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AN OPTIMUM CONDITION FOR ATTAINMENT OF A SINGLE CURRENCY PROJECT IN WEST AFRICA

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ABSTRACT

The paper examines the primary and secondary convergence conditions for a monetary union in the second monetary zone for West Africa. The focus of the paper is on the primary conditions as they provide the basis for the secondary conditions. The annual panel data used for the research are obtained from the West African Monetary Agency website: www.wami.imao.org. The panel variables are first tested for unit root and stationarity. The panel unit root test results show that all the variables are integrated of order one. The stationarity test confirms the result, as the variables are non-stationarity in level but stationarity after first difference. The Long-run cointegration equation is obtained using the pooled group mean estimator. Linear programming is then applied on the result of the long-run equation to obtain the optimal conditions for attainment of single currency project for West Africa. The result shows that the objective value of 0.0462 is obtained with inflation contributing more to the variation in the government external reserves. The Central Banks in West Africa should be cautious in implementing inflation targeting as a way of tackling their economic problem.

Keywords: Convergence criteria; Linear programming; optimum condition; objective value; pooled group mean estimator.

1 INTRODUCTION

The Economic Community of West African States (ECOWAS), is a regional body which was formed on May 28, 1975 with fourteen members. The main objective was to work towards a single currency leading to a single economic block (Masson and Pattillo, 2001). The countries that signed the treaty creating ECOWAS include the following: Benin Republic, Burkina Faso, Gambia, Ghana, Guinea Bissau, Guinea Conakry, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. Eight of these countries, Benin Republic, Burkina Faso, Guinea Bissau, Ivory Coast, Mali, Niger, Senegal and Togo are already operating a single monetary union, Union Économique et Monétaire Ouest-Africaine (UEMOA) using a single currency, the franc de la Communauté Financière de l'Afrique (CFA franc), and a common central bank, the Banque Centrale des Etats de l'Afrique de Ouest (BCEAO) (Benassy-Quere and Coudet, 2005).

The creation of a single monetary zone has been high on the agenda of the ECOWAS members since its inception in 1975 (Masson and Pattillo, 2001). To this end the following three primary objectives were formulated:
- Integration of monetary and fiscal policies to eventually create a common market,
- Creation of a single currency,
- Improve welfare of members through intra-regional trade (see Masson and Pattillo, 2001 for details).

Even though members were very enthusiastic at the formation of the regional body, and pursued these objectives with vigor, intra-regional trade could not be stimulated (Ojo, 2003). This has been blamed on the low volume of trade in the region (Itsede, 2002; Ogunkola, 2005). Similarly the objective to form a single monetary union for the entire region is still far away from being realized (Benassy-Quere and Coudet, 2005). Instead the five Anglophone countries Ghana, Nigeria, The Gambia, Guinea and Sierra Leone have gone ahead to initiate

another monetary union tagged 'The West African Monetary Zone (WAMZ)' which will merge with the UEMOA after its take-off. Till date there is no assurance that even this single monetary zone for the five countries will take-off as proposed less the entire region.

Several dates tentatively fixed for the commencement of the WAMZ could not stand due to a number of factors which include the short time table for preparing a monetary union (see Itsede, 2002). A transition programme was put in place to commence in 2000 and terminate in December 2003, with the take-off date for the monetary union in July 2005, and merger date with UEMOA in 2006. These deadlines have slipped by, with the envisaged single currency project yet to commence. Nevertheless (because of the commitment to the realization of these goals) a new date December 1, 2015 has been fixed for the take-off of this monetary union (WAMA, 2009; Egwaikhide and Ogunleye, 2010).

Four primary and six secondary convergence criteria have been agreed upon. The targets and schedule of primary and secondary convergence criteria are shown in Table 1 and Table 2 below.

Table 1: Targets for Primary Convergence Criteria

Criteria	Benchmark
Inflation Rate	Single digit $(\leq 10\%)$
Gross External reserves (Months of Imports	≥ 3 months
Central Bank Financing of Fiscal deficit as % of Previous Tax's Revenue	$\leq 10\%$
Fiscal Deficit/Surplus/GDP (%) Excl. Grants	$\leq 4\%$

Table 2: Targets for Secondary Convergence Criteria

Criteria	Benchmark
Change in Domestic Arrears	$\leq 0\%$
Tax Revenue/GDP ratio	$\geq 20\%$
Salary Mass /Total Tax Revenue	$\leq 35\%$
Exchange Rate (+:Depreciation/ -: Appreciation)	$\pm 15\%$
Real Interest Rate	$> 0\%$
Domestically Financed Investments/Domestic Revenue	$> 20\%$

Available literature (WAMA, 2011) show that as at 2010 The Gambia satisfied two (2) primary and two (2) secondary conditions; Ghana satisfied three (3) primary and Zero (0) Secondary conditions; Guinea satisfied zero (0) primary and one (1) secondary condition; Nigeria satisfied two (2) primary and three (3) secondary conditions; while Sierra-Leone satisfied one (1) primary and one (1) secondary condition. Our focus is on the primary conditions stipulated above. This is because they are more difficult for a state controlled economy to attain.

2 THEORETICAL FRAMEWORK
The quantity theory of money explains the relationship between money supply and inflation. It states that there is direct relationship between quantity of money in an economy and prices of goods and services. In its simplest form the theory could be expressed as MV=PQ, where M is the money supply in an economy, V is the velocity of money in expenditures, P is the price level associated with transactions for the economy and Q is the real output. The equation

assumes that V and Q are constant in short terms. This has however been criticized by prominent economists like Keynes, especially the assumption that V is constant (Catao and Terrones, 2003).

The criticisms above suggest the relaxation of the assumptions underlying the quantity theory of money. The relaxation allows for a broader analysis of the possible interactions among the variables in the identity. Thus, given that the percentage change in a product, say U and V which is equal to the sum of the percentage changes ($\Delta U + \Delta V$). The quantity theory could be rewritten in terms of percentage changes as : $\Delta \pi + \Delta Q = \Delta M + \Delta V$. Rearrange the variables to get the identity:

$$\Delta M_t = \Delta \pi_t + \Delta Q_t - \Delta V_t \qquad (1)$$

Equation (1) implies that an increase in money supply leads to increase in inflation or output. In other words, a decrease in money supply leads to decrease in inflation or output. Thus a decrease in velocity or a combination of changes in these variables (depending on a number of factors) such as elasticity of supply and the level of unemployment in the economy concerned leads to increase in money growth or decrease in inflation.

The relationship between fiscal deficit to GDP ratio and inflation has been investigated by many authors including Catao and Terrones (2003), Bhattacharya (2009) and Ammama et al. (2011). A study conducted by Catao and Terrones (2003) for 23 countries found that a 1% reduction in ratio of fiscal deficit to gross domestic product (GDP) ratio lower long-run inflation by 1.5 to 6%. They concluded that fiscal deficit is efficient determinant of inflation. Similarly, Bhattacharya (2009) tested the effect of fiscal deficit on inflation and concluded that any increase in demand caused by large deficit will raise prices. These studies did not investigate convergence, and the use the linear programming approach as adopted in this paper. Moreover, their focus was on long-run economic relationship between these variables.

The core issue under the ECOWAS monetary union is the convergence in microeconomic variables as stated in the primary and secondary convergence criteria. In addition to facilitating policy coordination, it affords the opportunity to ensure microeconomic stability (WAMA, 2009). Available literature (WAMA, 2009; Egwaikhide and Ogunleye, 2010) shows that as at end of 2008 three primary criteria were satisfied except inflation whose average was 13.6 above the targeted value $(\leq 10\%)$. It is sad to note that from here these countries could not maintain the momentum for which they used to satisfy these primary conditions. As demonstrated above, all the countries performed poorly in attaining the target set by the monetary agency. The five countries have to tighten their belts if not, the dream of a single currency come December 2015 will be a mirage.

The past has been very ugly for ECOWAS, in terms of implementation of set goals. None of the objectives of the regional body have been achieved on schedule. The region is still among the poorest in the world with weak institutions as reported in Benassy-Quere and Coudet (2005) and Roudet et al. (2007). The big question is 'can the goals of ECOWAS be achieved in the near future?'

Many solutions have been professed in the literature as documented by Ojo (2003), Itsede (2002), Obadan (2002), Ogunkola (2002), Masson and Pattillo (2001, 2003), Benassy-Quere and Coudet (2005), Ogunkola (2002, 2005) and WAMI (2006, 2007). Masson and Pattillo

(2001) for instance argued in favour of genuine trade liberalization as a precondition for successful monetary unification with an independent single currency. Quoting from Hanink and Owusun (1998), and Yeats (1998), they observed that because of low market potentials, high transportation costs, similar factor endowments, liberalization might not be the solution. Itsede (2002) quoting from Corden (1972) emphasized the concept of monetary union as premised on two essential but interwoven parts. These include: exchange rate union which is an area in which exchange rates bear permanent relationship to each other and currency convertibility where exchange rate controls are permanently removed. Monetary union is then defined as the existence of a single monetary zone with a high degree of monetary stability in furtherance of economic integration (Itsede, 2002).

Other obstacles besides the conditions laid in the OCA[1] theory that militate against monetary integration all over the world are lack of commitment, political will and strong leadership to implement the policies and actions that will move the programmes forward (Itsede, 2002). In West Africa, another factor is the non convertibility of the currencies of countries in the zone. Besides the UEMOA countries that already use the CFA Franc whose convertibility is backed by the French Treasury, all the other currencies (including the Nigerian naira) are not yet fully convertible. According to Obadan (2002), for a monetary union to be successful, the several currencies in the integrating zone must be fully convertible one into the other at permanently fixed exchange rates, thereby effectively creating a single currency. As stated earlier, the focus of the paper is to use the convergence criteria given at Table 1 to obtain an optimum convergence point for these economic variables. This point is to serve as a point of convergence to be satisfied by the primary conditions, hence this study.

Before monetary union is in place, conditions for its sustenance have to be in place. Implementing the monetary union before these primary and secondary convergence conditions are satisfied is like putting the cart before the horse, a major asymmetric shock would result in unbearable pressure within the union because of limited mobility and inadequate fiscal redistribution (Yuen, 2008). There is a common understanding that lasting economic convergence is a main prerequisite for a full monetary union. As such, significant degrees of convergence will have to be attained prior to monetary unification. The steps to be taken will be interdependent and will reinforce one another in particular the development of monetary unification, must be based on sufficient progress in the field of convergence and then the unification of economic policies (Yuen, 2008). Simulation studies by Solomon and De-Wet (2004) indicate that inflation is very responsive to shocks in budget deficit as well as GDP.

3 MATERIALS AND METHODS

3.1. Data

The data for this research was collected from the West African Monetary Agency (WAMA) in the website http://www.wami.imao.org. The annual data is for 10 years 2001 - 2010. The variables are: inflation rate (π_t), ratio of fiscal deficit/surplus to GDP (b_t), Central Bank financing of fiscal deficit (d_t), and gross external reserves (m_t). These data were collected for the five countries The Gambia, Ghana, Guinea, Nigeria and Sierra Leone.

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[1] An Optimum Currency Area (OCA) is an area that maintains fixed exchange rate within their members, and flexible exchange rate with trading partners outside the area (Appleyard and Field, 1998).

3.2. The Model Formulation

The starting point of the model formulation is the empirical relationship between fiscal deficit, gross external reserve (G) and inflation of a single equation model as given by Akçay et al. (2002), Vit (2003) and Solomon and De Wet (2004). Let us assume that inflation (π_t) $\leq \mathbf{0.1}$, gross external reserve (G)≥ 0.25Imp$_t$, where Imp$_t$ is annual imports, central bank financing of fiscal deficit $\leq \mathbf{0.1}Tr_{t-1}$, where Tr_{t-1} is the tax revenue in the previous year and fiscal deficit to GDP ratio (Fd) $\leq \mathbf{0.04}$. The equation linking fiscal deficit to GDP ratio (Fd$_t$) with real interest rate (r$_t$) is given by Vit (2003) as:

$$r_t = c + Fd_t + \varepsilon_t \tag{2}$$

where c is a constant and ε_t is the random error.

However, similar to equation (1) Akcay et al. (2002) started with the following equation:

$$G_t - Tr_t + i_t B_{t-1} = \Delta M_t + \Delta B_t \tag{3}$$

where M_t is the reserve money, B_t is total stock of domestic and foreign debt, i_t is nominal interest rate, G_t and Tr_t are already explained above. If the budget deficit is inclusive of interest payment then

$$D_t^* = \Delta M_t + \Delta B_t \tag{4}$$

where D_t^* is the budget deficit. For countries with high inflation like those in WAMZ

$$d_t + b_{t-1}\rho_t = \Delta b_t \tag{5}$$

where d_t is the primary deficit less reserve money with each variable scaled by nominal output Y, b_t is total stock of domestic and foreign debt at period t, and ρ_t is reserve money (see Akcay et al. 2002 for details). Equation (4) therefore follows that:

$$b_{t-1} = \frac{\mathbf{1}}{(\mathbf{1} + \rho_t)}(b_t - d_t) \tag{5}$$

The discounted debt-output ratio can be thus calculated using

$$X_t = b_t \prod_{k=1}^{t}(\mathbf{1} + \rho_k)^{-1} \tag{6}$$

Taking logarithm transformation of equation (6) and rearranging leads to

$$\log(b_t) = \log(X_t) + \sum_{k=1}^{t}(\mathbf{1} + \rho_k) \tag{7}$$

The starting point of the long run government budget constraint of Solomon and De Wet (2004) is:

$$\frac{B_{t-1}}{P_t} = \sum \frac{1}{r_j}\left(\tau_{t+j} - g_{t+j} + \left(M_{t+j} - \frac{M_{t-j-1}}{P_{t+j}}\right)\right) \tag{8}$$

where $\dfrac{B_{t-1}}{P_t}$ is government debt, r_j is discount rate, τ_t is the tax revenue, g_t is the

government expenditure and M_t is the broad money supply. Catao and Terrones (2003) derived a long-run equation that explains the inflation rate by the budget deficit and money supply as:

$$\pi_t = \alpha\, b_t \frac{p_t}{M_t} \tag{9}$$

where α is the inverse linear multiplier, b_t is the budget deficit which is

$b_t = g_t - \tau_t - B_{t-1}$ and $\dfrac{M_t}{P_t}$ is the money supply.

Studies carried out by Vit (2003) found the relationship between real interest rate (discount rate) and budget deficit as follows:

$$r_t = c + b_t + \varepsilon_t \tag{10}$$

where r_t is the real interest rate, b_t is the budget deficit, c and ε_t are drift and residual terms respectively. Considering equations (5), (9) and (10), we have the functional form of the model given as:

$$m_t = f(\pi_t, d_t, b_t) \tag{11}$$

Linearly, equation (11) can be expressed as

$$m_t = \phi_1 d_t + \varphi_2 b_t + \varphi_3 \pi_t + \varepsilon_t \tag{12}$$

where π_t is the inflation rate $\leq \mathbf{0.1}$, b_t is the fiscal deficit/surplus/GDP ratio $\leq \mathbf{0.04}$, d_t is Central Bank financing of fiscal deficit $\leq \mathbf{0.1}$, and m_t is the gross external reserves $\geq \mathbf{0.25}$. The long-run economic relationships between these variables are obtained by conducting the cointegration test. The long run cointegration equation is:

$$\Delta y_t = \Pi y_{t-1} + \sum_{t=1}^{p-1} \Gamma_j \Delta y_{t-j} + x_t + \varepsilon_t \tag{13}$$

where $y_t = \left(m_t, d_t, b_t, \pi_t\right)'$ is a vector of endogenous variables, x_t is a vector of exogenous (explanatory) variables which include deterministic terms and ε_t is the residual error term.

This can be extended to the panel cointegration like the pooled mean group estimator of Persaran et al. (1999) given in section 3.4.

3.3. Panel Unit Root Tests

3.3.1 Im, Pesaran and Shin test
The Im, Pesaran and Shin (2003), test is based on N augmented Dickey-Fuller regressions:

$$\Delta y_{it} = \rho_i y_{i,t-1} + \sum_{j=1}^{p_i} \varphi_{ij} \Delta y_{i,t-j} + \alpha_i + \gamma_i t + u_{it} \text{ for } i = 1,...,N; \ t = 1,...,T \qquad (13)$$

where T is the length of the sample, N is the cross-section dimension, $\Delta y_{i,t-j}$ are the lagged dependent variables included to eliminate serial correlation in the error term, p_i are the country-specific lag lengths, α_i and γ_i are country-specific intercepts (fixed effects) and trend parameters, respectively. The error term u_{it} is distributed as a white-noise random variable across i and t, with $E(u_{it}) = 0$, $E(u_{it}^2) = \sigma_i^2 < \infty$ and $E(u_{it}^4) < \infty$. p_i, is assumed to be known and in practice it is estimated using an information criteria. The null hypothesis in the IPS test is $H_0 : \rho_i = 0$ for all i, which implies that all individual series contain a unit root (are independent random walks). The alternative hypotheses assume that $H_{1a} : \rho_1 < 0, \cdots, \rho_{N_0} < 0$, and $H_{1b} : \rho_i = 0$ for i = $N_0 + 1,...,N$ (heterogeneous alternative). The IPS test averages the Augmented Dickey-Fuller statistics across groups to remove contemporaneous correlation in the errors. The statistic is given by:

$$\overline{t}_{NT} = \frac{1}{N} \sum_{i=1}^{N} t_{iT}(p_i, \varphi_i). \qquad (14)$$

This statistic converges sequentially to normal distribution as $T \to \infty$ followed by $N \to \infty$, while the ratio $\frac{N}{T} \to \alpha > 0$, where α is a constant (see Lukacs, 1975). IPS compute the values $E[t_{iT}(p_i, \varphi_i)]$ and $Var[t_{iT}(p_i, \varphi_i)]$ and propose a statistic which tends asymptotically to the standard normal distribution.

$$W_{\overline{t}} = \frac{\sqrt{N}\left[\overline{t}_{NT} - N^{-1}\sum_{i=1}^{N} E[t_{iT}(p_i, 0) \mid p_i = 0]\right]}{\sqrt{N^{-1}\sum_{i=1}^{N} Var[t_{iT}(p_i, 0) \mid p_i = 0]}} \xrightarrow[T,N\to\infty]{d} N(0,1) \qquad (15)$$

In practice, IPS test has been used recommended for use in many empirical applications (see for example Al-Rabbaie and Hunt, 2004; Aslan, 2008).

3.3.2 The Hadri test

The test proposed by Hadri (2000) is a residual-based Lagrange Multiplier test (LM) in the spirit of the KPSS test suggested by Kwiatkowski et al. (1992). The Hadri test has a reverse null hypothesis, i.e. that the time series for each cross-section unit is stationary around a deterministic level or trend, against the alternative hypothesis of a unit root. It is based on the following regression:

$$y_{it} = \alpha_i + \gamma_i t + \sum_{t=1}^{T} u_{it} + \varepsilon_{it} \tag{16}$$

where α_i and $\gamma_i t$ are the deterministic terms defined in (16) above, and the error term has two components: ε_{it} which is white noise, and $\sum_{t=1}^{T} u_{it}$ which is a random walk. Under the null hypothesis $H_0 : \sigma_u^2 = 0$ versus alternative hypothesis $H_1 : \sigma_u^2 > 0$. That is the null hypothesis is that the variance of the random walk component $\left(\sigma_u^2\right)$ is zero. The autocorrelation in ε_{it} is accounted for by considering the long-run variances of the ε_{it} which is estimated by

$$\hat{\sigma}_{\hat{\varepsilon}_i}^2 = \frac{1}{T-1}\sum_{t=2}^{T}\hat{\varepsilon}_{it}^2 + 2\sum_{j=1}^{\bar{k}} w_{\bar{k}j}\left(\frac{1}{T-1}\sum_{t=j+2}^{T}\hat{\varepsilon}_{it}'\hat{\varepsilon}_{i,t-j}\right) \tag{17}$$

where $w_{\bar{k}j}$ are weights used to ensure that $\hat{\sigma}_{\hat{\varepsilon}_i}^2$ are always positive. These Bartlett weights are given by $w_{\bar{k}j} = 1-\left(\dfrac{j}{\bar{k}+1}\right)$, where k is the bandwidth. The k has to be efficiently chosen in order to get reasonable results. The statistic H_0 is the average of the individual KPSS statistic for each series. The test statistic is standardized to take the form $\dfrac{\sigma_u^2}{\sigma_\varepsilon^2}$, which has a standard normal distribution under the null hypothesis.

3.4. The Pooled-Mean Group Estimator

The test for panel ARDL as proposed by Pesaran et al. (1999) is based on the pooled mean group estimator (PMGE). This allows for the short-run coefficients and error variances to differ across group, but constrains the long-run coefficients to be identical in an error correction framework. The pooled mean group estimator of order $\left(p_i, q_i\right)$ is given by the following equation

$$\Delta y_{it} = \phi_i y_{it-1} + \beta_i' x_{it} + \sum_{j=1}^{p_i-1}\lambda_{ij}\Delta y_{i,t-j} + \sum_{j=0}^{q_i-1}\delta_{ij}'\Delta x_{i,t-j} + \alpha_i + \varepsilon_{it} \tag{2},$$

where y_{it} is the dependent variable, x_{it} is vector of explanatory variables, α_i are country specific intercepts and λ_{ij} and δ_{ij} are the country specific coefficients of the short-term dynamics, ε_{it} the white noise error term. The long-run coefficients $\phi_i = \phi$ (are defined to be the same across countries). If $\phi_i < 0$, there is a long-run relationship between y_{it} and x_{it}

defined by $y_{it} = -\left(\beta_i' / \phi_i\right) x_{it} + \eta_{it}$. The maximum likelihood procedure based on the concentrated likelihood function is used to estimate the PMGE. A Gauss-Newton algorithm is used to maximize the likelihood function. The pooled mean group regression equation (23) can be estimated with individual specific ϕ_i which are then averaged over N to obtain a PMGE.

3.5. Linear Programming Formulation
The model formulated in equation (12) can be expressed as a linear programming as follows:

minimize $m_t = \phi_1 d_t + \varphi_2 b_t + \varphi_3 \pi_t$

subject to $\quad \pi_t \leq \mathbf{0.1}$; $b_t \leq \mathbf{0.04}$; $d_t \leq \mathbf{0.1}$; $m_t \geq \mathbf{0.25}$.

The optimal solution is obtained by the use of the Simplex method as shown in Hillier and Lieberman (2001).

4 RESULTS AND DISCUSSIONS
A preliminary step is taken to calculate the correlation matrix for the four variables. The result shows that government external reserve is most correlated with the fiscal deficit to GDP ratio.

$$
\begin{array}{ccccc}
 & \pi_t & b_t & d_t & m_t \\
\pi_t & 1.0000 & & & \\
b_t & 0.1161 & 1.0000 & & \\
d_t & 0.4206 & -0.2259 & 1.0000 & \\
m_t & -0.2657 & 0.4590 & -0.2846 & 1.0000
\end{array}
$$

4.1. Results of Panel Unit Root Tests
The variables are tested for panel unit root and panel stationarity using Im et al. (2003) and Hadri (2000) to determine their degree of integration and level of stationarity. The results of the panel unit root tests are given in Table 3. The result shows that the variables are nonstationary in levels but stationary in first difference. An indication the variables are integrated of order 1.

Table 3: Panel Unit Root Tests

Variable	IPS-W-test		Hadri-test	
	No trend	**Trend**	**No trend**	**Trend**
m_t	-1.31(0.09)	-0.04(0.48)	2.65(0.00)	4.13(0.00)
Δm_t	-2.76(0.003)	-1.02(0.155)	0.95(0.17)	3.34(0.00)
π_t	-1.19(0.12)	-0.12(0.45)	0.97(0.17)	3.79(0.00)
$\Delta \pi_t$	-1.45(0.07)	-0.28(0.39)	0.16(0.44)	0.12(0.45)
d_t	-1.99(0.02)	-0.55(0.29)	2.53(0.01)	6.68(0.00)
Δd_t	-3.28(0.0005)	-2.57(0.005)	1.25(0.11)	7.82(0.00)
b_t	0.203(0.58)	0.57(0.72)	1.96(0.03)	5.19(0.00)
Δb_t	-0.83(0.204)	0.02(0.51)	2.51(0.01)	13.08(0.00)

The IPS - w - test at 5% are: for N=5, T=50. The numbers in parentheses are the p-values.

4.2. Panel Cointegration Results

The results of the long-run cointegration parameters using the PMGE are given in Table 4. The result of the long-run panel cointegration test shows that the variables inflation rate, fiscal deficit/surplus to GDP ratio account for most of the gross external reserves in agreement with the results of Catao & Terrones (2003).

Table 4: Estimation Results of PMGE

Variables Dep. var m_t	PMGE	t-value
π_t	0.4437	4.48
d_t	-0.072	0.24
b_t	0.0288	2.78

Central Bank financing of the fiscal deficit however, did show little influence on the gross external reserves with a low t- ratio of 0.24. The long-run panel cointegration relation using the PMGE with individual constants is

$$ec_t^{m_t} = \mathbf{0.4437}\,\pi_t + \mathbf{0.0288}\,b_t - \mathbf{0.0720}\,d_t \qquad (4)$$

Equation (4) shows that a 1% increase in government external reserves (m_t) induces 0.4437% inflation rate (π_t). Similarly, a 1% increase in m_t will induce a 0.0288% increase in the fiscal deficit to GDP ratio, and -0.0720% decrease in the Central Bank financing of fiscal deficit. This result compares favorably with Solomon and de Wet (2004) whose simulation study showed that inflation is very responsive to shocks in budget deficit as well as GDP.

4.3. The Optimum Convergence Criteria

The objective value of the optimum convergence criteria is 0.0452. The objective value for the variables, objective coefficients and their objective value contribution are given in Table 5. Inflation is the highest contributor to the optimum value followed by Central Bank financing of fiscal deposit, while fiscal deficit to GDP ratio is the least.

Table 5: The Optimum Convergence Criteria

Variables	Value	Objective Coefficient	Objective Value Contribution	Slack-/Surplus+
m_t	0.25	0.00	0.0000	0.0000
π_t	0.10	0.44	0.0440	0.0000
d_t	0.00	0.03	0.0012	0.0000
b_t	0.04	-0.07	0.0000	0.1000

5 CONCLUSION

The conclusion we draw from the paper is that Government external reserves, inflation rate, fiscal deficit/GDP ratio, Central Bank financing of fiscal deficit are correlated with the highest correlation between government external reserves and fiscal deficit and GDP ratio. The result shows that the objective value of 0.0462 is obtained with inflation contributing

more to the variation in the government external reserves at variance with the correlation matrix. This may be due to the non-stationarity of the variables in level. Due to the result of linear programming approach, we advise that Central Banks in the countries studied to be cautious in implementing inflation targeting as a way of tackling their economic problems. In conclusion there is a warning by Solomon and De Wet (2004) that governments should note the sensitivity of price levels to fiscal policy.

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ACCOUNTING AND REGULATORY CHANGES IN BRAZILIAN CORPORATE LAW: AN INVESTIGATION OF THE IMPLICATIONS FOR THE REVISION OF THE TARIFF OF THE SANITATION SECTOR IN PERNAMBUCO

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ABSTRACT

The research aimed to highlight the implications of reconciling accounting information for regulation with the information for the corporate the process of rates revision of the sanitation sector in Pernambuco. The data collected for this study were obtained in the Financial Statements, Notes, Balance Sheets, Reports and Technical Notes of tariff revision, relating to the period of 2009/2010. Interviews were conducted and surveys were applied on the Regulatory Agency of Pernambuco and on The Company of Sanitation of Pernambuco in order to clarify the details about the accounting and regulatory process to determine and validate the selection of abnormal test results and the results obtained. These data were processed in spreadsheets, prepared with the intention of reconciling the financial statements for regulatory purposes with the information for corporate purposes. It was observed that the existing regulatory norms for the case studied did not fit to update the Brazilian corporate law, the present amendments to Law 6.404/76, the Pronouncements, Interpretations and Technical Guidance Statements. Thus, it not necessarily represent a barrier to corporate changes, lack of regulation or unsuitability or asymmetry could bring little clarity to the financial statements for regulatory purposes, and possible impacts on the values established for the review of the tariffs charged to society.

Keywords: Sanitation Sector, Accounting Process, Regulatory Accounting

1 INTRODUCTION

The motivation of this research is the social and economic impact from changes in legal accounting practices. In one hand, there have been changes in the laws that guides accounting in corporations and large companies. Moreover, the implications of these changes, both in measurement and in disclosure of assets and income of an organization. These implications, inserted into the regulatory environment of public services, would hit a sensitive spot of regulatory activity, since the information sheet and operating results could be involved with new criteria for evaluation, measurement and recognition.

The regulatory activity is represented by the power consigned from the controlling bodies to intervene in the relationship between producers and consumers in a market. In general, the objectives of the regulation are geared toward to ensure a sustainable basis, protecting the interests of consumers in terms of prices and quality of service, and to ensure that companies, operate efficiently and can finance their activities and fulfill obligations as decided initially by the national or local policy.

In order to develop these activities and for the effective achievement of its objectives, the regulatory agencies need clear, objective and reliable information on various aspects of the utility company. This information should be able to guide the regulatory process and the ability to compensate for operation of agencies, often limited by the sheer size of the operational service.

Among other information used for regulation, the accounting should have an interface with these needs. It would allow communication between the regulator and the regulated operator, through disclosure of financial position, asset performance and activities of an organization, allowing the knowledge of the environment and decision making in the regulation. Thus, the accounting information directed by the regulatory agencies would have the purpose of aligning the accounting practices adopted by the provider needs adjustment, in order to strengthen the control and give more credibility to the information.

In this context, including the perspective of the process of tariff revisions, some regulators sought to establish guidelines for the establishment of accounting information geared to the interests of regulation. These guidelines imply the accounting practice of the operators as devices Normative Resolution of the National Electric Power No. 396 of February 23, 2010, and the Standard Model of the Brazilian Regulatory Agencies, released in 2008.

Was observed between the considerations of Resolution and Standard Reference, the need to disclose, to the society and the regulatory body, a set of information that represent the economic, financial and equity of public service operators, so that allow the analysis and demonstration of the tariff components, the effective return on investment, asset composition, and especially the confrontation of revenue and expenses in providing the service. Therefore, we introduced several elements guiding the conduct book, for example, the composition of a chart of accounts, the criteria for valuation of assets, liabilities and results and the adequacy of regulatory standards to Brazilian corporate law.

This point converges to the understanding that the criteria for regulatory accounting information must be aligned to the rules of the Brazilian corporate law, especially regarding changes and updates suffered this legal framework. According to the Standard Model and Resolution Energy Agency, would be for the regulator to determine the adoption and monitoring of changes in corporate law and convergence with international accounting standards, through the new wording given by the Federal Laws 11.638/07 and 11.941/09, which amended provisions of Federal Law No. 6.404 of December 15th, 1976, and FASB, issued for guidance and adoption of international accounting standards.

Discussions, guided by these regulations and deepened by this research relate to the adequacy of regulation to corporate law, transparency of information and regulatory policy adopted. For this, they determined that, in addition to other specific content, the notes should provide explanations and reconciliations of income and equity position for corporate purposes and for

regulatory purposes. Such reconciliation would transpire possible differences and present the criteria for control made by regulatory agencies. These data, together with the supporting reasons, would be disclosed to the public, together with the other financial statements.

Thus, the research sought answers to the following question: **What are the regulatory and accounting implications from the reconciliation of the information directed to regulatory activities and the information used for corporate purposes?** The present study sought to highlight, from the reconciliation of financial information to regulatory activities directed to the information used for corporate purposes, as changes to Brazilian corporate law, perceived the new accounting practices, could result in the review of tariffs in the sector sanitation in Pernambuco.

1.1 The relevance of the Research
The accounting topic directed to the regulation of infrastructure services is a relevant issue to be addressed in academic context. The discussion on corporate law accounting changes, the small number of studies on regulatory accounting and the nature of the social and economic public utility make timely research regarding the use of accounting information in corporate and regulatory environment, in their decision making processes and disclosure. The Basic Concept Statement owns to anticipate that openness and prescribes that governments, regulators or tax authorities may determine specific requirements to suit their own purposes.

Silva et al (2009) bring this discussion specifically for companies in the sanitation sector. The authors researched the difficulties in adopting new accounting policies and the likely impacts on the balance sheet and results of these companies. Through awareness of the accounting profession, highlighted that the lack of regulation by the competent bodies, such as regulatory agencies, could bring some barrier in the adoption of new accounting practices.

The workpaper of Ximenes and Junior (2008) found that, in the sanitation sector, 883 municipalities are regulated, that is, about 4,600 municipalities still operate without an administrative unit of independent regulation. This number represents only approximately 16% (sixteen percent) of all municipalities in the country have adopted the structure provided in Sanitation Law. On the other hand, according to these authors emphasize, not all 883 municipalities have standards laid down regulated according to the art. 23 of Law No. 11.445/07. In the 14 state and municipal agencies surveyed by Ximenes and Junior (2008), the authors noted that there are few rules relating to economic and financial aspects, such as tariffs and regulatory accounting. In turn, the choice of focusing on tariff revision was determined because the rate is the available formal instrument of trading to regulators. It represents an element of balance to guarantee return on investment for the utility and accessibility of public services to multiple users and should reflect some economic and social aspects of the place of service.

For convenience and to establish a direct relationship with the regulatory requirements of a particular locus by setting the numerous normative acts and technicians which consider the peculiarities and the regulatory process, a study was conducted in the regulatory environment in the sanitation sector in the State of Pernambuco.

1.2. Delimitation of the Research
The environment studied was defined by the intersection between the process of regulation and the use of accounting information for regulatory order, in order to understand how the

production and the product of accounting information might result in the tariff review process. This environment is presented for the negotiation of fees and other points between a utility company and a regulator.

The implications were observed with a focus on revenue, the costs, expenses and assets comprising the tariff revision for the period June 1, 2009 until May 31, 2010. These data were compared with the values in the same period, taken from the financial statements of the operating company.

This focus narrows the search to the accounting aspects of tariff replacement, in which detailed studies are reported on the confrontation of revenue and costs to perform the public service. So, did not intend to discuss other economic variables, social or political for determining tariffs.

As Technical Pronouncement No. 13, the terminology "Accounting policies" adopted in Brazil, covering the Brazilian Corporate Law, the Pronouncements, Guidelines and Interpretations issued by the Accounting Pronouncements Committee, in view of the pronouncement Basic Conceptual Framework and according to the rules international accounting.

2 LITERATURA REVIEW

2.1. Regulatory environment and the tariff adjustment process

2.1.1. Environment and Objectives Setting

In recent decades, the infrastructure sector has undergone in a profound change. From 1970, several countries initiated a transformation in the form of state intervention in their economies. This transformation is mainly due to a period characterized by economic crisis and a political, social, cultural and legal environment conducive to change a "Producer State" for a "Regulatory State" in strategic economic and social sectors. Started in the United States and later the British privatizations, this transformation movement branched out to other countries, such as those in Latin America, Africa and Asia (Estache, Foster and Wodon, 2002; Gomes, 2006).

In Brazil, such a shift occurred from the '90s and drifts from similar conditions to those analyzed in other countries. The country was in an environment of crisis of the state. This crisis could be seen in four dimensions: fiscal, due to lack of credit and savings; mode of intervention, with the critical state model, policy, and finally, administrative, referring to the bureaucratic model of management. The crisis was addressed and used as justification for a solution through the comprehensive transformation of state enterprises responsible for producing goods and services, such as steel, mining, telecommunications, electricity, among others (Bresser-Pereira, 1999). The State transfers, thus the production of goods and services for the operation of several other participants, more flexible, therefore, the constitution of their capital and transferring activities to others involved.

The transformation is not, however, the absence of the state in the provision of services. Majone (1999) notes that some sectors of public utilities such as gas, electricity, water or telecommunications, are considered strategically important and therefore assumes state power to impose a planned structure, while protecting the public interests against private interests.

For Gomes (2006), these services are essential, both for economic development, and for the fulfillment of public redistributive demands or welfare. The latter author states further that such conflicts of interest and failures of the market itself become essential to create institutions for the establishment of a balance of interests and mitigate these failures. Thus, even if not directly involved in the production of these goods and services, there would be the essential figure of the sector regulation, targeting the public interest and the proper functioning of the market itself.

Other authors bring a different perspective to the need for regulation. Due to heavy investment, high levels of fixed costs and economies of scale, characterized by industry infrastructure, the decision economically feasible or more efficient is the existence of a single provider of infrastructure services. In case, these researchers do not consider the question from the standpoint of processing, but rather demonstrate a concern with the existing monopoly in this sector (Pardina, Rapti and Groom, 2008; Brow, Tenenbaum and Stern, 2006).

Mankiw *apud* Aragon (2008), for example, discusses the unique monopoly characteristic of some segments that this sector confers, such as market power to the holder of its exploitation, which could potentially distort market prices and do not encourage investment and promote information asymmetry. Aragon (2008) corroborates the understanding, while commenting on the emergence of regulatory agencies. For him, there is a necessarily relationship between the direct regulation model, through agencies, and privatization, both in Brazil and abroad.

A key element in that process is the division of government, regulatory agencies and providers of services with elements functions developed by different institutions (Pardina, Rapti and Groom, 2008; Brow, Tenenbaum and Stern, 2006). Thus, it would require the involvement of various entities, such as the service provider, the regulator, the State and users. For Aragon (2008), this means that regulation is necessary and integral part of this process.

Estache, Foster and Wodon (2002) reported that, on a broader level, the objectives of the regulation are to protect the interests of users in terms of prices and quality of service to ensure that companies, operating efficiently, can finance their activities, to promote efficiency, to meet obligations as decided initially by national policy and regulation to ensure that the scheme is sustainable.

From an economic standpoint, researchers attribute the regulatory activity of public services is to ensure four objectives: (1) sustainability, (2) allocative efficiency, (3) productive efficiency, and (4) efficiency or distributive fairness (Pardina, Rapti and Groom, 2008; Estache, Foster and Wodon, 2002).

The first goal, on the economic and financial sustainability implies that tariffs should generate sufficient revenues to allow an efficient cover to the economic costs of providing services. Economic costs represent the projected cost of services operated, including opportunity costs.

On the second goal, allocative efficiency requires that in an environment of scarce resources and alternative uses for the same services, the rates must be related to the production costs. Thus, the rates should establish a correspondence with the marginal costs of providing the service.

Next goal, the productive efficiency concerns the minimization of costs, a certain level of production, or the maximization of production, taking into account the amount of inputs. For a company to have incentives to minimize costs depend on the rules used to adjust rates in the future. There is, here, a negotiation between allocative efficiency and productive efficiency.

The efficiency of distributive eventually regards to accessibility. Regulatory regimes are designed to allow access to the service universally as a target medium or long term. For many essential services infrastructure, there is a need to relate the rates with the ability to pay all its consumers.

For Estache, Foster and Wodon (2002), the objective of promoting efficiency reveals tensions at the heart of regulation. For them, the difficulty in establishing the efficiency may be attributed to an asymmetry of information or due to the difficulty in understanding the possible improvements in performance and the best time for investment and level of operators. Thus, it would not be possible to establish tariffs and goals that reflect allocative efficiency, distributive and productive properly.

2.1.2. Regulatory Accounting

In this context, in order to assist in controlling the activities delegated by the public and reduce the information asymmetry between the regulated and the regulator, the Regulatory Accounting arises.

According Rehbein, Engelmann and Gonçalves (2008) and Vass (2003), the Regulatory Accounting want to align the accounting practices adopted by the provider needs adjustment. This alignment attitude aims to enable and strengthen control and give more credibility to the accounting information. For the authors, this segment of accounting represents the connection between the financial information service from providers and objectives of regulation, thus allowing control and monitoring aspects of sustainability and efficiency of operators.

The National Electric Energy Agency (Aneel), for example, established guidelines for the establishment of accounting information geared to the interests of regulation, which resulted in the accounting practice of the operators as Normative Resolution No. 396 of February 23, 2010.

Among the considerations for drafting the resolution, we observed the need to disclose, to the society and the regulatory body, a set of information that represent the economic, financial and equity of public service operators, so that allowed analysis and demonstration of the tariff components, the effective return on investment and the composition of assets, the regulatory environment, particularly regarding the confrontation of revenue and expenses in providing the service.

Accounting directed to the regulatory agencies comprises a set of principles and rules for submitting information for regulated companies, to assist regulators to deal with the special situation of the market for public utilities and transport. These rules allow the allocation of costs, revenues, assets and liabilities of operators in a way that facilitates the control of the objectives of regulation (Vasconcelos and Souza, 2008).

Most statutes or guidelines relating to the regulatory framework are represented by the following points: (a) monitoring the performance of the operators, in contrast to the assumptions of price controls, (b) detection of anti-competitive behavior, (c) monitoring the financial health of the operator, and (d) pricing.

Some authors write that , in this environment of negotiation between these goals, to prioritize one or the other, regulators should take into account the intrinsic characteristics of the regulatory environment, the degree of competition, the amount and type of investment needed, the local economy the social and political aspects to which the operators are inserted etc. For them, in network industries such as electricity or water, for example, the main focus is on monitoring performance, setting the price "fair and reasonable" in order to ensure that prices reflect costs in a context efficiency. Furthermore, accounting oriented to serve regulatory purposes to other purposes such as benchmarking compared with the competition, transparency of information and services and ensuring timely reports with consistent structure and needs (Estache, Foster and Wodon, 2002).

Regulators can determine their information needs in terms of scope of activities, the content of financial and non - financial, information format, such as classifications of accounts and accounting detail level of groupings of accounts, and the frequency of reporting.

As was noted earlier, the Sanitation Law, for example, in accordance with art. 23 delegates to the regulatory agencies the power to issue rules so that agencies would ensure the financial stability and economic development, low tariffs and the efficiency and effectiveness of service delivery. Among them, it is up to the agencies to issue rules regarding: (a) the measurement, billing and collection services, (b) the monitoring costs, and (c) the chart of accounts and reporting mechanisms, auditing and certification.

Therefore, the normative content of the accounting information geared to the regulatory framework is represented by the description of accounts and criteria through a chart of accounts, and non-financial information, for example, economic reports, environmental and quality of services.

The information generally obey the rules of attribution and measurement established by regulators. They are defined by general principles such as causality, objectivity, consistency and transparency (Vasconcelos and Souza, 2008).

Regulatory Accounting is presented in various elements guiding the conduct book, as standard reference ABAR. Among them, it was observed: (1) control sheet, accounts receivable and loans and financing, and (2) the accounting information of revenue, costs and expenses for the purposes of regulation.

2.1.2.1. The control sheet in the regulatory environment

Firstly, the study of the control of balance sheet accounts, the points can be classified under the control of assets, accounts receivable, loans and financing, amounting to some extent, the structure of investment and financing provider. In this set, the control sheet, for example, is essential to ensure the valuation of assets, accumulated depreciation, the calculation of cost of capital and the physical movements of the operating assets. According to standard reference abar must differentiate Fixed Assets, Fixed Assets Technical and Administrative Work in

progress. Thus, it is possible to evaluate the management of assets allocated to the activity provider and investments to improve the operations of the sector.

The control of accounts receivable, in turn, allows the monitoring of the management and financial condition of these titles, as well as the tariff policy. In the sanitation sector, the account must be categorized according to the class of consumption, which are distributed in residential, industrial, commercial and services and the public sector, and should be controlling the accounts receivables, accrued and allowance for loan doubtful. This control allows the knowledge of socially appropriate tariff policy, as well as allows you to follow the provisions of receivables from installment services.

The control of loans and financing allows the regulator to monitor the management of third-party funding sources, including funding through debt titles, confronting the financial sustainability and economic segment (Vass, 2003; Rehbein, Engelmann and Gonçalves, 2008).

2.1.2.2. The accounting information of revenue, costs and expenses for the purposes of regulation

Second, we observed the guiding elements of the income statement and classified the points on revenues, costs, expenses and accounting information to the tariff policy.

Revenues represent economic resources resulting from the practice in service delivery and the resulting tariff policy adopted or required. In the sanitation sector, revenues are differentiated in relation to the direct or indirect application of service and depending on the tariff category. This control allows the monitoring of management tariff, from the benefits generated by the activity linked to the sector, to confrontation with the costs of services (Rehbein, Engelmann and Gonçalves, 2008).

However, under the regulation, the revenue should be able to cover the costs and expenses pertaining to the provision of public services, aiming to maintain a balance in the industry, with the cost of activities and the fair remuneration of the investment providers.

The relationship between an operator and the regulator depends to a large extent, the regulatory regime and the specific rules of each service. Accordingly, for Rodriguez Pardina, Rapti and Groom (2008), while the regulator has the duty to the economic and financial sustainability of the regulated company, operator charges represent an element to be taken into account for the determination of tariffs, control and monitoring of service delivery.

As mentioned in the discussion on the system efficiency, the accounting data provided to the regulator are not necessarily used in its entirety to determine the rate. According to some researchers, regulators not only have the right to audit the data and may exclude some items or approve only part of the costs (World Bank, 2006). A major function of the regulator is to ensure that companies have an incentive to operate efficiently. Thus, the costs of inefficient operator, previously established as control objects should not be recovered through tariffs targeted customer.

The sanction of "cost ineffective" even when completely deleted, can be part of the incentive scheme and has parallels with results in unregulated markets. These exclusions costs must adhere to clear rules, prior and must have a legal basis. The principles, the process and

methodology used by the regulator to decide on the exclusion of some "inefficiency costs" should be clearly established and made public before the operating license of the regulated company. Regulators want, thereby avoiding the risk that the expense of providers has a cost higher than market value (Pardina, Rapti and Groom, 2008).

The discussion on the partial exclusion of costs refers to the delicate question of "excesses". In a competitive environment, a company that operates under inefficient management produces or provides goods or services at a cost that can put it out of business due to the presence of competitors that operate more efficiently. The purpose of regulation is then simulating the effects of a positive competitive environment, so that the efficiency benefits can be passed on to consumers through lower tariffs. Regulators may, for example, delete lines ex ante costs sponsorships, marketing expenses, donations, advertising or any costs that are not considered useful for the provision of regulated services (World Bank, 2006).

This goal is executed through the level of costs that will be allowed by the regulator to determine the rate. The regulator excludes all extra costs, such as capital expenditures excessive, excessive salaries, excessive energy costs or running water, and so on. The excess may arise through the inability to optimize the purchase contracts or through the use of more expensive products or services, regardless of cheaper alternatives. The excessive price is exogenous to the minimum cost for the regulated company. In this situation, the regulator would need help from other organizations (Exemple: other regulatory agencies) before deciding whether a cost is "reckless" (Pardina, Rapti and Groom, 2008).

2.1.3. Adjustment process and tariff review
Similarly to what has been stated in the literature review, as amended by State Decree 33.354/09, treated the process of changing rates in two stages: (1) tariff adjustments and (2) tariff revisions.

The adjustments occur annually in order to recover the amount of fees before inflation adjustments. They are corrected by the application of official rates of price change, for example, the National Index of Consumer Price (IPCA). For the year 2010, for example, the average increase rate was 5.0%. It was obtained by weighing the cost of electricity, the impact of inflation was offset by the IGP - M (index), and personnel costs, outside services, materials, chemicals, and general tax, offset by the IPCA, details as observed in Arpe Resolution No. 04/10 and Technical Note Arpe/TC No. 06/10.

In turn, the tariff revisions, changes in the operating costs of sanitation services are observed and studied in more detail. These revisions are quadrennial reassessment and understand the conditions of the provision of services and tariffs, through the study of revenues and costs for the coming year, as well as for monitoring the targets of regulation.

Remember that, as described in Standard Reference abar tariff revision consists of the tariff adjustment and determination of tariffs and efficiency goals. In this research, the case was thorough repositioning; they are made studies on the conditions of economic and financial sustainability of the operator, with calculations and presentation of revenue, cost and fair return on investment. In general, the repositioning is the comparison between the required revenue to cover costs and investments and the income obtained by applying the rates prevailing market conditions estimated on an annual basis for the next tariff period.

According to the State Decrees 18.251/94, 33.354/09, 34.028/09 and 33.912/09, the tariff structure should represent the distribution of rates by age and consumption volume depleted, in order to get rate middle and reconcile the economic to the social goals. The service costs are added those relating to remuneration of the investment provider. Costs should be the minimum amount necessary to provide adequate services for all systems operated and economic feasibility. The table below summarizes the categories or accounts that make up the basic costs of sanitation services.

Table 1: Detailing of services costs (DEF, 2009)

Services costs
I. Exploration Expenses
II. Depreciation and Provision for doubtful receivebles
III. Investiment Compensation
IV. Financial Losses

The ordering of the decrees above operating expenses in item I are considered to be those necessary for the provision of sanitation services and cover the costs of operation, maintenance, commercial, administrative and fiscal. The Sole paragraph of art. 56, the State Decree 18.251/94, anticipates some exclusions from operating expenses, in order to establish a system of efficiency and restraint in spending, which should be disregarded: (1) payments of expenses related to fines or donations, (2) interest and monetary loans, (3) advertising expenses, except those required by law or public interest, and (4) other expenses incurred in providing services of any kind, not charged to customers.

According to art. 57, the above mentioned decree, item II of the table refers to the share of depreciation of assets related to fixed assets in operation, provision for doubtful accounts and the amortization of deferred expenses.

To illustrate the service costs line, it was used the next table with details of the account composition comprising the investment recognized by Arpe. This investment is remunerated on the basis of a rate of return on investment.

Table 2: Detailing the returns on investments (DEF, 2009)

Accrual of Interest on Investment
I - Recognized Investment (a + b + c)
(a) Property Technical
(b) Deferred
(c) Capital Movement
(c.1) Available unlinked
(c.2) Accounts receivable
(c.3) Stock supplies for Operation and Maintenance
II - Rate of Compensation
III - Return on Investment Recognized (I x II)

The art. 59, the State Decree 18.251/94, prescribes, first, on the composition of investment recognized, which is formed by fixed techniques, the deferred and capital movement, and then on the conceptualization and assessment each element of the composition.

In case, the item (a) of fixed techniques, corresponds to the values of assets and facilities used, exclusively and permanently, the operation and maintenance of sanitation systems. Thus, the works in progress, other goods that are not already being economically operated in the provision of services, aid for works and, finally, accumulated depreciation not incorporate this value of fixed assets.

The item (b) of deferred, corresponds to the values on expenses that contribute to the formation of the result of more than one fiscal year.

The item (c), capital movement, represents the available untied, credit accounts receivable and inventories for operation and maintenance. The first element, the available non-binding, is formed by the real currency and deposits free, limited to the equivalent of one and a half times the average monthly operating expenses. The second element is the value of accounts receivable and can not exceed two times the average monthly sales for the year. Finally, the third element is formed by inventories for operation and maintenance, and is limited to the average monthly balances for the year.

In the exercise of his powers, the Arpe can make possible adjustments to the accounts, with total or partial exclusion of particular value, as well as the implementation of efficiency targets. In the process, 2009, between the regulatory decisions of the Final Report Approval was applied to Meta Regulatory Reduction of Default. This goal, delinquency of receivables from customers should be reduced to lower levels. The agency noted that there is a tendency to reduce these values since 2003. According to the regulatory decision, the values of "Accounts Receivable" shall not exceed 1.05 (one and five hundredths) the average revenue for the same period.

Item III, table calculation refers to the return on investment. This compensation is the result of multiplying the rate of return (item II of the table above) by recognized investment. As the decree on the screen, the expected rate of return is the percentage return on investment and recognized is limited to the ceiling of 12% (twelve percent) per year.

State Decree discusses potential financial losses, in item 01 of Table 4, and revenue service concessionaire, presented in the table below. By decree, can be considered in the process of tariff revision recovering any financial losses, which are related to the financial costs incurred in the billing process, when deadlines require between consumption survey and issuance of invoices and the dates of their maturity.

The recipes are divided into direct and indirect (Table 3). Operating Revenues Direct Water represent revenues resulting from the provision of water supply. Revenues Direct Operating Sewage represent revenues resulting from the provision of sewage services. The Indirect Revenues are from the realization of specific services requested by the client or the imposition of penalties. As Proposal Compesa are considered income indirect rates cut, reconnections, measurements of water meters, specific services funded and fines for late payment of water and sewer. This indirect revenues will be used to reduce costs, as stated in the decree, before the analysis of the percentage adjustment.

Table 3: Detailing of Revenues Recipes (DEF, 2009)

Recipes
Direct Revenue - Water
Recipes Direct - Sewage
(+/-) Adjustments - Revenue Direct
(=) Total Revenues Direct
Indirect revenues

The line adjustments, as provided above, it is possible adjustments to the accounts, with total or partial exclusion of a certain amount of revenue. In 2009 procedure, one of the regulatory decisions concerning the Meta Regulatory Loss Reduction - MRRP. This goal was implemented in order to minimize losses to the volume of water produced. For clarification, as the report, only 56% (fifty-six percent) of the volume of water produced can be billed. Therefore, by decision of Arpe, the MRRP added a percentage of 6% (six percent) per volume sold, constant measurement projected in the proposal Compesa.

The difference between the values established for the revenue and the cost of services is insufficient revenue. To obtain the value of percentage of tariff adjustments, the total cost of services revenue is subtracted indirect. This difference, in turn, is divided by the total direct revenues. This quotient is subtracted by one. Thus it has that:

Tariff revision% = {[(Service Charges - Revenues Indirect) / Income Direct] - 1}

Table 4: Flow tariff approved set - June/09 to May/10 (2009)

Proposed Tariff (R$ thousand)	Flow Revision Approved	Flow Revision Adjusted	Difference Flows
Revenue	735.041	790.225	55.184
Direct revenues	686.207	747.775	61.568
Indirect revenues	42.450	42.450	-
Adjustments - Revenue	6.384	-	(6.384)
Cost of services	790.225	790.225	-
Exploration expense	601.500	597.333	(4.167)
Depreciation and Provision / debtors	88.426	88.426	-
Compensation Recognized Investment	104.466	104.466	-
Adjustments - Expenses	(4.167)	-	4.167
Determination of value of Tariff			
(a) Total Cost - Indirect Revenues	747.775	747.775	-
(b) Direct Income	692.591	747.775	55.184
Difference (Insufficient Revenue)	55.184	-	(55.184)
Tariff Review [(a / b) - 1]%	7,97%	0,00%	

The table above sets out the amounts proposed and approved in the tariff revision for the year June 1, 2009 until May 31, 2010. The first column of figures shows the data of the report

approval, the second column shows the adjustment to the expected flow of revenues and costs of the service and the last column shows the difference between the flow and the flow adjusted approved.

To adjust the flow of revenues and costs of the tariff revision proposal and approved, we considered some modifications in the predicted values. Despite not change the total value of the group of service costs, operating expenses were adjusted by Target Efficiency loss reduction proportionately to each one. This caused a reduction of £ 4.167 million in operating expenses and the cancellation of the adjustment costs. The other service costs are unchanged. The group revenue has undergone a change in its total value. Operating revenues were increased direct adjustment of R $ 6.384 million and adjusted by the percentage of tariff revision (7.97%), so that total revenue is sufficient to cover the costs of services designed as column "Flow Adjusted revision" of the previous table. Indirect revenues did not change in their forecasts.

In a simplified view of the process, the service costs projected for next year are faced with tariff revenue service. However, revenues are based on the volume planned for next year and prices of existing tariffs (without the tariff adjustment). Projected costs are already based on estimates of future prices and quantities of resources required to perform the service. Thus, the composition and amount of the cost of service, revenue, based on values of existing tariffs, tend not to bear such costs. It is this focus of insufficiency of income that the measure of fit is established. The following figure illustrates the above comment.

Figure 1: Tax Results (ARPE, 2009)

3 RESEARCH METHODOLOGY AND DATA ANALYSIS
The methodology used to carry out this research was guided by the work of Yin (2001) and Cesar Antunes and Vidal (2010). The research studied the particular case of the regulation and, especially, the tariff process practiced between Pernambuco Sanitation Company and the Regulatory Agency of Pernambuco.

This study observed the changes undergone by the tariff and regulatory process, resulting from the application of conciliation provided for in Resolution ANEEL and standard reference ABAR. Thus, the predicted values were observed in the rate review and amounts realized during the regulatory period. The former were obtained from the forecasts made in the reports of tariff revisions and approved by the regulator. The values obtained were carried out in the financial statements and other documents in order to allow comparing with the

forecasts made in the tariff approval. Also, it was observed, through interviews, the perception of the professionals involved in this process tariff and accounting, both sanitation company as the regulatory agency.

3.1. Regulatory Environment: Arpe versus Compesa
The research studied the particular context of the regulatory environment and accounting information relating to the sanitation sector in the State of Pernambuco. The regulation of this segment is related to the negotiations between the Regulatory Agency of Pernambuco (Arpe) and Pernambuco Sanitation Company (Compesa).

3.1.1. Regulatory Agency of Pernambuco (Arpe)
The first participant was studied in this environment the Regulatory Agency of Pernambuco (Arpe). It is a special agency, linked to the Governor's Office, and is endowed with financial autonomy, budgetary, administrative and functional.

This special agency was created by Law N. 11.742, of January 14, 2000, for the purpose of providing conditions of regularity, continuity, safety, modernity, universality and reasonable rates. Among the objectives of the Agency are set, for example: (a) the promotion and zeal for technical efficiency and economy of public representatives, (b) the protection of users and operators dealers, possible market imbalances that can penalize either in order to establish a balance in the market sector, and (c) encouraging the expansion and modernization of public services delegates in order to seek its universalization and improvement of quality standards.

The powers of Arpe fixation, adjustment, revision, approval or referral to the delegated entity, tariffs, values and structures as well as the development and establishment of procedures for measuring the quality of services of the operators, conducting economic studies, accounting, financial and operating policies of any kind and, finally, the expedition resolutions, instructions and terms of conduct adjustment, including setting deadlines for the fulfillment of obligations and targets by the regulated entities. The power of regulating Arpe, in the sanitation sector, covering economic, financial, technical, operational and ombudsman.

3.1.2. Companhia Pernambucana de Saneamento (Compesa)
The second research participant was Pernambuco Sanitation Company (Compesa). It was established by State Law N. 6307, of July 29, 1971, and is a corporation, mixed, closed and authorized capital. The majority shareholder of Compesa is the State of Pernambuco, with 99.76% of total shares. The remaining percentage is divided among other organs, such as: Sudene, Diper, Municipality of Olinda, Town of Gravesend, Codevasf and others, totaling 0.24% of the shares.

According to information Compesa, it operates at 172 (one hundred seventy-two), a total of 184 (one hundred eighty-four) Municipalities and State District Fernando de Noronha. Currently, caters to all the municipal towns, with respect to water supply, covering more than one hundred (100) districts and villages and benefiting 6.1 million inhabitants (90.7% of the urban population of the state), with supply systems water, and 1.3 million inhabitants (19% of the urban population of the state), with sewage systems.

Among other purposes, the Company prepares and implements plans, programs and projects for water supply and sanitation, promoting the implementation, expansion and completion of the systems in the area of their jurisdiction. For the development of its duties, the studies

Compesa keeps current with respect to problems relating to water supply and sanitation, treats and controls the quality of drinking water and sewage effluents, and calculates operating costs and prepares studies, aimed at fixing or revision of tariffs for services of their competence, adapting them to the economic-social of State.

3.2. Collection and processing of data

In this environment, the object of study was mainly established by the inter - relationship between the process of revision of tariffs and the use of accounting information demanded for this purpose, including the analysis of the changes brought about by new accounting practices.

Were collected various data and bibliographies that addressed the process of negotiation of fees and accounting standards between these entities, through laws, resolutions, ordinances, pronouncements, guidelines, etc. The calculation of the amounts proposed in the tariff review, amounts realized during the period and other financial data and non-financial to the application of new accounting practices were obtained from financial statements, notes, technical, public documents and electronic documents, available on the websites of the organizations surveyed. To supplement and clarify various points of the review process and accounting information were made semi-structured interviews and questionnaires with professionals involved in the regulation and accounting segment studied.

As highlighted in the work of Cesar Antunes and Vidal (2010), to avoid distortions and biases in the survey, were made some triangulation of data and results. For this, we used several evidences like documents, statements, interviews and questionnaires. Triangulations have also been made to: (a) validation of selection of items to be addressed in the survey, and (b) confirm the results obtained for the realized and simulated values, as the following topics.

Some aspects of regulation and use of accounting information were observed in the regulatory frameworks of this segment, the proposals Compesa (1st and 2nd Proposal), Technical Note No. 003/2009, the Final Report of Approval 2009 (Arpe, 2009) and in the Minutes of the 1st Public Hearing Sanitation, of October 16, 2009, tariff studies for the period June 2009 to May 2010, between the Regulatory Agency and Compesa. These data were available electronically on the website of Arpe, or in some cases, were delivered by the agency itself. Likewise, we considered the Financial Statements for 2008 and 2009 Compesa, as well as the trial balances of May 2009 until May 2010, collected by the sanitation company.

The data in the Reports, Technical Notes and Proposed Tariff Review for the tariff periods 2009 and 2010, conducted by Arpe and the Compesa, were organized in spreadsheets. First, the data were established to reconcile the information gathered in the report for approval of tariff revision and the values in the financial statements using the strand disclosure prescribed in ANEEL Resolution No. 396/00. Secondly, after the reconciliation between the information provided and performed, the data were compared with the changes in accounting policies resulting from Accounting Standards, in order to establish evidence of possible differences in the reconciliation of such data.

3.2.1. Interviews, questionnaires and regulatory documents

The semi-structured interviews were conducted with the Management Accounting Compesa and Coordination Rates of Arpe, in order to understand the details of the process of tariff adjustments and the use of accounting information for regulation. In these interviews, conducted at the beginning and end of the study were discussed questions about the structure of the tariff process, the use and processing of accounting information directed to the regulation, the adoption of new accounting practices, after the change in legislation Brazilian social and possible impacts in the process of revision of tariffs.

3.2.2. Model for reconciliation between the accounting information and corporate regulatory

According to ANEEL Resolution, accounting information, both for regulatory purposes, and for corporate purposes, must be confronted, reconciled and presented, in a note, even with appropriate explanations of differences. With this purpose, the data obtained for the amounts of revenues, costs and return on investment were treated in a spreadsheet to explain the differences between the projections made at the time of tariff revision and the actual values obtained in the trial balances, as the following table.

Table 5: Flow Tariff (planned x actual) - 01/jun/09 up 31/mai/10 (Compesa, 2009)

Regulatory Statement Result (R$ thousand)	Estimate	Made	Difference
Revenue	790.225	790.964	739
Direct income	747.775	756.754	8.979
Indirect revenues	42.450	34.210	(8.240)
Cost of Services	790.225	833.482	43.257
Exploration expense	597.333	605.075	7.742
Personnel	175.399	160.312	(15.088)
Electricity	155.374	143.604	(11.770)
Outsourced services	143.350	143.550	200
Materials and Chemicals	57.568	53.269	(4.300)
Tax expenses	41.518	92.341	50.823
General Expenses	24.123	12.000	(12.123)
Depreciation and Provision f/ debtors	88.426	80.455	(7.971)
Compensation Recognized Investment	104.466	147.952	43.486
Financial losses	-	-	-
Regulatory outcome	-	(42.519)	(42.519)
Determination of value of Tariff Revision	Estimate	Made	Difference
(a) Total Cost - Indirect Revenues	747.775	799.272	51.497
(b) Direct Income	747.775	756.754	8.979
Difference (Insufficient Income)	-	42.519	42.519
Tariff Review [(a / b) - 1] %	0,00%	5,62%	

In the column "Expected" values presented were proposed and approved in the tariff revision of 2009 that in the regulatory environment, are estimated financial data and non-financial to the interval from June 2009 to May 2010, according to the flow tariff revision set (Table 5).

In the column "Held", the values obtained are presented in the balance sheets of the same accounting period. For this, we used the balance sheets May 2009, December 2009 and May 2010. In this case, considering the balance of accounts December 31, 2009, the balances were excluded from early January to the end of May 2009 and the balance accrued from 01 January to 31 May 2010. The following figure was developed in order to clarify the adaptation of the corporate calendar to schedule tariff.
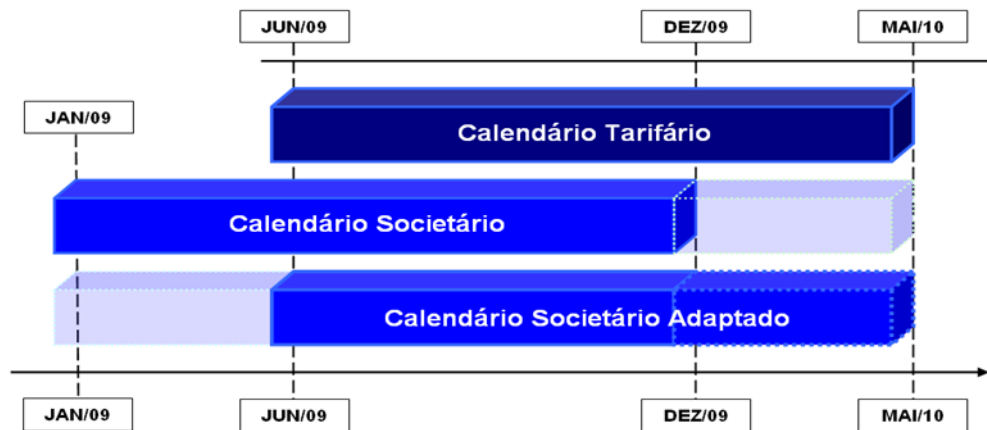
Figure 2: Adaptation of calendar

Some accounts of the column "Held" were adjusted. For determination of regulatory norm should be excluded expenses incurred through inefficiency or those not covered by the tariff review process, such as interest expense and penalties on late payment and income/expenses not related to the financial operations of the company.

In an interview with both parties, regulated and regulator were agreed deleting some accounts. Regarding the character of inefficiency, were excluded amounts related to Overtime (Personnel Expenses) Interest Expenditure and Late fees (Other Expenses) and the Compensation for Damage to Third Parties (Other Expenses). Regarding the character of no coverage or not permission rules, revenues/expenses not related to the service were excluded, as well as other operating income/expenses not covered by the legal regulatory framework, as income from Rents, Recovery of Expenses and Losses Several.

By the nature tariff, the expected value of revenue and service costs must be matched. Thus, all operating expenses, depreciation, allowance for doubtful accounts, and even the cost of investment return should be covered by the revenue service. Therefore, the column "Laid" result presents a tariff equal to zero, in which the flows of revenues and costs vanish. However, in the "Accomplished", the result tariff increase for the period showed a lack of revenue. This may indicate that even with the adjustment provided for in the tariff review, there was an underestimation of the rate revision. The last line of the table above shows the percentage of increase to direct revenues to effectively cover the costs of the service performed in the exercise tariff.

Among the costs of the service, stood out tax expenditures and the costs of investment return recognized. Unlike other operating expenses, which showed a decrease compared to the

predicted value, tax expenses increased by R$ 50,823 thousand, an increase in proportion of 122% compared to the predicted value.

Only deductions the PIS/COFINS due billing in the period was R$ 73,001 thousand. Other taxes, such as property tax, income tax and social, showed a value of R $ 19,341 thousand. The sum of the total tax would be $ 92.34 million, this tariff period. Despite the request Compesa R $ 33 million, the Arpe increased this prediction to R $ 41,808 thousand, as tariff revision 2009. In the Financial Statements 2008 and 2009 Compesa, deductions and tax expenses have totaled a value higher than anticipated for the tariff study. In 2008, for example, deductions from income, the PIS/COFINS, already had a value of £ 60.59 million and tax expenses, income tax and social contribution totaled R$ 6,105 thousand. In 2009, deductions were £ 68,888,000 and expenses were totaled R$ 20,033 thousand. Thus, tax expenditures were worth U.S. $ 66.695 million in 2008 and R$ 88,921 thousand in 2009.

Table 6: Detailing of tax expenditure

Description	2008	2009
PIS/COFINS (deduction)	60.590	68.888
Tax expenses	4.544	8.305
Income tax/social contribution	1.561	11.728
Total (Tax Expenses)	66.695	88.921

The return on investment was treated in a spreadsheet to illustrate the values recorded in the financial statements, as the following table.

Table 7: Details of the return on investment – May/2010 (Compesa, 2009)

Recognised Investment (R$ thousand)	Estimate	Made	Difference
1 - Technical Fixed	1.194.592	1.589.210	394.618
2 - Accumulated depreciation	(408.303)	(442.712)	(34.409)
3 - Movement of Capital	142.294	168.633	26.339
Available	14.240	17.198	2.958
Accounts Receivable	117.966	131.827	13.861
Stock Materials for Op. and Maintenance	10.088	19.607	9.519
4 - Value of Investment Recognized (1+2+3)	928.583	1.315.131	386.548
5 - Rate of return on investment	11,25%	11,25%	-
Investment return recognized (4 x 5)	104.466	147.952	43.486

Data from the investment recognized were obtained in trial balances Compesa and obeyed the limits prescribed in the regulatory normative. There was an increase of 42% to the predicted value for the investment return recognized. The Technical Fixed Accumulated depreciation were taken and the values of assets in operation and Accumulated Depreciation balance sheet in May 2010 and varied between 33% and 8%, respectively. In relation to the predicted values were incorporated U.S. $ 394.618 million to property Compesa. The capital movement was

obtained by the sum of the Available, Accounts Receivable and Inventories. The available amount was withdrawn from accounts in Cash and Banks. The value of accounts receivable shown on the balance sheet was the only higher than the regulatory limit and, therefore, was restricted to twice the average monthly billing period. The value of stocks was taken from the average balance of the balance sheets of May 2009, December 2009 and May 2010.

The confrontation between the regulatory and corporate environments allowed in terms of absolute values, check the difference between the percentage of tariff revision requested and the percentage needed to cover the costs of the service actually occurred during the period.

The reconciliation between the predicted values (approved), and amounts realized during the tariff period could be presented as follows:

Table 8: Reconciliation of Income and Corporate Regulatory (2009)

Reconciliation of Results – 01/jun/2010 until 31/mai/2010	
Service Revenues	**R$thousand**
Expected revenues	790.225
(+)Increase in revenue realization Direct	8.979
(-)Decrease in revenue realization indirect	(8.240)
Service Revenue	790.964
Service costs	**R$ th**
Expected costs	790.225
(+) Increase the achievement of operating expenses	7.742
(-) Decrease in carrying out depreciation and PDD	(7.971)
(+) Increase in assessing the return on investment	43.486
Service Cost Realized	833.482
Result Regulatory Service Held	**(42.519)**
Adjustments to other income / expenses not included in the regulatory basis	79.937
(-) Charges excluded by inefficiency (regulatory consideration)	(12.291)
(- / +) Income / Expenses excluded by regulatory impediment	(15.311)
(- / +) Expenses / income not dealt with in the regulatory	(40.413)
(+) Reversal of cost of investment return	147.952
Adjusted profit for the period (Corporate Base)	**37.419**

Observing the regulatory basis, expected revenues ranged 0.09% over the amount realized. During the period, despite the increase in direct revenues of US. $ 8.979 million, a reduction of £ 8.24 million worth of indirect revenue. In addition, service costs have been underestimated. Despite the decrease in depreciation and allowance for doubtful accounts, were additions to operating costs and to pay the costs of the investment. Such events of revenues and costs of the service caused an outcome regulatory negative R $ 42,519 thousand.

For reconciliation purposes the corporate basis, adjustments were made after the determination of income tariff. According to the regulatory standards, in determining the results were excluded from the cost of inefficiency character, as the cost of overtime, with interest and penalties and compensation for damages to third parties. Also included were the costs/revenues for financial regulatory impediment and other operating income/expenses not

included (Recipes Rents, Recovery of expenses and losses other). Before the determination of net income for the period, the increase was related to the reversal of the cost of investment return recognized, since, in its essence, this cost is the opportunity cost and is not covered by corporate law.

Accounting information permeate the tariff review process to support the calculations projection service costs with historical data consumption (forecast operating expenditure) and mainly with the evaluation of balances of equity accounts (for measurement of recognized investment) as Technical Notes and Proposed Tariff Review 2009. The accounting information from the reconciliation, also allowed the observation of differences between projected amounts and the amounts actually incurred for the year tariff and allowed to proceed some comments on these differences, transpiring accounting information based on regulatory and corporate basis.

4 CONSLUSION

The research was motivated by the potential implications of disclosure under regulatory originated by the reconciliation of accounting information for regulatory purposes and for corporate purposes, based on the rate review process. This model allowed the observation of the differences between proposed and realized values.

By adopting the precepts of Technical Pronouncements, ANEEL Resolution No. 396/10 and Decree No. 18.251/94 State PE was possible to observe the convergences and divergences of criteria of accounting information for corporate purposes and for purposes of regulation. Under regulatory accounting information would serve to guide the proposed revision of tariffs and confront the values proposed with the regulatory outcome in the period. The study of corporate base allowed the understanding of the application of new accounting practices established in the technical pronouncements, and their implications for regulatory result held for the tariff period. The reconciliation of basic corporate and regulatory basis, showed differences in the assessment of revenues, expenses, assets and costs.

The normative regulatory studied did not spoke about the adequacy of the new accounting practices, included in Accounting Standards and the Corporate Laws 6.404/76, 11.638/07 and 11.941/09. Despite subsequent changes in regulatory norms, no upgrading, according to the new corporate law, for the composition of values and accounts that permeate the tariff review process.

It was observed that the lack of a normative framework of accounting regulation and the lack of alignment in knowledge about regulation and corporate law, by the professionals involved with the environment studied, does not necessarily represent a barrier to new accounting practices, but could bring asymmetry or lack of clarity between the accounting information for corporate purposes and for regulatory purposes, as well as possible impacts on the values established for the review of fees charged to the company.

The provisions in the Resolution ANEEL and the standard reference ABAR determined reconciling accounting information for corporate purposes and for regulatory purposes, including with respect to the disclosure of this reconciliation in the notes attached to the financial statements. This aspect allowed us to observe possible implications of compliance with new accounting standards and the need to segment studied to regulate such practices in

order to ensure that the values adopted represent its economic essence, minimize the asymmetries of financial reporting and transparency to enable better tariff review process.

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SIMPLIFICATION OF INTERNET SERVICES IN THE KNOWLEDGE SOCIETY

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ABSTRACT

For several years, observable are processes of simplifying IT systems and collectivization of network services. An example is the simplification of Linux operating system, which in first versions from clumsy, based on the command line and virtually devoid of the graphical elements evolved towards an open and user friendly operating system. The same applies to the posting of data on the Internet - work in cloud computing, building web pages. In addition, it is difficult not to agree with the fact that information is now one of the key consumer goods, and dynamic scientific and technological development in the twenty-first century civilization fosters referred to as a knowledge society.
These considerations seem to indicate an increase simplification of communication systems and collective web services with the idea of the knowledge society. Undoubtedly, this issue deserves deeper consideration, and this article is a contribution to reflect on the issue of dissemination and simplify the network in the perspective of the knowledge society.
Reflection locates on the border of sociology , economics and computer science.

Keywords: *simplification, internet services, knowledge society.*

1 INTRODUCTION

Jürgen Habermas noted that each generation stands on the shoulders of the previous generation, and with the passage of time accumulates resource of scientific and technical measures (1983b, p. 423). What's more: "the direction of technological progress today is largely determined by social interests yet to emerge naturally from the need to reproduce social life and as such are not subject to reflection or self-understanding confronted with the declared political groups. Therefore, the new technical skills suddenly penetrate the existing forms of practical life" (Habermas, 1983a, pp. 367-368). Cited above the thought of Habermas clearly shows the importance of technological development and its cumulative nature. It should also be noted that subsequent inventions and new technical solutions are used to facilitate human functioning in the new reality, and their development is dominated by the needs of the people, or more precisely, their interests. This thought is a smooth transition to the theme of simplification of computer systems and network services in the society of information/knowledge .

2 THE IMPORTANCE OF INFORMATION. THE DIFFERENCE BETWEEN THE INFORMATION SOCIETY AND THE KNOWLEDGE SOCIETY

History of the socio-economic thought includes a wide variety of theories of social change. Among them is an interesting proposal of modernization theory, which shows the transition from a traditional to a modern society. The clearly illustrates the cycle of modernization comprising the following steps of evolution of human communities:

- traditional society (pre-industrial);
- semi-industrialized society;
- industrial society (modern);
- post-industrial society (postmodern);
- Information Society (postmodern) (cf. Krzysztofek, Szczepański 2002, p. 36).

The information society is not only the result of profound social structure, but also the rapid technological development. In contemporary society, neither important in the economy Frederick W. Taylor's determination (intensification of work on the effective use of time and minimize costs; the engagement time worker of his wage), nor the transition from Fordism (multisession mass production of standard components based on the technology of the production line) to post-Fordism (transition towards flexible specialization providing product differentiation) turns out to be insufficient for the needs of a modern economy and the world. In Western society there has been a clear shift away from industrial production, which seems to be a harbinger of the end of industrialism (cf. Dobrowolski, 2006, p. 11). Currently, you can not talk about simple logical connection - information leads to knowledge, and knowledge to cognition - because it combines information from a network of heterogeneous knowledge relationships that no longer serve cognition (as was the case in the classical idea of science), but try to meet the expectations of market (Ibidem, p. 10). Today, information has become one of the key consumer goods, and dynamic scientific and technological development in the twenty-first century civilization fosters referred to as a knowledge society. The importance of information even more stress appearing assertion that everything that exists in the world can be reduced to information (cf. Jacyna-Onyszkiewicz, 2002, 2013). In such a vision information becomes the highest value and the ability of its discovery, selection, interpretation, evaluation, application or processing (Jaskuła, 2009, p. 183). Currently, these activities have become almost a requirement because, as noted by Grzegorz Kołodko, saturated data broadcasting time, acres of paper as well as the vastness of the Internet is often filled by the content of insignificant value (Kołodko, 2009, p. 12).

However, a distinction should be made aware of the information society of the knowledge society, which takes the German sociologist Ulrich Beck. Information society puts on a pedestal goal of building the information infrastructure. In this type of society, it is important to continuously update the ownership information resource, because it is not based on it is possible to navigate the slippery surface of the modern world. The most important is access to information, and who possesses it has the power. In turn, the knowledge society is an alternative to that outlined above vision. While universal access to information and the development of information technology will accelerate the development of the information society, with so much knowledge can be used in the opposite direction - to maintain the *status quo* (cf. Dobrowolski, 2006, pp. 23-25).

3 THE PROCESS OF SIMPLIFICATION OF IT SYSTEMS AND NETWORK COLLECTIVES - SELECTED EMPIRICAL EXAMPLES

The development of the information economy, about which among others wrote Manuel Castells, runs along the plane of the commercial, financial, organizational, business and labor (Stalder, 2012, p. 76). Castells also speaks about capitalism information, which consists of: global reach, network structure and the nature of the information (Ibidem, p. 76). At this point I would like to explain this network structure, to be more precisely, further reflection will refer to the process of simplification, and thus simplify IT systems and network services. The analysis below includes some examples of empirical evolution of solutions to the IT industry with at first was "clumsy" and "dedicated exclusively for professionals" towards "user-friendly graphics solutions."

(1) The first case concerns the evolution of the Linux operating system, which underwent a complete transformation of the system of the text-based command line (terminal) to the rich in complex visual effects functional system. Similar transition took place also in the

production of Microsoft Windows, but there work in text mode (MS-DOS) lasted a relatively short time, Windows 95/98/2000/ME constituted a hidden sub-system, and in the distribution of Windows XP its dimension was rudimentary to the entire system. What's more, the evolution of Linux is so interesting that in the public consciousness still appears stereotypical belief that Linux is not for everyone and you have to be a computer scientist to be able to deal with it.

The origins of the system associated with the project Unix (then called Unics) which was established in 1969, when AT&T Bell Labs by a team composed of Dennis Ritchie, Ken Thompson, Rudd Canaday and several other developers[1]. K. Thomson and D. Ritchie for the first time presented a project for Unix Systems Symposium on Operating Principles in Purdue University in November 1973[2]. However, the real system Linux was created in 1991 with the work of the Finnish science Linus Torvalds who developed the system kernel[3]. In time Linux has become a full-scale operating system based on the text interface. Without knowing the syntax was not possible to operate the system. In addition, you have to know the principle of operation of the software, because in case of failure of software programs do not „tell" what's the problem. In the initial phase of development of the whole world of the IT system was designed for enthusiasts rather than unrelated to this industry of ordinary people.

Figure 1. The command line (terminal) on Linux. The first distributions have only a text interface. Retrieved 04.01.2014 from http://www.linuxforu.com/wp-content/uploads/2010/12/figure_5_linux_module_operations.png.

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1   *Unix/Linux* history. Retrieved 04.01.2014 from https://digital-domain.net/lug/unix-linux-history.html.
2   McKusick M.K., *Twenty Years of Berkeley Unix. From AT&T-Owned to Freely Redistributable*. Retrieved 04.01.2014 from http://oreilly.com/catalog/opensources/book/kirkmck.html.
    This article based on: DiBona Ch., Ockman S., Stone M., *Open Sources. Voices from the Open Source Revolution*. January 1999.
3   *Introduction to Linux*. Retrieved 04.01.2014 from http://www.tldp.org/LDP/intro-linux/html/sect_01_01.html.

Really big change was the introduction of Graphical User Interface (GUI), which allows Linux has become more accessible to novice users. The first work began to Unix in 1984 at the Massachusetts Institute of Technology (MIT) - a project of X-Window. Then, in 1996, work started on KDE (Figure 2), while in 1997 the Gnome and Xfce.
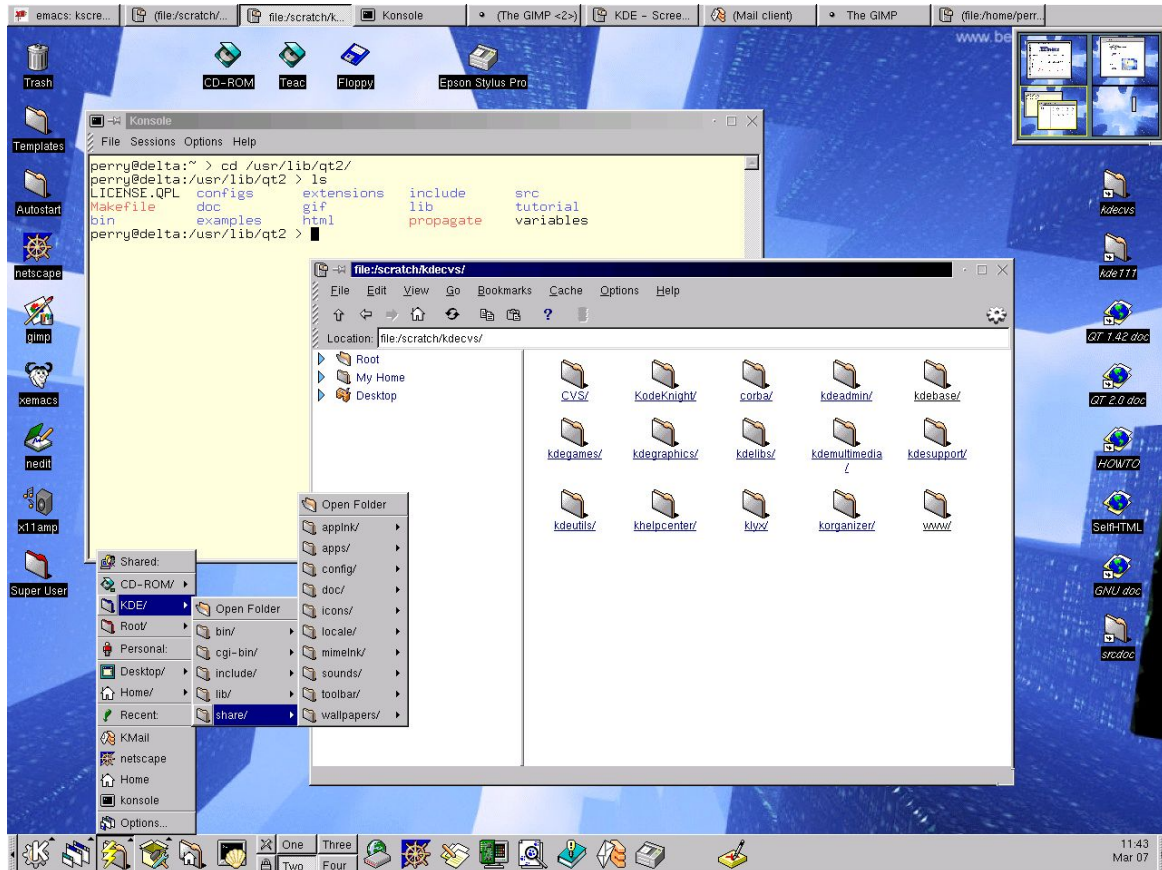
Figure 2. First KDE GUI v1.0 (1998). Retrieved 04.01.2014 from http://sumolari.com/wp-content/uploads/2009/08/KDE_1.0.jpg.

Subsequent editions of Linux distributions are increasingly filled with graphic elements and mechanisms to facilitate the user to operate the system. You can even say that the operating system started to operate in the background while the user only plane on which he can work. Transparency of the system allowed the user to redirect energy to work using their own tools (programs). This is undoubtedly good progress. Modern operating systems to the maximum extent focused on the user (generally for the novice user), because it does not require the knowledge of IT. The system is designed so that after installing a package of essential utilities, so that you can immediately use its features to the fullest. In addition, the deployment of applications and features are intuitive, and most of the processes running in the background (without the user's knowledge). It looks aesthetically pleasing and functional. However, more advanced users would expect the possibility of interference with the "subcutaneous" the system[4].

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4   Linux gives you the opportunity, mainly because of the open source license (GNU/GPL). Unfortunately, this issue belongs to the minority of operating systems.

(2) Also downloading and uploading data on the Internet has been simplified. It is based on Cloud Computing technology, which is a "model allows versatile, convenient, on-demand network access to a shared pool of configurable computing resources (...), which can quickly provide and share with minimal effort in terms of management or with minimal interaction service provider "1 The entire burden of providing IT services is here transferred to the server, which allows continuous access to data by client computers[5]. The entire burden of providing IT services is here transferred to the server, which allows continuous access to data by client computers[6]. The architecture of Cloud Computing presents the picture below (*Figure 3*).
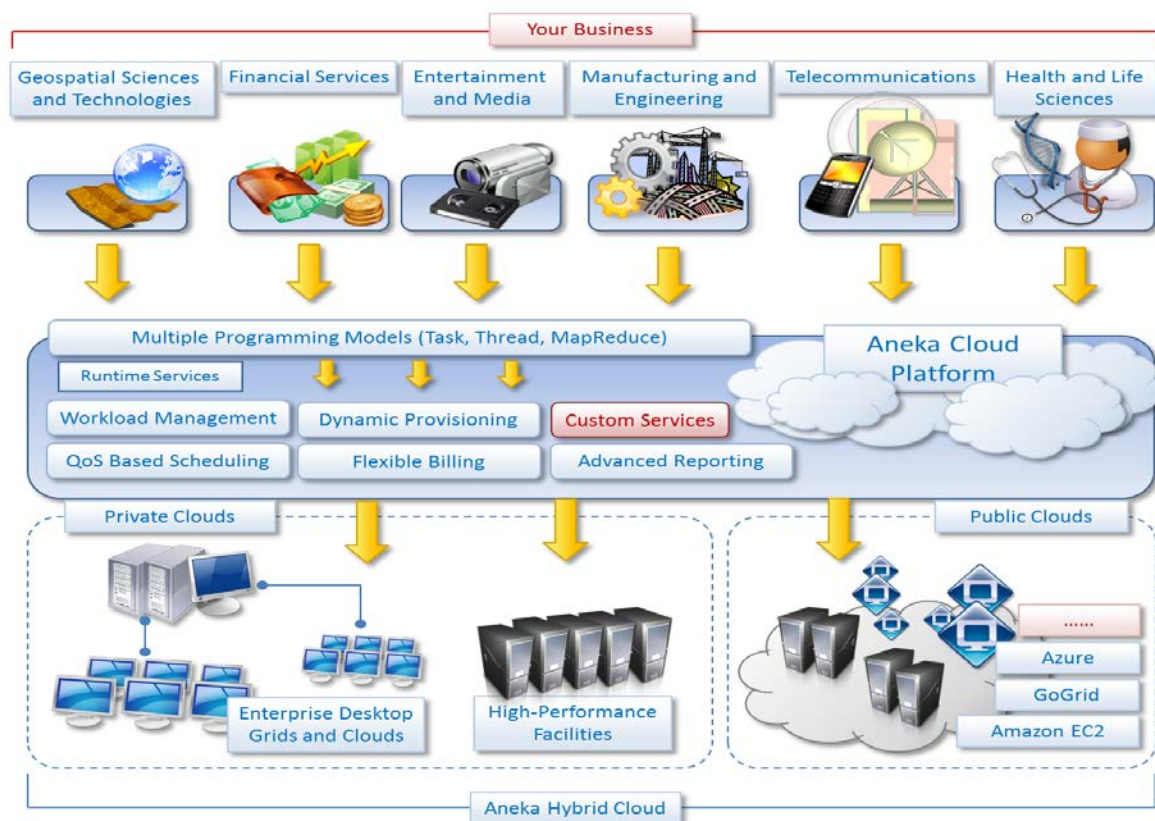
Figure 3. The architecture of Cloud Computing. Retrieved 04.01.2014 from
http://www.manjrasoft.com/images/aneka_cloud_computing_schema.png.

(3) Combined with the above issue is to build websites. Initially required a knowledge of HTML (HyperText Markup Language) (*Figure 4*) and knowledge about the web browser and operating system users to adjust the code page to display hardware capabilities by users.

Currently, in order to build a website and put it on the Internet does not need to be a computer scientist. This can be done for each user using simple tools such as Wordpress even. Literally just a few clicks arises site design, and you can also use ready-made templates. The whole encoding process is invisible to the user.

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5 NIST (2009), Krajowy Instytut Standaryzacji i Technologii w Stanach Zjednoczonych; by: Komunikat Komisji do Parlamentu Europejskiego, Rady, Europejskiego Komitetu Ekonomiczno-Społecznego i Komitetu Regionów pt. *Wykorzystanie potencjału chmury obliczeniowej w Europie* from day 27.09.2012, p. 3, note 5.

6 cf. *SmartCloud Enterprise. Moc obliczeniowa na żądanie.* Retrieved 04.01.2014 from http://www-05.ibm.com/pl/cloud/.

```
01  <!--html code starts here -->
02  <html>
03  <head>
04      <title>Video Library </title>
05  </head>
06
07  <body bgcolor="#DEDEDE">
08
09  <div align="center">
10  <h2>Media Streaming : Video Library Project</h2>
11  <h3>If you are viewing videos from this collection
12      for the first time, please download
13      <a href="http://localhost/videofiles/StreamingMediaPlayer.msi">
14      Streaming Media Player</a>
15  <br />
16  <a href="ums:\\TCP:localhost:5119\videofiles\hrm.mpg">
17  Introduction Human Resource Management</a>
18  </h3></div>
19  </body> </html>
20  <!--html code ends here -->
```

Figure 4. HTML code fragment. Retrieved 04.01.2014 from
http://wiki.greenstone.org/lib/exe/fetch.php?cache=&media=en:html_code.jpg.

4 CONCLUSION

Nowadays, the importance of technology is so pervasive that you can say by M. Castells about the phenomenon of techno-meritocracy. It is characterized by several distinguishing features. Firstly, technical discovery related to the programming of computers in a networked environment is considered to be the highest value. Secondly, it just expertise used to improve the technical work. This means nothing less than the devaluation of knowledge *per se* and its instrumentalization. Rating technical discovery depends on community members, professionals in the field of network and the Internet. Project coordinators are appointed by the authorities, which also have control over the resources (basically hardware). Members of the community can not use the network only for the personal benefit (excluding the development of their own, which is treated in terms of the common good). However, the most important feature of techno-meritocracy in terms of Castells is open to the transmission of the software and any improvements identified through networking. Without this openness of the community would be completely only individual projects, taking care of special interests and intensifying competition (cf. Castells, 2003, pp. 50-51) .

Putting together the two above outlined areas - the importance of information and the simplification - it can be concluded that in the modern society, the emphasis has not been placed on extensive knowledge, or the ability of critical and logical thinking. This, what is currently important is the ability to use information and the ability to make use of modern technology. At the same time the information is reduced to a kind of "already digested slurry" (unfortunately not by the user), which instead of user generate simplified services of the IT industry.

To paraphrase McLuhan aphorism that the medium is the message Castells proposes a new look - the network is the message. In this vision of the network is understood specifically as a higher way of organizing social action, regardless of its purpose (Stalder, 2012, p. 38).

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5. *Figure 1. Linia komend (terminal) w systemie Linux. Pierwsze dystrybucje miały wyłącznie tekstowy interface. Retrieved 04.01.2014 from http://www.linuxforu.com/wp-content/uploads/2010/12/figure_5_linux_module_operations.png.*
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19. *SmartCloud Enterprise. Moc obliczeniowa na żądanie*. Retrieved 04.01.2014 from http://www-05.ibm.com/pl/cloud/.
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THE EFFECT OF NET FOREIGN ASSETS ON SAVING RATE

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ABSTRACT
Observing empirical data we find that many countries try to delay the decision of increasing saving rate in order to avoid a decrease of the living standards. However the delay leads a deterioration of countries financial stability.
We present a simple theoretical model that connects between countries' saving rate and their net foreign assets. Using cross section data set of 135 countries in 2010 we estimated the econometric relation between saving rate in 2010 as dependent variable and two explanatory variables: the current account in 2010 and the aggregated current account during 1980-2010. Our findings show that industrial countries in a bad financial state tend to decrease their saving rate as external debt is larger causing to deterioration in external debt while countries with good financial state tend to increase their saving rate and the tendency increase as financial state becomes better. Only in countries with a very large external debt saving rate tends to grow. The results point that gross foreign debt will keep increasing and will worsen world financial state causing increased risk of getting into a world crisis.

1 INTRODUCTION

Basic economic theory claims that capital will flow from countries with low marginal product of capital into countries with high marginal product (or from developed countries with high per-capita level of capital into developing countries with low per-capita level of capital).

However, according to Eswar, Raghuram, & Arvind, (2007) stylizes facts shows that in contrast to the neoclassical theory capital is not flowing from rich to poor countries, on the contrary, in the years previous to 2007 it seems that capital makes the opposite movement. In addition one would expect flow of capital, to fastest growing developing countries, in greater intensity then to countries with low growth rate. As it turns out according to Eswar et al., these are not the facts. Particularly, China, the fastest growing developing country, runs a surplus in its current account for the previous years to 2004. During the years 2000 to 2004 high growth countries exported significant amount of capital while the low growth countries received a significant amount. Moreover, looking at the correlation between long run growth in nonindustrial countries and the current account balance they reveal a positive correlation (not negative as one would expect). The explanation the researcher offer is that poor countries do not have the financial system that can easily absorb and ramp investment up substantially. Secondly, domestic saving is growing substantially in poor countries that are growing rapidly because it takes a while until households respond in rising consumption to the rising income**.** Gruber and Kamin (2007) tried to explain the large surpluses in Asia's current accounts and the large deficit in U.S. current accounts in the years previous to 2007. Estimating a regression model that includes classical explanatory variables identified in the literature (per capita income, output growth, fiscal balances, net foreign assets and economic openness) they got poor regression result. After adding the financial crisis's as an explanatory variables it largely improved the explanation to the emergence of developing Asia's current account surpluses. However they failed to explain why those Asians' surpluses ended up mainly in U.S deficit rather than being spread more evenly throughout the world. Ferrucci and Miralles (2007) examined the drivers of private savings behavior in a panel of developed and developing economies. They emphasized the dynamics allowing separation between short run

adjustment and long run equilibrium markets. The researchers estimated the short run private saving rate compared with that of the long term in emerging economies and in developed economies. The results shows that private saving rate in the short run, in emerging economies, shifted up from the long run equilibrium, particularly in Asia. The researchers relate this short run movement to demographic factors and financial catching-up. Moreover, they suggested that looking ahead and adjusting to long run will cause a considerable fall in saving in those countries and that further progress in financial deepening will smooth saving rate among countries in the global economy. In developed countries, however, private saving in the short run is bellow long run equilibrium Chinn and Ito (2008) investigated the factors influencing current account and saving rate with an aim to explain the world saving glut. They found that government budget balances play an important role in the determination of current account balances. Sun (2011) examined empirically the differences of private savings in developing countries and its impact on current account balances. He found that economic growth is accompanied with structural changes in productivity and in job reallocations, which in turn affect private savings. According to Sun, different growth patterns of economic sectors create new income and employment distributions. High productivity creates large wage variation across industries and sectors therefore raises saving, while faster employment growth moves labor from low income sectors to high income sectors therefore reduce saving.

Apart from the papers mentioned above, the existing literature suggested many factors that might explain the level of savings, among them: financial development, demographic differences and the pension system (see Masson, Bayoumi and Samiei (1998), Loayza, Schmidt-Hebbel and Serven (2000).

We suppose that the changes in countries' saving rates are the most dominant factors in determining current accounts and that getting into financial instability might be a signal for policy makers to take steps in order to stabilize the economy. Our aim in this paper is to examine the effect of financial stability determined by aggregated level of current accounts in past 30 years and current account in present period on saving rate of 135 developed and developing countries.

The paper is organized in the following manner. A theoretical analysis of how current account effect steady state equilibrium within a Solow's' model is laid down in section II. An empirical estimation of the relation between saving rate and financial stability indicators is presented in section III. Section IV presents the summary.

2 THEORETICAL ANALYSIS

According to Solow (1956) the condition for long term steady state growth equilibrium is:

$$(1) \qquad sY = (n+d)k \,,$$

For: s – saving rate, $Y = f(k)$ – per capita production, d – depreciation rate and k – Per capita amount of capital.

When the economy is open to trade and to capital movements, we get that in equilibrium:-

$$(2) \qquad I = S + IM - EX$$

For: I – Total net investment, S Total savings, EX – Total export and IM – Total import.

Let us define: $S_{net} = S + IM - EX$ and:

$$(3) \qquad s_{net} = \frac{S + IM - EX}{Y}$$

s_{net} - represent net saving rate in open economy.

In open economy equilibrium condition will be changed into:

$$(4) \qquad s_{net}Y = (n+d)k \ .$$

In order to present the effect of opening economies to trade and to capital movements, let us consider 2 countries with equal production function, equal population growth rate and equal depreciation rate. The only factor differentiating the countries is saving rate which is assumed to be higher in country 2.
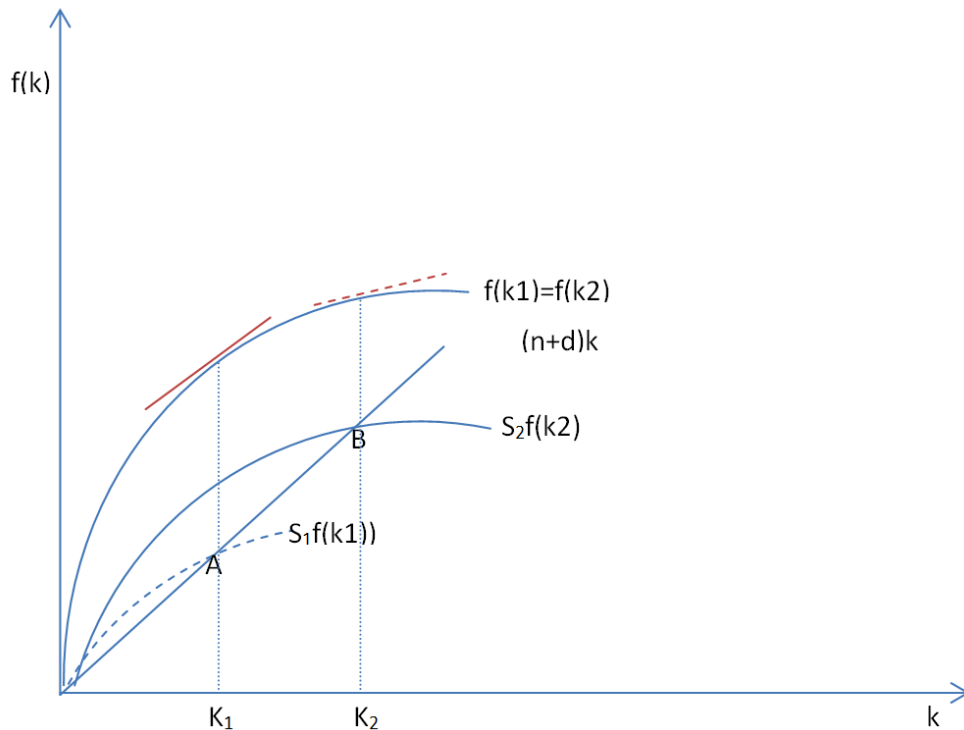
Figure 1: Presents long term equilibrium for each of the countries for economies that are closed to capital movements and to trade.

The dashed line represents the saving curve of the country with the lower saving rate.

Equilibrium of capital per-capita is lower in country 1 and marginal product of capital is higher - $f'(k_2) < f'(k_1)$ (see red line slope).

When economies are open to capital and goods movements, we expect that capital will flow from country 2 into country 1 and will seas flowing when marginal production in both countries will be equal.

The new equilibrium is depicted in figure 2 below:
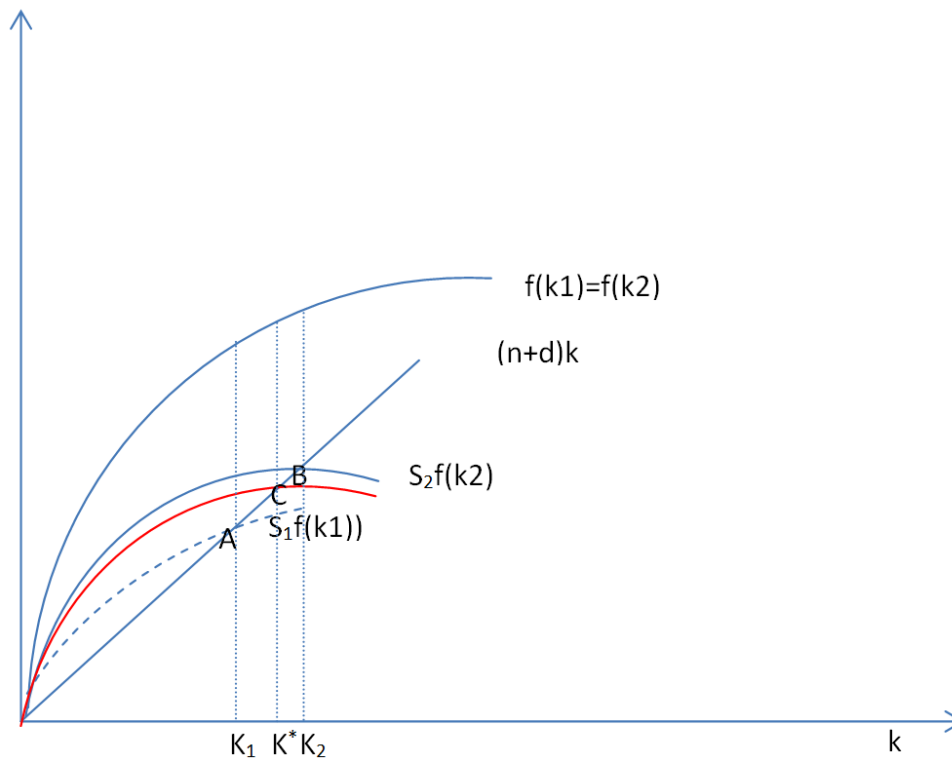
Figure 2 New equilibrium

Both economies will converge to point C with equal long run capital - K^* and equal product per-capita.

We should notice that country 1 will have negative trade balance while country 2 will have positive trade balance. Given that each country persist with the same savings rate, population growth, depreciation rate and production function, the net deficit in foreign asset of country 1 and the net positive foreign asset of country 2 will persist to grow.

What will stop foreign debt from growing?
When the foreign debt grows, countries' financial state is perceived as more dangerous by other countries. At the first stage interest rate on foreign loans rise, a process that might increase local savings while decreasing local investment, causing improvement in trade balance and slowing the growth rate of foreign debt. In some countries the rise of interest rate might not stop local consumption and the deterioration of countries financial state. Under such conditions, foreign global organizations such as the "world bank"," international monetary fund" or other institutions or friendly governments will suggest financial aid that generally include a new proper economic program for decreasing local consumption while increasing local savings.

If the process described above characterize reality we expect that as long as foreign debt is low, a country has the freedom of decreasing savings without decreasing private consumption and net investment. However, when foreign debt increases above a given threshold, the country will be perceived as financially instable and will be expected to increase savings

while decreasing consumption and investment. Local saving rate is expected to be determined as a positive function of countries' external debt per capita.

The connection between external debt and the saving rate
If a country that has a large external debt accompanied by trade balance deficit starts increasing saving rate it can move to an acceptable level of external debt per capita. Given that the country is initially at point C (figure 2), capital and production per capita should not change following the increase in gross savings, however consumption should be reduced, trade balance will improve and investment stay constant.

Reduction in net investment might occur when a country is perceived as financially more dangerous. Higher risk pushes the local interest rate up leading to higher marginal product of capital and lower amount of capital per capita.

Figure 3 and figure 4 present a country with initial long term equilibrium of capital per capita in point C. Savings rate, S_1, determines a large negative trade balance and high consumption level ($CONS_1$).

The country can persist with the low saving rate as long as external debt is at an acceptable level.

However, when the external debt is crossing a given level, the country is forced to increase saving rate (see figure 4). The increase in savings is accompanied with consumption reduction to $Cons^1_1$ (see figure 3).
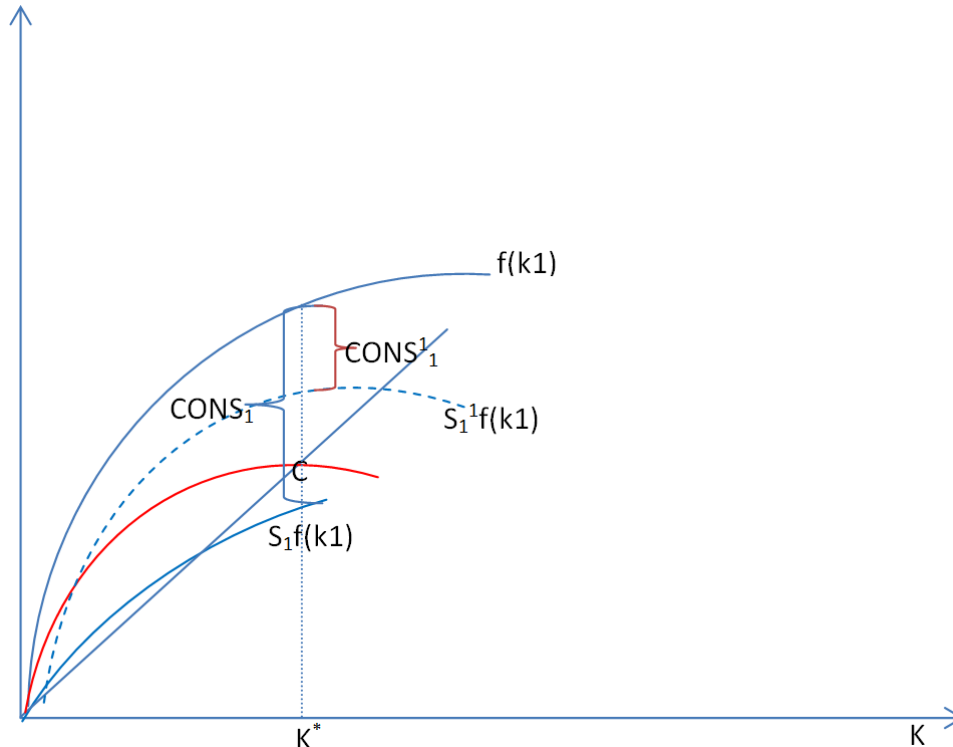
Figure 3 The increase in savings accompanied with consumption reduction
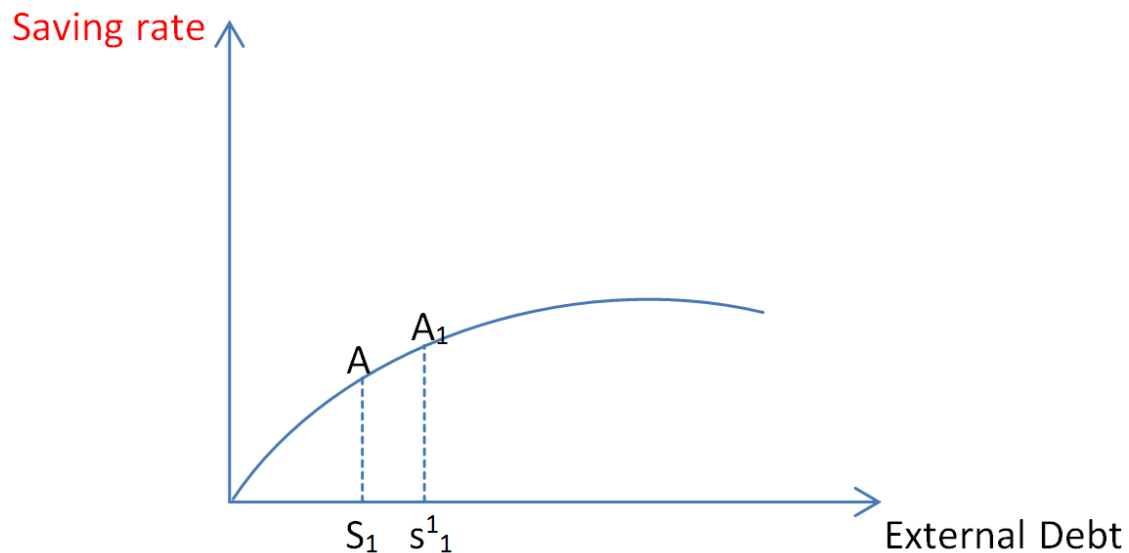
Figure 4 The external debt crossing a given level - the country forced to increase saving rate

Should a country create external debt?

A country with a low saving rate reaches a low equilibrium level of capital when trade balance is balanced. Starting at point A in figure 1 the country can move instantly to point C by creating a trade balance deficit. In point C capital level, production and private consumption grow, together with foreign debt. As long as foreign debt is low, gross saving rate can persist to be low.

However as foreign debt crosses a given threshold, the country is forced to increase its gross saving rate and reduce consumption.

One can think of situations where creation of a large external debt is worthy, especially if the debtors agree to give up some of the debt as part of a rescue plan that include decrease in consumption and increased savings in the borrowing country.

How should we define countries' financial state?

At first, we thought that the most obvious variable to represent financial risk is net foreign assets. However after examining data published by the "world bank" we were surprised to reveal that the aggregate net foreign assets of all countries sum into a huge amount of over 13,000 billion American dollars in 2010. This contradicts the common knowledge that aggregate net foreign assets of all countries must be summed to zero, since a positive net foreign asset in one country should be accompanied by a negative net foreign asset of the same amount in other countries. It is well known that such odd results occur when definitions of variables according to statistical agencies that are responsible for collecting the data differ from classical economic definitions. Since worlds bank definition of foreign net assets do not include investment in real estate assets abroad or other capital movement, we get that aggregate net foreign assets differ largely from zero.

In figure 5 we depicted the connection between gross saving rate and the net foreign assets rate (from GDP) for 135 countries in 2010.
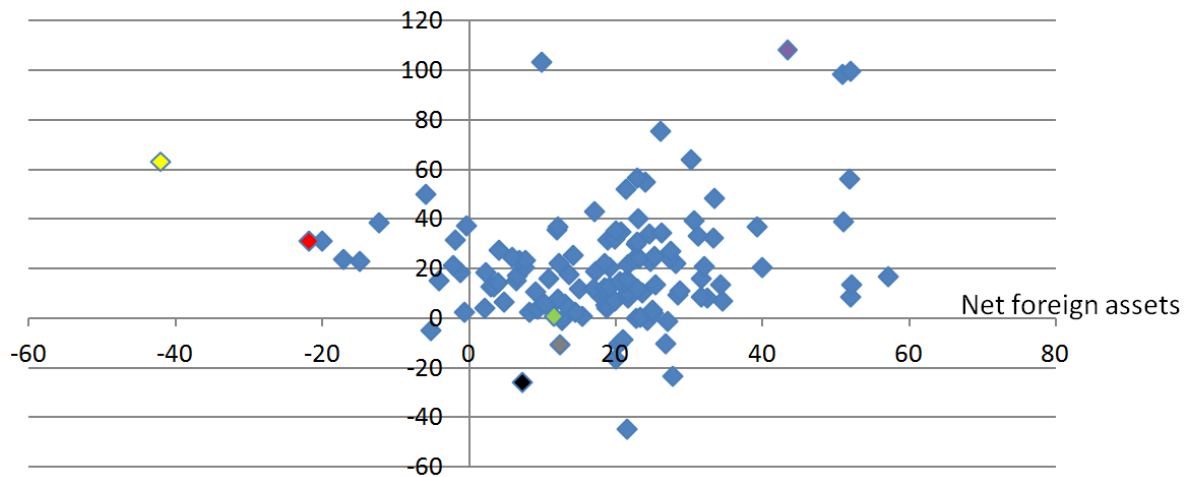
Legend: Yellow: Lesoto; Red: Afganistan; Green: U.S.A; Purple: South Arabia; Black: Greece; Gray: Portugal

Figure 5: Saving rate and the foreign assets rate

We can see that for a vast majority of the countries, net foreign assets rate is positive and only in 13 out of 135 countries it is negative (See in appendix 2 the gross saving rate and net foreign assets rate for all 135 countries). We do not intend to get here into an argument of why world bank data on net foreign assets do not represent countries financial risk, but preffer to search for a better risk indicator.

Alternative indicator for financial stability

If we would measure correctly all capital movements in each year, net foreign assets in period t should equal to the aggregated current accounts that starts in period 0 and ends at period t. Equation (5) defines the connection between net foreign assets and current account.

$$(5) \quad NFT_T = NFT_0 + \sum_{t=1}^{T} CA_t$$

For:

NFT_t - net foreign asset in period t

CA_t - Current account in period t.

We can see that aggregation of current account for a long enough period of time can be a good indicator for the total net foreign assets of a country.

Using IMF data of Current account ratio to GDP (CA ratio) we calculated for each country the aggregated CA ratios for the period 1980-2010.

Figure 6 presents the connection between aggregated Current account ratio DURING 1980-2010 and Gross Savings ratio to GDP in 2010 (see data in appendix 1).
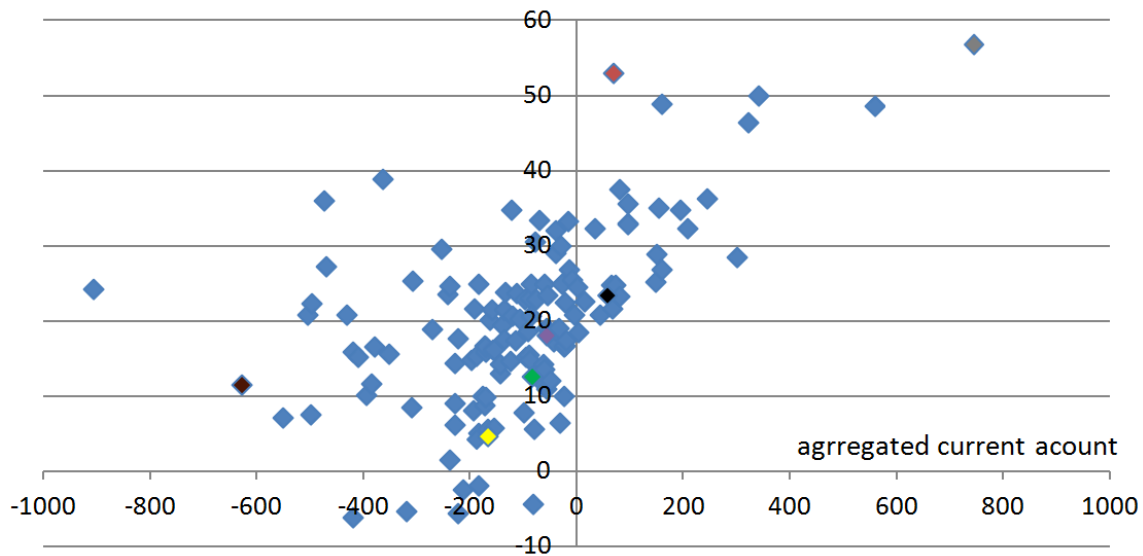
Legend: Greece: yellow; Germany: black; China: red; Brazil: purple; U.S.A: Green; Katar: gray; Nicaragua: brown

Figure 6: Saving rate in 2010 and agrregate current acount in 1980-2010.

We can see that according to figure 6 worlds' countries aggregated current account is distributed as expected, with many countries having a negative aggregated CA ratio.

3 EMPIRICAL MODEL

In this part we estimated an econometric equation with saving rate as dependent variable and two explanatory variables defining countries' financial risk: the current account and the aggregated current account.

$$(6) \quad savings = \alpha_1 D_1 + \alpha_2 D_2 + \alpha_3 D_3 + \beta_1 AGCUR * D_1 + \beta_2 AGCUR * D_2$$
$$+ \beta_3 AGCUR * D_3 + \delta_1 AGCUR^2 * D_1 + \delta_2 AGCUR^2 * D_2 + \delta_3 AGCUR^2 * D_3$$
$$+ \gamma_1 * CUR2010 * D_1 + \gamma_2 * CUR2010 * D_2 + \gamma_3 * CUR2010 * D_3 + u$$

For:
Savings - saving rate ratio in 2010.

AGCURR - aggregated CA ratio in years 1980-2010.

CURR2010 – Current account in 2010.

D1 – a dummy variable equal to 1 for 45 countries with the lowest aggregate current account in years 1980-2010.

D2 – a dummy variable equal to 1 for 45 countries with middle aggregate current account in years 1980-2010.

D3 – a dummy variable equal to 1 for 45 countries with the highest aggregate current account in years 1980-2010.

Table 1: Results of the regression after correcting for Heteroskedasticity
and removing non-significant variables

Significant level	Coefficient	Variable
0.0000	15.66787	D1
0.0000	28.20771	D2
0.0000	22.69293	D3
0.0119	-0.024005	CURRENT*D1
0.0007	0.027577	CURRENT*D3
0.0066	-0.000255	CURRENT^2*D2
0.0000	0.727978	CURR2010*D1
0.0000	1.131170	CURR2010*D2
0.0000	1.013667	CURR2010*D3
0.0022	-0.020227	CURR2010^2*D3
R-squared=0.665208		

The estimated equations are as follows:
for countries with a very large negative aggregated current account:

$$(7) \quad savings^f = 15.66787 - 0.024005 * AGCURRENT + 0.727978 * CURR2010$$

For countries with large or medium negative aggregated current account (in absolute values):

$$(8) \quad savings^f = 28.20771 - 0.000255 * AGCURRENT^2 + 1.131170 * CURR2010$$

For countries with a small negative or with positive aggregated current account:

$$(9) \quad savings^f = 22.69293 + 0.027577 * AGCURRENT + 1.013667 * CURR2010 - 0.020227 * CURR2010^2$$

Notice that we can interpret the coefficients of dummy variables as basic saving rates.

We get that countries with very large negative aggregate current account (in the lower edge Equatorial Guinea with -907.35% aggregated CA and in the upper edge Portugal -170.49% aggregated CA) saving rate increases in a larger amount as aggregate current account is more negative (see equation 7 -negative coefficient multiplied by negative aggregated current account).

For countries with large and medium aggregated negative account (in the lower edge Costa Rika with -170.14% aggregated CA and in the upper edge El Salvador -55% aggregated CA) saving rate decreases in larger amount as aggregate CA is more negative (see equation 8 – negative coefficient multiplied by squared aggregated CA). Among this group we can find several industrial countries with negative aggregated CA, Greece with -166%, Poland with -155%, Australia -133%, Spain with -92%, U.S.A. with -82%, Ireland with -60% and other large economies such as, Turkey -59% and Brazil -56%.

In countries with relatively small negative aggregated current account (in the lower edge Mexico with -54% aggregated CA) saving rate decreases in larger amount as aggregate CA is more negative (see equation 9 – positive coefficient multiplied by negative aggregated CA). Among this group we can find several industrial countries with negative aggregated CA, United Kingdom -48%, Canada -32%, Italy -21% and other large economies such as India -38% and South Africa -24%.

Countries with positive aggregate current account (see equation 9[1]) tend to increase the saving rate in a larger amount as aggregated net foreign account is more positive. Among this group we can find Austria 1.8%, France 3.37%, Korea 33%, Germany 57%, Japan 80% and China 208%.

Current year current account have a negative effect on saving rate in all countries with negative aggregated current account, while in countries with positive current account the effect is positive but diminishes as current account is growing.

These results point that countries with negative medium or small aggregate current account will tend to "sink" deeper. In addition in these countries saving rate will decrease when current year current account is negative.

The results are troubling since this group includes some of the major worlds' economies, such as U.S.A, Australia, Spain, Turkey, Brazil, United Kingdom, Canada, Italy, India and South Africa.

Countries with positive aggregate current account (external assets) will tend to increase saving rate. In addition positive current year current account will increase saving rate even higher.

Our interpretation of the results is that countries' will tend to go to the edge, those with positive net foreign assets will keep increasing their assets while those with external debt will tend to increase debt as long as the debt is not very large. Only when external debt becomes very large, saving rate will start growing.

Since some of the largest economies belong to the group that keep increasing external debt due to continues reduction of the saving rate, we are concerned of the obvious conclusion that at some stage when debt will become too large, the world will go into a deep financial crisis.

We should mention that countries which have a middle level of aggregate current account have a higher basic saving rate 28.20771%, in comparison to the counties at the edges. Since most of the western countries can be classified as "middle countries", world institutions should concentrate at these counties which produce a major part of world production.

4 SUMMARY
We presented a theoretical analysis of an economy that is open to international trade and to capital movements by using Solow's model (1956) as a frame. According to our analysis, a country can accelerate the convergence to long run steady state of per-capita production and

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[1] Equation 9 was estimated on data of countries with small aggregated negative CA and on data of countries with positive aggregated CA.

capital by creating a negative current account and creating external debt. As long as the country is financially stable, it can keep a low saving rate and high consumption per-capita. However when external debt increases beyond acceptable level the country will not be able to borrow from abroad and will be forced to increase saving rate and improve current account, a process that will cause a reduction of external debt.

In the empirical part of the paper we suggest to measure financial stability of a country by the aggregated current account in the last 31 years (1980-2010). We think that this measure is better than the "net foreign assets" which does not include all financial factors that define countries' financial stability.

Using data of 135 countries we estimated a cross section econometric equation with saving rate as dependent variable and the current account and aggregated current account as explanatory variables.

Our findings show that countries with very high external debt tend to increase their saving rate, while countries with medium or low external debt tend to reduce their saving rate. The group of countries with medium and low external debt includes many of the most developed countries, among them U.S.A, United Kingdom and span.

Countries with positive aggregated current account tend to increase their saving rate as their aggregate CA is larger.

Our findings are troubling since they show that countries which are at the edge of becoming unstable financially tend to deteriorate into a worse financial state and only when financial state becomes extremely unstable they start increasing saving rate. It seems that if this behavior will proceed, the world might fall into a deep crisis.

The finding point to the fact that deterioration of worlds' financial stability is due to the negative financial state of some of the most dominant and productive countries.

We believe that in order to stop deterioration, worlds' organization together with worlds' leading countries must concentrate on economic policy that will create a   change in the most developed countries which carry medium levels of external debt, but can risk all worlds' financial system.

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Appendix 1

Gross savings rate, Aggregated current accounts during 1980-2010 and current account in 2010 as percentage of GDP in 2010

	saving rate 2010	agg current acount	curr2010
Equatorial Guinea	24.322	-907.35	-24.07
Nicaragua	11.428	-627.597	-14.372
Guyana	7.256	-551.104	-9.513
Sudan	20.856	-505.463	0.717
Dominica	7.584	-497.839	-21.138
Lebanon	22.34	-496.546	-10.822
Bhutan	36.122	-473.022	-11.64
St. Kitts and Nevis	27.358	-469.999	-20.642
St. Lucia	20.901	-431.27	-15.203
Antigua and Barbuda	15.945	-419.492	-12.945
St. Vincent and the Grenadines	-6.104	-419.284	-31.571
Lesotho	15.334	-408.95	-15.084
Mozambique	10.258	-393.509	-11.742
Togo	11.688	-384.834	-7.125
Seychelles	16.604	-378.343	-20.08
Chad	38.896	-363.427	-3.51
Mauritania	15.688	-351.676	-8.802
Grenada	-5.209	-318.245	-25.529
Comoros	8.542	-308.475	-6.863
Cape Verde	25.337	-308.34	-12.467
Madagascar	18.928	-269.929	-9.679
Zambia	29.635	-253.099	7.068
Senegal	23.613	-241.555	-6.095
Malawi	24.78	-238.617	-1.246
Guinea-Bissau	1.564	-238.578	-8.253
Benin	9.122	-228.784	-7.192
Sierra Leone	6.288	-227.605	-28.772
Jamaica	14.401	-227.484	-8.097
Niger	17.729	-222.562	-21.103

Solomon Islands	-5.557	-222.301	-30.259
Maldives	-2.356	-212.812	-17.356
Belize	14.923	-197.954	-3.076
Burundi	8.114	-192.969	-9.889
Tanzania	21.638	-191.506	-9.278
Iceland	4.256	-188.22	-8.389
Burkina Faso	15.391	-188.179	-3.567
Guinea	-1.785	-184.451	-12.351
Central African Republic	5.126	-183.915	-9.939
Sri Lanka	24.956	-183.61	-2.196
The Bahamas	10.028	-176.78	-11.689
Cyprus	8.894	-172.788	-9.876
Honduras	16.734	-171.665	-6.222
Rwanda	15.889	-171.223	-5.978
Portugal	9.945	-170.496	-9.981
Costa Rica	16.575	-170.141	-3.518
Greece	4.574	-166.387	-9.982
The Gambia	5.688	-166.319	-15.736
Democratic Republic of Congo	20.163	-163.372	-6.906
Bulgaria	21.568	-157.963	-1.322
New Zealand	16.162	-156.481	-3.432
Poland	16.293	-155.772	-4.66
Mali	5.796	-154.718	-12.628
Guatemala	13.123	-143.746	-1.52
Albania	14.272	-143.393	-11.614
Hungary	19.498	-138.638	1.097
Jordan	17.567	-135.765	-5.574
Tunisia	21.587	-134.708	-4.796
Australia	23.943	-133.037	-2.844
Uganda	14.679	-123.029	-9.569
Vietnam	34.904	-122.189	-4.139
Suriname	20.761	-120.618	2.035
Ghana	17.413	-113.456	-7.302
Peru	23.687	-112.27	-1.707
Romania	20.387	-106.355	-4.452
Dominican Republic	7.91	-98.466	-8.59
Haiti	22.877	-96.179	-2.556
Panama	15.213	-94.885	-10.763
Spain	18.698	-92.025	-4.604
Mauritius	15.59	-88.585	-8.158
Angola	23.047	-87.913	10.378
Kenya	14.912	-87.707	-6.525
Ethiopia	20.716	-86.093	-4.35
Chile	25.039	-84.378	1.512

United States	12.532	-82.639	-3.242
Swaziland	-4.251	-81.869	-16.483
Barbados	5.637	-78.506	-8.204
Morocco	30.557	-77.107	-4.234
Ecuador	22.87	-75.423	-3.307
Pakistan	13.134	-74.834	-2.231
Nepal	33.413	-69.031	-2.406
Cameroon	13.288	-64.014	-2.835
Paraguay	14.367	-61.397	-3.378
Bolivia	24.987	-60.706	4.89
Ireland	11.528	-60.036	0.488
Turkey	13.581	-59.51	-6.35
Brazil	18.03	-56.479	-2.208
Colombia	19.109	-55.731	-3.083
El Salvador	10.991	-55.354	-2.301
Mexico	23.541	-54.397	-0.299
United Kingdom	12.058	-48.319	-3.318
Uruguay	17.37	-43.536	-1.184
Israel	18.879	-39.812	2.914
Bangladesh	29.157	-38.894	1.664
India	32.144	-38.517	-3.268
Canada	19.072	-32.5	-3.131
Papua New Guinea	6.504	-31.687	-8.442
Thailand	30.067	-28.482	4.132
Philippines	25.012	-27.875	4.471
Cote d'Ivoire	10.067	-24.188	1.101
South Africa	16.61	-24.182	-2.816
Italy	16.725	-21.291	-3.522
Argentina	22.53	-20.781	0.594
Egypt	17.525	-19.635	-1.976
Indonesia	33.373	-14.781	0.797
Nigeria	26.846	-14.689	1.268
Republic of Congo	25.531	-7.312	5.065
Syrian Arab Republic	20.89	-3.422	-3.308
Austria	24.596	1.895	2.954
France	18.556	3.376	-1.743
Denmark	22.683	14.269	5.506
Korea	32.424	33.585	2.896
Finland	20.885	43.757	1.432
Germany	23.427	57.463	6.083
Botswana	24.841	65.341	-5.168
Belgium	21.653	66.554	1.46
Sweden	24.893	73.345	6.277
Japan	23.314	80.073	3.569
Saudi Arabia	37.607	80.372	14.808
Bahrain	33.066	95.892	3.434

Malaysia	32.915	96.168	11.499
Oman	35.715	96.476	8.812
Netherlands	25.246	148.572	6.569
Hong Kong SAR	28.949	149.62	5.525
Trinidad and Tobago	35.112	153.371	19.857
Algeria	48.958	160.714	7.545
Venezuela	26.85	160.804	4.878
Norway	34.867	195.514	12.427
Taiwan Province of China	32.401	208.867	9.269
Gabon	36.37	244.188	9.061
United Arab Emirates	28.487	301.218	3.069
Singapore	46.54	322.865	24.412
Libya	50.103	342.484	20.887
Kuwait	48.703	559.427	29.643
Qatar	56.748	744.938	26.331

Appendix 2

Gross savings rate and foreign assets as percentage of GDP in 2010

Country Name	saving	Net foreign assets
New Zealand	21.45339	-44.6888
Greece	7.315297	-26.0401
Australia	27.69843	-23.4663
Latvia	19.83488	-16.4806
Portugal	12.43516	-10.6807
St. Lucia	20.36088	-10.3872
Estonia	26.65565	-10.0669
Spain	20.82645	-8.4051
Montenegro	-5.26694	-4.70158
Belarus	26.92417	-1.28174
Bahamas, The	12.50006	-0.94068
Sudan	24.18633	-0.86675
Myanmar	22.68732	0.01658
Slovenia	23.18996	0.26605
United States	11.50909	0.704036
Lithuania	15.38073	0.900842
Romania	25.08338	1.9074
Turkey	14.40806	2.533677
Nicaragua	-0.7875	2.595323
Malawi	8.167067	2.679123
Hungary	24.90444	3.375747
Armenia	9.17124	3.612507
Sri Lanka	18.6525	4.216631

Georgia	2.034217	4.323639
Italy	18.48654	5.209486
Pakistan	10.15377	5.626143
United Kingdom	12.91013	5.917982
Dominican Republic	4.729032	6.658624
Poland	19.74442	7.142056
United Arab Emirates	34.44901	7.179034
Chad	12	8.055656
Colombia	21.52231	8.09664
Venezuela, RB	32.33607	8.247541
Zambia	31.48323	8.612394
Azerbaijan	51.89935	8.692297
Bangladesh	17.80368	9.249327
Chile	28.31894	9.468836
Mexico	23.51948	10.19109
Lao PDR	21.49966	10.39628
Kenya	8.953688	10.56037
Brazil	18.25583	10.87784
Vietnam	28.60619	11.33007
Ghana	14.92989	11.7578
Croatia	22.87472	11.77969
Costa Rica	16.8805	12.07682
Cote d'Ivoire	18.44441	12.46657
Jamaica	2.895242	12.60806
South Africa	19.05885	12.67819
Sierra Leone	3.324156	12.71346
Argentina	25.30852	13.50285
Indonesia	34.12176	13.5163
Gabon	52.10808	13.7378
Guatemala	3.777377	14.23893
Tunisia	21.0449	14.56313
Ecuador	20.50739	14.64688
Serbia	6.328413	15.17186
El Salvador	-4.17682	15.30316
Japan	21.37025	15.66604
India	31.52593	15.99798
Senegal	10.77067	16.156
Equatorial Guinea	57.05925	16.67397
Gambia, The	6.5	17.46529
Uganda	13.47804	17.57861
Bosnia and Herzegovina	-1.32507	18.44654
Honduras	2.21775	18.45324
Tanzania	17.16311	18.84833
Nepal	7.390787	20.60817
Kazakhstan	39.84637	20.62265
Cape Verde	19.11957	20.75705

Challenges of the Modern World

Korea, Rep.	31.94211	20.81003
Swaziland	-2.29515	21.21813
Paraguay	21.63303	21.90969
Syrian Arab Republic	18.3888	22.01972
Angola	28.03244	22.06535
Benin	12.17729	22.3786
Namibia	24.57689	23.12908
Moldova	-14.9786	23.13958
Macedonia, FYR	6.777835	23.38326
Yemen, Rep.	7.540357	23.54381
Tonga	-17.1733	23.89822
Denmark	22.42872	24.05111
Peru	27.28734	24.1997
Bulgaria	23.0204	24.21588
Mozambique	5.724723	24.53575
Morocco	25.20587	25.20213
Egypt, Arab Rep.	14.10575	25.29498
Czech Republic	27.36069	27.09992
Albania	3.947689	27.70447
Panama	22.73904	29.84582
Iceland	22.81976	30.65778
Afghanistan	-21.7924	30.97363
Haiti	-20.2011	31.11457
Guyana	-2.03899	31.61172
Philippines	18.72782	31.82192
Uruguay	19.81789	32.23292
Mongolia	33.14273	32.54097
Russian Federation	31.18261	33.47037
Sweden	24.49533	34.08973
Netherlands	26.14214	34.7108
Papua New Guinea	20.58571	34.79103
Finland	19.94647	35.33438
Cambodia	11.9295	35.8889
Cyprus	11.99943	36.80134
Malaysia	39.22648	37.10227
Dominica	-0.40561	37.40393
Kosovo	-12.3424	38.5274
Congo, Rep.	50.94492	39.09943
Switzerland	30.58454	39.53693
Belgium	22.89499	40.34596
France	17.00667	43.17924
Thailand	33.29735	48.29601
Jordan	-6.05141	50.12153
Botswana	21.23956	52.05881
Bolivia	23.8703	55.0676
China	51.69536	56.16424

Germany	22.8121	56.68331
Lesotho	-42.0569	63.32774
Ireland	30.12621	64.16727
Austria	25.95028	75.69826
Algeria	50.73373	98.52624
Singapore	51.89371	99.96196
Lebanon	9.843946	103.6549
Saudi Arabia	43.3622	108.0656

HOUSEHOLD PORTFOLIO CHOICES AND HEALTH CARE SYSTEMS: WHAT DOES ITEM NON-RESPONSE ADD TO THE PICTURE?

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ABSTRACT

Previous literature identified that health status plays an important role in shaping both the participation decision of holding a particular type of asset (extensive margin) and allocation of financial wealth between asset categories (intensive margin). However, most research focused on US data, while European countries were rarely analyzed and mostly focusing on participation decision. This is largely due to the lack of fully comparable microeconomic data across countries and the high item-non response rate in such data, which poses a challenge for reliable econometric analysis. In this paper, the data from Survey of Health, Aging and Retirement in Europe (SHARE) are used to investigate whether the association of health status with both participation and allocation decision varies across 11 European countries, each shielding households from out-of-pocket medical expenditures to a different extent. The hypothesis is that health risk shapes both decisions, but, as background risk theory suggests, the strength of these effects varies with the generosity of health care system, being weaker (even negligible) in countries with full-coverage National Health System. Using multiple imputation (MI) analysis to account for high non-response rate, this paper employs Probit and Tobit estimations to find empirical confirmation of this hypothesis on both margins. The health status shapes households' portfolio choice, but only in countries with less generous Health Care Systems where this association is large and economically significant. The results also provide some evidence that in those countries, informal care arrangements in form of bequests might be particularly important, thus indicating potential spillover effects of health related financial risks of the elderly to younger individuals, who are not included in SHARE sample.

Keywords *Health care systems; Health status; Household portfolios; Imputation; Survey non-response*

JEL *C81; D14; G11; I13*

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1 INTRODUCTION

Based on World Health Organization 2012 report covering 90% of the world's population, an estimated 100 million people are pushed under the poverty line[1] each year simply because they use health services for which they are forced to pay out of their own pockets.[2] Bankruptcy scenarios induced by medical expenditures are present both in poor and rich countries (Xu et al., 2003), and both for poor and rich individuals (Himmelstein et al., 2005). In Europe, due to population ageing[3], health care expenditures became increasingly important over the last few decades. This raised a particular concern among EU countries, which are bounded by 1992 Maastricht Treaty's stringent spending rules. Hence, following the Treaty, and being faced with rising health care costs, EU countries introduced restrictive fiscal policies which reduced the generosity of their health care systems. These reforms faced patients with either rationing or an increase in co-payments to access publicly provided health care services, both increasing unexpected out-of-pocket (OOP) expenditure, hence overall household's financial risk. As background risk theory suggests, this may drive households to adjust their exposure to other types of risks (Gollier and Pratt, 1996; Goldman and Maestas, forthcoming) such as rate-of-return risk of their portfolio.

From a macroeconomic perspective, further European financial integration and regulatory responses to recent financial crisis in a form of legislation governing protection of financial "consumers" are likely to increase (fair) competition between financial services providers, reducing participation and transaction costs and increasing trust into financial intermediaries, which should all encourage investment in stocks. Furthermore, pension reforms are driving the elderly towards relying more on individual retirement accounts, therefore having to make active choices regarding their retirement plans. If they do not allocate assets adequately, they will not be able to maintain their current living standard after retirement - a problem that has come to be known as *adequacy of retirement* savings (Alan et al., 2008). Having in mind that besides population ageing ("graying" of Europe), elderly individuals also hold most of the assets in European economies (so called "graying" of wealth), it might be of particular interest to both economists and politicians to understand by which factors, and through which channels, investment decisions of this subpopulation are shaped. Being at the end of their working age, or already retired, the elderly face limited labor income risk, but much more health risk, since health is known to decrease with age. Goldman and Maestas (forthcoming) indeed find that medical expenditure is particularly important for individuals aged 65 and over.

Previous literature, using mostly US data, identified that health status plays an important role in shaping both the decision to hold a particular type of asset (extensive margin) and share of financial wealth held in each asset category (intensive margin).[4] Cross-country analysis offers natural source of variation in household's realized and expected medical expenditures given the heterogeneity of corresponding health care systems which shield from these expenditures to different extents. Hence, cross-country analysis may be the most suitable in order to analyse the role of health care systems in altering household's exposure to overall background risk and, as a consequence, their portfolio composition.

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[1] To simplify comparability across countries and over time, the poverty line has been standardized as a daily income of US$ 1 at international standards.

[2] World health statistics 2012 (page 40), available at:
http://www.who.int/gho/publications/world_health_statistics/EN_WHS2012_Full.pdf

[3] More details on the phenomena are available at:
http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Population_structure_and_ageing.

[4] See e.g. Rosen and Wu (2004) and Edwards (2008).

Until recently, a systematic analysis of household portfolios across countries has not been possible due to lack of fully comparable microeconomic data. With Survey of Health, Aging and Retirement in Europe (SHARE) launched in 2004, the cross-country analysis of the elderly subpopulation is made feasible.

A notable contribution to this literature is in Atella et al. (2012), where the authors exploit the heterogeneity of health care systems across Europe and focus on health risk association with participation decision. In line with theory of background risk, they find evidence that health risk affects decision to hold risky assets only in the countries with less protective health care systems, therefore highlighting the importance of health care systems in mediating households' health risk through medical expenditure channel. Further research is needed to investigate whether the same is true for allocation decision, as a closer measure of level of risk households bear. Additionally, from a methodological point of view, being a large household survey, SHARE suffers from high item non-response rate. This can substantially bias estimates and also lead to a large efficiency loss, especially with many variables entering regression equation. As a way to obtain valid statistical inference in such a scenario, multiple imputation analysis can be employed. Hence, to fill in these gaps, this paper uses multiple imputation analysis of SHARE data to investigate importance of health care systems for household portfolio choice on both extensive and intensive margin.

The rest of the paper is organized as follows: **Section 2** reviews previous theoretical and empirical literature to understand the question of interest and delimit the variables to be used in the analysis; **Section 3** discusses the methodological approach to the analysis; **Section 4** describes the data; **Section 5** presents the empirical findings; **Section 6** concludes.

2 PREVIOUS LITERATURE
Traditional portfolio theory[5] states that an investor's willingness to take financial risks depends only on her risk aversion and investment opportunities. This has the strong implication that although household have highly heterogeneous characteristics, their portfolios should share a few common features: each household should hold at least some amount in stocks in order to profit from excess return they provide, all investors should have the same portfolio of risky securities and these portfolios should be well diversified (all risky assets should be included).

Despite the uniformity predicted by the traditional theory, there is high heterogeneity in investors' observed behavior. Among stockholders, there is a considerable heterogeneity of share of assets invested in stocks, with the overall distribution of portfolio allocation being highly positively skewed - many households have risky share equal to zero, hence opt out of the stock market entirely. This phenomenon, dubbed "*stockholding puzzle,*" represents a partial equilibrium counterpart of "*equity premium puzzle",* and receives a great attention in the literature, posing a challenge to both portfolio choice and asset pricing theory (Bertraut and Haliassos, 1995). Another empirical finding is that portfolios are usually weakly diversified.

These empirical observations do not necessarily imply that any of these investors is making mistakes or that revealed preference theory should be abandoned, if one considers that investors may have different preferences and face different circumstances (Curcuru et al.

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[5] See Gollier (2002) for a good survey.

2009). To account for this, the empirical literature aimed to single out variables that might help explain the patterns of portfolio choice in microeconomic data. Two distinct but related questions are considered: i) "Does the household own stocks at all?" ii) "In what proportion with respect to other assets in a portfolio?", hence participation and allocation decision, respectively. The literature documents vast and systematic differences in portfolios of individuals with varying attributes (see Curcuru et al., 2009 for an excellent summary) such as their socio-economic characteristics (income and wealth), and demographic characteristics ranging from age (Guiso et al., 2002; Brunetti and Torricelli, 2010) to education (Vissing-Jørgensen, 2002), cognitive abilities (Christelis et al., 2010) gender and marital status (Bertocchi et al., 2011).

Hence, unlike traditional finance theories, recent literature (including background risk literature), allows for many factors other than risk aversion and investment opportunities to affect portfolio choice. Background risk theory states that, under some regularity assumptions on preferences[6] when faced with some unavoidable (or non fully insurable) risks (dubbed *"background risks"*) individuals tend to reduce their exposure to avoidable ones (Kimball, 1993; Pratt and Zeckhauser, 1987; Elmendorf and Kimball, 2000), such as investment in risky assets.[7] Eeckhoudt and Kimball (1992) show that an agent's willingness to bear other risks in presence of a background risk decreases whether or not the two risks are correlated. Hence, reducing (one part) of background risk can increase investment in risky assets, even if the reduced risk is uncorrelated with that of the risky assets (Gollier and Pratt, 1996).

There is a large literature analyzing labor income as a source of background risk (see e.g. Guiso and Paiella, 2008). Labor income uncertainty may be particularly important among younger and middle-aged individuals, but for older population health risk might be even more important since health status is found to decline with age and many elderly are already retired (or at least at the end of their working age). Health risk, as a source of background risk, entails both direct (e.g. healthcare expenditure which increases the marginal utility of wealth by absorbing it) and indirect costs (e.g. loss of labor income due to reduced productivity) for the household. However, insurance coverage decreases the risk of out-of-pocket medical expenditure, thus reducing the household's overall background risk (Edwards, 2008; Yogo, 2009).

Empirical literature widely acknowledges that health risk is a significant determinant of household's portfolio choice. Using US Health and Retirement Survey (HRS), Rosen and Wu (2004) find health risk to be significant in explaining both participation and allocation decisions. Interestingly, they found that this negative association is not driven by "third variables" that simultaneously affect health and financial decisions, such as family background, industry and occupation and that it does not seem to operate through the effect of health status on individuals' risk aversion, planning horizons or their health insurance status. Edwards (2008) presents a theoretical model of portfolio choice in which current health status and expectations about future medical expenditure burden determine portfolio shares, and using HRS and Survey on Assets and Health Dynamics Among the Oldest Old (AHEAD) they find that share is decreasing in both variables. Goldman and Maestas (forthcoming) find that among Medicare beneficiaries who own different forms of supplementary health

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[6] The property of continuously differentiable utility finctions with derivatives that alternate in sign (e.g. Gollier and Pratt, 1996).
[7] Such "proper risk aversion" characterizes most of commonly used utility functions.

insurance and hence have different exposure to medical expenditure risk, those who face less medical expenditure risk are more likely to hold risky financial assets.

Health is a risky asset itself, so the fundamental question is whether individuals can adequately insure against it (Edwards, 2008). Health risk is insurable, but markets are far from perfect. Hence, in analyzing financial implications of health risk, type of health care system may play a central role. National full-protective insurance may be particularly important in shielding households from health-related financial risk. As Goldman and Maestas (forthcoming) emphasize *"health risk and medical expenditure risk are closely related, but they are distinct sources of background risk."* Atella et al. (2012) add that *"the former is a sole function of the actual health condition of household members, while the latter depends not only on health risk but also on health insurance coverage. In turn, health insurance coverage varies among countries due to different health care systems."*

Guiso and Sodini (2012) emphasize that risk-taking by individuals is, indeed, likely to vary relative to the economic and institutional environment where decisions are being made. To this end, cross-country data is a natural source of variation. The availability of comparable data across countries in SHARE can thus be exploited for this purpose. Using SHARE data and exploiting the heterogeneity of health care systems across Europe, Atella et al. (2012) study the medical expenditure channel of the effect of health status on extensive margin of households' portfolio choice. They find evidence by probit analysis that it is only in countries with less generous health systems that worse (self-reported) health status is associated with lower probability of holding risky assets.

Christelis et al. (2010) examine the role of cognitive abilities in shaping portfolio choice in SHARE data using multiple imputations analysis, and find that cognitive abilities are positively associated with probability of holding risky assets, but do not affect the share invested in them. The authors draw attention to a need of accounting for high item non-response rates in SHARE. SHARE provides multiple imputed values for a set of variables including economic variables, numeracy and perceived health status for both respondents and non-responding partners (NRPs). Christelis (2011) emphasizes that analyses based only on observations with complete records, since information is unlikely to be missing completely at random, are likely to be biased and inconsistent (Rubin, 1987; Little and Rubin, 2002). This is especially the case in the scenario of high incidence of missing data, as in SHARE, since omitting respondents that do not have complete records are likely to result in small and non-representative samples. Moreover, the missingness of information is the highest for economic variables, since these information are deemed sensitive by many respondents. It is essential to include all imputed data, particularly since health information is central to the analysis because non-response is likely to be strongly positively correlated with bad health status (Hoeymans et al., 1998). This also holds for NRPs, since ignoring them may result in overestimating health status at household level and hence in biased inference.

In sum, previous literature on health risk as a source of background risk widely acknowledges its effect on households' portfolio choice. However, previous work mainly uses US data, with European countries rarely considered, especially in analyzing the intensive margin of such association. This paper studies the effect of health status on households' portfolio choice on both extensive and intensive margin, through its effect on out-of-pocket medical expenditure, particularly focusing on the role of health care systems. From methodological point of view,

the analysis follows Christelis et al. (2010) and uses multiple imputation analysis to obtain more reliable estimates.

3 METHODOLOGICAL APPROACH

In this setting, the unit of analysis is a household, since some information in the data source is available only at the household level. This is a standard data constraint in the related literature, with few exceptions (e.g. Calvet, Campbell and Sodini, 2009).

Households invest their financial assets across different financial instruments with different levels of riskiness. Most of the previous literature (recently e.g. Christelis et al., 2010 and Atella et al., 2012) models participation decision with probit, while for allocation decision there are variety of econometric approaches. Heaton and Lucas (2000) focus on individuals who hold stocks above a certain threshold and use ordinary least squares estimation, while Curcuru et al. (2009) use OLS on a sample restricted to stockholders. Bertaut and Starr-McCluer (2002) and Christelis et al. (2010) use Heckman's selectivity adjusted model to account for the fact that many households hold no risky assets at all. Guiso et al. (1996), Poterba and Samwick (2003), Rosen and Wu (2004) and Edwards (2008) use tobit estimator instead. While each of these approaches has its pros and cons, this paper opts for a tobit estimator, viewed as the most suited for the analysis.[8] The problem at hand is perceived as a censored data, not a self-select data for which Heckman model would be more suitable. More precisely, this analysis approaches households' portfolio choice as a single decision regarding the risky assets - decision on the share to invest in them, and once they decide the risky share, the share being positive or zero implies participation or nonparticipation in risky assets. The model, thus, implicitly assumes that the same data generating process that determines the censoring is the same process that determines the outcome variable.

In the proposed econometric setting, both participation and allocation decision can be modeled as depending on a latent variable, with allocation regression seen as a regression with more observable information on the latent variable.

The latent variable model can be represented as:

$$Y_i^* = X_i^{'}\beta + \varepsilon_i \qquad (1)$$

where i represents the household, X_i the observable variables affecting the latent variable, and ε_i the unobservables which are assumed to be normally distributed (standard normal for probit), so that maximum likelihood estimation can be used. It might not be convenient to give an economic interpretation to a latent variable, especially for tobit estimation.[9]

For participation dummy variable Y_i^p, we observe 1 if $Y_i^* \geq 0$ and 0 otherwise. This can be written as:

$$Y_i^p = \begin{cases} 1 \text{ if } Y_i^* \geq 0 \\ 0 \text{ if } Y_i^* < 0 \end{cases}$$

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[8] Since in the SHARE data, households do not have a high concentration of the portfolio shares close to unity, the analysis uses the simpler one-limit version of the estimator with lower limit at zero. This is also what Rosen and Wu (2004) use.

[9] Some may understand it as desired outcome variable – hence, in the present analysis, desired share invested in stocks.

For allocation (share) variable Y_i^a, we observe Y_i^* if $Y_i^* \geq 0$ and 0 otherwise. This can be written as:

$$Y_i^a = \begin{cases} Y_i^* \text{ if } Y_i^* \geq 0 \\ 0 \text{ if } Y_i^* < 0 \end{cases}$$

Thus, both participation and allocation analysis, probit and tobit respectively, have the same structural model, just different measurement models – how the latent variable Y_i^* is translated into Y_i is different (more information in tobit).

As argued by Rosen and Wu (2004), it is difficult to find a compelling reason to use different variables for allocation regression compared to participation regression. This is even more so in the understanding of a single investment decision adopted in the present paper, so this analysis follows the usual practice and use the same set of covariates in both equations.

In particular, following Atella et al. (2012), the portfolio choice of household i living in a country j can be represented as:

$$Y_{i,j} = f(H_{i,j}, S_j) \tag{2}$$

where when analyzing participation decision (extensive margin), $Y_{i,j}$ is binary variable being equal to 1 if household holds risky assets and 0 otherwise, and in allocation decision (intensive margin) $Y_{i,j}$ is a continuous variable bounded between 0 and 1 indicating the share of household financial portfolio held in risky assets. The other two elements are household observables $H_{i,j}$, and system-wide observable characteristics S_j.

Household characteristics:

The main variable of interest is health status. The model controls for a set of socio-economic variables found in the literature to be significant in explaining the patterns of portfolio choice. These include household size, age, gender, marital status, education, income, wealth, bequest motives, cognitive abilities and social interactions.

System-wide characteristics:

The level of health care system protection might be crucial in the extent to which household's health status shapes her portfolio decision, since less protective health systems shield less against unexpected medical expenditure. Therefore, equation (1) can be rewritten as:

$$Y_{i,j} = f(HS_{i,j}, H_{i,j}^d, S_j) \tag{3}$$

where $HS_{i,j}$ represents household's health status, $H_{i,j}^d$ are non-health related household characteristics (demographic and socio-economic observables) and S_j system-wide observable characteristics .

Whenever the country is characterized by NHS, a full (or nearly full) public coverage is guaranteed, hence individual health-related characteristics should be less (if at all) relevant in shaping portfolio choice.

Empirical specification:

To test the model, I follow Atella et al. (2012) and split the sample according to the dummy variable being 1 if the residence of household is NHS country (Sweden, Denmark, Italy and Spain) and 0 if non-NHS country (Belgium, Austria, Netherlands, Germany, France, Switzerland and Greece). This dummy is a crude indicator of the degree to which health care system shields from health-related financial risks.

Therefore, the latent variable in equation (1) can be represented as:

$$Y_{i,j,k}^* = \Sigma_j \beta_{0,j,k} C_j + \beta_{1,k} HS_{i,j,k} + \Sigma_n \beta_{n,k} H_{i,j,n,k} + \varepsilon_{i,j,k}$$

where i represents the household, j represents the country, and k represents the indicator whether country belongs to the group having NHS. Φ represents the cumulative distribution function of a standard normal distribution, C_j is a vector of country dummies[10], capturing country fixed effects, HS is a variable describing household's health status, H is a vector of other controls, including demographic and socio-economic household observables *(n)*, and ε_i is error term which is standard normally distributed.

Thus, empirical representation of equation (3) for probit is:

$$Y_{i,j,k} = \Phi(\Sigma_j \beta_{0,j,k} C_j + \beta_{1,k} HS_{i,j,k} + \Sigma_n \beta_{n,k} H_{i,j,n,k}) + \varepsilon_{i,j,k} \qquad (4)$$

Let $X_i'\beta = \Sigma_j \beta_{0,j,k} C_j + \beta_{1,k} HS_{i,j,k} + \Sigma_n \beta_{n,k} H_{i,j,n,k}$, the empirical representation of equation (2) for tobit is:

$$Y_i = \Phi(\frac{X_i'\beta}{6\sigma}) [X_i'\beta + 6\lambda(\alpha)] + \varepsilon_i \qquad (5)$$

where $\lambda(\alpha) = \dfrac{\phi\left(\frac{X_i'\beta}{\sigma 6}\right)}{\Phi\left(\frac{X_i'\beta}{\sigma 6}\right)}$ is the inverse Mills ratio, σ is the variance of the error term ε_i which is normally distributed.

By splitting the sample, empirical model is quite flexible, allowing for different slopes on all variables entering the regression equation, as well as for country-specific fixed effects. Ceteris paribus, poorer health is expected to be associated with a lower probability of holding risky assets and lower share invested in those assets, but also that these effects are weaker (if any) in countries with full-coverage protective National Health Systems. In other words, coefficient $\beta_{1,k}$ should be less negative or non-significant in countries where k=1.

Both probit and tobit parameters of interest are estimated using Maximum Likelihood Estimation.

3.1. Variables selection
The empirical analysis follows the approach and similar definition of the variables found in the related literature, with the aim of better comparability of the empirical findings.

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[10] The model controls for country fixed effects since it does not explicitly account for differences in country-specific institutions and other environmental determinants.

To capture health risk faced by individuals, the analysis uses **self-reported health status**, rather than objective health status for several reasons. Firstly, even if objective health measures are more reliable since less likely to be affected by measurement error, if people buffer health risks by altering their portfolio, what affects this decision is their subjective perception of such risks (not necessarily their objective presence). Self-reports of general health have proved to be useful indicators of an individual's health by many authors (see for example Benyamini and Idler, 1997 and Jürges, 2007). Rosen and Wu (2004) report that *"Poor self-reported health is strongly correlated with mortality even after controlling for indices of functional capacity, the presence of specific medical conditions and physician health assessments."* [11]

Following a rich body of empirical literature, the model controls for many socio-economic observables which are generally found to be highly associated with household portfolio choice. When it comes to demographic variables, the model includes several variables widely used throughout the literature. **Age** enters the regression in linear and quadratic terms to capture the life-cicle effect – since risk aversion and the time horizon vary with it (Bertaut and Starr-McCluer, 2002; Dohmen et al., 2011; Guiso and Paiella 2008). On intensive margin, age may also capture a traditional investment advice - namely, a rule of thumb which negatively relates portfolio risky share and age (Malkiel, 1999). **Gender** is also controlled for to capture possible gaps between male and female risk attitudes, since a large set of papers find that risk aversion is higher for women than for men (in experimental setting e.g. Holt and Laury, 2002 and Fehr-Duda et al., 2006; using field and survey data e.g. Kimball et al., 2008, Guiso and Paiella, 2008, Dohmen et al., 2011). A dummy for being **married** is also included in the model because agents with different marital status may differ in their perceptions of and preferences for risk (e.g. Bertocchi et al., 2011) and a dummy that indicates high educational achievement, since **education** is found to be associated with portfolio choice (e.g. Vissing-Jørgensen, 2002) - the reason of which might lay in information barriers. Additionally, **cognitive abilities** may affect portfolio choice in a similar way as education and are found to have independent effect from it (Christelis et al., 2010). The model focuses on those measures of cognitive abilities that are relevant for financial investment. These include numeracy i.e. the ability to perform numerical operations, fluency i.e. the ability of planning and executive function and recall i.e. the ability to compare facts and situations at distant points in time. Following recent related literature, the model also controls for **social interactions**, that are found to affect financial decisions (in addition to Christelis et al., 2010, see e.g. Hong et al., 2004).

To capture the household's budget constraint, the model includes household **total income** and **net wealth**. [12] Both are defined in quantiles form, as a more flexible specification which enables the model to capture nonlinear relationship with the dependent variable. This is particularly important since transaction costs might discourage risky assets holding only for low levels of income and wealth (Christelis et al., 2010).

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[11] Additionally, using SHARE data, Atella et al. (2012) find that when included in a regression for participation decision, their measure of objective health status is found to be not significant at conventional significance levels, unlike perceived health status.

[12] Controlling for wealth stems both from theory of „cash on hand" as an important determinant of asset holding and the need to avoid confounding the role of other covariates with that of wealth which may happen when wealth is excluded from regression.

Portfolio of the elderly might be different than those of younger population because the elderly face much more mortality risk, which shortens their planning horizon. **Bequest** motives may extend this time horizon and reduce the effect of mortality risk (Hurd, 2002), hence may be particularly important among elderly. Therefore, the model also controls for intention to leave a bequest.

As reported by Rosen and Wu (2004), "*in psychology literature some argue that an individual's subjective health evaluations can be distorted by mood*" (Schmidt et al., 1996). Hence, the model also includes a dummy variable capturing **low mood**, similar to Christelis et al. (2010).

4 DATA

The data used in this paper are drawn from 2004 (Wave 1) Release 2.5.0 Survey of Health, Aging and Retirement in Europe (SHARE). SHARE was patterned after US Health and Retirement Survey (HRS) and English Health and Retirement Study (ELSA). It biannually surveys households which are representative of the population of aged 50 or more in 12 (and increasing number of) European countries – Austria, Germany, Switzerland, France, Belgium, Netherlands, Denmark, Sweden, Spain, Italy, Greece, and Israel – resulting in 35,003 individuals (including 3,888 non-responding partners) and 19,548 households.

SHARE encompasses detailed information on series of different questions ranging from basic demographic information – including household size, age, gender, marital status, education, employment – to different types of cognitive abilities, intensity of social interactions, various economic variables and finally both physical and mental health. Financial assets information covers ownership and amounts invested in different assets, varying in their riskiness (see Explanation Box 1 for more details on economic variables). Thus, the dataset is particularly suited to study the association between health risk with social characteristics and economic outcomes.

Israeli observations are excluded from the dataset in this paper, since for this country not all variables relevant for the analyses were available. The analysis also excludes households in which (at least one of) financial respondent(s) is aged over 90 or below 50.[13] The resulting sample has 27,714 individuals and 16,549 households.[14]

Explanation box 1: Financial Assets

This box provides a brief description of the construction of financial assets data in SHARE, while full details are given in Christelis et al. (2005). The SHARE asks questions regarding the financial assets to financial respondent only. There are questions on seven kinds of assets: i) bank, transaction or saving accounts; ii) government or corporate bonds; iii) stocks or shares; iv) mutual funds or managed investment accounts; v) Individual Retirement Accounts (IRAs); vi) contractual savings for housing vii) term or whole life insurance policies. As risky assets, this paper considers stocks/shares, mutual funds invested mostly in stocks and IRAs invested mostly in stocks.

The following description is from Christelis et al. (2010.). For stocks/shares (held directly), first she is asked whether she owns that asset and then if yes, in what amount. If the respondent refuses to provide the answer or claims that she does not know, she is then introduced to unfolding brackets sequence.

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[13] The latter happens when there is an eligible household member over 50, therefore the household is eligible for SHARE interview, but her partner is also a financial respondent, but is younger than her.

[14] By including imputed data, the dataset used in this paper is threefold larger than Atella et al. (2012).

The financial respondent is randomly assigned to one of the three thresholds (with three threshold values varying by country) and asked whether she holds more, less or about that threshold. Depending on her answer, she might then be asked the next lower or higher threshold. The thresholds impose range of acceptable value of asset holding, which are taken into account during the imputation process. For mutual funds and IRAs, however, the information is less detailed. The financial respondent is still asked the same question for ownership, but then if answered affirmatively, the following question is regarding only the main investment profile of the mutual fund/IRA as "mostly in stocks," "mostly in bonds" or "half stocks and half bonds". The imputations are not provided.

4.1. Health care systems of SHARE countries

The eleven countries included in SHARE have quite heterogeneous health care systems. In this paper they are classifyied according to the criteria suggested by Atella et al. (2012) – they, however, did not include Belgium in their analysis, since the data for that country were not yet fully available.

Countries are divided in two groups according to whether they have a full-coverage national health service. The NHS countries include Sweden, Denmark, Italy, Spain, which, as described by Allin (2005) share a few key characteristics. They are all predominantly financed through general taxation and grant universal access to a uniform level of care throughout the country. Private health insurance is not particularly widespread, and if any exists it is used to purchase additional service and to avoid waiting for the service (Atella et al., 2012). All other countries, including Austria, Netherlands, Belgium, Germany, France, Switzerland and Greece, are classified as non-NHS countries. In **Austria**, 95% of population is covered by mandatory health insurance, 2% by voluntary health insurance, while the remaining 3% are not covered by any insurance. In **Netherlands**, public health care system covers only "exceptional medical expenses" (long-term care or high-cost treatments), while for all other health expenditures people must turn to compulsory sickness funds. In **Belgium**, the system is based on compulsory social health insurance, which reimburses OOP medical expenditures depending on the nature of the service, the legal status of the provider and the status of the insured person, while sickness funds offer complementary health insurance. In **Germany**, health features three co-existing schemes, statutory, private and governmental, while only 3% is covered by governmental schemes. **French** health system is also based on three main schemes general (84%), agricultural (7%) and self-employed scheme (5%), which are complemented by voluntary private health insurance, covering 95% of the population. In **Switzerland**, health care system provides universal coverage, but the service is provided through multiple private insurers in a regulated competitive market. Finally, **Greek** health care system is characterized by national health care system coexisting with compulsory social insurance (held by 97% of the population) and voluntary private health insurance (8%).[15]

Comparing the countries across several indicators, Atella et al. (2012) report that in NHS group, there is full population coverage, medical expenditures are mostly publicly financed and the average share of out-of-pocket expenditures (OOP) is slightly lower than in non-NHS. In sum, in NHS countries there is a higher degree of publicly guaranteed protection against health related financial risks than in non-NHS countries.

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[15] These summaries are from Atella et al. (2012), based on Allin et al. (2005).

4.2. Accounting for non-response

Being a large household survey, SHARE suffers from high item non-response rate, which can substantially bias estimates and also lead to a large efficiency loss, especially with many variables entering regression equation.

This paper addresses item non-response by exploiting multiple imputations (MI) of missing data provided by SHARE, as a way to obtain valid statistical inference in item non-response scenario.[16]

The SHARE imputation process yields 5 implicate datasets.[17] The bias of the standard errors of the estimates depends on the fraction of missing data, but this bias decreases with the number of implicates (as shown by Rubin, 1987). Following Christelis et al. (2010), when assessing missingness of data, the present analysis adopts the most stringent definition of imputed values where a value of a household level variable is considered imputed if any of its constituent parts is imputed for any household member. Thus, the incidence of missing values is particularly high for total income (63.32%) and net wealth (63.03%), since these variables are sum of many elements. The statistics on percentages of missing data for imputed variables used in this paper is reported in Table 1.

Table1: Prevalence of missing values of imputed variables

	Missing	Total	Percent Missing
Amount held in stocks directly	2,457	16,549	14.85
Gross financial assets	8,717	16,549	52.67
Share invested in risky assets	8,497	14,249	59.63
Total income	10,479	16,549	63.32
Net worth	10,431	16,549	63.03
Perceived Health Status	3,324	16,549	20.09

4.3. Choice of outcome variables

To define the dependent variables, the paper adopts two definitions of stockownership: direct stockownership (holding stocks directly) and total stockownership (holding stocks directly or in mutual funds or IRAs that invest mostly in stocks).

In allocation regression, the paper focuses on share in stocks held only directly following Christelis et al. (2010), since for indirect stockholding (through mutual funds or individual retirement accounts) there are not exact amounts reported[18] nor imputations provided.

As emphasized by Heaton and Lucas (2000) "*An important issue in studying portfolio shares is how broadly the measure of wealth in the denominator should be defined. Different pictures can emerge if one uses financial assets, all physical assets (including homes and automobiles), or physical assets plus human capital as the relevant measure of wealth.*" This paper follows most of the recent literature (e.g. Edwards, 2008 and Christelis et al., 2010), and uses gross financial assets in the denominator, therefore focusing on the allocation between different types of financial assets. Beyond being an indicator of diversification *between* risk

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[16] MI are a simulation-based approach for analyzing incomplete data whose objective is not to predict missing values as close as possible to the true ones but to handle missing data in a way resulting in valid statistical inference (Rubin, 1996). Multiple imputation replaces missing values with multiple simulated values to complete the data, then standard analysis should be applied to each completed dataset, and the obtained parameter estimates adjusted for missing-data uncertainty using as "Rubin combination rules" as described in Rubin (1987).
[17] For the description of SHARE imputation process see Christelis (2008).
[18] For mutual funds and IRAs the financial respondents are asked only whether they invest mostly in bonds, about equally in both bonds and stocks or mostly in stocks.

categories, this measure is found by Calvet et al. (2009) to be a reasonable diversification proxy for Sharpe ratio, for which computation requires more dissaggregated data than available in SHARE.[19] When this proxy is used in the regression on household characteristics, the authors obtain results broadly consistent with the results obtained when they use Sharpe ratio itself. Thus, the regression of determinants of share of risky assets can also provide some intuition on association of health with (under)diversification *within* risk categories.

4.4. Descriptive statistics

Table 2 reports descriptive statistics of the variables used in the empirical analysis (see Explanation Box 2 for more details on variables construction). The median household has 2 members, about every fifth household having non-responding partner. The financial respondent is about 65 years old, equally likely to be male and female and married with probability of 64%. Household's average perceived health-status is 3.16 on 1 (Excellent) to 5 (Poor) US scale - so something between Good and Fair.

Explanation box 2: Variables construction

Dependent variables In order to use all information available (declared or imputed), the dummy for direct stockholding is assumed to be 1 if household declared to hold stocks/shares and/or has positive amount invested in stocks (declared or imputed), and the dummy for total stockholding takes the value of 1 if household has dummy for direct stockholding equal to 1 and/or has declared to have assets invested in mutual funds mostly in stocks or retirement accounts mostly in stocks (no imputations available).
Self- assessment of health status SHARE asks question on self-assessment of health status on both US and EU scale. The scales are quite similar: The European scale (1 = Very good, 2 = Good, 3 = Fair, 4 = Bad, 5 = Very bad) and the US scale (1 = Excellent, 2 = Very good, 3 = Good, 4 = Fair, 5 = Poor.) This analysis relies on US scale, since only for US scale SHARE provides imputed data.
SHARE asks questions on 12 depression symptoms (depression, pessimism, suicidality, guilt, sleep, interest, irritability, appetite, fatigue, concentration, enjoyment, tearfulness) which are part of EURO-D depression scale ranging from 1-12 (counting the number of symptoms reported by the respondent). In the present analysis, dummy for low mood takes the value of 1 if household obtains above 7 on EURO-D scale.

Other controls
o **Education** is captured with the dummy variable that indicates high educational achievement of financial respondent, taking the value of 1 if he/she completed more years than duration of current compulsory education process, which is 9 years on average. The paper adopts the definition in Atella et al. (2012) and use completed years of education as generated by SHARE rather than direct respondents' answers on educational degrees obtained, since educational systems are highly heterogeneous across Europe.
o **Total income** in SHARE is a generated variable equal to the sum of all household members' income from all sources.
o **Net wealth** in SHARE is a generated variable equal to the sum of real assets – including the value of owned property – and of financial assets net of any debt.
o **Cognitive abilities** include 3 measure:
    i) **numeracy** being measured by number of correct answers provided to 4 simple computational questions
    ii) **fluency** being measured by number of animals named in 1 minute

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[19] SHARE dataset, as most large survey datasets, does not report holdings in specific assets, but only in asset classes.

iii) *recall* being measured by number of words recalled out of 10

o *Social interactions* are captured with the dummy variable that takes the value of 1 if respondent takes part in social, sport, political or other community-related associations during the last month. Detailed explanation of how this variable is defined and constructed is provided in the Appendix of Christelis et al. (2010).

o *Bequest motives* are controlled for in in a form of a probability to leave an inheritance. SHARE contains three questions for financial respondents regarding the intention to leave an inheritance – first question being the probability of leaving an inheritance of more than 50.000 euros, then if answered affirmatively, the following question is the probability of leaving an inheritance of more than 150.000 euros, otherwise, if the answer to the first question is negative, the household is asked about the probability of leaving any inheritance. This paper follows Christelis et al. (2010) and Atella et al. (2012) and uses the first question as a control variable.

Aggregating to household level

For singles, computing household level health status is straightforward. However, for couples, the aggregation should be made with due caution. A natural question is whether health status of each member has the same weight in affecting portfolio choice. Rosen and Wu (2004) investigate this issue and find that joint effect of when both spouses are in poor health is approximately equal to the sum of the individual spouses' effects. In the present paper, thus, health status at household level is computed as an average of health status of all its eligible members. This is the discrete measure of health status. To define a household health status in a dummy form, the analysis follows Atella et al. (2012) and set a dummy to 1 if average household health status is higher than 3 (when it moves from Good towards Poor).

Only economic variables and perceived health variable are collapsed to household level including imputations, which cover also non-responding partners (NRPs), while all other variables – including age, gender, marital status, education, cognitive abilities, social interactions and intention to leave a bequest – are collapsed to household level taking into account only financial respondents (those declared to manage household finances) since they are the ones making investment decisions. For age, education, cognitive abilities and probability of bequest, the household level variable is obtained as the average over household financial respondents, and for male dummy, married dummy, social interactions dummy it is the maximum over household financial respondents. This choice for household gender dummy was made because the data show that within the household with both partners being financial respondents, it is usually male who holds more assets and earns higher income, therefore is likely to have more bargaining power in deciding on asset allocation. The choice for household married dummy was driven by the fact that within the household with 2 financial respondents who are not married between them, the other one is usually a sibling or a child of the married one, hence is likely to have less bargaining power in financial decisions. Finally, the dummy for household social activities takes the maximum over financial respondents since spillover of information acquired through social interactions are likely to be high for people living under the same roof.

When it comes to cognitive abilities, the average financial respondent displays fairly good level of all three measures: numerical skills (around 3 correct answers), fluency (around 18 animals named) and memory (around 5 recalled). Around 19% of financial respondents take part in some social activity. Average household displays strong bequest motives with around 54% of households stating the intention to leave an inheritance of over 50,000€ The household has median annual income of slightly less than 27,000 € (mean 41,000 €) and net wealth of around 150,000€ (mean 307,400 €). It has around 10,400€ (mean 44,500€) of gross financial assets. From those having positive amount of financial assets (14,249 households), around 4% is directly invested in stocks.

Table 2: Descriptive statistics

VARIABLES	MEAN	MEDIAN	SD	MIN	MAX	OBS
household size	2.13	2	1.04	1	9	16549
household has	0.21		0.40	0	1	16549
age	65.20	64.42	9.75	50.00	89.92	16549
male	0.50		0.50	0	1	16549
married	0.64		0.48	0	1	16549
years of education	9.86	10.5	4.84	0	21	16549
PHS (discrete, US scale: from 1 "Excellent" to 5 "Poor")	3.16	3	0.90	1	5	16549
PHS (dummy, 1 if less than good health)	0.44		0.50	0	1	16549
low mood	0.07		0.26	0	1	16549
numeracy	3.28	3	1.13	1	5	16549
fluency	18.15	17.5	7.21	0	90	16549
recall	4.68	5	1.78	0	10	16549
sociability	0.19		0.39	0	1	16549
Probability of leaving inheritance >50.000	53.70		43.94	0	100	16549
total income	4.10	2.66	4.83	0	90.96	16549
net worth	30.74	14.96	89.92	-224.88	2918.08	16549
gross financial assets	4.45	1.04	14.08	0	626.65	16549
Dummy for directly investing in risky assets	0.14		0.34	0	1	16549
Dummy for indirectly investing in risky assets	0.05		0.22	0	1	16549
Dummy for investing in risky assets (directly or indirectly)	0.16		0.37	0	1	16549
Amount directly invested in risky assets	0.48	0	4.47	0	407.39	16549
Share directly invested in risky assets	0.04	0	0.14	0	1	14249
NHS_dummy	0.36			0	1	16549
Austria	0.03			0	1	16549
Germany	0.28			0	1	16549
Sweden	0.03			0	1	16549
Netherlands	0.05			0	1	16549
Spain	0.12			0	1	16549
Italy	0.19			0	1	16549
France	0.19			0	1	16549
Denmark	0.02			0	1	16549
Greece	0.04			0	1	16549
Switzerland	0.02			0	1	16549
Belgium	0.03			0	1	16549

Note: All variables are reported at the household level. Statistics are computed using sample weights.
All monetary amounts are PPP-adjusted and in 10.000 of Euros.

5 ECONOMETRIC ANALYSIS AND RESULTS

The analysis includes two dependent variables: a) binary variable for holding risky assets (extensive margin) b) share of funds invested in risky assets (intensive margin). The analysis computes portfolio shares for all individuals who reported positive financial assets.[20]

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[20] In the literature, some even exclude households whose net financial position falls bellow some threshold (Heaton and Lucas, 2000, Curcuru et al., 2009).

For both participation and allocation regressions, the analysis estimates separate models for two measures of self-reported health status – in a discrete form and in a dummy form.[21] Each regression is estimated for full sample, and then separately for NHS and non-NHS countries, obtaining coefficients by Rubin combination rules (Rubin, 1987). More specifically, coefficients are computed as the mean of coefficients estimated on five individual implicate datasets and standard errors are computed taking into account both within and between imputation variability of the five estimated standard errors.[22] Following the commonly used practice, marginal effects are reported at the (weighted) means of variables (combining all 5 implicate datasets). Since both probit and tobit models are non-linear, marginal effects are non-linear combinations of coefficients, hence the computation of corresponding standard errors is not straightforward. Following Christelis et al. 2010, the estimation employs bootstrap method to obtain the standard errors (see Explanation Box 3 for the details on estimation algorithm).

Explanation box 3: Computational algorithm

The results in this paper are obtained using STATA 12 software package. STATA 11 and later include Multiple imputation (MI) package which performs Rubin combination rules on coefficients and corresponding standard errors, works for probit, but not for tobit, and does not allow postestimation commands such as margins. Hence, the estimation in this paper does not utilise MI package, but develops own code for obtaining Rubin estimates of coefficients and standard errors, and corresponding marginal effects and their standard errors. The routine is quite involved and dealing with such a large dataset led to the choice of reporting marginal effects at the mean rather than average marginal effects, which are found to be preferable (Train, 2003) but more computationally intensive.

5.1. The extensive margin (probabilities of stockholding)

Probit regressions for participation decision are estimated for both direct stockholding and total stockholding. The estimates of marginal effects and corresponding standard errors are reported in Table 3 for direct stockholding and Table 4 for total stockholding. For both direct and total stockholding and both specifications of health measure, standard control variables display the expected signs and significance for overall sample. The magnitude and significance of marginal effects, as expected, vary across the two groups of countries.

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[21] For more details on how these variables are defined and constructed see Explanation Box 2.

[22] Let $\hat{\beta}_m$ denote the vector of parameter estimates for imputation m , and M be the number of imputations, then the overal estimates equal $\hat{\beta} = \frac{1}{M}\sum_{m=1}^{M} \hat{\beta}_m$. The variances of these estimates consist of two unequally weighted parts: the within-imputation variance $WV = \frac{1}{M}\sum_{m=1}^{M} \hat{V}_m$ and the between-imputation variance $BV = \frac{1}{M-1}\sum_{m=1}^{M}(\hat{\beta}_m - \hat{\beta})^2$, hence total variance equals $TV = WV + \frac{M+1}{M}BV$.

Table 3: Participation decision/direct stockholding – probit estimates

VARIABLES	Probit direct stockholding discrete PHS			Probit direct stockholding dummy PHS		
	Overall	Countries without NHS	Countries with NHS	Overall	Countries without NHS	Countries with NHS
HS discrete	-0.0052*	-0.0094**	0.0026			
	(0.003)	(0.0045)	(0.0031)			
HS dummy *				-0.0079	-0.0137**	0.004
				(0.0049)	(0.0067)	(0.0048)
low mood *	-0.0368**	-0.0411	-0.035*	-0.0398**	-0.0453	-0.0323*
	(0.0172)	(0.0256)	(0.0178)	(0.0188)	(0.029)	(0.017)
Total income q2*	0.0432***	0.0375*	0.0468**	0.0432***	0.0375*	0.0468**
	(0.0159)	(0.0194)	(0.0179)	(0.0159)	(0.0194)	(0.0207)
Total income q3*	0.0993***	0.1006***	0.0813***	0.0993***	0.1006***	0.0813***
	(0.0151)	(0.019)	(0.0181)	(0.0151)	(0.019)	(0.022)
Total income q4*	0.1404***	0.1339***	0.13***	0.1404***	0.1339***	0.1301***
	(0.0148)	(0.0179)	(0.0225)	(0.0148)	(0.0179)	0.0285
Net worth q2*	0.0946***	0.0998***	0.0657***	0.0946***	0.0998***	(0.0657***)
	(0.0161)	(0.0193)	(0.0157)	(0.0161)	(0.0193)	0.0192
Net worth q3*	0.1362***	0.1259***	0.134***	0.1362***	0.1259***	0.1344***
	(0.0153)	(0.0182)	(0.0216)	(0.0153)	(0.0182)	(0.0268)
Net worth q4*	0.2177***	0.193***	0.228***	0.2177***	0.193***	0.2276***
	(0.013)	(0.0199)	(0.0212)	(0.013)	(0.0199)	(0.0228)
Household size	-0.0032	-0.0035	-0.0018	-0.0037	-0.0043	-0.0017
	(0.0035)	(0.0049)	(0.0035)	(0.004)	(0.0061)	(0.0033)
Age	0.0029	0.0012	0.0054	0.0033	0.0015	0.0048
	(0.004)	(0.006)	(0.0041)	(0.0046)	(0.0076)	(0.0043)
Age squared	-0.00002	-0.00001	-0.00004	-0.00003	-0.00001	-0.00001
	(0.00003)	(0.00005)	(0.00003)	(0.00004)	(0.00006)	(0.00006)
Male *	0.0412***	0.0463***	0.0276***	0.044***	0.0499***	0.0257**
	(0.008)	(0.0103)	(0.0102)	(0.0087)	(0.0113)	(0.0105)
Married *	0.0145	0.0174	0.0068	0.0155	0.0189	0.0063
	(0.0097)	(0.0132)	(0.0133)	(0.0104)	(0.0145)	(0.0129)
Higher Education *	0.0393***	0.0571***	0.0208	0.0421***	0.0619***	0.0193
	(0.0087)	(0.0129)	(0.0123)	(0.0093)	(0.0142)	(0.012)
Numeracy	0.0159***	0.0207***	0.0072**	0.0182***	0.0254***	0.0065**
	(0.0028)	(0.0042)	(0.003)	(0.0034)	(0.0056)	(0.003)
Fluency	0.0012***	0.0014**	0.0008	0.0014***	0.0017***	0.0007
	(0.0004)	(0.0005)	(0.0005)	(0.0005)	(0.0007)	(0.0005)
Recall	0.0041**	0.0043*	0.0038*	0.0047**	0.0053*	0.0034*
	(0.0018)	(0.0026)	(0.0021)	(0.0021)	(0.0032)	(0.002)
Sociability *	0.0223**	0.0212*	0.028**	0.0237**	0.0227*	0.0261**
	(0.0092)	(0.0115)	(0.0117)	(0.0096)	(0.0122)	(0.0114)
Inheritance	0.0002***	0.0003***	0.00004	0.0002**	0.0004***	0.00004
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Observations	16549	10621	5928	16549	10621	5928
R2	0.24	0.22	0.30	0.24	0.22	0.30

Note: Marginal effects evaluated at the weighted means. *** p<0.01, ** p<0.05, * p<0.1 Standard errors are reported in parentheses, calculated using 200 bootstrap replications. The R² measure is computed as in Harel, O. (2009.) The results are a combination of those of separate regressions for each implicate dataset, using the multiple imputation methodology of Rubin (1987). Country fixed effects included, but not reported. Categorical variables are marked with an asterix. Monetary amounts are PPP-adjusted and in 10.000 of Euros.

Table 4: Participation decision/total stockholding – probit estimates

VARIABLES	Probit total stockholding discrete PHS			Probit total stockholding dummy PHS		
	Overall	Countries without NHS	Countries with NHS	Overall	Countries without NHS	Countries with NHS
HS discrete	-0.0082**	-0.015***	0.0036			
	(0.0036)	(0.005)	(0.0041)			
HS dummy *				-0.0112**	-0.0189***	0.0053
				(0.005)	(0.0062)	(0.0055)
low mood *	-0.0275	-0.0272	-0.0295	-0.0294	-0.0289	-0.0268
	(0.0196)	(0.0291)	(0.0199)	(0.0211)	(0.0318)	(0.0179)
Total income q2*	0.0503***	0.0392**	0.0542***	0.0503***	0.0392**	0.0542***
	(0.0151)	(0.0182)	(0.021)	(0.0151)	(0.0182)	(0.021)
Total income q3*	0.101***	0.0872***	0.0988***	0.101***	0.0872***	0.0988***
	(0.0127)	(0.0167)	(0.0221)	(0.0127)	(0.0167)	(0.0221)
Total income q4*	0.1378***	0.1147***	0.1561***	0.1378***	0.1147***	0.1561***
	(0.0121)	(0.0162)	(0.0271)	(0.0121)	(0.0162)	(0.0271)
Net worth q2*	0.0855***	0.087***	0.0587***	0.0855***	0.087***	0.0587***
	(0.0154)	(0.0165)	(0.0193)	(0.0154)	(0.0165)	(0.0193)
Net worth q3*	0.1197***	0.1052***	0.1222***	0.1197***	0.1052***	0.1222***
	(0.0143)	(0.0165)	(0.0267)	(0.0143)	(0.0165)	(0.0267)
Net worth q4*	0.1861***	0.1481***	0.223***	0.1861***	0.1481***	0.223***
	(0.0147)	(0.0232)	(0.0231)	(0.0147)	(0.0232)	(0.0231)
Household size	-0.0037	-0.0023	-0.0041	-0.0044	-0.0029	-0.0035
	(0.0041)	(0.0059)	(0.004)	(0.0047)	(0.0075)	(0.0034)
Age	0.0072	0.0062	0.0073	0.0084	0.0079	0.0063
	(0.0047)	(0.0067)	(0.0051)	(0.0056)	(0.0086)	(0.0049)
Age squared	-0.0001	0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	(0.00004)	(0.0001)	(0.00004)	(0.00004)	(0.0001)	(0.00004)
Male *	0.0477***	0.0526***	0.032***	0.0503***	0.0547***	0.0294***
	(0.0082)	(0.0105)	(0.0109)	(0.0089)	(0.0109)	(0.0107)
Married *	0.0125	0.0149	0.0045	0.0132	0.0156	0.0041
	(0.0105)	(0.0133)	(0.0151)	(0.0111)	(0.014)	(0.0139)
Higher Education *	0.0365***	0.0491***	0.017	0.0387***	0.0515***	0.0156
	(0.0093)	(0.0136)	(0.013)	(0.0098)	(0.0144)	(0.0119)
Numeracy	0.019***	0.0223***	0.0105***	0.0222***	0.0282***	0.0091***
	(0.0034)	(0.0045)	(0.0036)	(0.0041)	(0.006)	(0.0034)
Fluency	0.0018***	0.002***	0.001*	0.0021***	0.0025***	0.0009*
	(0.0004)	(0.0006)	(0.0006)	(0.0005)	(0.0008)	(0.0005)
Recall	0.0058***	0.0068**	0.0036	0.0068***	0.0086**	0.0031
	(0.0021)	(0.0028)	(0.0023)	(0.0025)	(0.0036)	(0.002)
Sociability *	0.0179*	0.0142	0.031**	0.0188*	0.0147	0.0286**
	(0.0095)	(0.012)	(0.0134)	(0.0099)	(0.0123)	(0.0124)
Inheritance	0.0003***	0.0004***	0.0001	0.0004***	0.0005***	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Observations	16549	10621	5928	16549	10621	5928
R2	0.26	0.22	0.35	0.26	0.22	0.35

Note: Marginal effects evaluated at the weighted means. *** p<0.01, ** p<0.05, * p<0.1
Standard errors are reported in parentheses, calculated using 200 bootstrap replications. The R² measure is computed as in Harel, O. (2009.) The results are a combination of those of separate regressions for each implicate dataset, using the multiple imputation methodology of Rubin (1987). Country fixed effects included, but not reported. Categorical variables are marked with an asterix. Monetary amounts are PPP-adjusted and in 10.000 of Euros.

The probability of owning risky assets increases with **total income** and **net wealth** in a full sample and both subsamples, and, as expected, this relationship is not linear. In line with Atella et al. (2012), the marginal effects of **household size** and **age** are not statistically

significant in either sample. **Gender** gap in inclination towards investing in risky assets is confirmed, having males more prone to such investments than females. The **marital status** dummy also displays expected positive sign, but the effect is not precisely estimated. The marginal effects of having high **education** is found to be positive and significant in the full sample, as expected, but in a split sample regressions it is significant only in non-NHS countries. Possible interpretation is that these countries feature low transparency of the financial system on average, and therefore higher education helps to reduce information costs more than in NHS countries. Moreover, two group of countries display high difference in average education levels.[23] In line with findings of Christelis et al. (2010), in a full sample all three measures of **cognitive abilities** and **social activities** display positive association with stockholding.

As expected, the two subsamples contrast substantially with respect to association of health variables with stockholding, but also regarding the measure of bequest motives. The variable capturing **low mood** has an expected negative sign in all regressions, although it is not always precisely estimated. Marginal effects on both self-perceived health measures (discrete and dummy) are found to be negative and statistically significant in non-NHS countries and insignificant in NHS countries, suggesting that probability of holding risky assets decreases with worsening of perceived health status, but only in countries where health-related financial risks are not mediated by highly-protective NHS. The marginal effects are somewhat more precisely estimated for total stockholding, then for direct stockholding, and in the former regression in non-NHS countries are the magnitude of -0.015 for discrete, and -0.019 for dummy measure of health status and significant at 1% significance level.[24] Hence, worsening health status has no effect on propensity to hold stocks in NHS countries, while this effect is negative and economically significant in non-NHS countries - one standard deviation (0.9) decreases the probability of holding risky assets directly by 0.9 x (-0.009) = 0.8 percentage points and directly or indirectly by 0.9 x (-0.015) = 1.35 percentage points. The effect of health status dummy going from 0 to 1 is associated with an increase in probability of owing risky assets of 1.4 percent for direct stockholding and 1.9 percent for total stockholding.

Interestingly, the results show that the marginal effect on the probability of leaving a **bequest** is significant for full sample but when splitting the sample, becomes more positive and significant in non-NHS countries, while smaller positive and insignificant in NHS countries. Although this might appear surprising at first, it is not necessarily so. Health care is provided not only through formal insurance contracts, but also through informal family networks. In turn, planned bequest may informally hedge through intergenerational care arrangements (Bernheim et al., 1985). Namely, parents may be able to hedge health-related financial risks by bargaining care from their children through promised inheritance, which reduces household's overall exposure to background risk and hence encourage investment in risky assets. Since in non-NHS countries households are not shielded from OOP medical expenditure risk by publicly organised health system, informal care arrangements might be particularly important for those households.[25] The importance of bequest motives as a hedge

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[23] Median years of education are 12 in non-NHS countries, and 6 in NHS countries, with dummy for high education having the mean of 0.72 an 0.36 respectively.

[24] Both are threefold smaller in magnitude than what reported in Atella et al. (2012), which may be due to the sample selection in their paper – namely, dropping observations with missing values on any of variables relevant for analysis.

[25] When estimating regressions for non-NHS countries without bequest motives among the covariates, marginal effect of health status dummy for being sick increases by 5-6% in magnitude, hence providing further support to this hypothesis. The results are available upon request.

against health related financial risks might be different between singles and couples, since a partner can act as a hedge himself. On one hand, individuals may be more likely to bargain care from their children when having no partner to rely on in case of falling ill. On the other hand, children might be more likely to accept such financial responsibility if their parents are in a couple, since children foresee that the parents will rely on each other in case of need (thus they foresee lower participation in their parents medical expenditure). The results show no clear empirical support for either interpretation.[26]

5.2. The intensive margin (share of risky assets)

As explained in section 4.2., tobit regressions for allocation among different types of financial assets are estimated for direct stockholding only. The estimates of marginal effects and corresponding standard errors are reported in Table 5. The results are qualitatively similar to those from probit analysis.

Table 5: Allocation decision/direct stockholding – tobit estimates

VARIABLES	Tobit direct stockholding discrete PHS			Tobit direct stockholding dummy PHS		
	Overall	Countries without NHS	Countries with NHS	Overall	Countries without NHS	Countries with NHS
HS discrete	-0.0026	-0.005***	0.0026			
	(0.0016)	(0.0016)	(0.0021)			
HS dummy *				-0.0078	-0.0064**	0.0002
				(0.005)	(0.003)	(0.0131)
low mood *	-0.038**	-0.0436	-0.0411	-0.0402**	-0.0459	-0.0375
	(0.0177)	(0.0281)	(0.0278)	(0.0188)	(0.0282)	(0.0288)
Total income q2*	0.0391***	0.0324*	0.0488**	0.0391***	0.0316*	0.0519***
	(0.0146)	(0.0178)	(0.0198)	(0.0146)	(0.0177)	(0.0197)
Total income q3*	0.0939***	0.0919***	0.0881***	0.0939***	0.0945***	0.0925***
	(0.0156)	(0.0184)	(0.0208)	(0.0156)	(0.0201)	(0.0211)
Total income q4*	0.123***	0.115***	0.122***	0.1226***	0.1209***	0.1258***
	(0.0155)	(0.0162)	(0.0275)	(0.0155)	(0.0182)	(0.0253)
Net worth q2*	0.0808***	0.0863***	0.0479**	0.0808***	0.0876***	0.0501**
	(0.0167)	(0.0201)	(0.0192)	(0.0167)	(0.0215)	(0.0199)
Net worth q3*	0.115***	0.106***	0.105***	0.1147***	0.1093***	0.1095***
	(0.0167)	(0.0188)	(0.0247)	(0.0167)	(0.0199)	(0.024)
Net worth q4*	0.186***	0.166***	0.173***	0.1859***	0.1887***	0.1744***
	(0.0154)	(0.0172)	(0.023)	(0.0154)	(0.0138)	(0.0218)
Household size	-0.0013	-0.0012	-0.0012	-0.0015	-0.0011	-0.0012
	(0.002)	(0.0019)	(0.0028)	(0.0023)	(0.0019)	(0.0028)
Age	0.0019	0.0014	0.0034	0.0022	0.0013	0.0035
	(0.0025)	(0.0025)	(0.0028)	(0.0028)	(0.0025)	(0.0027)
Age squared	-.0000141	-0.00001	-0.00002	-0.00002	-0.000009	-0.00003
	(0.00002)	(0.00002)	(0.00002)	(0.00002)	(0.00002)	(0.00002)
Male *	0.0354***	0.0366***	0.0302**	0.037***	0.0371***	0.03**
	(0.0094)	(0.0105)	(0.0142)	(0.01)	(0.0105)	(0.0142)
Married *	0.0084	0.0133	-0.0031	0.0088	0.0133	-0.0019
	(0.0131)	(0.0142)	(0.018)	(0.0136)	(0.0143)	(0.0177)
Higher Education *	0.035***	0.058***	0.013	0.0367***	0.0588***	0.0126
	(0.0104)	(0.014)	(0.0138)	(0.011)	(0.014)	(0.0139)
Numeracy	0.008***	0.0096***	0.0049*	0.009***	0.0096***	0.0048*
	(0.0015)	(0.0015)	(0.0029)	(0.0017)	(0.0015)	(0.0029)

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[26] When the models are estimated for singles and couples separately, controlling also for number of children, marginal effect of bequest is positive and significant for couples and non-significant for singles, which would go in favor of latter interpretation. However, marginal effect of self-reported health status also shows up as non-significant for singles (as found in Edwards, 2008 who uses US data), thus the results are not convincing of bequests hedging singles different than couples against health-related financial risks.

Fluency	0.0006***	0.0008**	0.0001	0.0007***	0.0008**	0.0001
	(0.0002)	(0.0003)	(0.0004)	(0.0002)	(0.0003)	(0.0004)
Recall	0.002**	0.0017	0.0033**	0.0023**	0.0018	0.0033**
	(0.0008)	(0.0013)	(0.0015)	(0.001)	(0.0014)	(0.0015)
Sociability *	0.0164*	0.0168	0.0182	0.0171*	0.0173	0.0169
	(0.0093)	(0.0125)	(0.012)	(0.0097)	(0.0126)	(0.0118)
Inheritance	0.0001*	0.0001***	-0.000003	0.0001*	0.0001***	-0.000005
	(0.00004)	(0.00004)	(0.0001)	(0.0001)	(0.00004)	(0.0001)
Observations	14249	9313	4936	9313	9313	4936
R2	0.19	0.25	0.09	0.19	0.24	0.09

Note: Marginal effects evaluated at the weighted means. *** p<0.01, ** p<0.05, * p<0.1
Standard errors are reported in parentheses, calculated using 50 bootstrap replications. The R² measure is computed as in Harel, O. (2009.) The results are a combination of those of separate regressions for each implicate dataset, using the multiple imputation methodology of Rubin (1987). Country fixed effects included, but not reported. Categorical variables are marked with an asterix. Monetary amounts are PPP-adjusted and in 10.000 of Euros.

The two subsamples contrast substantially with respect to health variable and the measure of bequest motives in their association with allocation as well. Association of portfolio allocation with both measures of **self-perceived health** measures (discrete and dummy) is found to be negative and significant in non-NHS countries and insignificant in NHS countries, suggesting that worsening of perceived health status is associated with decrease in the share of funds directly invested in stocks, but the effect is present only in countries where health-related financial risks are not mediated by highly-protective NHS. The variable capturing **low mood** has an expected negative sign, although is not precisely estimated when splitting the sample in two groups of countries. The results show that share invested in risky assets decreases with **total income,** but also with **net wealth**, as an evidence of decreasing relative risk aversion (DRRA).[27] Coefficients on **household size**, **age** and **marital status** are again not statistically significant in either sample. The **gender gap** evidence is also present, and **education** effect displays disparity between two subsamples also in allocation regression.

Unlike Christelis et al. (2010), the present analysis finds evidence of **cognitive abilities** affecting also the intensive margin of household portfolio choice. This seems an intuitive result, since it is likely that individuals with better cognitive abilities are better able to understand and compare different asset classes on a risk-adjusted basis. As expected, among three measures of cognitive abilities, **numeracy** matters the most for portfolio choice. **Sociability** is again positive but not as precisely estimated as in probit. It seems reasonable, since social learning increases the probability that individuals become aware about existing assets (Guiso and Jappelli, 2005), but there is no particular reason why sociability would affect their effective risk aversion.

The disparity of importance of **bequest motives,** and hence intergenerational care arrangements, between two subsamples is confirmed also for tobit, thus showing that informal care arrangements might play an important role in shaping portfolio choice in both dimensions.

5.2. Robustness check - Stock market nonparticipation

Following Bilias et al. (2010), in analysing the participation in risky assets, this robustness check restricts the sample to the households holding positive amount in financial assets, *„not to equate the stock market nonparticipation with the decision to hold no assets at all (or the inability to do so)".* Hence, probit is reestimated excluding households with zero financial assets, so using the same sample used in tobit regressions. Table 6 and 7 report the results for

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[27] DRRA is the result obtained also by e.g. Calvet et al. (2009).

direct and total stockholding respectively. The results seem pretty robust to this change in the definition of nonparticipation.

Table 6: Participation decision/direct stockholding –
sample restricted to those with positive amount invested in financial assets

VARIABLES	Probit direct stockholding discrete PHS			Probit direct stockholding dummy PHS		
	Overall	Countries without NHS	Countries with NHS	Overall	Countries without NHS	Countries with NHS
HS discrete	-0.0062*	-0.01*	0.0018			
	(0.0037)	(0.0053)	(0.0041)			
HS dummy *				-0.0093	-0.0138*	0.0027
				(0.0058)	(0.0077)	(0.0051)
low mood *	-0.0357**	-0.0399	-0.0369	-0.0405**	-0.0435*	-0.0354*
	(0.0172)	(0.0245)	(0.0243)	(0.0203)	(0.0264)	(0.0189)
Total income q2*	0.0381**	0.0323	0.0469**	0.039***	0.0323	0.0469**
	(0.015)	(0.0212)	(0.0208)	(0.0149)	(0.0212)	(0.0205)
Total income q3*	0.0918***	0.0927***	0.0811***	0.0917***	0.0927***	0.0811***
	(0.0138)	(0.0234)	(0.0223)	(0.013)	(0.0234)	(0.0229)
Total income q4*	0.1335***	0.1279***	0.13***	0.1304***	0.1279***	0.1295***
	(0.0131)	(0.0215)	(0.026)	(0.0119)	(0.0215)	(0.0249)
Net worth q2*	0.0925***	0.0973***	0.064***	0.0924***	0.0973***	0.064**
	(0.0171)	(0.0229)	(0.0222)	(0.0168)	(0.0229)	(0.0265)
Net worth q3*	0.1299***	0.1219***	0.128***	0.1271***	0.1219***	0.1278***
	(0.0161)	(0.0189)	(0.0273)	(0.0153)	(0.0189)	(0.026)
Net worth q4*	0.206***	0.1841***	0.216***	0.1877***	0.1841***	0.2158***
	(0.0157)	(0.0234)	(0.0246)	(0.0175)	(0.0234)	(0.0256)
Household size	-0.0033	-0.0036	-0.0018	-0.0043	-0.0043	-0.0017
	(0.004)	(0.0049)	(0.0048)	(0.0053)	(0.0061)	(0.0052)
Age	0.0039	0.0021	0.0076	0.0052	0.0026	0.0072
	(0.0031)	(0.0061)	(0.0064)	(0.0041)	(0.0073)	(0.0061)
Age squared	-0.00003	-0.00002	-0.00006	-0.00004	-0.00002	-0.00005
	(0.00002)	(0.00005)	(0.00005)	(0.00003)	(0.00006)	(0.00005)
Male *	0.0428***	0.0471***	0.0308**	0.0473***	0.0502***	0.0297**
	(0.008)	(0.0114)	(0.0134)	(0.0089)	(0.0122)	(0.0144)
Married *	0.0135	0.0165	0.0053	0.015	0.0176	0.0051
	(0.0115)	(0.0149)	(0.0159)	(0.013)	(0.016)	(0.0169)
Higher Education *	0.0389***	0.0579***	0.0192	0.0431***	0.0621***	0.0186
	(0.0097)	(0.0148)	(0.0141)	(0.0107)	(0.0163)	(0.0146)
Numeracy	0.0165***	0.0217***	0.0069	0.0217***	0.0263***	0.0064
	(0.0033)	(0.0039)	(0.0045)	(0.0044)	(0.0052)	(0.0043)
Fluency	0.0013**	0.0015***	0.0005	0.0017**	0.0019***	0.0004
	(0.0005)	(0.0006)	(0.0006)	(0.0007)	(0.0007)	(0.0005)
Recall	0.0048**	0.0045	0.0061*	0.0063**	0.0054	0.0057*
	(0.0023)	(0.0032)	(0.0032)	(0.003)	(0.004)	(0.003)
Sociability *	0.0208***	0.0197*	0.0271*	0.0228***	0.0209*	0.0262*
	(0.0081)	(0.0106)	(0.0141)	(0.0086)	(0.0112)	(0.0147)
Inheritance	0.0002***	0.0003**	0.00006	0.0003**	0.0003**	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Observations	14249	9313	4936	14249	9313	4936
R2	0.22	0.21	0.26	0.22	0.21	0.26

Note: Marginal effects evaluated at the weighted means. *** p<0.01, ** p<0.05, * p<0.1

Standard errors are reported in parentheses, calculated using 50 bootstrap replications. The R² measure is computed as in Harel, O. (2009.) The results are a combination of those of separate regressions for each implicate dataset, using the multiple imputation methodology of Rubin (1987).

Table 7: Participation decision/total stockholding –
sample restricted to those with positive amount invested in financial assets

VARIABLES	Probit total stockholding discrete PHS			Probit total stockholding dummy PHS		
	Overall	Countries without NHS	Countries with NHS	Overall	Countries without NHS	Countries with NHS
HS discrete	-0.011**	-0.0159***	0.003			
	(0.0045)	(0.0055)	(0.0043)			
HS dummy *				-0.0122**	-0.0189***	0.0042
				(0.0051)	(0.0065)	(0.0057)
low mood *	-0.0249	-0.0235	-0.0297	-0.0251	-0.0244	-0.0281
	(0.0223)	(0.0282)	(0.0269)	(0.0224)	(0.0298)	(0.0246)
Total income q2*	0.043***	0.0329*	0.0547***	0.0439***	0.0329*	0.0547***
	(0.0124)	(0.0184)	(0.0204)	(0.0131)	(0.0184)	(0.0204)
Total income q3*	0.0867***	0.078***	0.0992***	0.0911***	0.078***	0.0992***
	(0.0118)	(0.0195)	(0.0236)	(0.0128)	(0.0195)	(0.0236)
Total income q4*	0.1178***	0.1068***	0.155***	0.1275***	0.1068***	0.1552***
	(0.0104)	(0.0175)	(0.024)	(0.011)	(0.0175)	(0.024)
Net worth q2*	0.0775***	0.0829***	0.0538**	0.0809***	0.0829***	0.0538**
	(0.013)	(0.0198)	(0.0245)	(0.0135)	(0.0198)	(0.0245)
Net worth q3*	0.1037***	0.0994***	0.1117***	0.1106***	0.0994***	0.1117***
	(0.013)	(0.0149)	(0.0241)	(0.0136)	(0.0149)	(0.0241)
Net worth q4*	0.1447***	0.1359***	0.208***	0.1701***	0.1359***	0.2076***
	(0.0179)	(0.022)	(0.0259)	(0.016)	(0.022)	(0.0259)
Household size	-0.0042	-0.0021	-0.0047	-0.0044	-0.0026	-0.0043
	(0.0053)	(0.0062)	(0.0056)	(0.0055)	(0.0078)	(0.005)
Age	0.0101*	0.0077	0.01	0.0104*	0.0096	0.0091
	(0.0053)	(0.0071)	(0.0073)	(0.0055)	(0.0086)	(0.0075)
Age squared	-0.0001**	-0.0001	-0.0001	-0.0001**	-0.0001	-0.0001
	(0.00004)	(0.0001)	(0.00005)	(0.00004)	(0.0001)	(0.00006)
Male *	0.051***	0.0485***	0.0145	0.0513***	0.0544***	0.034**
	(0.0089)	(0.0143)	(0.0157)	(0.0091)	(0.0132)	(0.0162)
Married *	0.0117	0.0533***	0.0357**	0.0117	0.0137	0.0027
	(0.0128)	(0.0128)	(0.0162)	(0.0129)	(0.016)	(0.0185)
Higher Education *	0.0361***	0.0133	0.0028	0.0363***	0.05***	0.0138
	(0.0112)	(0.0155)	(0.0193)	(0.0113)	(0.0151)	(0.0153)
Numeracy	0.0225***	0.0232***	0.0107**	0.0231***	0.0291***	0.0098**
	(0.0045)	(0.0047)	(0.005)	(0.0049)	(0.0059)	(0.0048)
Fluency	0.0021***	0.0022***	0.0007	0.0021***	0.0028***	0.0006
	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0008)	(0.0006)
Recall	0.0077***	0.0071**	0.006*	0.0079***	0.0089*	0.0055*
	(0.003)	(0.0036)	(0.0032)	(0.0031)	(0.0046)	(0.0031)
Sociability *	0.0159*	0.0119	0.0289**	0.016*	0.0121	0.0276**
	(0.0087)	(0.0103)	(0.0145)	(0.0087)	(0.0104)	(0.014)
Inheritance	0.0004***	0.0004***	0.0002	0.0004***	0.0005***	0.0002
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Observations	14249	9313	4936	14249	9313	4936
R2	0.24	0.20	0.32	0.23	0.20	0.32

Note: Marginal effects evaluated at the weighted means. *** p<0.01, ** p<0.05, * p<0.1
Standard errors are reported in parentheses, calculated using 50 bootstrap replications. The R² measure is computed as in Harel, O. (2009.) The results are a combination of those of separate regressions for each implicate dataset, using the multiple imputation methodology of Rubin (1987).

6 CONCLUSION

This paper uses data drawn from SHARE sample covering the elderly population in Europe to investigate whether health care systems play a role in shaping household portfolio choice. Using multiple imputation analysis to mitigate the potential bias arising from high item non-response, the results suggest that, by increasing household's exposure to health-related financial risk, less protective health care systems indeed drive households towards safer portfolios. This is evidenced by both probit analysis of holding risky assets and tobit analysis of portfolio share invested in those assets. There is some evidence that informal care arrangement in form of bequests may (partially) compensate for the uncertainty arising from lack of full-coverage national health system and, thus, (partially) offset the associated effect of health risk on portfolio choice.

Europe is graying. In 1998, 21 percent of Europeans were aged 65 or older. By 2025, this proportion will have risen to 33 percent and to 47 percent by 2050.[28] The older society is characterized by higher health care costs, which are a large burden on public finances bounded by 1992 Maastricht Treaty's stringent spending rules. Thus, following the Treaty, EU adopted the set of reforms with the aim of taming public deficit, which also included reduction in generosity of the health care system.

If increases in exposure to medical expenditure risk drive households toward safer portfolios, as reported in this paper, then health care system reforms leading to such increases will further reduce household's willingness to invest their funds in risky assets. This way of "self-insurance" is particularly worrying for the elderly population, since health risk increases with age and since misallocation of their funds may lead to deficit of resources in a period of life when they are no longer able to generate wealth by labor.

What about economy as a whole? Would such reforms at least tame the public deficit? Reduction in health care generosity decreases the expenditure side of public finance, hence works towards the reduction of the public deficit, but through its effect on households' portfolio choice, the reform may offset the decrease in public expenditures by decreasing also the tax revenues. Hence, the overall effect to abate the public deficit may be less or opposite than such reform envisaged. Population aging means that working-age citizens, who generate most savings in the economy, will stagnate or shrink, while the number of retirees, who tend to spend their savings, will rocket. Thus, absolute level of savings will plummet across most of Europe. But households accumulate financial wealth not only trough saving money out of their income, but also through generating an increase in the value of those savings which depends on their portfolio choice. The elderly hold a disproportionate share of wealth in European countries, yet are known to invest relatively conservatively (Goldman and Maestas, forthcoming). Namely, even those that participate in a stock market, hold very little share of their funds in these (risky) assets. Diversifying the range of assets held in a portfolio increases the efficiency of capital allocation and the elderly are giving up significant return on their investments by concentrating on low-risk low-return assets. If structure of the health care system indeed affects this allocation, then the scenario following the health care reform which increases the households' exposure to medical expenditure risk may be the following: decrease in health care protection would drive the elderly towards safer portfolios which would generate lower returns, hence less wealth accumulation, therefore less capital available to fuel growth, which would result in a lower GDP, less corporate earnings and less tax

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[28] UN World Population Monitoring 1999.

revenues. If this reduction in tax revenues is higher than the reduction in the public spending resulting from cuts in overall health care expenditures, such reform may end up exacerbating the budget deficit. Furthermore, the rise in public deficit may lead to an increase in real interest rates, decrease in investment, and reduction of economic growth, which may further depress living standards already hit by reduction in generosity of health care system. Such macroeconomic implications of crowding out of risky financial markets due to decrease of public coverage of medical expenditures appear a fruitful area for future research.

Several other issues remain open. First, the measurement consistency across countries, namely, whether the presented evidence holds true if one uses "vignette" sample. Second, further examination of how and to which extent informal care arrangements affect the association of health status and portfolio allocations. This is particularly important because these arrangements can compensate for the lack of (full) public coverage of health risks and hence offset the associated effect of health risk on portfolio choice. This question requires additional data beyond the one provided by SHARE and is hence left to future research.

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MANAGING CROATIAN ENERGY LEGISLATION WITH EUROPEAN UNION ENERGY PACKAGE

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ABSTRACT

Since Croatia started acquiring the status of a candidate for European Union (EU) membership it has been adjusting its legislation with EU requirements. Moreover, Croatian electricity sector is facing a numerous challenges and significant changes in legislation are needed in order to successfully complete the process of market liberalization. The biggest challenge in Croatian electricity sector is to achieve a 20% share of renewable energy sources (RES) in gross final energy consumption by the year 2020. Croatia currently has about 15.1% of RES in gross final energy consumption and one of the ways to achieve its goal is to increase production capacity from renewable energy sources in accordance with energy consumption. Furthermore, the opportunities for establishing economic growth through innovation and a sustainable competitive energy policy have been very well recognized in Croatia. Therefore, the overall investments in energy production from renewable sources will have significant impact on growth and employment in rural parts of country which is in line with EU RES strategy.

Key words: managing, energy strategy, renewable energy resources

1 INTRODUCTION

Croatia, as a member of the European Union (EU), is committed to align its energy sector with EU objectives, and to adopt its goals with EU Directive 2009/28/EC[1] on the promotion of the use of energy from renewable sources. The Directive requires EU member states to produce a pre-agreed proportion of energy consumption from renewable energy sources (RES) such that the EU as a whole shall obtain at least 20% of total energy consumption from RES by the year 2020. Moreover, it reinforces the 20-20-20 agenda of the EU, e.g. 20% reduction in greenhouse gas (GHG) emissions, 20% share of renewable energy in gross final consumption, and 20% reduction in energy consumption and 10% share of renewable energy in transport.

Considering EU objectives and large investment potential in developing energy markets RES is in the special focus of almost every government. Therefore, most of the EU governments are trying to implement different actions in order to reach EU goals. However, if we analyze Croatian share of RES, in gross final consumption in the year 2012, we can see it is around 15.1% (Figure 1). For that reason, Croatian plan is that remaining 4.9% of the 20% target

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[1]EU Directive 2009/28/EC, source: http://eur-lex.europa.eu

share shall be produced from newly constructed renewable energy plants that Croatian government is supporting.
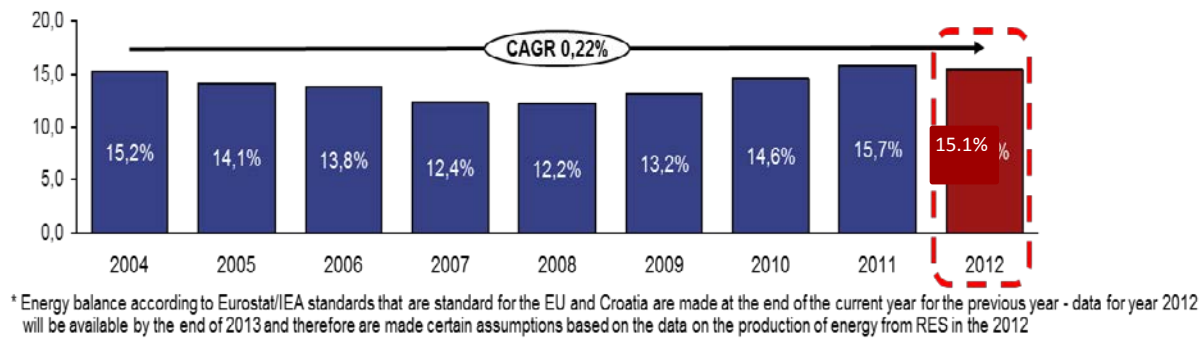
Figure 1: Share of RES in gross final energy consumption in Croatia
(http://epp.eurostat.ec.europa.eu)

2 CROATIAN ENERGY STRATEGY AND IMPLEMENTATION CHALLENGES

Croatia nowadays imports nearly 30% of electricity and 75% of primary energy, and it is highly dependent on energy imports which, in the case of growth of energy prices on the international market, have far-reaching consequences for the competitiveness of the Croatian economy. Therefore, Croatian Energy Strategy (CES) was adopted by the Croatian Parliament in 2009[2] setting the goal of building at least 2400 MW of new thermal power plants, 300 MW of large hydro, and 1655 MW from renewable sources by the year 2020. Furthermore, after adoption of CES in the year 2009, Croatian government adopted one more strategic plan and set the goals in renewable energy sources plan (RES) of electricity production (Table 1). CES wants to retain at least a 35% share of RES, which includes large hydro power plants (excluding pumped storages) by the year 2020, with the ultimate target of reaching at least a 20% share of RES in gross final consumption. We see that hydro power plants accounts almost 30% of the RES electricity balance, but we need to consider that even hydro energy costs are low, the down side of hydro energy production is consequently large dependence on hydrological conditions.

Table 1: Plan of electricity production from renewable energy sources by the year 2020.
(http://www.mingo.hr)

Renewable energy sources	Megawatts
Wind power plants	1200
Solar power plants	45
Small hydro power plants	100
Biomass	140
Biogas	110
Municipal waste	40
Geothermal power plants	20

From Table 1 it is clearly seen that Croatian government based its development strategy of RES mostly on wind plants (72.5%). However, this energy strategy is based on the assumption of gross final energy consumption with annual growth of 2.7%, which is not in accordance with the current decline in consumption of 1.3% per annum, whereas gross final energy consumption in the year 2011 reduced by 2.5% compared to the year 2010 (Figure 2).

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[2] Croatian Energy Strategy (CES), source: http://narodne-novine.nn.hr

Moreover, in the period from 2006 to 2011 a final energy consumption reduction trend was observed at an average annual rate of 1.3%. Therefore, as it is not likely that the predicted consumption growth will occur, and the given estimations should be revised.
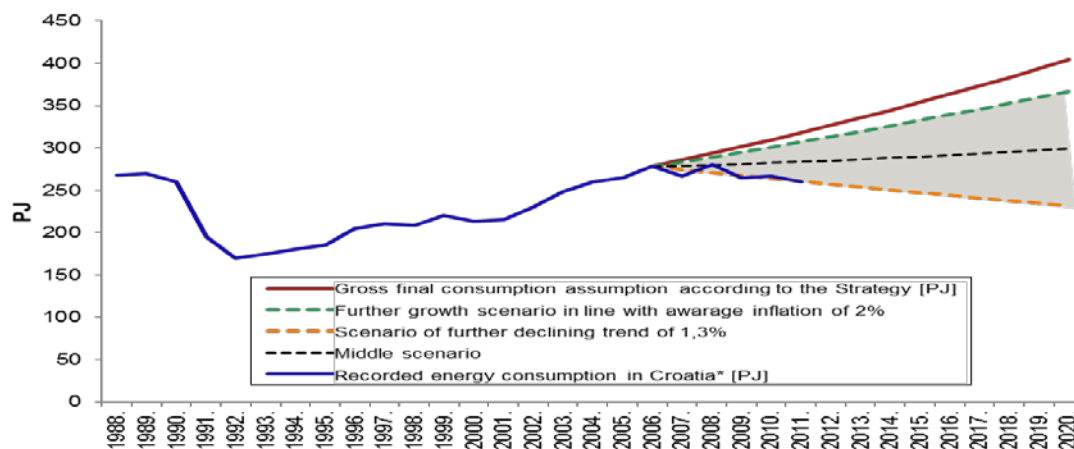
Figure 2: Trends in Croatian final energy consumption
(http://www.eihp.hr/hrvatski/projekti/EUH_od_45/EUH11web.pdf)

Revising predictions on consumption growth has a direct impact on the goals of RES which also impacts installed capacity targets by the year 2020, and construction of an incentive system to support implementation of new RES.

3 ANALYSIS OF CROATIAN CURRENT SITUATION

Now days, three year after Croatian Energy Strategy was adopted, we can see that it has very low implementation rate regarding renewable energy sources projects. Progress of newly constructed RES projects towards targets set in the Energy Strategy is only 13.8% (Figure 3). Poor implementation of RES projects is a consequence of legal, technical and financial barriers, as well as lack of cooperation between institutions which all contributed to making the administrative procedure for RES to become lengthy, with inherent uncertainties and risk for prospective investors. Also, due to specifics of the Croatian electricity grid it is questionable whether the strategy goals are realistic.
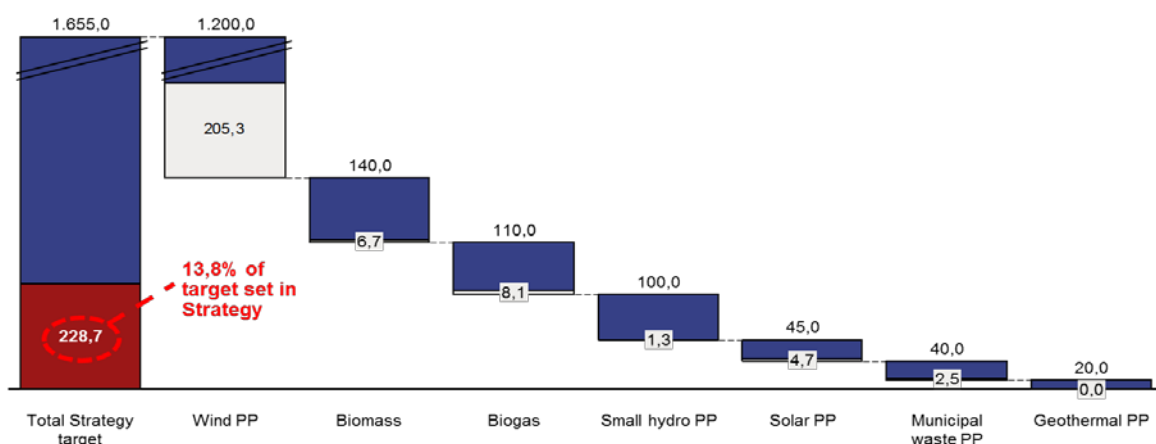
Figure 3: RES projects in March 2013 (MW) that are connected to the grid by types in relation to the objectives defined by the Croatian Energy Strategy
(http://oie-aplikacije.mingo.hr/pregledi/)

3.1. Wind power plants

Croatia has a high potential for the realization of wind power. However, due to the lack of secondary regulation power in the system the capacity is limited to 400 MW, which will be achieved by the year 2015. In the Registry of renewable energy projects and cogeneration (OIEKPP Registry)[3] there are 4,267 MW of registered projects in various stages of implementation. The current technical potential of the transmission system enables connection of 400 MW without loss of system stability. For this purpose a quota system was established for wind energy projects.
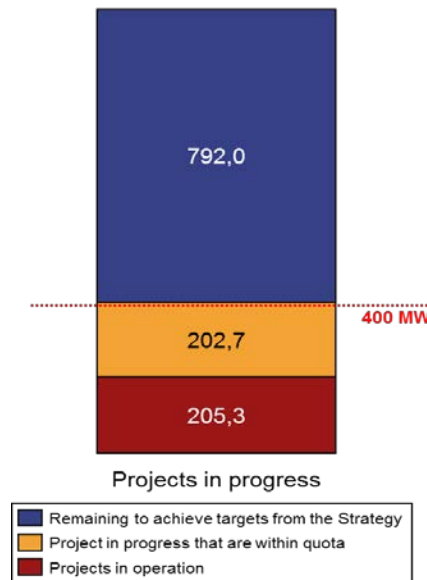
Figure 4: Overview of wind power projects in progress March 2013 (MW)
(http://oie-aplikacije.mingo.hr/pregledi and http://www.hep.hr)

The quota of 400 MW consists of 205,3 MW of wind power plants already in operation and 202,7 MW for which implementation (commissioning) is planned in 2014, and they are all within the quota (Figure 4). Solutions for expansion of secondary regulation capacity in the network are currently being developed to ensure the successful implementation of new wind power plants, but timeframe for expansion is not yet known.

3.2. Solar power plants

There are 4,7 MW of solar power plants (photovoltaic) operational in Croatia and in the near future connection of additional 31,7 MW is expected. In the OIEKPP Registry there are 340 registered projects with a total installed capacity of 86,7 MW in various stages of implementation. There are no technical limitations to the growth of the number of connections to the network. Currently the only limitation on solar power plants is the annual quota that is defined by the Croatian energy market operator (HROTE)[4], formed due to limitations in the resources available for the payment of incentives. From the year 2007 to 2012 quota for integrated solar power plants was 1 MW while 7 MW was contracted. For the year 2012 quotas for integrated solar systems (installed on buildings) were 10 MW and 5 MW for non-integrated. For the year 2013 quota for integrated solar systems is set at 15 MW and 10 MW for non-integrated. All quotas for integrated systems have been filled. However, since there are only 4,7 MW of projects currently in operation, it is necessary to change the way of calculating fulfilment of quotas (currently it is calculated as projects that have signed a

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[3] OIEKPP Registry, source: http://solarserdar.wordpress.com
[4] HROTE, source: http://www.hrote.hr

contract with HROTE, and it should be calculated as project that already started operation). Furthermore, given the small annual energy production and the benefits of distributed generation, there are no obstacles to a large increase of targets.
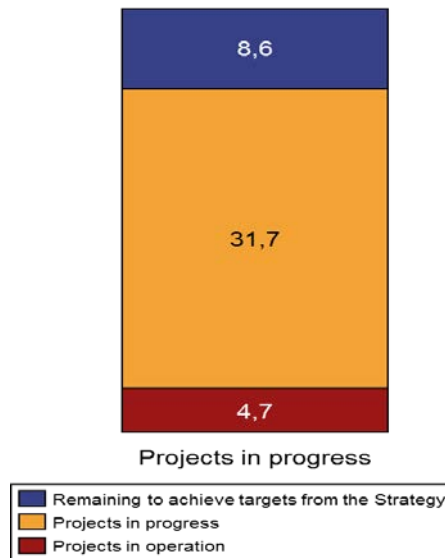
*Figure 5: Overview of solar power plants projects in progress March 2013 (MW)
(http://oie-aplikacije.mingo.hr/pregledi and http://www.hrote.hr)*

3.3. Small hydro power plants (SHPP)

There are currently 1,3 MW of SHPP operational in Croatia, while additional 0,3 MW is under construction. However, a number of key permits for project initiation "the previous energy approvals" have expired. Currently there are only 3 'previous energy approvals' which are still valid, along with 5 'energy approvals' (a permit for plant construction in advanced implementation stages, subsequent to location permit), for a total capacity of 5,4 MW. OIEKPP Registry has 63 registered projects with a total installed capacity of 128,8 MW in various stages of implementation, but expected realization is low although there are no technical limitations for connection to the grid.
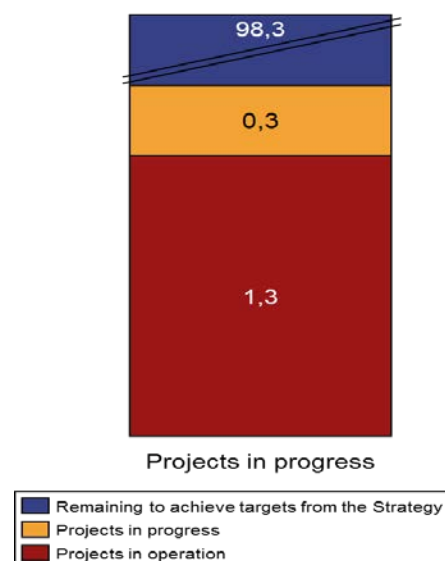
*Figure 6: Overview of small hydro power plants projects in progress March 2013 (MW)
(http://oie-aplikacije.mingo.hr/pregledi and http://www.hrote.hr)*

Part of the areas viable for construction of SHPP is covered by the Natura 2000 network[5] which complicates construction. In Croatia there is very small interest for small hydropower plants and the implementation of projects is poor due to the risk and long administrative procedures. Furthermore, due to a small number of remaining locations with unrealized hydro potential, it is unlikely that there will be more than 100 MW of SHPP implemented in total.

3.4. Biomass power plants

Currently there are 6,7 MW of biomass plants operational in Croatia, while 46 MW are at an advanced stage of implementation, e.g. have signed contracts for procurement of raw material from Croatian Forestry. A consolidated list of projects from OIEKPP Registry and Ministry of Economy reports contains 102 projects with a total installed capacity of 256,82 MW and its needed to say that there are no technical limitations for connection to the grid. According to the issued energy approvals, a realization of 77,5% of the target set in the Energy Strategy can be expected by 2015. Furthermore, given the maturity of the technology a large investor interest is expected. There are also synergies possible with the wood industry for simultaneous generation of electricity and heat from RES. The target goal for biomass plants should be increased.
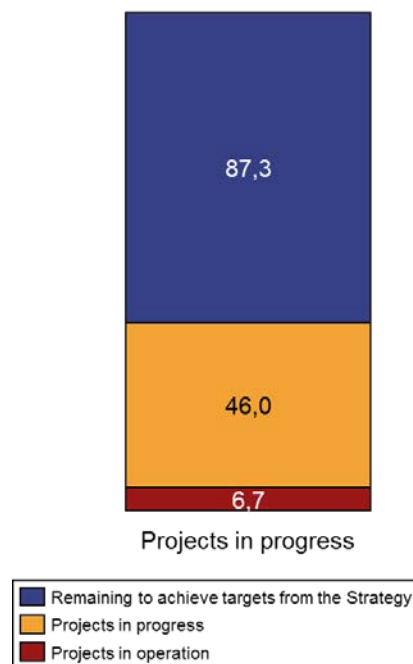
Figure 7: Overview of biomass hydro power plants projects in progress March 2013 (MW)
(http://oie-aplikacije.mingo.hr/pregledi and http://www.hrote.hr)

3.5. Biogas power plant

There are currently 8 plants operational in Croatia with a total capacity of 8, 1 MW while 4 plants with total capacity of 7,5 MW are in the stage of construction. In OIEKPP Registry there are 51 registered projects with a total installed capacity of 77,91 MW in various stages of implementation. There are no technical limitations for connection to the grid for this kind of plants but there's potential depends on the ability of simultaneous delivery of electricity and heat to nearby consumers. Due to high investment costs of biogas plants in the current

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[5] Natura 2000 network, source: http://ec.europa.eu/environment/nature/natura2000

market, biogas projects are less attractive to investors compared to other sources. So far, investors' interest is not satisfactory to realize target of 110 MW set in the CES.
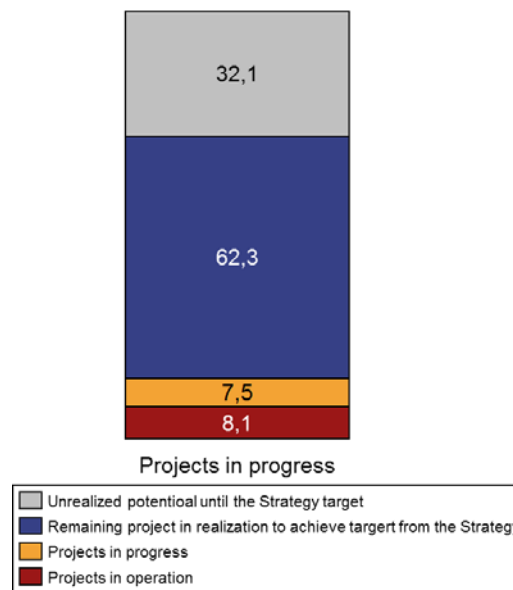
*Figure 8: Overview of biogas power plants projects in progress March 2013 (MW)
(http://oie-aplikacije.mingo.hr/pregledi and http://www.hrote.hr)*

4 CONCLUSION
After the study of Croatian Energy Strategy and after analyzing renewable resources power plant implementation we can conclude that certain changes are needed to be implemented in this strategy immediately. In order to achieve the target share of RES in gross final consumption, according to EU obligations, goals of the Croatian Energy Strategy should be revised.

In the time when the Croatian Energy Strategy was made the government has not thought that world economy crisis will effects economy in so big scale. Moreover, projections for the year 2020 were based on stable growth of the economy while the reality was a huge recession in the world. In-depth analysis of barriers in the administrative procedure for the implementation of RES projects should be made. Also, the dynamics of RES projects implementation is not satisfactory. The government should be aware that presumption of grid development to accept the 1200 MW wind power has not been jet achieved. Also, the plants for the production of renewable heat, which are also included the target of 20% RES in EU, do not represent a significant burden on the grid and are not adequately addressed in energy policy. Moreover, the energy production from solar power plants is much cheaper now due to technological progress and is nowadays suitable for mass implementation.

We often witness that investors display huge interest for renewable power plants, while the strategy makers do not prepare the county's strategy plan well; do not consider maturity of the technologies and the time required for project implementation in the design of the system. The construction of new power plants is essential for Croatia due to high dependence on imports and hydrological conditions, which can vary significantly in the short-term and mid-term. In the long-term RES is the optimal choice for new capacities since it do not depend on fuel costs or disturbances in foreign markets. The strategy has to set development principles according to which Croatia will become an exporter of energy, and its energy sector will become more profitable. At the time finishing this article a new indication are seen that the

Croatian government will make new, critical step which will be in focus of achieving Croatian energy independence.

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THE SIZE OF THE PUBLIC SECTOR - CASE OF ALBANIA

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ABSTRACT
The government is one of the key players in the economic area of each country. Its impact is evident in all areas, such as political, economic and socio-cultural ones. This impact is measured by an indicator which economists call "the size of the public sector". As government's influence is so significant a question naturally arises: Should the impact of the government be big or small? There are many arguments in favor and against this issue and it is difficult to come to a consensus on the extent of government's intervention in the economy. That is why the purpose of this paper is to present a picture of this intervention in the economic life of our country by connecting this indicator with the budget deficit.
First, we will elaborate the progress of the size of the public sector in Albania and its measurement by various indicators. Secondly, we will compare the size of the public sector in Albanian with the sizes of the public sector of other countries in the region. Finally, we will present the results of a study on the optimal size of the public sector in the economy of a country being analyzed and in terms of our country.

Keywords: *Albania, Budget deficit, public sector, size.*

1 INTRODUCTION
Throughout his life several times every man faces governmental activities in one way or another, ranging from registration in the register of citizens recording, public school attendance, payment of taxes, employment in the public sector, use of public services as highways, electricity, drinking water, garbage collection, environment, pollution and safety improvement, etc. (Stiglitz, 2000). On the basis of the importance that these activities have in the economic development of a country, they have always been the subject of study by different economists. The public sector has changed over time, by being adapted to the trajectory of economic development.

Historically referring to the government intervention there have been two opposing views belonging to the two main schools of economics. Each side supports the positive aspects of a large or small intervention in the economy (Rosen, 2002). Modern theories of public finance do not focus on the fact whether the government should intervene or not, but on the fact that this intervention must be more efficient and serve the economic growth.

The object of many studies in this field have been the reforms for the restructuring of the public sector in order to: reduce inefficiency in the delivery of public goods and services, address the appropriate cost in priority and productive sectors, increase the efficiency of the tax system in terms of structure and tax rates, change the relation between public sector and private sector by facilitating high levels of deficit and public debt, increase the quality of institutions and governance, etc. (Milova, 2012).

The impact of the public sector in the economy of the countries in transition is of particular interest. In these countries the government plays a two-fold role: on the one hand it is the subject of reforms to be adapted to the new structure of the economy and on the other hand it affects the creation of a positive climate for the implementation of economic reforms and other comprehensive reforms in order to accelerate the process of transition.

2 THE PUBLIC SECTOR SIZE IN ALBANIA AND ITS MEASUREMENT

The size of the public sector represents expenses related to institutional integrity of public entities which produce goods or services for individual or collective consumption and make the redistribution of wealth and income to meet the political and economic role and responsibilities of regulation (SNA, 1993).

The size of the public sector can be measured by means of various methods, which do not always give the same result. One method that can be used is the method based on the number of employees in the public administration. This measurement method appears too problematic because the same number of employees does not necessarily mean the same value added in the economy. This is due to the fact that the technologies used in different countries are not the same. The most accurate method for measuring the size of public sector is the method that calculates how much of the added value in the economy during a year is produced by the public sector. This method uses as an indicator the G/GDP which represents the total percentage of public sector expenditure (G) in relation to the gross domestic product (GDP). As according to the expenditure method, GDP is calculated as C+I+G+Nx, it makes sense to measure the public sector contribution to total economic output by total expenditures made by this sector (Rosen, 2002).

In calculating the size of government by G/GDP method, government expenditure (G) consists of:
- Acquisition (consumption) of goods and services by public administration
- Transfers of income for people, businesses or other governments
- Payment of debt interest

The chart below shows the indicators mentioned above for measuring the size of the public sector, the number of public sector employees in relation to total employees and the most used indicator of government size G/GDP.

In the below chart it is displayed the time series from 1997 to 2010. The interrupted line, show the size of the public sector, measured by the number of employees working in public administration in relation to total employees. It seems clear from the below chart that the level of public sector employees has been stable over the last decade. Only in 1998 the size of the public sector is the same under both methods used to measure it. After this year the differences between these indicators have deepened. The reason of this difference can be explained by the change in the productivity of employees in public administration compared to the private sector. Another reason has to do with the quantity that the wages of public servants constitutes within the total costs. For a country like Albania, where the share of wages in total costs is relatively high, the difference in the number of employees in the public sector, changes in the same direction G/GDP, while the rest of the conditions remain unchanged. This connection is also confirmed from the below chart.
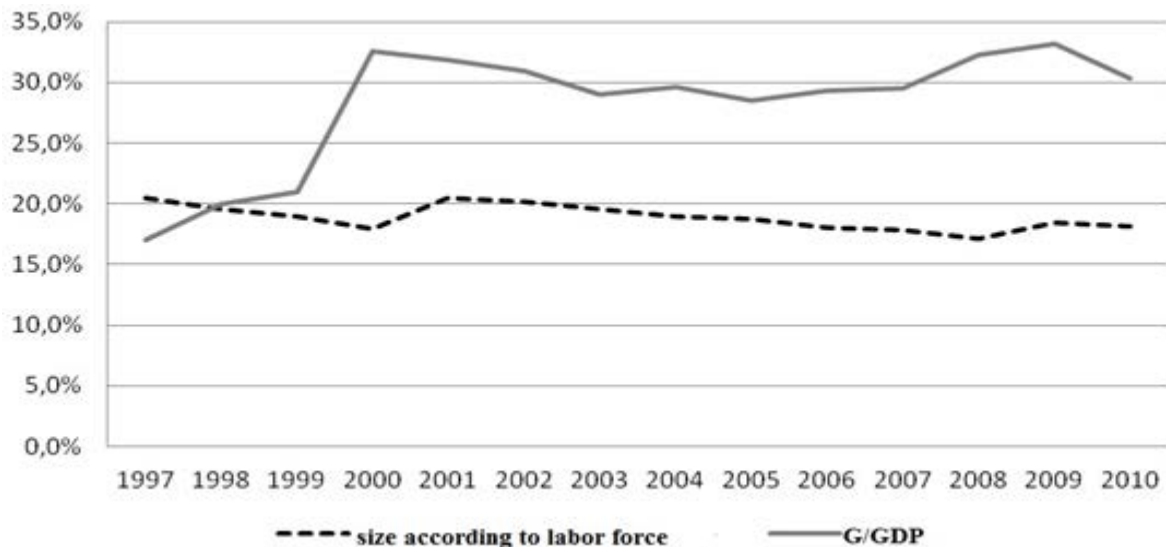
Chart 1: The government size INSTAT, 2013; (MoF, 2013)

Budget deficit expresses the extent to which the expenditures exceed the revenues. This deficit can be financed by taking loans from the domestic market, which constitutes domestic financing as well as from the foreign market, which constitutes the external financing of the deficit. Usually, budget deficit is expressed as a percentage in relation to GDP. Below we analyze the size of the public sector and budget deficit for Albania.

The link between the size of the public sector and budget deficit level is evident. If the government decides to increase expenditures at a time when income growth is impossible, the gap between expenditures and revenues will increase, which implies an increasing of the budget deficit. Therefore there is a proper relation between the size of the public sector and budget deficit. If the government increases expenditures by increasing the deficit, its intervention in the economy will grow, so this leads to the increase of the size of the public sector (Stiglitz, 2000).

In 2000 the size of the public sector was 32.6% of GDP and the deficit was at the highest value of this decade, at the level of 7.6% of GDP. After this year, it can be observed that there is a continuous decrease of G/GDP, accompanied with the decrease of the budget deficit until 2003, specifically at the level of 29% and 4.9%. Until 2007, the situation was characterized by the same trend, with the exception of the years 2005 and 2006 where the size of the public sector growth occurred without any increase of the budget deficit. This can be explained by the fact that the growth of the state expenditures was not financed by means of the budget deficit growth but by income growth of the state budget (an increase of about 12% in 2006). After this period, the two indicators have followed the normal trend.
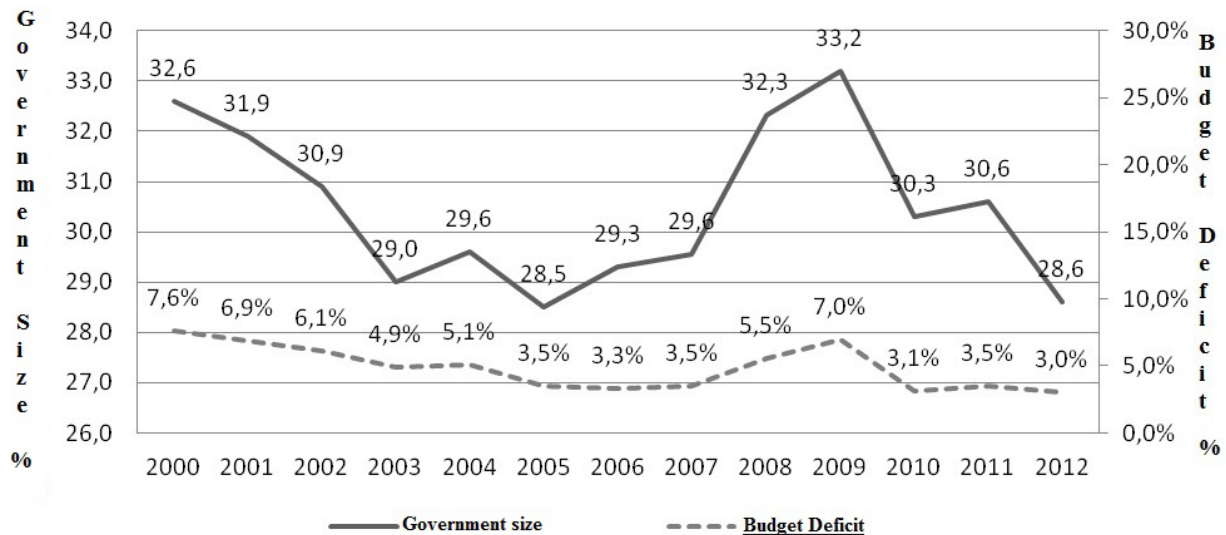
Chart 2: The government size and the budget deficit, (MoF, 2013)

It should be emphasized that the year 2009 marked the highest level of government size as well as a high level of budget deficit, specifically at a level of 33.2% and 7%. This is due to the international financial crisis of 2008 that affected Albania too. Borrowing costs increased by increasing government spending to cover the interests. The major factor contributing to the growth of the budget deficit during this year were high costs for the "Durrës-Kukës" highway. This period also coincides with the highest level of public debt in the past nine years. After the year 2009 there was a downward trend mainly on the size of the public sector and budget deficit levels.

3 THE GOVERNMENT SIZE OF OTHER COUNTRIES IN THE REGION

To better understand the importance of the public sector in the economy it is necessary to make a comparison of this sector to the public sectors of other countries, mainly of the region where Albania is part. The past communist period of most countries in the region has resulted in to high government expenditures in relation to GDP. The following chart shows the trend of government size for six Balkan countries: Albania, Bosnia and Herzegovina, Croatia, Macedonia, Montenegro and Kosovo.

It is obvious that the tendency of the change of public sector sizes in the region is more or less the same. Among the countries of the region, Bosnia and Herzegovina is the one with the highest level of government expenditures in relation to GDP, which come up to the level of 50% of GDP. This country is followed by Montenegro which has continuously increased the size of the public sector, in the last decade, reaching the level of 47%. As one of the most stable economies in the region, that of Croatia has had a steady size of public sector at about 41%. Macedonia, Kosovo and Albania have been characterized by a relatively low level of government expenditure. As a result of continuing consolidation of its institutions Kosovo has steadily grown its impact on the economy by making the government expenditures constitute about 32% of GDP in 2011.
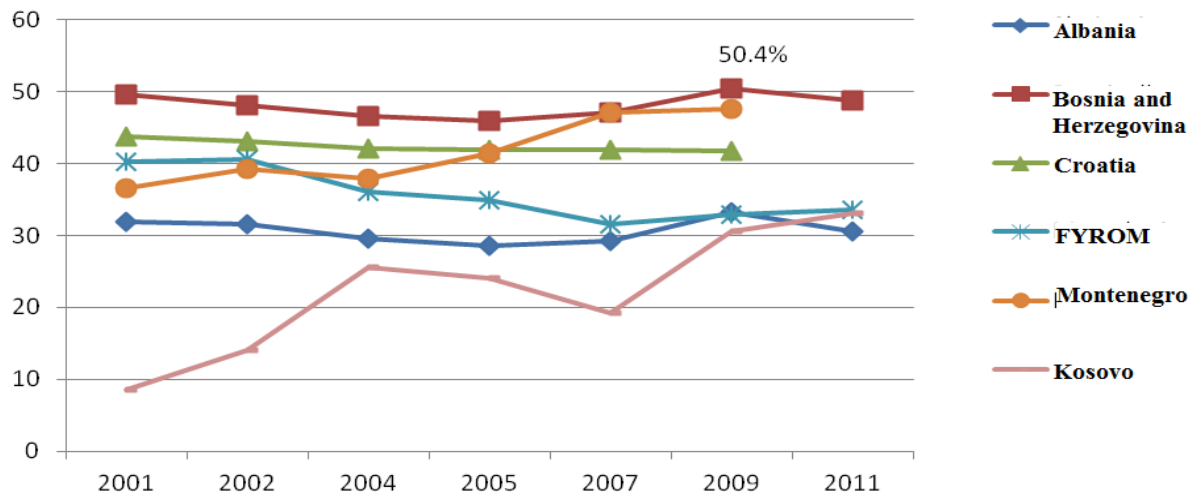
Chart 3: The percentage of public sector expenditure (G) in relation to gross domestic product (GDP), G/GDP% (MoF, 2013)

4 THE OPTIMAL GOVERNMENT SIZE

Adam Smith has always preached in favor of a small government intrusion in the economy. According to him, the invisible hand of the market would regulate it whereas in many cases the government intervention would only distort the market performance. The Great Depression of the 30's urged economists to consider the government as a regulator of markets and preventer of economic crises. Since then the government intervention in the economy has increased significantly.

Different societies have different sizes of public sector. A question can be raised: Is there an optimal size of government in the economy?

Not all economists support the idea of an optimal size of the government in the economy. Some believe that great government intervention in the economy is inefficient and in some cases causes distortions of competition in the markets. Also high public investments may shrink a private investment by "crowding-out" effect. Other economists think that bigger government can accelerate economic growth by providing public goods and correcting market failures. Apart from that, according to these views, the growth of government consumption by means of multiplier's effects increases aggregate demand in the economy.

In many studies, economists have accepted the size which provides a higher economic growth as the optimal size of government intervention (Chobanov and Mladenova, 2009). The model which gives us an overview of this optimal size is presented in the chart below.

In the chart 4, the horizontal axis represents the size of government and the vertical one represents the economic growth. At the point A, the intervention of the state sector in the economy is near zero and the economic growth it produces is also near zero. So each level near this point is inappropriate for any country. Initially the increase of the government size is accompanied with the increase of the latter's contribution to economic growth. So the larger the government, the higher is the economic growth. If the economy is at point B the government size is optimal and there is no reason to change the level of government expenditure in the economy. At this point the economic growth has reached its maximum. Beyond this point if the government size grows, its impact in the economy will be inefficient

and the economic growth will be lower. Point B is exactly the one where all the countries should aim at.
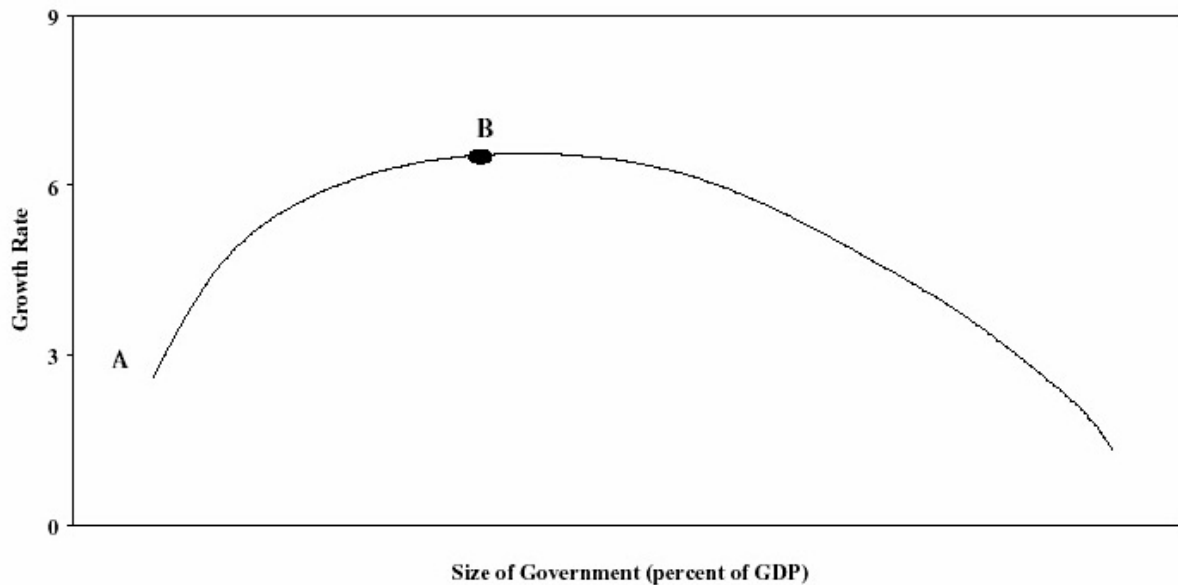
Chart 4 Size of Government (Gwartney, Lawson and Holcombe, 1998).

Scully (1998; 2003) developed a model that estimates the amount of government expenditures that maximize economic growth. Government expenditures comprise one of the production factors which affects the production function of an economy. Having estimated the model with data from more than 30 different countries he came to the conclusion that the government size that maximizes economic growth is at the level of 25% of GDP. This does not mean that all countries must have exactly this size of the public sector. Different countries have different optimums of the government size, due to the fact that governments do not have the same efficiency. For this reason, other studies have shown that the size should range from 20%-30% of GDP.

In Albania, the size of the public sector is about 30.6% of GDP (MoF, 2012). This level is not too far from optimal level shown above. This size is justified by the fact that the tax revenues collected by the Albanian government are relatively low and this leads to lower government expenditures. Another reason is also the existence of high budget deficits. The reduction of the budget deficit is certainly accompanied by a decrease in expenditures.

5 CONCLUSIONS
The size of the public sector can be measured by means of various methods, which do not always give the same result. One method that can be used is the method based on the number of employees in the public administration. This measurement method appears too problematic because the same number of employees does not necessarily mean the same value added in the economy. This is due to the fact that the technologies used in different countries are not the same. The most accurate method for measuring the size of public sector is the method that calculates how much of the added value in the economy during a year is produced by the public sector. This method uses as an indicator the G/GDP which represents the total percentage of public sector expenditure (G) in relation to the gross domestic product (GDP). As according to the expenditure method, GDP is calculated as C+I+G+Nx, it makes sense to

measure the public sector contribution to total economic output by total expenditures made by this sector.

The link between the size of the public sector and budget deficit level is evident. If the government decides to increase expenditures at a time when income growth is impossible, the gap between expenditures and revenues will increase, which implies an increase of the budget deficit. Therefore there is a proper relation between the size of the public sector and budget deficit. If the government increases expenditures by increasing the deficit, its intervention in the economy will grow, so this leads to the increase of the size of the public sector.

Over the past decade, Albania has experienced a proper relation between the size of the public sector and budget deficit. There are different views regarding the size of the public sector that should have an economy. However, that size that maximizes economic growth accepted as the optimal size of government. This indicator should be in the range 20-30% of GDP. Albania has consistently been one of the countries with the lowest government size in the region. This is explained by the relatively low income that the Albanian government collects and the incentives that the government has to reduce the budget deficit and public debt.

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25 YEARS ON THE WAY TO MARKET ECONOMY: PROGRESS OR REGRESSION. THE CASE OF LITHUANIA

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ABSTRACT
After the collapse of central planned economy in Central and Eastern Europe, all affected countries experienced dramatic change towards the market economy. Seemingly market economy could bring prosperity and plant "american dream" in Central and Eastern Europe. However, the way towards market economy of every country became not that easy as was thought primarily. Different models of transition period did not bring rapid results, however. "Shock Therapy" or gradualist approach was the central pillar of debates of economists and politicians. However, none of them could predict the exact consequences to the development of economies. The official approach to market economy was considered liberalization. The creation of extremely important preconditions for transitions was lacking. The most important market institutes such as social capital, human resources were not created timely which caused long social economic consequences to countries' development. Lithuanian experience of transforming economy and integration to EU is analyzed in the paper. Lithuanian experience might be applicable to other potential candidate countries. In order to identify the level of development such indicators were selected: competitiveness index, rate of social exclusion and at risk of poverty, GDP growth rate, minimum wage and others.

Keywords: competitiveness, market economy, social economic transformation

1 INTRODUCTION

So far, there is a disagreement on the reasons why communism in Central and Eastern Europe collapsed – social economic system based on the state means of mass production and societal control over economic processes. It is surprising that sociological and economic polls suggest that there were very few economists who were able to predict the collapse of communism. Even a distinguished political scientist such as Z. Brzezinski claimed that communism can sustain itself long enough (Brzezinski, 1989, pp. 242-255). Without going more in details underlying the causes of these complex phenomena, in this article we are going to analyse the Lithuanian transition to a market economy in comparison with some other countries in transition. The aim of the article is to analyse Lithuania transition to a market economy and formulate insights for perspective of these complex economic and social processes.

Achieving the aim six tasks has been set:
1. Provide Lithuanian economic characteristics of period of two economic system's interaction.
2. Discuss about the economic transformation disputes at that time.

3. Characterize the directions and methods of Lithuanian economic transformation.
4. Discuss the specifications of Lithuanian integration in European Union.
5. Discuss Lithuanian economic situation in regional and global context.

Lithuania rooted its sovereignty a thousand years ago was incorporated in Soviet Union where centrally planned economy was strictly dominated. Being average agrarian country between two world's wars, in post war period became one of the leading industrialized economies in Soviet Union round out five productive economies. On other hand, in the context of developed western economies Lithuania's social and economic indicators seemed quite poor. Because of geopolitical global circumstances Lithuania lost its independent economic model of own development for some time.

Extensively developed economy in Soviet Union collapsed and perhaps it was the main reason of it. It was necessary to direct the economy to free market oriented model of development and it was impossible without elimination of communistic political system (Kornai, 1992, pp. 360-379).

After the collapse of enormous and extremely difficult social and economic system mainly two approaches were possible to transition to liberal market economy: „gradualistic" approach or "step by step" or „shock therapy" or extremely rapid destroy of old social and economic structures and provision to liberal market economy's „invisible hand" . According to Nobel prize laureate Joe Stiglitz "invisible hand" is invisible because it is not there. Gradual transformation dominated in Belarus, Central Asia, in Russia after 2000, for some time in Bulgaria and Rumania.

2 PERIODIZATION OF LITHUANIAN TRANSITION TO A MARKET ECONOMY

In Lithuania as in other Baltic states without long discussions the neoliberal imitation to transformation was chosen. Imitational orientation means that Western economic models were trying to adopt and neoliberalisation – associated with deregulation process almost in all fields of economic activities. That is to say in the beginning of the privatization process two thirds of state owned capital was privatized only in two years. According many scholars, privatization should be the last stage of transition to market economy, only then when market economy institutes are created: social capital, human capital, rule of law, social trust, entrepreneurship skills etc. (Marangos, 2005, pp. 264-288). Of course, these processes take place decades as well as transition to market economy and require certain preconditions. Unfortunately at the time, political elite, some economists and probably the most important society were dreaming that neoliberal economic model would bring by itself (probably society was persuaded by Adam Smith's "invisible hand" panacea and governing elite by strong international financial institutions pressure) fast transition to market economy, achieving Western economic indicators and quality of living for all social groups.

In our opinion Lithuanian transition to the market economy could be periodized in some stages. The first period started on the Restoration of Independence Declaration Day in 11 03 1990 till 1995 when Lithuania officially declared the willing to become a member of European Union. This period was marked by politicized decisions of economic policy, too rapid and chaotic privatization process very often influenced by criminal structures. Hyperinflation (in 1992 it was 1163%) was struggled only introducing national currency – Lithuanian litas. Many analysts acknowledged that the exchange linking to the U.S. dollar and the Currency Board regime was the most rational solution helped to stabilize the economy.

Second period (1995-2004) of Lithuanian transition to the market economy could be described as integration of Lithuanian economy to European and global structures. Quite soon after intensive negotiations Lithuania became a member of international institutions such as International Monetary Fund, World Bank and World Trade Organization and after meeting many economic and legal requirements a member of European Union in 2004. During this period Lithuanian economy experienced a few perturbations. The first crises occurred in 1995-1996 when half of operating banks at that time bankrupted causing harsh economic and social consequences in fragile economic system. Second crises happened in the second part of 1998 and 1999. This time the reason was external – financial crisis in Russia. The social and economic consequences of that crisis could be compared with global financial crisis 2008-2012, especially 2009. However, this crisis brought positivity in thinking and Lithuania started diversifying its export markets to Western countries and looking for new export and marketing channels. That is not said about imports in energetic sector. Having created energy sector during planned economy time economy of Lithuania became very depended on energy supply from Russia.

However rapid recovery of Russian market influenced rapid growth of Lithuanian export recovery and growth. Worth mentioning that data suggest the similar results of Lithuanian economic recovery after 2008 financial crisis. That is to say economy stopped falling and started recovering only when main export markets recovered in that number Russian market as well. More than 60% of GDP is created from exports in Lithuanian economic system. Coming back to analysing period one must said public finance was over pressured because government took responsibility to finance too many public administrative functions having not focused on sustainable economic development. Under every elected government not making differences in political ideology structural reforms were really lacking. It is assumed that similar situation is seen in other post-communist countries in transition.

Period from 2004 till 2008 global financial crisis could be named as „economic intoxication" period based on bubbles mainly in real estate sector. Also it is a period of "lost opportunities" to implement structural reforms mainly in economic systems, business environment, health care and educational system and social protection and social insurance system. This period was marked by European Union structural funds financial instruments usage for economic development and Scandinavian banks' lending (in Lithuania all main banks are Scandinavian). Varying by years European Union financial injection was around 1/3 of the state budget income. The reduction of income taxes, some products VAT was contributed too rapid economic growth instead implementing contra-cycle economic policy – increasing taxes, accumulating financial reserves. Moreover, easy housing loans were marketing aggressively that made many underestimated own opportunities and risks. All this political blindness brought high rates of inflation estimating more than 10% and in the light of financial crisis Lithuania appeared with no "financial buffer" that could mitigate the negative consequences of global economic downturn. High inflation rate was the main reason why Lithuania was not able to introduce Euro in 2007, what did Slovenia at that year. Meanwhile Estonia six years before crisis had budget surplus and accumulated around 10% of the state budget yearly estimating 2 billion Euro state reserve in the light of crisis that made it meet Maastricht criteria and introduce Euro in 2011 (Latvia introduced Euro in 2014, Lithuania is expected to introduce in 2015).

Enormous financial injections and government's indulgence to some of social groups did not reduce the rate of emigration. During Lithuanian transition to the market economy more than

0,5 million people have emigrated leaving population just of some less than 3 million people. Not much promising situation of economic development and lack of social mobility as well as borderless regional and global opportunities encouraged especially young people to leave their homeland estimating the highest net emigration rate in European Union. However, according to Lithuanian Central Bank data, yearly emigrants transfer around 1-1,4 billion Euro to their families contributing 3-4% to GDP.

The whole external and internal factors influenced 2008-2012 financial crisis and its response to it. The bottom line of which was in 2009 when the rate of GDP fell down by 17% in Lithuania, domestic consumption fell down by 1/3. In Latvia economic downturn was even more complicated – GDP went down by 18% that made Latvia apply to IMF for loans on strict conditions (however, Latvia successfully repaid loan with interest rate), in Estonia by 14%.

Austerity measures taken during 2008-2012 financial crisis will be discussed in the future, however it is necessary to notice that Lithuanian one of the highest economic growth before crisis was marked by one of the highest rate of downturn followed by one of the highest rate of growth of recovery in EU. Strict austerity measures were taken. The main characteristics of them are following:
- VAT increase from 18% to 19% and later to 21%;
- almost all eliminations of tax reliefs;
- the increase of excise;
- the cut of public expenditure on pensions, wages of civil servants, social transfers etc;
- radical cut in state investment projects.

In Latvia similar measures were taken (Davulis, 2012, pp. 134-147). According to Nobel prize laureate Paul Krugman all these measures are absolutely opposite ones that US did during The Great Depression in 1939-1932.

3 PROGRESS OR REGRESSION?
After the collapse of planned market economy every country had to adopt to new market rules and specifications. It was almost impossible to make the right decisions not only for politicians but economists as well. Every post-communist country choose its own path on the way to market economy. After 25 years of colourful changes the authors of the article think that it is the right time to make some assessment on processes that were controversial at that time.

1 table shows the dynamic of global competitiveness index presented by World's Economic Forum. That is to say three Baltic states were not taken into account in 2000. The number of assessed countries was expanded from 58 in 2000 to 148 in 2014. The methodology of global competitiveness index was reviewed a few times during analysed period but the authors of the article make assessment in the framework of officially provided methodology. Comparing global competitiveness index 2000 and 2014 the significant change is determined. Only one country's (Lithuanian) competitiveness has improved over 14th years. Some others' competitiveness index have slightly deteriorated (Poland, Estonia). Two of transition countries' competitiveness has fallen by 10 positions (Latvia, Check Republic). Other countries' in transition competitiveness have fallen more than double behind more than 30 additional countries (Hungary, Slovak Republic). How Lithuania has remained its competitiveness over 14 years while other countries' competitiveness deteriorated and some of them deteriorated a lot?

Tabela 1: Table 1: The dynamics of the global competitiveness index (World Economic Forum reports 2000-2014)

	Country/Year	2000	2001	2003	2004	2006-2007	2007-2008	2008-2009	2009-2010	2010 -2011	2011-2012	2012-2013	2013-2014
1.	Lithuania	n/d	**49**	40	36	39	38	44	53	47	44	45	**48**
2.	Latvia	n/d	**42**	37	44	44	45	54	68	70	64	55	**52**
3.	Estonia	n/d	**27**	22	20	26	27	32	35	33	33	34	**32**
4.	Poland	**41**	41	45	60	45	51	53	46	39	41	41	**42**
5.	Hungary	**32**	26	33	39	38	47	62	58	52	48	60	**63**
6.	Czech Republic	**34**	35	39	40	31	33	33	31	36	38	39	**46**
7.	Slovak Republic	**36**	39	43	43	36	41	46	47	60	69	71	**78**

Notice: in 2000 global competitiveness ranking was estimated out of 58 countries comparing with 148 countries in 2014

Chart 1 shows GDP per capita in PPS for the last decade. Before coming on track Lithuania was ranked 6th among 7 places leaving only Latvia behind by GDP per capita in PPS comparing with the average of EU GDP per capita in PPS.

GDP per capita in PPS, EU 28

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU (28 countries)	100	100	100	100	100	100	100	100	100	100	100	100
EU (27 countries)	100	100	100	100	100	100	100	100	100	100	100	100
Czech Republic	73	74	77	78	79	80	83	81	83	81	81	81
Hungary	58	61	63	63	63	63	62	64	65	66	67	67
Slovakia	53	54	56	57	60	63	68	73	73	74	75	76
Poland	48	48	49	51	51	52	55	56	61	63	65	67
Estonia	47	50	55	58	62	66	70	69	64	64	69	71
Lithuania	42	45	50	52	55	58	62	64	58	62	68	72
Latvia	39	41	44	47	50	53	57	59	54	55	60	64

Chart 1: GDP per capita in PPS in EU-28 (Eurostat database, 2014)

Estimating only 42% of average GDP per capita in EU, over decade Lithuania has improved achieving more than two thirds of GDP per capita of average created in EU. From 6th position Lithuania is placed the third in post-communist countries in transition list. However Czech Republic is a country creating the highest value added, it is listed only 46th out of 148 countries in global competitiveness index list. Over decade Latvia remained the seventh of analysed post-communistic countries transformation. Even though Latvia was a country of one of the highest growth rate, Latvia's progress seems to be sluggish (see table 1).
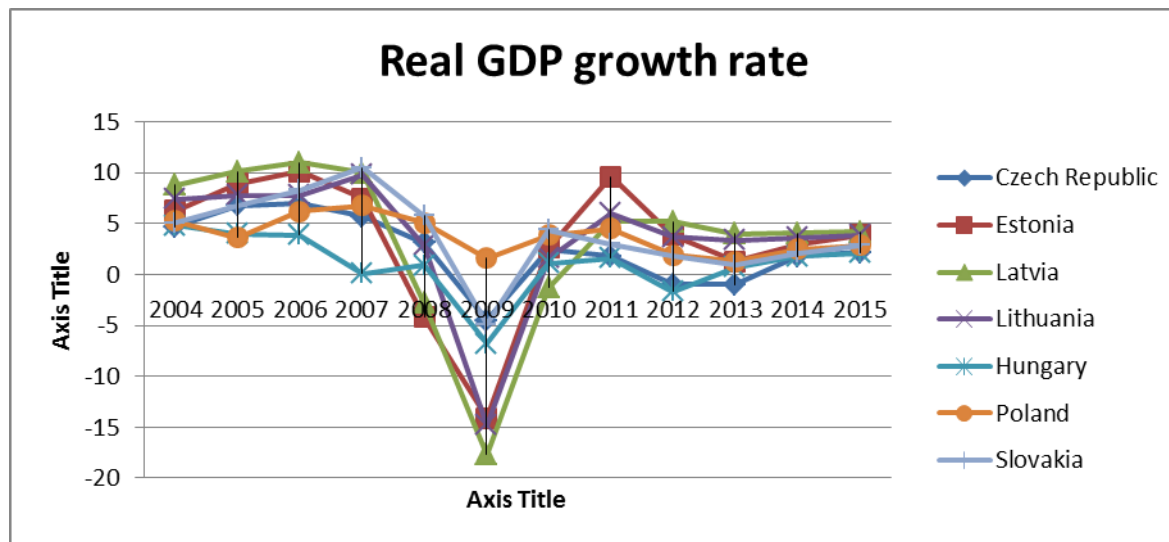
Chart 2: GDP growth rate (Eurostat database, 2014)

Baltic countries real GDP growth rates were the highest ones in all European Union estimating the growth of 7-8% rate on average. Accession to EU encouraged FDI in all countries. However the Baltic states were not exception among other countries. That is to say the growth was based on housing credits and supporting export initiatives very hardly investing in new technologies and innovations. Because of deep financial downturn in 2008-2009 Baltic states experienced one of the highest falling GDP rate in EU – Lithuania 17%, Estonia 14%, Latvia 18%. Only Poland remained a country which did not experience recession and during the peak of financial downturn Poland's GDP growth rate was 1%. That is to say, Poland's government twice devaluated zloty that made polish export competitive in European markets. Separate from Poland, Lithuania did not have even theoretical chance to devaluate Lithuanian Litas because of its exchange linking to Currency Board model. Moreover, devaluation of Litas could bring harsh social consequences – during housing credit boom most of mortgages were taken in Euro, Lithuania imported 95% of oil and 100% gas. On contrary, as it is characterized above, newly elected government took strict austerity measures.
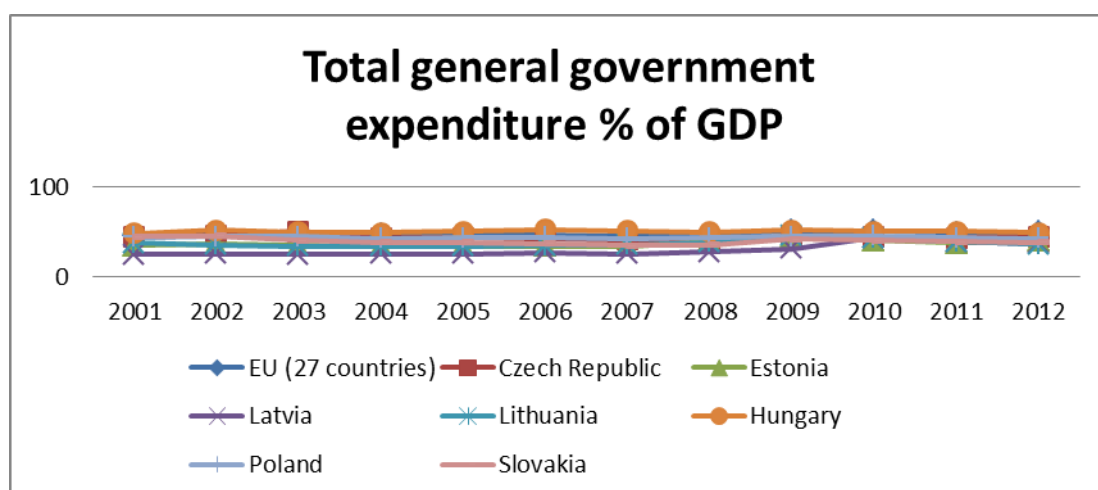
Chart 3: Total general government expenditure % of GDP (Eurostat database, 2014)

Some scholars argue that countries those had less state's intervention to post-communist countries in transition did better. However, chart 3 suggests that it is controversial enough to

directly address to governments' spending and quality of living or competitiveness index at least in post-communist world. Among other post-communist countries Lithuania has relatively small government spending rate, however as analysed above Lithuania's competitiveness is ranked the highest among analysed countries. On other hand, Hungary's spending rate seems the highest one, however in competitiveness ranking Hungary performance seems to be poor enough. Czech Republic government spending is relatively high enough almost being the same as the average spending of EU members, however competitiveness is fell down sharply during the last decade.   Meanwhile Slovakia's government expenditure had been diminishing till crisis period more than 10% from 2001 till 2008, however by at risk of poverty and social exclusion rates Slovakia seems to be the most sustainable post-communist country among others despite the fact that it is the worst ranking country in competitiveness index among other countries in transition.
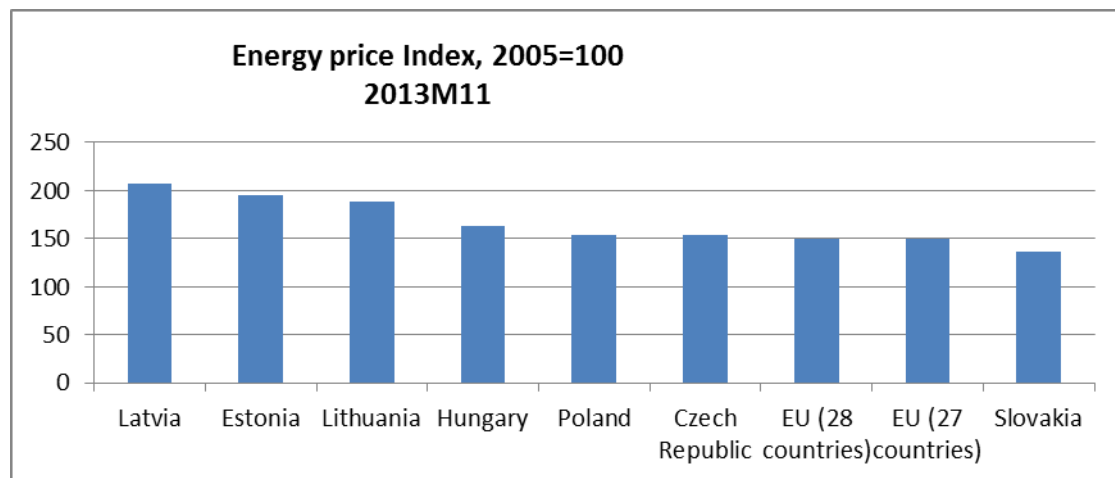
Chart 4: Energy price index 2005=100 (Eurostat database, 2014)

As chart 4 shows energy price index has doubled in some countries over the last 8 years. Baltic states heavily rely on imported energy resources and the prices for imported energy resources is one of the highest not only among post-communist countries but in EU itself. For some Lithuanian sectors it might be critical to its existence. For instance, for one company of chemical industry the cost of gas composes more than 70% of final cost. Any fluctuations in energy prices might be crucial for competitiveness in the region. However, Lithuanian government has adopted Export Development strategy where diversification of new less energy depending industries are promoted. In many national strategic documents Lithuania is positioned as "Baltic Sea Service hub".   Diversification of export structure mainly encouraging such sectors like tourism, medicine, architecture, IT, transportation and some others will make Lithuania less depended on energy price fluctuations.

In all countries in transition minimum wage has increased over the last 10 years. Baltic states and Slovakia had a lowest minimum wages among other post-communist countries. All these three countries did higher progress increasing minimum wage (see chart 5).
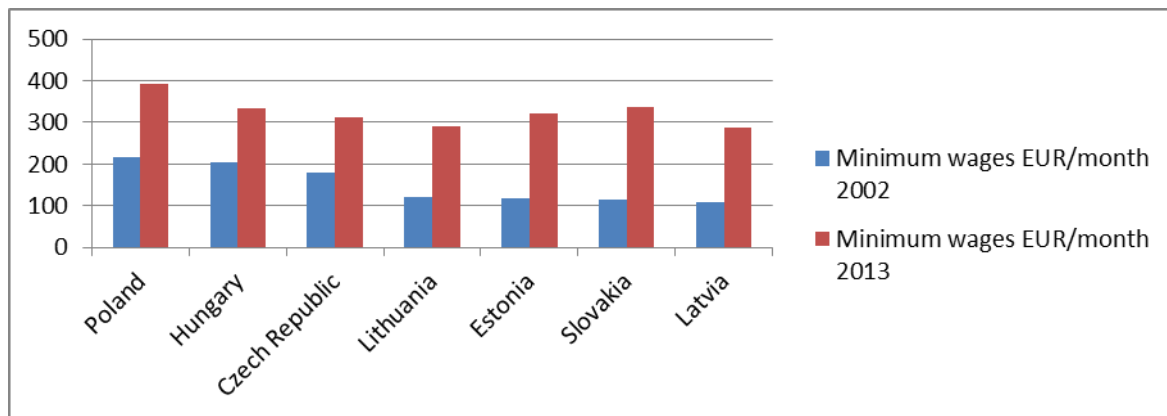
Chart 5: Minimmum wage growth in %, 2002-2013 (Eurostat database, 2014)

Hungary, Poland and Czech Republic had less progress but they had different starting positions for the development. Even though Slovakia raised minimum wage the most as much as 200% of primary wage it lost its competitiveness on contrary than Lithuania. That is to say that very few people are employed in exporting sectors in Lithuania. Czech Republic has increased minimum wage modestly, however its GDP per capita is the highest among post-communist countries and social exclusion rate is the lowest.
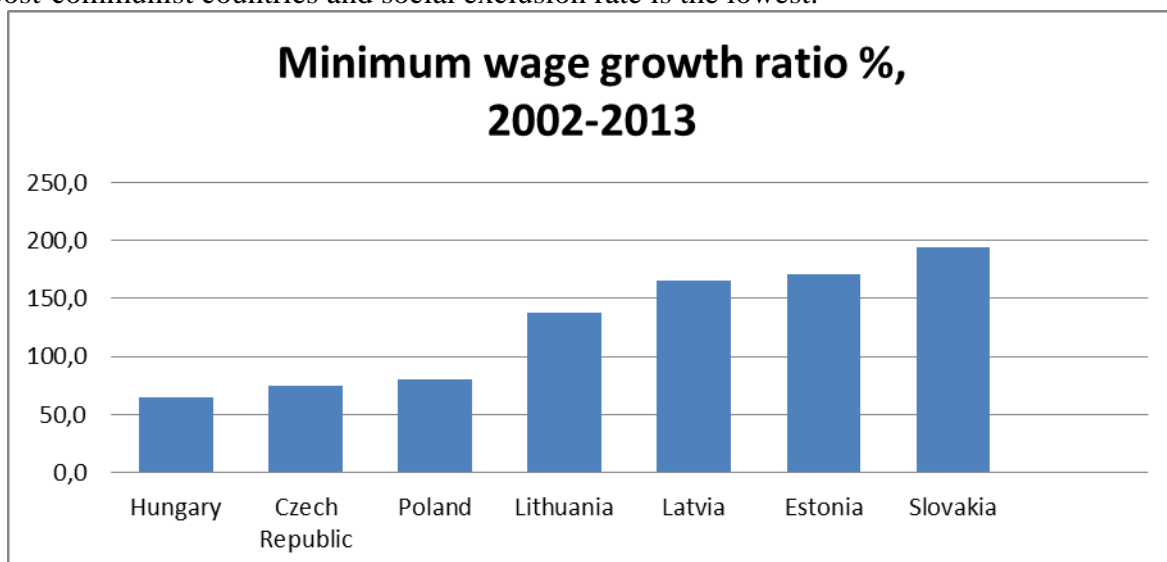
Chart 6: Minimum wage growth ratio (Estimated by authors, 2014)

However, starting current debates in Europe on minimum wage raises the essence of European social model of development. Raising minimum wage in export oriented sectors might bring negative consequences in losing export markets for some countries. On other hand, competitive advantage of some countries based just on primary raw materials and cheap labour force cannot be tolerated in global market any more. Moreover, that kind of model of development does not come along with spirit of competitive and social Europe idea.

Despite the rapid growth, Lithuania and Latvia experienced a high enough rate of social exclusion (according to Eurostat definition of Social exclusion). Financial crisis increased the level of social exclusion in Latvia, Lithuania, slightly in Hungary, Estonia and Czech Republic, meanwhile in Slovakia the level of people at risk of poverty remained the same and in Poland slightly improved.
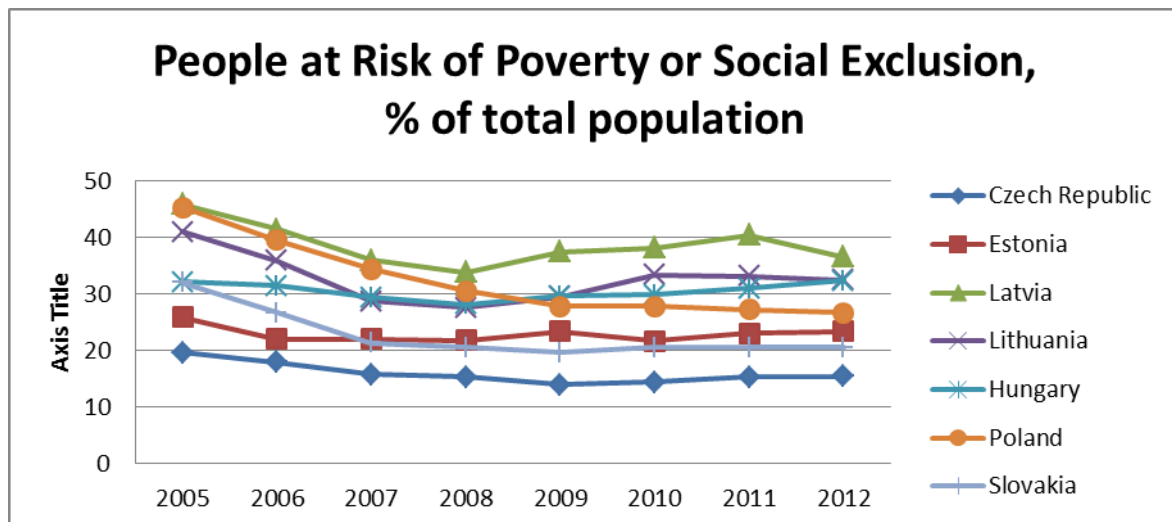
Chart 7: People at risk of poverty or social exclusion, % of total populatio (Eurostat database, 2014)

Financial crisis has showed that every economy of post-communist transformation is differently elastic to economic shocks. In authors' opinion, it is one of the most important parameter indicating the health of economy and the level of sustainable development.

4 CONCLUSION
Centrally planned economy in Central and Eastern Europe was a great social and economic experiment in human history. However, miscalculation of its governance and geopolitical circumstances made this system collapse. It is almost 25 years later from the beginning of social economic transformation in Central and Easter Europe. Every country introduced market economy elements, however approaches and speed of transformation varied bringing controversial and unexpected results. Having analyzed different variables it is concluding that there was no one universal approach to the market economy. There is no just one indicator that could suggest the right or bad economic policy at that time. Authors conclude that one of the most important factor of transition is the length of period of transition. Countries that started transition earlier such as Czech Republic they have less social exclusion and more stable economy, less social economic fluctuations, more smoothly face with external economic shocks.

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CREATIVITY IN HIGHER EDUCATION

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ABSTRACT

The paper presents results of research related to perception of creativity in higher education made by the authors at the University of Mostar. This research was based on a survey conducted among teachers and students at the University. The authors developed two types of questionnaires, one for teachers and the other for students in order to investigate the perception about creativity at the University. Namely, the idea that higher education has key role in development of knowledge-based society and economy, has been in the very heart of Bologna process implementing at the University of Mostar since 2005. Today's society is characterised by rapid and complex change processes encompassing all spheres of life. Creativity has been identified both as a key factor for adequate addressing the challenges caused by these changes as well as a major driving force towards knowledge creation and social and economic advancement through the development of a knowledge society. But, the complex questions of knowledge-based society and economy could not be solved without creative, forward-looking individuals and groups who are not afraid to question established ideas and who are able to cope with the insecurity and uncertainty this entails. If today's universities, including University of Mostar, would not succeed in strengthening creativity of teaching process and education of their teachers and students, development of knowledge society could be at stake. The aim of this research was to investigate the awareness of teachers and students of the University related to the necessity to enhance creativity within and by academic community.

Keywords: Creativity, Higher education, Knowledge-based society

1 INTRODUCTION

In the last decade creativity has become a mantra which is used by politicians, businessmen, employees, teachers, professors, students and others. Creativity is seen as a cure for a wide range of problems like social, economic and educational.

Creativity specifically has become a critical consideration, because "creativity becomes a force of great value when it is applied to causes that benefit humankind and the world at large" (Livingston, 2010; referenced by Fields and Bisschoff, 2013, p. 47).

In Learning and Teaching, the traditional teacher centred, transmission model of learning adopted by the 'sage on the stage' (McWilliam, 2007; referenced by Martin, 2010, p. 25) has gradually begun to change to a more facilitative approach to teaching that is learner centred and where the teacher becomes the 'guide on the side'. Barr and Tagg (Barr and Tagg, 1995; referenced by Martin, 2010, p. 25) see this shift from an 'instructional' to a 'learning' paradigm as changing the role of higher education (HE) from a 'place of instruction' to a place to 'produce learning'. Given greater democracy in learning, McWilliam (McWilliam, 2007; referenced by Martin, 2010, p. 25) suggests that the teacher can become the co-creator of new meaning making. Traditional attitudes towards knowledge transfer by lecture, however, still pervade many disciplines and institutions. Pressures for status quo in the socio-

economic structures, the training needs of the economy, the commodification of learning and the learner and adherence to traditional teaching methods that retain the power of the teacher, all support the passive receptor model of the learner who can then only learn that which is already known. This historical model of performance, though much loved by traditionalists, singularly fails to prepare learners to be creative in a life of change (Martin, 2010, p. 26). It is obvious that citizens of an increasingly complex community, country and globalized world need the skills, critically reflective processes and creative approaches in order to cope successfully.

Since 2005 University of Mostar has started formally with implementation of Bologna process, although University has observed European trends in higher education from the very beginning. The last *Strategy of development University of Mostar 2012-2016* (Strategy) was following modern trends in higher education related to the role of universities in social and economic development and need for improvement of creativity. In Strategy is said "Through creation of new ideas and technological solutions, critical thinking and creativity, University will become one of the key drivers of economy and sustainable development and at the same time it will foster and work on preserving cultural and historical heritage of social community from which is originated (Majstorović, 2012, p. 14). Although is Strategy publicly presented, discussed and adopted by University Senate, it seemed important to research level of awareness of teachers and students related to necessity of improvement of creativity at University of Mostar.

In this paper are presented results of the preliminary research which had aim to investigate the awareness of teachers and students of the University related to the necessity to enhance creativity within and by academic community.

2 CONCEPT OF CREATIVITY

Term creativity has root in a Latin word *"creare"* which means produce something. Latin poet Horatio wrote that poets and painters have talent to *create* something new. But, in Christian period word "creation" got completely different meaning, it was used to describe God act of creation, not human (Božanić, 2010, p. 1). Modern approach to creativity has started with theory of Graham Walas published in his book "Art of Thought" in 1926. He explained model for the four stages of creativity: preparation, incubation, illumination and verification. But, formal start of scientific research of creativity was imputed to J.P. Guilford. Guilford made an important contribution to understanding of creativity when he distinguished between convergent and divergent thinking processes. Convergent thinking, usually deductive, is thinking in which ideas are examined for their logical validity or in which a set of rules is followed while divergent thinking is an unusual and un-stereotyped way of thinking which generates several possible solutions to problem. Emphasis on divergent thinking and novelty is consistent with the typical layperson's conception of creativity but problematic when the solution must be both novel and effective (Wynder, 2008, p. 3). Creativity occurs on the right side of the brain when ideas are sparked, but to make creativity useful requires both divergent thinking (generating many unique ideas) and convergent thinking (combining those ideas into the best result) (Bisschoff, 2013, p. 47).

There are a number of definitions of creativity, depending on different authors. Stjepan Ozimec said that "*Creativity is a such kind of creation by which one produce something new, different from known, which include individual way of problem solving, discovery of*

unknown" (Ozimec, 1987, p. 8). As Isaksen said, creativity is not unambiguous phenomenon which could be defined precisely (Somolanji and Bognar, 2007, p. 3).

The physicist David Bohm saw creativity as dependant on perception and ability to recognise something new, requiring a state of mind which is 'attentive, alert, aware and sensitive' and does not impose existing preconceptions. This is very similar to the state which the educationalist Mezirow says is necessary for transformational learning to take place in which a person may have to abandon or modify their values and beliefs in order to accommodate their new experience and to create a new meaning. Bohm sees creativity as potentially opening the way to transform the individual (Pylkkanen, 1989, p. 23).

More importantly, educators will have their own implicit definition of creativity that will influence their acceptance of creativity as an important skill to be taught (Kleiman, 2008; referenced by Wynder, 2008, p. 2). In contrast to the popular view in which creativity is characterized as merely weird or non-conformist, an appropriate definition for educators focuses on the process culminating in a novel and effective solution to an open-ended problem. The importance of both novelty and effectiveness is reflected in the following definition. Creativity is "… the ability to produce work that is both novel (i.e. original, unexpected) and appropriate (i.e. useful, adaptive concerning task constraints)" (Sternberg, 1988; referenced by Wynder, 2008, p. 13).

3 THE IMPORTANCE OF CREATIVITY IN HIGHER EDUCATION

Higher education has been paying attention to the creativity when it was faced with large economic, cultural and other macro-environmental challenges which are changing role of universities from classical research universities („ivory towers") to entrepreneurial universities in the way that they not only became autonomous in their decisions, but also in the way that they developed and implemented new research and transfer relationships within their respective regions.

Livingston identified rising costs, increasing direct competition between universities, indirect competition from easily accessible alternative forms of learning, off-campus education possibilities such as the Internet as just a few modern challenges faced by university (Livingston, 2010, p. 61). This leads modern universities to the ultimate challenge, staying relevant and becoming redundant in a highly competitive market. In this regard, competitiveness expands to additional factors such as off-curriculum activities, innovative and new modules, sport development, development of reading skills, ease of information access and a safe, conducive learning environment (Bisschoff, 2013, p. 47). One such additional factor is the addition of creativity as stimulus in the development of the university student (Fields, 2012; referenced by Bisschoff, 2013, p. 47).

Almost all European strategic documents related to higher education mentioned creativity as imperative precondition for its further development. Document *Lisbon Declaration - Europe's Universities beyond 2010: Diversity with a common purpose* from the year 2007 stressed the need for "strong universities for Europe" (EUA, 2007, p. 4) enable "to produce an institutional milieu favourable to creativity, knowledge creation and innovation" (EUA, 2007, p. 8).

European Commission in Document *EUROPE 2020 - A strategy for smart, sustainable and inclusive growth* state as one of the three priorities: "smart growth – developing an economy

based on knowledge and innovation" which means "strengthening knowledge and innovation as drivers of our future growth. This requires improving the quality of our education, strengthening our research performance, promoting innovation and knowledge transfer throughout the Union, making full use of information and communication technologies and ensuring that innovative ideas can be turned into new products and services that create growth, quality jobs and help address European and global societal challenges. But, to succeed, this must be combined with entrepreneurship, finance, and a focus on user needs and market opportunities" (EC, 2010, p. 11). It is obvious that the role of European universities is crucial in the further development of EU. European Commission in the document *Europe 2020 Flagship Initiative* from 2010 said that to achieve Innovation Union EU Member states need the following: "Our strengths in design and creativity must be better exploited. We must champion social innovation. We must develop a better understanding of public sector innovation, identify and give visibility to successful initiatives, and benchmark progress (EC, 2010, p. 3) Document *Smart People for Smart Growth* is statement by the European University Association (EUA) on the EU Flagship Initiative "Innovation Union" of the Europe 2020 European Strategy for Smart, Sustainable and Inclusive Growth. First of six key messages was that "Europe's universities play an essential role in the "innovation chain" through their research and teaching activities which strengthen our knowledge base and skill development to provide new jobs for the future" (EUA, 2011, p. 3). Part six of that Document is dedicated to "Promoting openness and capitalizing on Europe's creative potential" (EUA, 2011, p. 8).

"Creativity in Higher Education", a project initiated by the EUA and cofunded by the Socrates Programme of the European Commission, was designed as an exploratory activity to enhance understanding of the concept. The aim of the project was to contribute to the advancement of the European knowledge society by identifying good practices and providing higher education institutions and their major external stakeholders – governments, quality assurance agencies and other partners – with operational recommendations on how to foster creativity (EUA, 2007, p. 8). Among ten key recommendations to European higher education institutions which have been derived from the findings and conclusions of the Creativity Project, the following are related to creativity (EUA, 2007, p. 10):

- Striving towards a creative mix of individual talents and experiences among students and staff, providing common fora for researchers from different disciplines and offering diverse learning experiences will likely result in conditions favourable to the creativity of the higher education community.
- It is recommended that HEIs explore the concept of a learning organisation for their management and governance structures. As important as these structural elements are, they must be complemented with ethical and cultural concerns in order to create an institutional milieu favourable to creativity.

In order to build upon EUA's recent work in enhancing the relationship between quality assurance processes, creativity and innovative practices, EUA launched a project in 2007, entitled Quality Assurance for the Higher Education Change Agenda (QAHECA). QAHECA aimed to explore what kind of quality processes for teaching and learning, both internal and external, support creative and innovative higher education institutions and seeks to limit the potentially problematic effects of these processes. Recommendation directly related to creativity said „*Quality assurance should be inclusive. A key success factor for an efficient quality assurance (QA) that enhances creativity at institutional level implies engaging the whole institutional community and not just considering QA as the special purview of a specific QA unit. This approach regards, for example, strategic planning, educational*

development and staff development as part of QA processes. We also urge the QA agencies to revisit their standards and processes in order to analyse in which ways they can encourage institutions to adopt this approach" (EUA, 2007, p. 20).

As it is already mentioned, University of Mostar has continuously observed European trends in higher education in order to be in step with good European practices. Although joining of Bosnia and Herzegovina (BH) to European Union is very uncertain, academic community of BH does not want to get behind European higher education institutions, but want to be prepared for joining in European Higher Education Area. University of Mostar is trying to be leading institution on that path.

4 RESEARCH METHODS
The research was conducted on a convenience sample of teachers and students at different faculties of the University of Mostar. Participants in research were informed of its purpose and participated voluntarily. Two types of questionnaires were developed, one for teachers and other for students. Generally, questionnaire had two main parts. First part contained general information about respondents (faculty, scientific field, course, seniority) while second part contained four groups of questions/statements. The first group of questions/statements evaluated frequency of practicing specified activities related to creativity. The second group of questions/statements evaluated the frequency of students' involvement during the class. The third group was related to expressing a degree of agreement with a set of statements about creativity in the classroom while the fourth group of statements offered respondents possibility to choose one or more of definition of the term creativity. The frequency of use and degree of agreement were scored according to the Likert scale with grades from 1 (never/totally disagree) to 5 (always/strongly agree).

After the technical control of questionnaires, sample consisted of 445 questionnaires - 58 questionnaires completed by teachers and 387 questionnaires completed by students. Data were analyzed in Microsoft Office Excel 2007 and SPSS for Windows, version 17.0. Results were expressed in absolute (f) and relative frequencies (%), also mean and standard deviation (M±SD) were calculated. The differences in the attitudes of teachers and students were tested by t-test for independent samples. The level of significance was p=0.05. P values that could not be expressed by three decimal places were reported as p<0.001.

5 RESEARCH RESULTS
As noted in previous paragraph, the second part of questionnaire contained four groups of questions/statements about creativity, so results of research are presented in the same manner. The first group of questions/statements was related to the evaluation of the frequency of application of specified activities during class - teaching process. Both, teachers and students evaluated to what extent specified activities appeared during teaching classes, i.e. meaning to what extent teachers practiced them. Results are presented in the Table 1.

Evaluation of teachers' behaviour related to creativity during the teaching process shows that there is statistically significant difference in opinions between teachers and students for each activity stated in Table 1. In the most cases teachers gave better grades, so one could conclude that teachers thought that their lectures are creative and customized to students' needs because they often behave according to specified activities (Table 1). Students' grades were not so high. They thought that teachers were not often affable, nor interested for students' ideas. According to students' opinions teachers do not respect unusual students' questions, do not

give creative examples, teachers are not open for new solutions or acceptance of different opinions. Comparison of average grades, beside statistical significant differences, shows that the greatest difference between teachers and students opinions is related to activity "Teachers encourage communication between and with students" while the minimal difference is for activity "Teachers are questioning all known in theory to encourage student on thinking". There is difference between teachers' and students opinions related to practising all specified activities, except one. Also, there is difference on activity "Teachers suggest students to think like them". Namely, students' opinion is that teachers more often "force" them to think like them, while teachers' opinion is that they do this seldom. From the results presented in Table 1 one could not conclude that there is no creativity in teaching process at University of Mostar. Namely, from the opinions of teachers and students it could be concluded that teachers try to be creative and to raise dynamic of teaching process, but it is obvious that they do not think that it is enough and that there is no room from improvement.

Table 1: Results related to frequency of practicing specified activities during class

Statement	M±SD		P*
	T (n=58)	S (n=387)	
Teachers appreciate the unusual questions.	4,138±0,826	2,964±1,131	**<0,001**
Teachers appreciate imaginative and unusual ideas.	4,207±0,811	2,987±1,083	**<0,001**
Teachers show students that their ideas have value.	4,379±0,721	3,261±1,068	**<0,001**
Teachers are connected with the evaluation of the causes and consequences.	3,966±0,878	2,920±0,885	**<0,001**
Teachers engage a more detailed discussion of others' ideas.	3,569±0,797	2,917±1,055	**<0,001**
Teachers suggested students to think like them	2,431±0,975	3,346±1,117	**<0,001**
Teachers allow students to express their creativity	4,345±0,785	3,382±1,137	**<0,001**
Teachers use case studies from real world as learning tools	4,448±0,680	3,282±1,087	**<0,001**
Teachers show their creativity	3,931±0,835	3,163±1,044	**<0,001**
Teachers encourage communication between and with students	4,466±0,842	3,044±1,156	**<0,001**
Teachers encourage students to develop self-confidence to work in unpredictable situations.	4,172±0,861	2,897±1,147	**<0,001**
Teachers provide learning situations in which there are no correct answers.	3,241±1,144	2,638±0,970	**<0,001**
Teachers are friendly to different new solution and accept different opinions.	4,362±0,693	3,103±1,018	**<0,001**
Teachers are questioning all known in theory to encourage student on thinking.	3,603±1,059	3,072±1,060	**<0,001**

T – Teacher; S – Student; M-mean; SD – standard deviation;
*t-test for independent samples

The second group of statements evaluated the frequency of students' involvement during the classes. The results are presented in Table 2.

Table 2: Results related to frequency of students' involvement during the classes

During the course, students are encouraged to	M±SD		P*
	T (n=58)	**S (n=387)**	
… participate in a constructive discussion	4,466±0,655	3,013±1,017	**<0,001**
… express their views	4,534±0,655	3,145±1,096	**<0,001**
… express their own ideas	4,586±0,622	3,168±1,046	**<0,001**
… give constructive suggestions	4,586±0,676	3,049±0,982	**<0,001**
… give new solutions of problems	4,431±0,752	3,101±1,034	**<0,001**
… guide classes to be of interest for them	3,931±0,934	2,829±1,102	**<0,001**

T – Teacher; S – Student; M-mean; SD – standard deviation;
*t-test for independent samples

As expected, teachers and students evaluated differently encouragement of students on participation during the classes. Looking at average grades at range from 1 (never) to 5 (always) it is visible how teachers thought that they were dedicated to students and encouraged them to participate in discussions, to express their ideas and views, to give proposals and solutions. Average grades for specified activities are around 4.5 with relatively low standard deviations which means very small variations in answers of teachers.

Table 3: Results related to degree of creativity in classroom

Statement	M±SD		P*
	T (n=58)	**S (n=387)**	
Students should be encouraged to be creative.	4,793±0,487	4,558±0,768	**0,002**
Lessons need to be oriented towards new methods of learning.	4,397±0,724	4,289±0,918	0,396
Teachers are the main instigators of students' creativity.	3,707±0,973	3,762±1,089	0,715
Creativity of students depends on the characteristics of teachers.	3,828±0,958	4,041±0,959	0,114
All student perceptions/experiences of a problem should be considered.	3,690±0,863	4,026±0,952	**0,012**
It is more important to communicate with students than to lecture planned material.	3,086±1,204	3,858±1,069	**0,000**
Students can guide running of lectures.	3,293±0,955	3,628±0,980	**0,015**
Each problem has unique solution.	1,655±0,965	2,530±1,420	**<0,001**
To successfully pass the exam the student needs to answer the question exactly as it is stated in literature.	1,879±1,027	2,129±1,309	0,100
Students can have their opinion about a problem that is completely different from teachers' opinion.	4,172±0,881	3,912±1,137	**0,047**

T – Teacher; S – Student; M-mean; SD – standard deviation;
*t-test for independent samples

When the encouraging of students to guide classes to be of interest for them (in the framework of course) is in question, the results show a little lower average grade, but it could be concluded that teachers are open for students interests, of course in the framework of courses. Namely, it is obvious that teachers are aware how teaching process does not mean just ex cathedra knowledge transfer, but encouragement and development of students thinking about theme of lecture. Variations of teachers' opinions for these activities are greater than for others. From the students' standpoint, the analysis of frequency related to encouragement of students to activities specified in Table 2 showed up considerably worse grades. Average grades are around 3 which indicate that, according to students' opinion, teachers did not often encourage students to actively participate at classes. Generally, students think that teachers do not encourage them enough to be active participants of teaching process which leads to conclusion that classical, ex cathedra approach is still prevailing.

The third group of statements was related to a degree of creativity in classroom. Results of respondents' agreement or disagreement with offered statements are presented in Table 3.

Table 4: Results of respondents understanding of creativity

Creativity means …	T (n=58)		S (n=387)	
	f*	**%**	**f***	**%**
generate new ideas	**38**	**65,5%**	**264**	**68,2%**
thinking outside the box	**39**	**67,2%**	207	53,5%
search beyond the obvious	19	32,8%	89	23,0%
seeing the world in different ways	34	58,6%	209	54,0%
inventing, innovating and producing new things	31	53,4%	201	51,9%
adaptation of the things that someone else invented	21	36,2%	67	17,3%
do things that nobody has done before	19	32,8%	142	36,7%
do things that others have done before, but in a different way	25	43,1%	128	33,1%
combining different ideas	37	63,8%	190	49,1%
see unusual connections between existing things/concepts	22	37,9%	89	23,0%
be nimble	22	37,9%	**238**	**61,5%**
be curious	25	43,1%	202	52,2%
search for novelty	26	44,8%	210	54,3%
explore and discover new and unknown	23	39,7%	150	38,8%
critically reflect on the current world	20	34,5%	71	18,3%
adapt to the existing frameworks	**1**	**1,7%**	**36**	**9,3%**
experiment	28	48,3%	230	59,4%
take the risk	19	32,8%	198	51,2%
analyze	16	27,6%	137	35,4%
synthesize	16	27,6%	65	16,8%

T – Teacher; S – Student;
*- multiple choice

Opinions of respondents about statements related to creativity in teaching process are variegated. The results of research show that there are statistically significant differences for some of the statements, while differences in average grades are obvious for all statements. Both teachers and students think that students should be encouraged on creativity. It means that during lectures teachers should use new methods of learning and accept that it could be significant difference between their and students' opinions about the same thing. It is interesting to notice that both, teachers and students, think that teachers have main role in encouraging students to creativity and that efficiency of encouragement is dependent on personal characteristics of teachers. Also, it is necessary to point out differences in grades for statements "Each problem has unique solution" and "To successfully pass the exam the student needs to answer the question exactly as it is stated in literature". Since the classical - ex-cathedra approach in teaching process is still prevailing, one could expected higher agreement of teachers. Strange, but students agreed more with that statements. It is necessary to stress that the level of agreement is relatively low for both of them (average grades are about 2). In the Chapter 2 different definitions of creativity were stated. So, the fourth group of statements offered respondents possibility to choose one or more of definition of term creativity (multiple choices were allowed). Results are presented in Table 4.

Results presented in Table 4 show that both, teachers and students, often connect creativity with "generating new ideas" (65.5% of teachers and 68.2% of students). It is also the most often answer for students, after that follow "be nimble", "experimenting", "seeing the world in different ways" and "search for novelty". The most often answer for teachers is "thinking outside the box", after that follow "generate new ideas", "combining different ideas", "seeing the world in different ways" and "inventing, innovating and producing new things". The rarest answer in both groups of respondents was "adapt to the existing frameworks". It is expected because obedient adaptation to existing framework has nothing to do with creativity, unless if it is a new way of adaptation.

6 CONSLUSION

The results of research presented in this paper show that teachers and students of University of Mostar are aware of necessity of creativity in teaching process. As it is expected, there are differences in opinions between respondents because creativity during lectures is differently experienced and vary from field to field and theme to theme. Although equally participation of both, teachers and students, in educational process is constantly pointed out, their roles, rights and obligations are different, so it is logical that their opinions are also different. Although teachers did not get high grades for some of specified activities, one could not say that they are not creative. But, prevailing model of teaching at University of Mostar is still ex cathedra, so it is necessary that all stakeholders make an additional effort to enhance creativity, not just in teaching process, but in research, management and other activities of University. Some preconditions for enhancing creativity were already done – the last *Strategy of development of the University of Mostar 2012-2016* highlights the necessity of fostering creativity in all segments of University life.

The research presented in this paper is the first research related to creativity conducted at University of Mostar and it could be good base for further research in this field. It is important to stress that teachers had to evaluate themselves, so their results should be taken with caution. In order to get more relevant and objective data it is necessary to increase sample, validate the instrument of research and to include independent evaluators to get data relevant for successful decision making related to fostering creativity at University of Mostar.

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MULTICULTURALISM TRENDS IN MODERN LITHUANIA: PROBLEMS AND PERSPECTIVES

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ABSTRACT
Multiculturalism has significantly progressed over the last decade in Lithuania after the country joined European Union. The authors analyze the literature and country's situation of multiculturalism and intercultural communication topics; examine the challenges posed by the phenomenon to Lithuanian society. The survey was conducted to find out the opinion of the citizens of modern multicultural environment peculiarities in the country. The research made in Lithuania on this topic is short in order to fully assess the current situation, so the authors want to find out the general multiculturalism concept and its development trends in recent time. Main respondents were the young and middle-aged residents of the city, of which more than 40 percent have higher education. The survey results reflect the respondents' attitudes towards multiculturalism, demonstrates the limits of their tolerance to foreigners, the challenges they face in communicating with each other with different cultures. Conclusions provide insights and recommendations on what measures can be used for promoting tolerance to other cultures in the Lithuanian society and achieving most effective integration of representatives of different cultures into the public life of the country.

Keywords: *intercultural communication, intercultural competence. multiculturalism, representatives of different cultures.*

1 INTRODUCTION

Global co-operation with the development of various nations and intercultural dialogue is one of the key factors of an open, modern society creation and the promotion of tolerance. The international dimension outlines the importance of corporate heritage to specific region, Europe or the whole world. For example, the Lithuanian capital Vilnius, has a multiethnic city face, it was shaped for ages by many religious and ethnic communities, whose contribution led to the multiethnic and multicultural city phenomenon (http://www.kpd.lt/lt/). This has had a considerable significance in choosing Vilnius city for European capital of culture 2009.

Lithuania is traditionally accredited to the relatively small and quite homogenous European countries, which is characterized by a small scale immigration – according to the data of The Department of Statistics, each year over the last decade about 2000 foreigners were coming to Lithuania, while ethnic minorities living here for a long time have already been adapted for sufficient amount of time, but is it really even in a seemingly homogeneous community, there is a reason to talk about culturally integral society? (Erentaitė, 2008).

The examination of multiculturalism in the broad sense, this phenomenon includes race, ethnicity, language, sexual identity, gender, age, social class, education, religion and other cultural dimensions (American Psychological Association, 2002). Studies carried out in Lithuania (Erentaitė, 2008) suggest that although macrocultural contrasts related to ethnic or religious diversity, Lithuania is unparalleled to such mixed societies like the U.S. or Western European cosmopolitan urban centers, however, there is no reason to believe that the state forming community is more homogeneous by population age, social class, sexual identity or

other characteristics. Lithuania is called Catholic country, while sociological studies show the differentiation of the country's societal values and norms, because a large part of the population tolerated values is more like a secular position (Žiliukaitė, 2007), and near the cultural foundation held the conjugal family model is actively practiced in other family forms (Mitrikas, 2003). Cultural diversity, especially microcultural differences and trends in Lithuania are related to the free movement of European Union influence, the previous migration of the last decade, the rapid development of information technology and the influence of Western culture developed social priorities.

Purpose of the article - analyzing scientific publications, statistical information and using the questionnaire method, discuss multiculturalism manifestation in contemporary Lithuania, ascertain residents opinion about various cultural dimensions issues, to provide survey results analysis, the basis of which highlight the main trends of multiculturalism and the resulting problems, see the tolerance of other cultural representatives the promotion opportunities and assess the process control conditions.

2 MULTICULTURALISM CONTEXT

The nature of human communication depends on the lifestyle, the corresponding orientation, character, taste, interest (Ebner, 1979). It is obvious that there are universal human qualities that are specific with different nationalities, but also the national or regional culture makes the huge impact to human behavior. Different nationalities, speaking different languages, see the world's picture differently and also have their own way to assess phenomenon and set their affairs, they tend to deal accustomed to their community of existing codes of conduct, that is why in the face of different cultures, their implemented and learnt national concepts do not meet the regulations of those who they are communicating with. And then there rises a cultural expression: the problem of values and the essential elements acceptability (Pruskus, 2004).

A very important part of the culture is a language, which can be regarded as a conscious thought. Famous Great Britain linguist Richard D. Lewis says that when the person is speaking, only the tip of the large iceberg flashes, consisting of verbal activities, not overstepping the limits of hearing. Based on the author's assumption, we can presume that what is said is only a brief summary of the human mind, born in his inner world, so even though grammatically can be evaluated as true or false, but there will always be colored by the human world-view, which is subject to strict his native language structure (Lewis, 2000).
Geert Hofstede (2001) defines culture as "the collective programming of the mind which distinguishes the members of one group from another." That is why it is primarily the collective behavior of the system, determined by values. Cultural values help determine how an individual or a social group reacts to its environment. Hofstede proposed paradigm, which he divided into five cultural dimensions (see Table 1). Based on these dimensions, it is possible to describe and compare the different cultures.

Table 1. Cultural dimensions according to Hofstede (2001).

Power distance	Uncertainty avoidance	Long term and short term orientation
Individualism and collectivism		Masculinity and femininity

According to Diana Janušauskienė (2013) the research of tolerance is a part of values research. Mostly these studies include the treatment of various social groups, which differed markedly from the dominant majority in the culture, research. In addition to various social

groups, recently the research object of national minorities is becoming more frequent with their own unique cultural flavor. As society becomes increasingly diverse, the approach to a different position, appearance, or way of life is becoming extremely important indicator showing public maturity.

Tolerance and intercultural education are very closely related. For effective cultural communication the compatible level of contemporary society's cultural literacy, in other words, intercultural competence is necessary. V. Pruskus in his book "Tarpkultūrinė komunikacija ir vadyba" (2012), agrees with E. D. Hirsh, who is dividing these intercultural competence levels:

- Needed to survive in the new cultural environment;
- Enough to enter into a foreign culture;
- Providing full existence in a new culture;
- Enabling the implementation of language singularity.

Intercultural competence is traditionally analyzed with the help of conceptual models. Cross-cultural competence (IC) model is the most used model in research. According to this model intercultural competence consists of three main components: a sufficient cultural knowledge, cultural skills or skilled actions and the corresponding motivation or personal attitude (Byram, 1997). *Cultural knowledge* - this is a general information about cultural practices, specific information knowledge about a particular culture, and information about your own culture knowledge; intercultural differences in communication styles and managers recognition, showing flexibility in dealing with communication misunderstandings, and feeling comfortable dealing with foreign citizens or other culture people. *Cultural skills* include appropriate and effective behavior, which is perceived as competent in the context of cultural diversity. This component includes such important skills as the ability to understand and clearly communicate with other cultures, decidedly conceiving communication goals, roles and norms. *A personal vein* describes the personal interest of cultural interaction, its emotional and physiological reaction and the degree of empathy in relation to other cultures. Is he tolerant of ambiguity and uncertainty because of cultural differences? Can he work with people of other culture (Matveev and Milter, 1995)?

Cultural identity – it is different values and different ways of dealing with things. Cultural interface success is inevitably associated with tolerance to different values, cultural diversity. Tolerance grows with recognition, knowledge and skills acquisition, formatting broader-minded personal stance. Multicultural environment, cultural identity, tolerance and the need for education - are the key components of multiculturalism.

3 MULTICULTURALISM IN LITHUANIA - RESEARCH DISCUSSION

In recent years, interest in intercultural communication has been supported by the EU Council decision of 2007 established European Integration Fund, whose main goal – to support the efforts of Member States with the help of different economic situation, social standing, cultural, religious, linguistic and ethnic dependence to third-country nationals to meet the conditions of residence and to facilitate their integration into European societies. Foreign authors of scientific publications emphasize intercultural communication topics (Kaluza, Golik, 2008; Korshuk, 2008; Hańderek, 2008; Williams, 2008; Chuťka, 2008), while Lithuanian researchers are more interested in the aspects of intercultural competence definition (P. Paurienė, 2010; Pruskus 2004, 2008, 2010, etc.) and the features of communication between Lithuanian population and foreign people (Macevičiūtė, 2005). In Europe, a place where the most research has been done about this question is Germany, while

in Lithuania intercultural communication thing started teaching only in 2011 Vilnius University, Faculty of Communication, the development of communication specialists (Pruskus, 2012).

The prof. of University of Wroclaw (Poland), Alicja Szerlag in 2007 completed the Vilnius region research about intercultural education of 330 families dedicated to the national specifics of structure, education system, household situation in family, education function features and their dynamics, family values enshrined. The main conclusion of this author's research: family, school, local and regional activities are the main generators[1] of intercultural competence development. According to the author, "... nationality may be a factor that helps differentiate personal relationships in defined social space. Caring that, it is important to examine inter-cultural education complexly in the context of school education (Szerlag , 2007).

D. Janušauskienė commenting researches done in Lithuania about tolerance to foreigners conducts that there is no need to talk about widespread intolerance, although relations between people of different nationalities in individual cases is a problem and a review of the various different tolerance study shows that the majority of the population in both Lithuania and ethnic Lithuania is optimistic with regard to foreigners. Made in autumn 2007, special Eurobarometer survey "Intercultural dialogue in Europe" has revealed how the residents of Lithuanian assess cultural diversity: 21 percent of Lithuanian population completely agree and 55 percent agree that the country's cultural life is highly enriched by the people with different cultural roots. In Baltic barometer survey, done in 2000 data shows that 67 percent of Lithuanians believe that you should always try to understand other than your own view. Those who think this way is 61 percent of Lithuanian Russians. Also a high tolerance of children education in their parents' native language existed for a long time. Studies from 2000 show that as much as 88 percent of Lithuanians believe that all Lithuanian residents must exercise the right to receive education in their parents' language. However, about one-third of Lithuanian express one or another negative prejudices against foreigners, for example, in 1999 carried out research of political culture showed that 34 percent of Lithuanians agree with the statement that Lithuania grants too many rights to foreigners. In autumn 2003, tolerance research, done in Lithuania have documented that negative attitudes towards Jews have 20.4 percent of respondents, and even 42.7 percent have a negative attitude against Romes (Janusauskiene 2013).

The content and context of tolerance, respect for diversity and equal opportunities for education in Lithuania was exhaustively analyzed by J. Reingardė, N. Vasiliauskaitė and R. Erentaitė (2012) . Social tolerance measurement research in schools environment shows that both teachers and students welcome the opportunity to interact with people from other nations, infidels, representatives of the different races, also disabled friends, neighbors, colleagues, or students who are close to themselves in personal and professional environment, but both groups investigated that the most unacceptable group for them are homosexual people. The data also shows that multicultural competence of teachers is low, local perspective is dominating, there is the lack of resources for critical reflection, teachers use media (usually the Internet) as the main information source of various cultural groups. The information about social and cultural diversity and equal opportunities given by the teachers and textbooks is considered to be the most immportant information source for the students. It is observed that the least information of social and cultural diversity and equality issues students receive from the social cultural minority groups and extracurricular activities.

Given results show that education of cross-cultural competence and tolerance for „different people" is an important and improvement-needed phenomenon in society's maturity development.

4 MULTICULTURALISM TRENDS IN LITHUANIA - FOCUS ON OPPORTUNITIES

Due to Lithuanian Department of Statistics population census data of the year 2012, the population of Lithuania is about 3 million people (http://db1.stat.gov.lt) , who represent 154 nationalities , among them – 83,7 percent Lithuanian, 6,6 percent Polish, 5,3 percent Russian, 1,3 percent Belarusians, 0,6 percent Ukrainian and 0,6 percent other ethnic groups (Jews , Latvians , Germans , Tatars , Roma, and others.). Vilnius, the capital of Lithuania, with population a little more than 600 thousand people, since the beginning was formed as a multinational city and today it still maintain this position, there are 128 nationalities in this city, whereas in Kaunas 85, in Klaipėda – 77, more than 50 nationalities are in Šiauliai and Panevėžys.

Lithuanian ethnic communities enjoy broad legislative rights and freedom in native language usage, education, culture, including: they can create and maintain their own organizations, to cooperate with compatriots who live in other countries, to cherish their nation's cultural heritage, to take educational activities and dissemination of information in their native language, Lithuania was one of the first countries in Europe that signed the Convention for the Protection of National Minorities (http://www3.lrs.lt), which expressed the European Council's and its member states concern about the risk of ethnic minority existence. The basic principles that guide the country through the creation and implementation of ethnic policies - development of democracy, prevention of exclusion, unity and the dialogue with various ethnic groups and individuals. The coexistence of European Union countries are based on common reference values of Western civilization such as democracy, tolerance, individuality (Gelumbauskas, 2004). As it is seen, tolerance for multiculturalism and its development should be included in any EU state's policy and appropriate management measures should be required. Therefore one of the priority tasks of Lithuania in controlling this process - to deepen the understanding and trust also to develop continuous dialogue between Lithuanian and Lithuanian ethnic minorities, new immigrants, tourists and others.

The authors of this article in 2013 year 09-10 months conducted a study, which was to discuss the challenges of working and communicating in a multicultural environment: whether the population of Lithuania is inherant to familiarize different cultures, are Lithuanian people able to work and communicate with other nationalities and cultures representatives in order to live in equality, despite the different culture, lifestyle or origin.

The study was performed using an anonymous survey method, the respondents were interviewed both directly and via the Internet, nearly two hundred completed questionnaires were received. Most of the respondents are Lithuanian citizenship, one of them - an Israeli citizen. In addition to Lithuanian respondents answers there were received one reply from Estonia, Great Britain and Norway. By ethnicity respondents were distributed as follows: 76,6 percent - Lithuanian, 10,4 percent - Polish, 4,2 percent - Russian , 0,5 percent - Belarusian, which is close to the Lithuanian population structure (see Table 2), 8,3 percent respondents did not indicate their ethnicity.

Table 2. The comparison of respondents' distribusion according to nacionalities.

Distribution of Lithuanian citizens according to nationalities	Distribution of respondents according to nationalities
84,2 percent Lithuanian; 6,6 percent Polish; 5,8 percent Russian and oth.	76,6, percent Lithuanian; 10,4 percent Polish, 4,2 percent Russian and oth.

The majority of respondents are women (65 percent), sorting by age - 71,4 percent of all respondents are younger than 35years old, 87,5 percent of respondents live in a city, 6,2 percent – district centers and other city type settlements, 5,2 percent – villages. 40 percent of the respondents work in the public sector, 25 percent – in private sector, 26 percent of those who answered are still studying and 9 percent don't work at all. In the survey participated 10,4 percent people with doctoral degree, 43,2 percent of the respondents have a bachelor or a master academic degree, others – have completed secondary and vocational education. Bigger part of the respondents – are young and middle aged city people, from which more than 40 percent have a higher education.

In Lithuania, like in every other country, live people with different sex, social sectors, nationalities, race. They talk in different languages, have different traditions, follow different religions, have their own values in life and so on. Respondents were asked to evaluate, how relevant are cultural differences in Lithuania, looking at race, nationality, language, religion, sex, sexual orientation and social status (Table 3.). As we can see, for more than half people questioned, mind the linguistic differences. (54,7 percent), and a good reason for that could be lack of other language skills those respondents have, the language used by a foreigner is rarely heard, and so on., that's why there's a need for further researches about this, so that we could answer more correctly about the situation. Almost every second respondent (42,6 percent) for various reasons (including the preservation of national identity) care about ethnic diversity, even though for the majority of Lithuanian citizens ethnic differences don't cause any problems. For more than a third of people answered seem to have a problem with sexual orientation in Lithuania.

Table 3. Different cultural features relevance, %

Cultural differences	Important	Nor important, nor unimportant	Doesn't care
Race	30.0	30.5	39.5
Nationality	42.6	30.9	26.6
Language	54.7	27.9	17.4
Religion	12.5	54.8	32.7
Sex	16.5	34.6	48.9
Sexual orientation	36.4	30.5	33.2
Social status	33.5	35.1	31.4

Absolute majority of people asked (9 from 10) admit that religious differences don't mind them, what is tied to wide range of opportunities to practice their religion freely in Lithuania as well as to develop tolerance towards other religions. Perhaps that is because, in Lithuania there aren't many people living with different races, event 70 percent of the respondents cultural differences according race is not relevant or poses indifference.

To find out the problems of intercultural communication, it is needed to know, how often Lithuanian citizens communicate with other cultures – find out about respondent intercultural experience while working with people from other cultures in an informal environment. From the survey results it is visible, that 41,3 percent of all respondents work with people from other cultures constantly, that is once per week and more. 29,1 percent have the opportunity to work with other cultures just some times, which is once or twice a year. 37,2 percent surveyed people communicate with other culture people constantly in an informal environment and 36,7 percent of them communicate with representatives of other cultures just sometimes. By the way, 14,3 percent of the respondents haven't had the chance to work with people from other cultures, and 2,1 percent has never in their life communicated with a person of a different culture. (Table 4.) As you can see in the chart, 2,1 percent have no experience of inter-cultural communication at all.

Table 4. Communication with other cultures in working and informal environment frequency, %

	Constantly (Once a week and more)	Often (Once per month)	Sometimes (1-2 times a year)	Never
Worked together	41.3	15.3	29.1	14.3
Communicated in an informal environment	37.2	23.9	36.7	2.1

Respondents, that have experience in working or communicating with other cultures, were asked – what difficulties have they encountered or have not encountered during the process of intercultural communication (Table No. 5.). We see, that even 69,6 percent of the surveyed people have a history of language barrier / miscommunication problems, 54,7 percent of the respondents had a hard time while discussing about values of life, and about customs and tradition differences – 50,0 percent of the respondents. When talking about religious differences 64,4 percent of people asked, have never faced any problems, same with social status, half of the respondents (49,2 percent) haven't had any problems as well.

Table 5.Frequency of facing the cultural differencies, %

Cultural differences	Often	Sometimes	Never	Don't have a clear opinion
Language barriers	15.7	69.6	13.1	1.6
Custom and tradition differences	7.8	50.0	37.0	5.2
Different values in life	11.1	54.7	30.0	4.2
Religion and beliefs	4.7	24.1	64.4	6.8
Social status difference	6.3	33.5	49.2	11.0

Using this survey it is set out to find out – whether Lithuanian citizens have ever encountered certain intolerance: hostility, rejection or prejudice cases because of their cultural differences (Chart No. 6.). As seen in the results the majority (6 out of 10), have never faced intolerance manifestation, have never felt rejected or somehow stood out because of their cultural

identity. But, the research showed, that average of 3,2 percent of surveyed people meet with the problems mentioned before almost every day, and more than a third of respondents have at least once been affected by this phenomenon. Data from the survey shows that majority (42,6 proc.) OFM Lithuanian citizens had faced some prejudice towards them.

Table 6. Frequency of intolerance cases, %

	Fell it often	Has felt it	Never felt it
Have you felt hostility towards you?	2.2	35.1	62.7
Have you felt any prejudice towards you?	3.7	42.6	53.7
Have you ever felt rejected or different?	3.7	31.1	65.2

People, who have faced intolerance in Lithuania, were questioned, if it had any effect on their opinion about other cultures and what do they think about the need of multiculturalism education in Lithuania. Not looking back to the fact that almost every 3rd respondent has faced intolerance it doesn't change their opinion about other cultures, but 18 percent of people who answered think, that it's important to put more attention in educating the public about multiculturalism (Table No. 7.) One gets the impression that the lack of public attention to multicultural education for, 7,3 percent of the surveyed people, is the main reason to state, that other nationality and culture people should live in Lithuania as less as possible.

Finally, this study was aimed to find out respondents limits of tolerance for the representatives of other cultures and nationalities. In measuring the social distance between different groups Bogardus'o scale (Tar, 1999) is mostly used. It consists of some level questions, illustrating the limits of tolerance: 1) would you agree that the people of other nationalities lived in your country, 2) whether you would agree that the people of other nationalities lived in your town, 3) would you agree that people of other nationalities lived in your neighborhood 4) would you agree that the people of other nationalities lived with you for some time, 5) would you agree to marry someone of other nationality. Lithuanian residents have been asking these questions when other nationalities and cultures members were divided to the European Union (EU) (see Table no. 8) and non-EU citizens (see Table no. 9).

Table 8. The limits of Lithuanian tolerance for citizens of EU and its partners, percent.

Would you agree that people of other nationalities lived:	Yes	No	I do not know	I do not care
...in Lithuania	83,3	3,6	2,6	10,4
...in your town	81,7	5,2	3,1	9,9
... in your neighborhood	72,9	10,4	6,2	10,4
... with you for some time	50,0	26,6	16,7	6,8
Would you agree to marry someone of other nationality ?	40,0	20,5	27,4	12,1

The comparison of these two tables (table 8 and table 9) shows that however Lithuanian public tolerance for citizens of the EU and its partners and for non-EU citizens and its partners are different. Comparing the answers to the first stage question of tolerance shows a agreat decrese in acceptance rate (from 83,3 per cent to 66,8 percent), the approval of the second question decreases as well from the 81,7 percent to 66,5 per cent, in the third stage

step the acceptance is reduced from 72,9 per cent to 56,5 per cent , in the fourth stage of the issue - from 50,0 per cent to 38,6 percent . As it can bee seen the tolerance limits of the respondents of this research presuppose their approach to marriage with a person of another nationality and it is linked to the region of origin of the other half: EU citizens have the obvious priority over the citizens from other regions (40 and 28,3 per cent respectively).

Table 9. The limits of Lithuanian tolerance for citizens of non-EU and its partners, percent.

Would you agree that people of other nationalities lived:	Yes	No	I do not know	I do not care
...in Lithuania	66,8	10,9	10,9	11,4
...in your town	66,5	9,8	11,4	103
... in your neighborhood	56,5	16,3	13,6	13,6
... with you for some time	38,6	35,3	17,9	8,2
Would you agree to marry someone of other nationality?	28,3	27,7	28,8	15,2

Summarizing the results, it can be said that the most common problems in communicating with representatives of other cultures according to the respondents are language barrier / miscommunication, differences in values, customs and traditions. Talking about the tolerance of the respondents for the EU and its partners and non-EU citizens and its partners, the results are different and comparing these two cases, respondents express a wider tolerance limits in the EU and its partners citizens.

5 CONCLUSIONS

In various theoretical sources there is said about the importance of intercultural communication and multicultural competencies needed and the necessity of the modern globalized world of heterogeneous societies communication. This is especially true in communities such as Lithuania and other European countries that joined in the different countries economic and political union. Unfortunately, the Lithuanian experience in developing multicultural competence of the people is still relatively short. In the sphere of secondary education this area is touched episodically, but as a discipline in universities it began being taught only a few years ago. Stated theoretical approaches argue that the main multicultural competence and the ability to communicate with other cultures are knowledge, skills and personal attitude, while studies show that previously mentioned things are obtained by the sources of family, school, and activities in a multicultural environment.

According to results of a survey done by the authors of an article, respondents from Lithuania, summarizing the cultural differences in the relevance of certain points of view, the most relevant cultural differences in the country are linguistically and ethnically. It only confirms the scientists' R. Lewis described the language as a national identity attribute importance.

The most positive aspect of the survey results is that the vast majority of people interviewed never faced with any intolerance in Lithuania, but some of them have experienced a certain prejudice against them. A very small percentage of the respondents share the opinion that people from other cultures to live in the least, while most of the respondents believe that it is necessary to pay more attention to public education in multiculturalism development, even though that these problematic issues are likely to be resolved through intercultural education.

The main conclusion of an article – to continually develop positive attitudes of people in the country's cultural heritage, which would promote tolerance for cultural diversity and appreciate the different ethnic groups or different cultures' raised ideas of mutual influence in the development of society.

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ROLE OF FEMALE ENTREPRENEURS IN POVERTY ALLEVIATION IN RURAL COMMUNITIES: THE CASE OF AKOKO NORTH-EAST LOCAL GOVERNMENT AREA IN ONDO STATE ,NIGERIA

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ABSTRACT

The study assessed the role of female entrepreneurs in poverty alleviation in rural communities of Akoko North East Local Government Area of Ondo State, Nigeria. It specifically analysed the socio-economic characteristics of women entrepreneurship and assessed the contribution of female-owned businesses to poverty alleviation in the study area. The main reason for this study was due to the fact that most studies on the relationship between businesses development and poverty alleviation have concentrated on aggregate effects of small businesses on poverty reduction with little attention on individual traits of the businesses and gender issue in rural areas. The target population was all the women-owned enterprises from five communities in Akoko North-East Local Government Area in Ondo state of Nigeria. The choice of these communities was based on the concentration of women enterprises. The businesses were first identified and 50 per cent of the enterprises in each community were sampled using systematic random sampling technique. Data were collected using questionnaire on a sample of 205 enterprises. The result of descriptive statistics showed that 75% micro enterprises owners sourced their income mainly from their businesses, 85% of small scale enterprises (SSEs) sourced their income from their businesses while 67% of the medium scale enterprise owners sourced their income from their businesses. This suggests that the SMEs businesses constitute the main source of livelihood for all the scales of business women owners. Majority of respondents (82%), who chose income from small businesses as their number one source, indicated an improvement in their standard of living, and 18% reported no change. There was also evidence of an increase in the number of SMEs that have grown from microenterprises to small scale and medium scale over the span of the last five years apart from the substantial improvement in the income and consumption. The study therefore concluded that female-owned microenterprises have played key role in poverty reduction among the businesses' owners in Akoko Division through income generation and job creation.

Keyword: Female entrepreneurs, Akoko North-East, Poverty, Alleviation

1 INTRODUCTION

Poverty has been one of the main economic problems facing most countries in the world. There have been several strategies to tackle poverty in its various forms and dimensions. Of recent, there has been a shift from the capital intensive large-scale industrial policy. Most small and medium enterprises utilize local raw materials. In this regard SMEs are viewed as a sector that creates substantial employment opportunity as they are relatively labour intensive. Thus a given amount of capital will create more jobs, if it is spread over a large number of SMEs than if it focuses on few large firms (Asri and Baker, 2001).

In the light of this, different levels of government in Nigeria have embraced the challenge of promoting small and medium enterprises since 1986 through the Small Scale Enterprises

Programme (SSEP) as an engine for economic growth. There are many studies on the relationship between small businesses development and poverty rates and overall microeconomic performance on the basis of aggregate time series data. But most of the studies have neglected the individual traits of businesses and gender issue, and with less attention on rural areas. This study is gender sensitive as it investigates the roles of small businesses owned by women in rural areas in poverty alleviation.

2 STATEMENT OF THE PROBLEM
In view of the escalating level of poverty in developing countries constituting a serious problem to economic growth and welfare state of the citizenry, various policies were implemented which could not significantly impact on the level of poverty. The failure of various reforms and development programmes to impact on the level of welfare of the citizens in terms of poverty reduction particularly through employment generation, triggered the reappraisal of the role and importance of small and medium sized enterprises as a viable channel to attaining economic growth and development especially in terms of reducing the poverty level in the economy as was witnessed in the developmental progress economic transformation of some developed countries. Until recently in most developing countries, attention has not been focussed on development of businesses owned by women due to the perception of the traditional role of women at home. In Nigeria, there are few studies on the actual contribution of the women-owned micro, small or medium enterprises (SMEs) to employment creation, income generation and wealth creation in rural areas, hence this study.

2.1. Research questions
The study addressed the following questions:
- What are the characteristics of SMEs in rural areas in Ondo State, Nigeria with special attention on Akoko North-East Area.
- To what extent has the establishment of female -owned SMEs reduced the prevalence and incidence of poverty among the female entrepreneurs in the study area?

2.2. Objectives of the study
The broad objective of this study is to assess the role of small and medium businesses owned by women in reducing poverty in Akoko North-East Area in Ondo state, Nigeria through job creation and income generation. The specific objectives are to:
- Analyse the characteristics of female- owned SMEs the study area.
- Assess the extent to which medium, small and micro enterprises have reduced poverty among the female owners in the study area.

3 LITERATURE REVIEW

3.1. Theoretical Issues on SMEs
The last five decades have witnessed important developments in the conceptualization of the main issues relating to the SMEs sector and subsequent theoretical work on SMEs growth. These theories include: the labour surplus theory; the output-demand theory and the firm growth theory. The labour surplus theory is the main theory to the development of SMEs, which dates back to the seminar work by Lewis (1955). This theory claims that the driving force behind SME development is excess labour supply, which cannot be absorbed in the public sector or large private enterprises and is forced into SMEs in spite of poor pay and low productivity

However, there are some empirical problems with the unemployment theory of the growth and development of SMEs. First, there is lack of reliable and adequate data for researchers to test the hypothesis that SMEs absorb surplus labour from the public sector or large private enterprises and the hypothesis that increases in labour demand by SMEs has taken place before or after structural adjustment. Second, for the SME sector to function as a place of last resort, it must be easily accessible.

The second theory explaining the development of the SME sector in developing countries is the output-demand theory. The theory postulates that a prerequisite for the development of SMEs is that there is a market for their products and services. Therefore, the SME sector will tend to develop a cyclical relationship with the economy as a whole. However, SMEs will also develop in competition with large enterprises in the formal sector, and their development will be constrained by formal sector monopolies. Structural adjustment and other policies that limit such monopolies, and attempt to create more competition, will therefore be advantageous to the SMEs, because this may allow them to capture market shares from the large enterprises. Proponents of structural adjustment and stabilization policies tend to base their arguments on this theory. Empirical studies based on the output-demand theory tend to focus on the upper end of the SME sector, particularly the manufacturing enterprises and the larger, more resourceful and successful SMEs, which have a potential to grow into the formal economy. In addition, a modified strand of the output-demand theory links SMEs and the long-run development of the rural agrarian economy in an anti-cyclical relationship, to the detriment of agricultural production (Bryceson and Jamal, 1997). As a result of monetization, commercialization and urbanization, the rural population turns to non agricultural activities and the money economy. This creates a growing market for SMEs' goods and services.

The third theory, known as the firm growth theory, contends that, as a result of industrialization and economic growth, SMEs are likely to disappear and be replaced by modern large-scale industry. This theory has, however, been shown to be inaccurate in the sense that SMEs do not normally compete directly with large enterprises; rather, they often tend to remain micro and small, co-existing with large multi-national companies. For example in a study of Botswana, Kenya, Malawi, Swaziland and Zimbabwe, Mead (1994) found that most SMEs started with one to four employees and never expanded; less than 1% grew to exceed 10 employees. In addition, the SMEs tend to find niches in the factor and input markets where scale economies cannot be exploited by large enterprises.

3.2. Conceptual issues on Small and Medium Enterprises (SMEs)

3.2.1. SMEs Classification
Literature is replete with different ways of classifying SMEs. Researchers such as Akerele (2000) classified SMEs as formal and informal SMEs, rural and high technology and knowledge driven small scale enterprises. SMEs in the informal sector are difficult to control as they fall outside the modern or formal sector of the economy. In most cases, these informal SMEs are based on indigenous technology e.g dyeing, pot making and brick making. However they contribute job creation (Fluitman, 1989). Many of these enterprises usually make use of simple and crude method of production (Dutta, 2005). Those SMEs in the formal sector are usually registered under the statutory company laws.
Another classification of SMEs is the rural based SMEs. It is not actually easy to define the term rural SMEs. Some scholars are of the opinion that rural SMEs are those in cottage industry. Islam (1987) believes that the manufacturing enterprises using modern technology

can also be so regarded. Some believe that rural enterprises must necessarily have a direct relationship with agriculture. It is important to know that diversifying rural economy through promotion of small business would amount to rural industrialization.

Classification can also be viewed from the angle of the size of business. The United Nations Development Programme in its study UNDP (1988) defines micro enterprise as business engaging one to four employees while small enterprises are those with 5 to 25 employees. Others have classified those enterprises engaging 1 to 9 employees as micro enterprises and those engaging 10 to 49 as small enterprises while those engaging 50 to 250 employees as medium enterprises (CBN, 2005).We have adopted this classification in our study.

3.2.2. Characteristics of SMEs
In spite of various opinions on the classification of SMEs, there are common characteristics of SMEs. These include the following according to World Bank (2005).
- SMEs are in many cases owned by sole proprietors or at most jointly owned by very few individuals or most at times family owned.
- These enterprises owners do not possess requisite education to drive the business. In fact they lack required managerial skills and knowledge to run the business optimally.
- Majority of these business owners do not keep records and books of account.
- SMEs entrepreneur usually have little capital to operate as they do not have access to financial institution which are reluctant to provide needed credit to the SMEs.
- SMEs make use of crude technology.
- They are labour-intensive.
- They require little capital due to small size of operation.

3.3. Concept of poverty
Over the years there has not been a consensus on the definition of poverty due to its multidimensional nature. However, appreciable efforts have been made to provide operational definitions of the concept. Aku *et al*., (1997), Sen (1981), Soludo (2004) define poverty as a condition of low consumption. Others have adopted broader definitions such as inability to meet basic material needs which include food, water, clothing, shelter, education, health as well as environmental requirement, such as air, serenity and basic non-material needs such as political and community participation, identity, dignity etc (Blackwood and Kynch, 1994; Ajakaiye, 2001).In literature of poverty less attention has been paid to strategy of using small business development to alleviate poverty.

Okeke (2001), in conceptualizing poverty, categories poverty into three categories, namely the substance, inequality and externality aspects. He posits that subsistence poverty is concerned with lack of the basic needs such as education, health facilities, required by an individual to live in good health and be able to perform very well. The inequality aspect considers the extent of social stratification in the society relating to living standard. In this case, those with the least amount of income are classified as the poor whilst the proportion with the highest amount of income is the rich. The inequality aspect of poverty views poverty as a relative term indicating deprivation resulting from unequal distribution of resources. The externality aspect of poverty concentrates not on the hardship but focuses on the social consequences of poverty in the society.

Okeke (2001) then argues that poverty could be best described in terms of in terms of subsistence level of living. The definition of poverty in terms of subsistence level of living

has given rise to the concept of absolute poverty which has been defined as lack of sufficient income or earnings to obtain the minimum necessities of life (Akinlo, 2004; Ogwumike, 2001). It was against this background of subsistence poverty that the basic needs approach to the study of poverty came up in early 1970s. These elements of base needs include food, shelter, clothing and water. This is presumed to be better than alternative approach to accelerate growth or raising income of the poor through the trickling down effect (Nwakpa, 1997). Goulet (1971) referred to this as the theory of life-sustenance which forms the element of the lowest level of Maslow's hierarchy of needs (Maslow, 1970).

In order to develop a more robust concept of poverty, Ajakaiye, (1989) was of the opinion that a review of theory of human need would be important. He supported the theory of human needs as put forward by Doyal and Gough (1984). The theory states that basic human needs should be able to establish links among individual needs, the achievement of goals and social institution in addition to the framework of Maslow hierarchy of needs. Ajakaiye (1998) therefore looks at poverty concept to include in addition to economic factors, enabling socio-cultural and political system which will eliminate weaknesses of the instant perpetrating poverty.

3.4. Theoretical framework

The Keynesian theory attempts to explain how the level of income and output is determined in a capitalist economy. Based on some assumptions, it proposes that the equilibrium level of income can be determined by the equality of aggregate demand and aggregate supply or by equality of savings and investment. Thus, it assumes that plough back of profit into the business increases business investment of the SMEs which eventually yields improved income. Similarly, savings mobilized from the increased income are ploughed back into the economy with the same effect of improved investment and income. The poverty alleviation effect brings improvement in consumption and eventually living standard of respondents.

According to Asia Development Bank (2000; 2005) the model assumes that consumption expenditure can serve as proxy for poverty against which we regressed certain respondents' socio-economic variables. This specification followed Adeyeye (2003). Consumption assumed to be inversely related to poverty. Any parameter that will increase consumption will alleviate poverty. The Keynesian theory in macroeconomics known as the Absolute Income hypothesis implied that current real disposable income is the most important determinant of consumption in the short run (Riley, 1999). Real income is money income adjusted for inflation. Disposable Income (Y_d) = gross income – (deductions from direct taxation + benefits.

3.5. Previous empirical studies on the relationship between smes and poverty alleviation

Literature is replete with poverty issues but there is dearth of studies on the relationship between SMEs development and Poverty alleviation especially in the developing countries. Gebremariam (2004) examines the roles of small businesses in economic growth and poverty alleviation in West Virginia. In OLS and 2SLS regression analysis a positive relationship exists between small business and economic growth. A strong inverse relationship also exists between the incidence of poverty and small business and economic growth. Thus, the empirical result establishes the linkage between small business, economic growth and the incidence of poverty. But this study does not show systematic relationship between net job creation and firm size and the data used are state- specific.

There have been many attempts to establish statistical relationships between official poverty rates and overall macroeconomic performance on the basis of aggregate time series data (Freeman, 2002; Haveman and Schwabish, 2000; Blank, 2000; Cain, 1998; Powers, 1995; Blank and Card, 1993; Cutler and Katz, 1991; Blank and Blinder, 1986; Gottschalk and Danziger, 1985). The results from these studies show an inverse relationship between economic growth and poverty rates. Blank and Blinder (1986), for example, found that both the unemployment rate and the inflation rate were positively related to poverty rate, with a high quantitative effect of unemployment. Cutler and Katz (1991), Blank (1993) and Powers (1995) also found similar results apart from the post recession period of the 1980s where unemployment rate was found to be inversely related to poverty rate. Using GDP growth rate as explanatory variable, Haveman and Schwabish (2000) tested the differential effect of macroeconomic performance on the poverty rate for various periods. Beck *et al.,* (2005) provide cross-country evidence on whether SMEs boost economic growth, alleviate poverty, and reduce income inequality. They find a strong, positive association between the size of the SME sector and the rate of economic growth. But, they do not find that SMEs cause growth. Furthermore, the comparisons do not indicate that SMEs exert a particularly beneficial impact on poverty or income distribution. Agupusi (2007) assessed the role of the small business sector in poverty alleviation in Alexandra and to examine both government and private sector initiatives for supporting small business development for poverty alleviation. It is observed that small businesses are not playing the expected role due to number of constraints including a lack of policy that deals adequately with the semi-formal and informal business sectors, the predominant sectors in Alexandra. The overall finding indicates that with positive interaction between development agencies, and small businesses in Alexandra, predominantly informal and semi-formal SMMEs in Alexandra could not only alleviate poverty but could also contribute to the general transformation process.

A lot of studies have confirmed a positive nexus between female participation in business and rise in the standard of living and quality of life (Thomas and Muller, 2000; Morris and Lewis, 1991; Reynolds, 1987). Some studies are of the view that values and tradition have affected women participation in entrepreneurship and hence led to low level in their quality of life. (Abimbola, 2004).

It is important to note that most of the existing studies on the relationship between SMEs and poverty have concentrated on the aggregate effects of SMEs on poverty alleviation and economic growth. Apart from the fact that the existing studies have neglected the individual traits of the firms and countries, they also ignored the issue of ownership on gender and location basis, which are crucial in policy formulation, especially in developing economies, hence this study.

4 RESEARCH METHODOLOGY

4.1. Study Area
Ondo State in Nigeria is between latitude 5^045^1 and 7^057^1N and longitude 24^020^1 and 6^005^1E East. The state, which covers a total land mass of about 15,500sq km, is bounded on the North by Ekiti and Kogi States on the East by Edo and Delta States, on the West by Ogun and Osun States and to the South, the Bright of Benin and the Atlantic ocean. Of all the 18 local government areas, Akoko North-East Area is one of the biggest local government areas in Nigeria with good number of women entrepreneurs. The headquarter is in Ikare-Akoko.

4.2. Sampling Frame

The Sampling frame covered micro enterprises, small enterprises and medium enterprise in the selected rural areas in Akoko North-East Area. The sampling frame for the survey consists of SMEs which employ not more than 10 for micro, 50 people for small (SSEs) and 250 for medium (MEs) Since not all the SMEs are formally registered with government and even trade associations, the population size cannot be exactly pre-determined.

4.3. Sample Size and Procedure

230 questionnaires were distributed to selected Women SMEs owners, out of which 205 responded, eighty- six percent (87%) response rate. The sample selected is based on the following criteria:

- SMEs employing between ten to 50 people is considered as Small Scale Enterprise (SSEs) while Firms employing not more than 250 full –time employees is considered as Medium Scale Enterprise (MEs).Enterprises employing less than 10 people are micros. This criterion was in line the Central Bank of Nigeria (2011)
- Access to the business profiles of these SSEs (name, address, ownership details, type of business, employment data and date of formation were readily available). These profiles would facilitate the process of identifying and selecting the appropriate sample SMEs. Firms are privately owned by their management who have all decision-making rights.

Moreover, before developing the final questionnaire, a pilot test was conducted, and feedback was collected in order to improve the design and content of the questionnaire. For example, there were initial concerns, from the SMEs selected for the pilot test, about the length of the questionnaire suggesting a shorter version would be used to increase the response rate. The structures of some of the open questions were reframed into category questions which are less time consuming. The comments, suggestions and corrections made by the respondents were collated and used to improve the quality of the questionnaire. Further to this, we used experts in moderating the questionnaire as to the relevance and reliability of the questionnaire items.

To ensure that the respondents had the freedom to respond truthfully and responsively, they were given the option to either respond immediately or later which gave them the opportunity to reflect on the questionnaires and respond at their most convenient time and conviction. Those who had problems in filling the questionnaires were carefully guided to ensure that whatever they filled would correspond to their true perception of the issues raised. All these efforts were made to ensure the correctness and authenticity of responses and also to guarantee consistency and completeness in the responses as well as to ensure that the inferences to be drawn were based on the facts on ground and not mere speculations or hearsays.

However despite all these efforts and careful guidance, only 205 questionnaires were returned out of 230 sent out, representing 87 percent response rate. The major reasons that were given for non-response in some cases were due to the fear that it was a ploy to get information about their businesses in order to determine their tax rates. After a lot of persuasion, some of them agreed to fill the questionnaire but declined to disclose some vital information about their business such as their income, profitability, number of employees and their economic status as well as sources of their finance and capital. Even those that filled all the questionnaires after persuasions, during the process of editing and validation of the responses it was observed that some of the information provided by these reluctant respondents may not be reliable and decided was taken drop those questionnaires that the authenticity and reliability

of the responses are doubtful. The conviction is that the quality of the responses and reliability of the information are more important than the size of the respondents, therefore only the 205 questionnaires that were able to scale through the editing and validation of responses were analysed.

A stratified purposive sampling technique was adopted for the study to enhance objectivity and ensure sample taken actually replicates the characteristics of the population.

4.4. Methods of Data Collection
The questionnaires have four sections with socio-demographic profile in section A. businesses characteristics of the SMEs in Section B. Information on changes in income generation and consumption patterns as measures of poverty incidences among the SMEs owners in Section C, and contribution of SMEs to poverty reduction in Section D. The data collected were analysed using appropriate descriptive statistics.

4.5. Data Description
The questionnaires were used to collect data on some data such as Entrepreneurs' sources of disposable income (ranked according to importance), Income generation in terms of profit margins, according to income generation in term of salaries and wages and employment generation and the social amenities they had before and after the commencement of business. Respondents were also asked to estimate their monthly revenues and costs, from which their profit margins are calculated. The guiding principles for this part of the analysis are the levels of income that are perceived by respondents to be poverty reducing.

4.6. Analytical Technique
The role of small and medium businesses in poverty alleviation was analyzed using descriptive statistics. Objective one involves descriptive analysis of characteristics of SMEs. Based on the responses from the questionnaires, the basic statistics of the SMEs were analysed and discussed using means, percentages, frequency, and tables.

Objective two involves assessing the contribution of SMEs to poverty alleviation in the study area. The variables that were examined include: entrepreneurs' sources of disposable income, income generation in terms of profit margins, income generation in term of wages and salaries for employees and employment creation. Frequency tables were used to depict the responses of the respondents and the percentage change in these core variables over the years. Descriptive statistical analysis was carried out to compare before and after establishment of the SMEs. Percentage change is calculated and analyzed as possible changes that have taken place due to the improvement in the lives of the SMEs. Several factors that might have contributed to these changes were analysed.

5 DISCUSSION OF RESULTS

5.1. Analysis of Socio–Demographic and Economic Characteristics of Respondent
The age structure of the respondents was classified into six groups. Only (1%) of the respondents are above 60 years of age and less than ten percent (8%) is less than 20 years of age. (32%) were between the ages of 20 to 30 while (28%) of the SMEs owners were between 30 and 40 years of age. (30%) of the respondents were not older than 50 years but above 40 years. This suggests that the bulk (90%) of the SMEs owners were in their middle ages (20 to 50years) with only (10%) of the respondents between 50 and 60 years of age. The age

structure reflects the fact that most of the respondents are mature and they are the people whose economic reality and the survival instinct must have driven into the establishment of the businesses.

Table 1: Socioeconomic Profile of SMEs Business Owners (Source: Computation by author, 2012)

Socio- Economic Profile of Respondents		Frequency	Percentage
Marital status			
	Single	53	26%
	Married	117	57%
	Widowed/Divorced	35	17%
Age	18-20	18	9%
	21-30	66	32%
	31-39	57	28%
	40-59	62	30%
	60 and above	2	1%
Educational Qualification			
	No Formal Schooling	12	6%
	Primary	27	13%
	Secondary	78	36%
	Tertiary	92	45%
Number of Business			
	Only one	148	72%
	More than one	57	28%

The educational qualification of these business owners was also explored. As the Table 1 above shows, the level of education and literacy is very high among the female SMEs business owners in the study area. At least 94% of the business owners read and write and attended a minimum of primary education. The proportion of graduates among the SMEs owners is also encouraging, at least 45% of the SMEs owners attended one higher institution or the other. The proportion of those without any form of education, though small, is significant in view of the fact that about (6%) out of the businesses surveyed were still managed by people who lack the minimum ability to read and write. The implication of this is that this set of business owners may not be able to key in to the global trend of Information and Communication Technology and e-business.

Table 1 also revealed that most of the business owners (57%) were married. Only (26%) were single and (17%) of the business owners were either divorced or widowed. In essence the bulk of the business owners were people who had family responsibility and the presumption is that their drive to establish the businesses might not be unconnected with the need to meet up with their economic and social responsibilities even if they are single parents. Also it was observed

that most of the SMEs owners concentrated on one business at a time, only (28%) of the owners claimed that they had more than one business.

5.2. Nature and Type of SMEs Businesses in Akoko North-East Area in Ondo State
The characteristics of businesses also formed part of the background information that was examined before the assessment of the role of businesses. Table 2 showed the distribution patterns of the SMEs with respect to nature of businesses engaged in, size of business, ownership structure and years of operation.

5.2.1. Nature of Business
By nature of business, four major business lines were predominant among the business women; these are agro-allied business, like food processing, trading, light manufacturing, Vocational and professional service providers. Among these five lines of business, trading is the most common form of businesses that the SMEs engaged in (41%). This is followed by Light Manufacturing, (22%) and Vocational and professional services providers (20%). while a substantial proportion (17%) also engaged in agro-allied business. Expectedly, the trading business remained the dominant business. This is a reflection of the Nigerian economy that is more of consumer state. The economy depends heavily on imported goods and most people find trading as the most profitable and less risky business. Its flexibility and lack of barriers in starting make the business most attractive to prospective female SMEs owners.

5.2.2. The size of Business
The SMEs were also classified into three, according to the number of the employees. Those SMEs with less than 10 workers are regarded as microenterprises, those with not more than 50 workers are the small scale enterprises and the SMEs with above 50 workers but below 250 are called the medium enterprises. Table 2 showed that the majority (75%) of SMEs operation in the area were microenterprises with less than 10 workers. The proportion of the small scale business is (19%) while medium scale was only (6%). There are two reasons for such a pattern, the cost of establishing the bigger business may be enormous and out of reach of most of the potential owners. Secondly, the high incidence of poverty among the peoples had hindered their ability to engage in large scale business enterprises.

5.2.3. Ownership Structure
Table 2 also elicits information about the ownership structure of the selected SMEs in Ondo State. The distribution of respondents by the ownership structure shows that the bulk of the enterprise (73%) is one- man business. Twelve percent of the SMEs business were family joint business while (11%) are owned by different people who are not from the same family. Four percent of the respondents claimed that their businesses were owned by friends. The ownership structure also conforms to earlier observation that most of the businesses are microenterprises of less than ten workers with little start up capital. The idea of social recognition and self esteem among the Nigerians might have contributed to the ownership structure observed. In this part of the world most people are sceptical in engaging in joint business.

5.2.4. Year of Operation
It is a generally held view in the literature that most SMEs collapse within five years of establishment. This proposition was also factored into the information collected from the respondents by asking for the years of establishment of their businesses. As Table 2 showed, most of the businesses 63% were established within the last five years. Twenty-two percent of

the SMEs were established within the last ten years while only 15% had been in operation for more than 10 years. Though, it could be said that the proportion of business that fall below five years are higher, the fact that a sizeable number of the businesses are older than five years implies that the survival rate of the SMEs business in Ondo state is high and improving. The distribution pattern also shows that two out of every five SMEs survive more than five years and at least two of every ten survive above ten years.

Table 2: Profile of Selected SMEs Businesses (Source: Computation by author, 2012)

Nature of Business	Frequency	Percentage
Agroallied Business	35	17%
Trading	84	41%
Light manufacturing	45	22%
Vocational/Professional	41	20%
Size of Business		
microenterprises(less than 10)	154	75%
small scale enterprise(10-49)	39	19%
medium scale enterprise(50 to 250)	12	6%
Ownership Structure		
Solely Owned	150	73%
Owned by Family	25	12%
Joint Ownership	23	11%
Owned by Friends	7	4%
Year of Operation		
Less Than 1 year	43	21%
between 2-5 years	86	42%
between 5-9 years	45	22%
10 years and above	31	15%

5.3. Economic Profile of SMEs in Ondo State

The SMEs ability to generate income and employment thereby contributing to reduction in poverty level and incidence as well as its prevalence depends on the performance of the SMEs in terms of income, employment, sales, profitability and growth potential. To determine these parameters and then juxtapose them with the indicators of poverty reduction, this section explores some of the possible sources of the strength of SMEs to generate income and employment. These factors are divided into two categories: Those factors that relate to the sources of input and material that are used in the production of goods by the SMEs while those that relate to the changes in sales and profitability of the business. These two sets of factors determine SMEs performance. The SMEs owners who were the respondents in this survey were asked to respond to questions relating to these issues.

5.3.1 Sources of Raw Materials

The distribution of the respondents according to the sources of raw materials implies that most of the respondents (64%) sourced their materials locally. Only 12% of the SMEs claimed that the bulk of their raw materials were from other countries. The SMEs, because of the nature of their businesses, tend to use local raw materials and the use of these materials tends to generate ripple and multiple effects on the local productive capacity. Since the raw materials used by these SMES are in most cases the output of some other industries, they tend to increase the productive capacity of other business and hence the possibility of generating higher domestic employment and also income.

5.3.2 Sources of Finance

Four sources were identified. These are personal savings, cooperative society's loans, bank loans and family remittance or inheritance. Of these four sources of finances, personal savings (61%) was the most frequently cited sources of finance by SMEs. The second most commonly cited sources of finance are cooperative society loans (23%). Only 7% and 9% of the SMEs claimed to have ever sourced finances from the banks and family inheritance respectively. The informal nature of cooperative society financial support has made it the toast of almost all small scales business owners. However, the low patronage of formal banking system for finance by SMEs still underscore the non integration of the SMEs into the formal financial system

5.4. Assessment of Income and Employment generating capacity of SMEs

5.4.1. Income Generation

The assessment commenced by looking at the position women-owned small businesses occupied as a source of disposable income. 77% of the respondents ranked small businesses as their top income source. Micro enterprises owners sourced their income mainly from their business and 85% of small scale enterprises (SSEs) while 67% of the medium scale enterprise owners sourced their income from their business. This suggests that the SMEs businesses constitute the main source of livelihood for the owners.

The importance of income from the businesses is further emphasized by the fact that majority of respondents was not engaged in other occupations, implying that these small businesses were their sole source of income. This finding also correlates with the findings on the owners' motivation for starting small businesses where "push" factor dominated over "pull" factors signalling a higher probability that income from these establishments would be used to meet up with their economic and social needs.

To determine if income derived from small businesses was poverty reducing, respondents' perceptions of their standard of living were examined for those who ranked small businesses as the number one source of income. The majority of respondents (82%), who ranked income from small businesses as their number one source, indicated an improvement in their standard of living, while 18% reported no change. These results provide an insight into the perceptions of small business owners on the potential of these businesses to alleviate poverty.

5.4.2. Employment Creation

Small businesses in developing countries have been long recognized to play a dynamic role through which employment growth can be achieved. Apart from the fact that employment growth is a measure of economic growth; for the entrepreneur, it can also serve as an indicator

of his/her success and for the business as a whole, it is a measure of economic contribution of the firm to the common good. Moreover, according to Child (1973), employment is an adequate criterion for the measurement of the size of an organization.

This study also assessed the ability of small businesses to generate employment opportunities. Findings further show that employment growth occurred within the Micros i.e. three employees per SSE over an average period of 4 years in operation, while MEs also increase their employment levels giving an overall annual employment growth of 45%. The Micro enterprise has more potential to growth than the other two types of SMES. It grew by about 133% while SSE and ME grew by 75% and 45% respectively. To further analyze income generation for employees, this study focused on salaries earned by people employed in small businesses. The respondents were requested to indicate salaries and wages. The salary levels varied with the size of enterprises. MEs offered higher salaries of about N 30, 000 per month, compared to N 10,000 offered by Micros. The result was consistent with results from Beck et al (2003) which indicated that large firms offered higher wages and more non-wage benefits than small firms in developed and developing countries, even after controlling for differences in education, experience and industry. As remuneration is one of the indicators for job quality in the small business sector through an analysis of the remuneration, social protection, working conditions, human resource development and organization in this sector. In income terms for medium enterprises, salaries earned were well above the official minimum wages of N18, 000 per month prevailing in the Nigeria. It is also above the estimated basic need poverty line of N6, 000 per month based on the $1 per day.

5.4.3. Changes in the Well Being of the SMEs Owners
As the majority of small businesses owners were not involved in other income-generating activities, the estimated profit margins represent a better proxy for the disposable income of surveyed entrepreneurs. The respondents were also requested to comment on their profitability trend since the start of their businesses up the time of interview. On the average all the SMEs had an average profit of N60000 per month however; the Medium scale business still remained the most profitable followed by the Small and Micros. This implies that size of the SMEs enhances the profitability potential of businesses.

5.5. Impact of SMEs on Living Conditions of Owners

5.5.1. Income Level
The improvement in the SMEs owners' status could also be analyzed from the perspective of the changes in their condition of living before and after establishing the SME business. In terms of income, there was a substantial reduction in the number of SMEs in the less than N5000 income bracket per month. The percentage of SMEs owner in the less than N5000 reduced by 80% while the proportion of SMEs owners in the income bracket of 5000 to 12000 also reduced by 62%. Majority of the SMEs owner moved from lower income level to higher income level.

5.5.1.1. Toilet Facility
Income level might not be enough indicator or measure of wellbeing of the people. Other social economic indicators are also important. This explains why the changes in the other social indicators were included in the survey. The use of toilet was an indication of their household condition. The number of those using the least form of toileting that is "Bush" reduced drastically by 92% while the use of Pit toilet reduced by 13% while the Use of Water

Closet increased by 86%. This suggests that with the establishment of SMEs, the SMEs owners were able to have access to basic facilities of household and hence improve their living condition.

5.5.1.2. Sources of Water

The pattern observed in the use of toilet facility was also observed in the sources of water. Majority of SMEs moved from the use of stream water to Borehole or public water sources. The movement was more towards the borehole water as the public water supply in Nigeria especially in the southwest is epileptic and irregular. This explains the trend observed where 81% of the SMEs moved away from stream water and about 21% move away from borne water (public water) to borehole water. The cumulative effect of reduction in the stream water and public water utilization constitute the 44% reported in the number of those SMEs that are now using the borehole water supply by SMEs. Most household had no connection to the public water supply. Those who had, hardly got water running from their taps, therefore sinking boreholes are regular features in the houses of those who constitute the pseudo middle class and upper lower class in the society.

5.5.1.3. Sources of Energy for Cooking

One of the measures of affluence in the Nigerian context is the type of energy sources being used in the household. The proportion of SMEs owners that now use wood and charcoal had reduced by as much as 89.5% while the number of SMEs that use kerosene has increased by 4.1%. The bulk of the SMEs owners had now changed to the use of gas and electric cooking technologies. The proportion of SMEs owners who used gas and electricity to cook has increased by about 300%. This represents about three times the numbers who were using gas and electricity before the establishment of SMEs. This is by far a sign of affluence by Nigerian standard.

5.5.1.4. Access to Medical Care

The choice of health and medical care facilities utilized depends on the status of the people. There is significant (69%) shift in the types of medical care patronized by the SMEs after the establishment of the SMEs. A large proportion (144%) of the SMEs owners shifted from traditional and public hospital to Private modern hospital. The 52% reduction in the proportion of SMEs owners that patronized public hospital might not be unconnected with state of the facilities in the public health sector.

5.5.1.5. Sources of Electricity/Power Supply

The sources of the energy among household can also be used to determine the relative change in their living condition. Traditionally, the poor usually due to lack of income and purchasing power tends to use lantern, and other crude means of lightning and cooking. As their economic condition improves they tend to move up in the energy ladder. The responses of SMEs owners clearly showed that their economic condition improved with the establishment of SMEs. For instance a substantial proportion (94%) of the SMEs owners moved away from local sources of energy for lightening like candle to more modern but expensive sources like electricity. However due to state of public power supply, a significant proportion of those who moved from local sources to public power supply also move up the ladder to the use of privately provided electricity by acquiring generators to power their household and other equipments. The use of generators as sources of energy has become a norm and a sign of "I better pass my neighbour". In essence, the establishment of SMEs had improved the income

level of the owners and also they could avoid a better source of energy not only for cooking but for recreational and household activities.

5.5.1.6. Affordable and Adequate Meal per Day

The number of times and the quality of the food that individual eats per day is also measures of good living. The SMEs were also asked how often they ate and the adequacy of such meal before and after they established the SMEs. The proportion of SMEs owners that ate once a day before the establishment of the SMEs had reduced by as much as 20% while those who ate twice a day reduced by just 4%. In contract to this reduction in those who ate once or twice, the proportion of those who ate thrice daily increased substantially by as much as 172%. This shows that the establishment of SMEs had enhanced the quality of life and the healthiness of the SMEs owners.

Suffice it to say that participation in small and medium enterprises has given the owners access to affordable and adequate meals and enhanced living standard.

Table 3: Measures of the Well Being of SMEs Owners over the Years (Source: Computation by author, 2012)

		Before	**After**
Use of Toilet facility			
	Bush	23%	2%
	Pit Toilet	38%	25%
	Water Closet	39%	73%
Sources of water			
	Stream Water	21%	4%
	Well /Borehole Water	48%	69%
	pipe borne water	30%	27%
Sources of Energy for Cooking			
	Wood/Charcoal	34%	4%
	Kerosene	56%	59%
	Gas/Electric	10%	38%
Sources of Medical Care			
	Local herbs/Traditional Practitioner	23%	7%
	Public Hospital	48%	23%
	Private hospital	29%	70%

Table 4: Additional Measures of Well Being of SMEs Owners over the Years (Source: Field Work, 2012)

Sources of Energy for Cooking		
Wood/Charcoal	34%	4%
Kerosene	56%	59%
Gas/Electric	10%	38%
Sources of Medical Care		
Local herbs/Traditional Practitioner	23%	7%
Public Hospital	48%	23%
Private hospital	29%	70%
Sources of Electricity/power Supply		
local source candle and lantern	33%	2%
Private Generators	14%	65%
PHCN	54%	33%
Affordable Adequate Meals per Day		
Once	43%	34%
Twice	51%	49%
Thrice	6%	16%

6 CONCLUSION

Participation in small enterprises by women in Akoko North-East local government area in Ondo State, Nigeria has contributed significantly to reduction in poverty incidence, among the people, in term of annual per capita income, consumption and employment generation. However, the current high cost of borrowing, epileptic power supply and competition from foreign goods had remained the major challenges faced by these SMEs to contribute more to poverty reduction in the study area; lending rate may also impair outreach to the poorest of the poor in the area. Generally, savings in the area was far below the amount of business investment, thus public and private concerns need to come to the rescue of women entrepreneurs in the area by injecting funds in form of credit for business investment.

The study established a pay-off between increasing socio-cultural spending to alleviate poverty and reducing same to increase current savings and found that it is better for the SMEs owners to increase such spending. Finally, all indices showed that in spite of the non-conducive business environment under which most SMEs operate in rural areas, women-owned SMEs had achieved considerable success, thus refuting the traditional belief that women have no business in business. Women are breaking free from the traditional, gender-specific roles and doing well in businesses.

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RESTRUCTURING OF MANUFACTURE UNDER GLOBAL FINANCIAL AND ECONOMIC CRISIS: THE CASE OF ESTONIA

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ABSTRACT

It was not possible for Estonia only by raising the technological level of enterprises and increasing so-called technical productivity to catch up in terms of productivity with the developed industrial countries. The structure of Estonian manufacture was out-of-date and required cardinal and fast changes toward greater value added.

Every time a crisis hits, it brings about new breakthroughs in science and technology; promotes fundamental changes that take place in a relatively short period of time; gives birth to new industries; forms new growth points in the economy. The crisis has had a far-reaching impact on the world economy and has brought challenges and opportunities to all countries and all fields. In addition to big difficulties, the crisis provided for Estonian manufacture also an exceptionally good chance for change and development.

The crisis had a purifying and disciplining effect, enabled to eliminate from the manufacture wrong investments and inefficient enterprises. Assets were redistributed from passive economic agents to active ones and in favour of those who had capital for growth financing. After the crisis the structure of Estonian manufacturing is more effective than before: 1) technological level higher; 2) organization of work more perfect; 3) value added and productivity higher; 4) position of value chain better; 5) maybe also the value chain itself new and better.

But there are fewer jobs in the new structure of manufacturing than before the crisis. Economic, social, regional etc. stratification has increased. The influence of crisis is not over yet and there is still a risk of some setback in future. There may also arise new problems and old problems may grow sharper.

Keywords: *crisis; manufacture; restructuring; stratification*

1 INTRODUCTION

Manufacturing is the use of machines, tools and labor to produce goods for use or sale. The term may refer to a range of human activity, from handicraft to high tech, but is most commonly applied to industrial production, in which raw materials are transformed into finished goods on a large scale.

A challenge is a general term referring to things that are imbued with a sense of difficulty and victory – a call to engage in contest, fight, or competition. Opportunity is a good chance for advancement or progress.

The current (or by now already past) global financial and economic crisis has had a far-reaching impact on the world economy and it has brought challenges and opportunities to all countries and for all fields. Every time a major crisis hits, it brings about new breakthroughs in science and technology; promotes fundamental changes that take place in a relatively short period of time; gives birth to new industries, and forms new growth points in the economy.

This paper seeks to cover contemporary challenges and opportunities of Estonian manufacture after the global financial and economic crisis. The general situation and tendencies in the world economy influencing restructuring of manufacture in a small open economy of the European Union member state are discussed. The main goal of this paper is to summarize the

objectives and experiences of knowledge applied by different agents and to study alternatives and opportunities in this process. Specific focus of this paper will be on main tendencies in the world manufacturing and the peculiar situation of a very small, open and integrated manufacture.

2 THE STRUCTURE OF ESTONIAN MANUFACTURE BEFORE GLOBAL FINANCIAL AND ECONOMIC CRISIS

Most fundamental changes in Estonian manufacturing took place in 1992–1999 when manufacturing adapted to the new political and economic conditions. After the drastic structural changes in the early 1990s (in connection with regaining independence and the transition-reversion-return-comeback from planned economy to market economy) and the Asian-Russian crisis provoked slowing down of the growth in 1998−1999, the Estonian manufacturing enjoyed for eight years a relatively stable and fast growth. It stabilized around 10% in 2001–2006.

Since 2000, the structure of Estonian manufacturing has become more stable. Structural changes in this period were quite slow, insignificant and painless. Entrepreneurs grew used to it and believed that it's the way it has to be and will be. The predominant opinion in this period was that Estonia had almost accomplished its great ambitions: 1) re-establishment of independence – August 20, 1991; 2) withdrawal of Russian troops – August 31, 1994; 3) NATO membership – March 29, 2004; 4) European Union membership – May 1, 2004; 5) Schengen membership – December 21, 2007. Many were of the opinion that there was only one big aim left to accomplish for Estonia – join the Economic and Monetary Union of the European Union (EMU). Then Estonia would be the most integrated country in Northern Europe – only Estonia would be involved in four integration programs of Western democracies (EMU; Schengen zone; EU; NATO) in this region.

But relatively stable development and missing fundamental structural changes were dangerous for Estonian manufacturing. Employment in Estonia was unfortunately concentrated into sectors of manufacture where it was not possible to significantly increase productivity and hence also value added. Enterprises operated to a small extent in those economic sectors where productivity increase was more feasible or in less profitable part of value chains. Such conditions set limits to the further growth capacity of the Estonian manufacturing.

A research ordered by the Estonian Development Fund from Tartu University (Arengufond, 2008) calculated that if all branches of Estonian manufacturing achieved the productivity that is in the respective branch of manufacturing in the most advanced countries in European Union while the distribution of Estonian labor between the branches of manufacturing remains the same as now, then productivity in Estonia would attain only 56% of the Irish, 78% of the German, 80% of the Finnish and 90% of the Danish level. Hence, it was not possible for Estonia only by raising the technological level of enterprises and increasing so-called technical productivity to catch up in terms of productivity with the developed industrial countries. The structure of Estonian manufacture was out-of-date and required cardinal and fast changes toward greater value added.

3 CHALLENGES AND OPPORTUNITIES PROVIDED BY GLOBAL FINANCIAL AND ECONOMIC CRISIS FOR ESTONIAN MANUFACTURE

In 2000–2002, labor productivity in Estonian manufacturing increased faster than production volume. In 2003–2007, when the increase in production stabilized, the volume of output and productivity growth almost equalized. During that period Estonian manufacturing enterprises did not contribute to productivity growth and where production demand increased also additional staff was hired. The increase in labor costs augmented enterprises' costs, which in turn led to price increase of products and reduced the competitiveness of Estonian manufacturing enterprises.

Notwithstanding all sorts of financial and economic regulations cycles are inevitable in a market economy. The year 2007 already showed the first signs of slowdown in production growth. The beginning of decline cycle appeared in manufacturing at the beginning of 2008. Already then it was clear that both Estonian economy and global economic environment had significantly changed in recent years. Labor shortage had been replaced by unemployment, prices for many product inputs had increased and credit facilities more difficult to obtain. An inner structural crisis had developed in Estonian economy and real economic growth slowed down. A global financial crisis broke out in September 2008, which soon grew into a global economic crisis.

Developments in the world were still only the context for specific developments in the Estonian manufacturing – global financial and economic crisis had very different overall effects on different countries. The world financial crisis that began in 2008 affected countries in different ways, depending on their forms of international integration (Myant and Drahokoupil, 2011; Wade, 2008; 2009; Friedman, 2009; Stiglitz, 2009). Global financial and economic crisis was very badly timed for Estonia. In the years of rapid economic growth, when domestic demand was relatively high companies were not forced to contribute to productivity growth. An inner structural crisis had already developed in the Estonian economy. The Estonian economy had already grown weak and vulnerable to external shocks. Sharp deterioration of global conditions meant for Estonia amplification and piling up of two big factors (inner and outer), and contraction of the economy was inevitable. Real economic growth in Estonia slowed down very sharply.

The Estonian manufacturing had reached the stage of faster, more radical and painful structural changes again. It was realized that further development in Estonia will be to a very large extent determined just by external factors – developments in the world (especially in EU) and in the economic environment. These determine in the main challenges, opportunities and economic playground for Estonia.

The Estonian economy is very small and very open. It participates in international trade, but is small enough compared to its trading partners, so its policies do not alter world prices, interest rates, or incomes. The Estonian economy is a typical price taker. In 2008, Estonia's foreign trade (export 132.4 billion kroons + imports 170.0 billion kroons = 302.4 billion kroons) to GDP (251.5 billion kroons) ratio was 1.20, one of the highest in the world (Statistics Estonia, 2011; Eurostat, 2011). Due to the very small domestic market exports, i.e. successful sales in the world market are the main driving force of the economy and the main source of economic growth. The export share of manufacturing output remained just below half of the production until 2000. In 2000 the magical 50% threshold was exceeded.

As the Estonian economy depends on exports, it, manufacturing included, is extremely sensitive (much more sensitive than large countries with more closed economies) to all influences of the global economic environment. In 2008, compared to 2007, production decreased 4.5%. 2009 turned out an even amore difficult year for Estonian manufacturing. The decline in manufacturing grew into the biggest financial and economic crisis during the last decades. In 2009, compared to 2008, Estonian manufacturing production decreased as many as 28%. This was caused by inadequate demand on both domestic and foreign markets.

But in addition to big difficulties, the global financial and economic crisis provided for Estonian manufacture also an exceptionally good chance for change and development. The situation changed considerably and it was not possible to go on as before. The global financial and economic crisis had a purifying and disciplining effect, enabled to eliminate from the manufacturing wrong investments and inefficient enterprises, lowered the proportion of domestic market focused branches. Assets were redistributed from passive economic agents to active ones and in favor of those who had capital for growth financing. During boom years, the economy was mainly simply expanding, but during the decline, new ideas and more effective ways were searched for. Now it was possible to realize changes what was impossible to do during stable and fast growth.

During the global financial and economic crisis, several industries with long historical traditions disappeared in Estonia. Also several relatively new enterprises set up by foreign capital in the 1990s, which were primarily focused on cost advantage (low taxes, cheap labor, electricity, water etc, partly also cheap resources and materials bought from Russia) and not interested in operating in Estonia for long, terminated their activity in Estonia. Many low-technology, labor-intensive and low-capital-intensive productions that came to Estonia during that period moved on to CIS or Asia.

Unlike the developed and rich industrial countries Estonia had not in the least interested in keeping its *status quo*, and wanted to change it quickly and essentially. The global financial and economic crisis provided for this an exceptionally good chance. All sorts of developments, international relocation of production and reallocation of economic power in the world gathered speed.

Although: 1) the global financial and economic crisis had caused an economic decline in the countries Estonia was exporting to; 2) the protectionist tendencies – also inside European Union – had grown stronger; 3) suppliers demanded advance payments; 4) the Estonian kroon being pegged to euro had grown more expensive for some currencies (Sweden, Russia, Ukraine etc.) of export countries; 5) loan raising was much more difficult than previously, etc, attempts were made by Estonian manufacturing enterprises to take maximum possible advantage during the global financial and economic crisis. The more that there were positive developments also for entrepreneurs: 1) raw material prices in the world market had fallen; 2) real estate was cheaper; 3) wage pressure had abated; 4) the failing enterprises disappeared from the market leaving gaps and many enterprises were looking for new cooperation partners, 5) supply chains were changing; 6) international corporations were selling local subsidiaries etc.

The state of Estonia (in the first place Enterprise Estonia, Development Fund, Tallinn Entrepreneurship Agency, various techno parks, ministerial units of innovation etc.) had tried, within the limits of competence and financial resources, to create an innovative economic

environment and provide general recommendations for economic development. The recommendations of the state arose from a matter of fact that: 1) the wealth distribution scheme in the contemporary globalized world is contradictory; 2) success of advanced industrial economies is based on specialization in useful, high-value-added activities; 3) incomes of the participators in the world economy are most influenced by whether and how they can find a niche in a high-value-added branch and value chain. Unfortunately, the state of Estonia was not able (competent) to say what exactly should be done and can be done. Entrepreneurs themselves had to devise a successful business plan.

Enterprises had the following strategy options in that period: 1) lower costs – revise all processes and their management (organizational innovation); 2) change their production or services – differ from others (product or service innovation); 3) increase revenue – sales outside Estonia, continuing internationalization, cooperation with partners; 4) replace labor with capital – investment, reduce labor-intensive production; 5) change the position in value chain – move toward end consumers or toward product development.

Usually Estonian manufacturing enterprises in this period acted in the following way:
- Estonian manufacturing enterprises tried to shift from branches and activities where it was difficult significantly to increase productivity and value added, to more profitable and promising ones.
- Estonian manufacturing enterprises started to increasingly more operate in international networks and value chains. They located procurement, production, distribution, marketing, sales and services in different countries across the world. They performed every operation where the price-quality ratio was the best. Transnational relocation of production – mainly through foreign direct investment and subcontracting – was growing at an increasingly faster rate. Estonian manufacturing enterprises tried to find their opportunities in the "declining" market, profitable niche.
- Estonian manufacturing enterprises made attempts, by developing production, technology and sales, to climb up in the value chain, increase value added and profitability. Producers or service providers used mainly three possibilities to raise the value: 1) turn into a product developer; 2) turn into a brand holder; 3) move up in the value chain to higher value added products/services.
- For increasing productivity the target was set to high-technology production, which, as a rule, guarantees higher productivity and greater value added. But owners and executive managers of Estonian manufacturing enterprises understood that high-technology branches shouldn't be identified with high-technology production. All branches today contain segments of high-technology production and products, effective marketing channels, well-known brands etc. In the global market a brand owner in low-technology branch earns as a rule more than most of the subcontractors in high technology branches. Value added in electronics industry as a whole is definitely higher than in textile industry. But on the other hand, there are many low-productivity enterprises and entire branches in electronics industry (primitive subcontracting, assembly operations etc.). And, for example, in textile industry there are old, famous enterprises producing billiard and game table fabrics which own a well-known brand and earn enviably high profits, factories producing various specific products (cloths for firemen and racers, bulletproof fabric etc.).
- Leading manufacturing enterprises in Estonia tried to implement a strategy of big Western corporations. They dedicated themselves only to product development, logistics and marketing. They tried to administer trademarks, product portfolios and

value chains. Production was organized in some "cheap" country. Such enterprises tried to work as "producer without a factory".

- If it was not (yet) possible to be successful with end products, attempts were made to be competitive at least in the subcontracting market. Estonian manufacturing enterprises tried to shift from single procurement contracts to long-term contracts, become standing suppliers, participate in R&D activity, achieve high technological competence, being aware of the whole production cycle. Enterprises tried to orient to such high-technology subcontracting that the customers were not capable of doing themselves. For that they needed to own something that customers didn't – know-how, specialists, equipment or something else. These were the subcontractors customers concluded long-term contracts with and assisted in introducing standards, management systems etc. For such subcontractors customers paid well and such business partners were respected. There was much less sense to orient to such subcontracts which could be done cheaper than by the customer (a better price to quality ratio), for production for which the contracting entity had no sufficient production capacities or what was ordered outside to diversify risks (so as not to create production capacities which, when the conjuncture grows worse, will remain under-utilized).

- Estonian manufacturing enterprises tried continuously to use their proximity to the West-European market, their ability to produce small quantities, as well as operative and flexible production. In China and India one can get a subcontract at a better price-quality ratio than Estonia. Fortunately for Estonia, these countries are far away from large Western firms. Those who order subcontracts prefer to avoid large time differences, long air travel; they have problems with an inadequate infrastructure, different culture and food they are not accustomed to. Therefore they have so far preferred Estonia. Employees of the large firms in Nordic countries and Western Europe, which are up to three hours of travel from Tallinn, prefer Estonia regardless of the worse price-quality ratio. However, time is not working in favor of Estonia. The price-quality ratio is growing more and more significant.

Estonian manufacturing had a splendid opportunity to exit from the global financial and economic crisis as a winner, and take up a more dignified position in international division of labor than before the crisis. This, however, demanded many fundamental changes.

In 2007, Estonia was given the 163rd place in terms of labor market flexibility in the international rating of 181 countries (Eurostat, 2011; ILO, 2011). The new Employment Contracts Act (Employment Contracts Act, 2008), which entered into force on July 1, 2009, improved the situation in the Estonian labor market. Now the labor market is more flexible and labor force can easily and rapidly move from low-productivity branches to more productive ones.

The educational system changed more flexible too. A problem for Estonia during the boom years was that the labor market gulped down people with three years of general higher education who needn't be and were not specialists. Large drop-out numbers from school threatened long-term competitiveness of Estonia. Economic decline and the related unemployment provided many with a forced opportunity to continue education and graduate. At the same time, career counseling of high-school graduates improved significantly, as well as retraining and continuing education (Estonian Ministry of Education and Research, 2011). One can hardly plan what kind of new professional skills exactly people should be taught. But the training process itself is very important. People come together, share ideas and are more alert to notice new work opportunities.

The structure of Estonian manufacturing improved slightly between 2008 and 2010. The rate of employment with labor-intensive and small value-added textile and clothing industry dropped from 19.6 to 13.8 thousand (from 14.5% to 12.7%), whereas in the higher value-added metal, machinery and apparatus industry only from 37.2 to 31.4 thousand (from 27.5% to 28.9%). (Statistics Estonia, 2011).

The structure of Estonian exports also improved a little – the processing degree and value added of goods increased. Exports were differentiated (risk diversified) and largely oriented to quite stable European Union member states (Statistics Estonia, 2011), especially Finland (17% of Estonia's total exports in 2010) and Sweden (16%). In imports of metal, machinery and apparatus industry production of these countries the share of Estonia increased in 2010 (Eurostat, 2011).

4 CHALLENGES AND OPPORTUNITIES OF ESTONIAN MANUFACTURE AFTER THE GLOBAL FINANCIAL AND ECONOMIC CRISIS

The year 2010 can be regarded as a successful year for Estonia. The economy started to recover from the crisis, the confidence of entrepreneurs and consumers improved, especially significant was the growth of export volumes (Estonian Institute of Economic Research, 2010). While in the middle of 2009, Estonia was the country with the largest decrease in manufacturing production among the EU Member States, then in the 2nd quarter of 2010 Estonia became the country with the most rapid growth of production (Statistics Estonia, 2011).

However, the influence of global financial and economic crisis is not over yet and there is still a risk of some setbacks during further improvement of world economy: 1) support packages of many countries have restored their domestic demand, increasing demand also for Estonian exports, including subcontracting. When the main destination countries for Estonian exports (Finland, Sweden, Germany) terminate their economic revival programs, demand in these countries – particularly for subcontracting of Estonian manufacture – may decrease again and so will Estonian exports; 2) there is a risk (temptation) that under fallen labor costs (wages) Estonian manufacturing enterprises do not accomplish any fundamental changes – cheap workforce enables to produce and sell again labor-intensive, but low value-added products and services. This however will lead to repeat crisis. Moving out of the crisis is the immediate challenge, but the biggest challenge is to escape the reflex to try to return the pre-crisis situation.

There may also rise new problems and old problems may grow sharper. After the crisis, the structure of Estonian manufacturing will be, without any doubt, better and more effective than before: 1) technological level higher; 2) organization of work more perfect, 3) value added and productivity higher; 4) position in value chain better; 5) maybe also the value chain itself new and better. But a problem is that there are fewer jobs in the new structure of manufacturing than before the crisis (in 2008 135.0 thousand; in 2010 108.4 thousand) (Statistics Estonia, 2011). Unemployment remains extremely high, and continues to be problematic.

Another problem may be also that investment-intensive new high-technology, high value-added jobs are created mainly in Estonian capital city – Tallinn. And only top specialists and skilled workers in the capital city will benefit from these, not "ordinary people" in other regions. Not all people are qualified and do not fit into high-technology production. Such

structural changes may even increase economic, social, regional etc. stratification. Estonia needs also low-technology production for employing uneducated and not so highly skilled people. Structural unemployment in Estonia has increased. Such development is pushing further still the economic, social and regional stratification.

Manufacturing has been, and continues to be, critical to the success of the Estonian economy. Manufacturing is covering an important share of GDP. Due to political and economic changes since Estonia became independent a number of structural changes have taken place in development of manufacturing. Compared to the beginning of 1990s, the share of manufacturing in GDP has decreased from 20% to about 16%. As a result of the global financial and economic crisis, the share of manufacturing accounted only for 14% of GDP in 2009. In spite of the very big decrease in production during the crisis, also a very rapid growth of manufacturing took place starting at the beginning of 2010. Already in the 2nd quarter of 2010, the share of manufacturing in GDP had increased to 16% again (Statistics Estonia, 2011).

Estonian economy can be successful only by being strongly export orientated. Estonia needs to „export itself out of the crisis". Therefore Estonia needs new exporting enterprises or to expand the existing ones. Yet many Estonian people work abroad. A worker with a medium qualification can earn in Estonia's neighboring country Finland more than EUR 1400 monthly. Only few enterprises in Estonia can pay such wages. Average wage in the electronics industry, which was on top of Estonia's export growth, was only EUR 800 in 2010. It is impossible to pay more otherwise it would be more reasonable for enterprises to move away from Estonia, to Bulgaria or farther.

Estonian manufacturing needs much more activity and better coordination so as more value added producing manufacturing industries would come to Estonia or develop here for the world market. But this is not easy. Estonian manufacturing will need to adapt and transform to new realities in which continuing globalization, international competition and innovation will play a pervasive role.

Estonian manufacturing enterprises have taken the orientation to main growth domains (sustainable energy and environmental products which enable to prevent or mitigate environmental changes and energy crisis, and/or are environment friendly: health and welfare products which increase human life expectancy and quality). Attempts were made to focus on growing markets (China, India, Brazil, etc.).

Estonian workforce has been much cheaper than in developed industrial countries and so-called technical productivity not very much lower. A problem is rather the position of Estonian manufacturing enterprises in value chains and selling skills in general.

Increased supply of workforce dismissed from the real estate sector (construction) during the crisis was an opportunity for the forced development of manufacturing sector and increase in exports. Unfortunately such tendency – moving towards a post-industrial society – may be only temporary.

It is not possible to catch up with the advanced industrial economies only by updating production technology and making production increasingly more cost effective. Also changes in the manufacturing industry structure are necessary. This means development of new

growth areas and in the traditional branches moving toward activities that give higher value added.

When Estonia grows more attractive for foreign investors, and if the present trends continue, Estonia may become rather attractive to investments orientated to short-term motivation related cost-saving, which might exert Estonia a useful effect during a few years but won't be sustainable in long-term perspective.

The previous economic policy (openness, macro-economic equilibrium), creating a favorable environment, which has brought success, is clearly necessary still. But this is not enough in the new situation. We need a focused, pro-active economic policy which has a bigger role in identifying strategic branches for the state, leading and systematically developing them. This means amplification of existing strengths, testing in new growth areas and resource mobilization and trans-sectoral cooperation for that. Economic policies must grow much more forceful, focused and related to other policies (education, sciences, foreign economic policy).

Unfortunately the competitiveness of subcontracting manufacturing enterprises of Estonia is negatively affected by that the airport of Tallinn lags significantly behind the airport of Riga by number of airlines and destinations. Price-quality ratio of subcontracting in Baltic countries is more or less the same and West-European enterprises which order subcontracts from the Baltic region have therefore started to prefer Riga where they can fly from many cities without changing planes.

While previously cost and profit were the main determinants in the traditional location theory, then nowadays soft factors such as "quality of life" (housing and environment), "image" of place or "private" reasons are very important determinants. Modern living and work environment are very important for potential high-technology investors and skilled labor. Highly skilled workers/specialists, as a rule, have a well-kept and demanding family for the living conditions. They are willing to live and work only in a region where there is a good infrastructure. Or move to such place from a place that does not satisfy them. A high-quality living environment is an increasingly important location decision factor for companies which need to attract young and talented educated workers. The availability and range of high-quality affordable housing is increasingly important.

5 CONCLUSIONS

It was not possible for Estonia only by raising the technological level of enterprises and increasing so-called technical productivity to catch up in terms of productivity with the developed industrial countries. The structure of Estonian manufacture was out-of-date and required cardinal and fast changes toward greater value added.

Every time a major crisis hits, it brings about new breakthroughs in science and technology; promotes fundamental changes that take place in a relatively short period of time; gives birth to new industries, and forms new growth points in the economy. Global financial and economic crisis has had a far-reaching impact on the world economy and it has brought challenges and opportunities to all countries and for all fields.

In addition to big difficulties, the global financial and economic crisis provided for Estonian manufacture also an exceptionally good chance for change and development. The global financial and economic crisis had a purifying and disciplining effect, enabled to eliminate

from the manufacture wrong investments and inefficient enterprises, lowered the proportion of domestic market focused branches. Assets were redistributed from passive economic agents to active ones and in favor of those who had capital for growth financing.

After the crisis, the structure of Estonian manufacturing is better and more effective than before: 1) technological level higher; 2) organization of work more perfect, 3) value added and productivity higher; 4) position in value chain better; 5) maybe also the value chain itself new and better.

The year 2010 can be regarded as a successful year for Estonia. The economy started to recover from the crisis, the confidence of entrepreneurs and consumers improved; especially significant was the growth of export volumes. But the influence of global financial and economic crisis is not over yet and there is still a risk of some setbacks during further improvement of world economy. There may also arise new problems and old problems may grow sharper.

There are fewer jobs in the new structure of manufacturing than before the crisis. Investment-intensive new high-technology, high value-added jobs are created mainly in Estonian capital city – Tallinn. And only top specialists and skilled workers in the capital city will benefit from these, not "ordinary people" in other regions. Not all people are qualified and do not fit into high-technology production. Such structural changes may even increase economic, social, regional etc. stratification. Estonia needs also low-technology production for employing uneducated and not so highly skilled people. Structural unemployment in Estonia has increased. Such development is pushing further still the economic, social and regional stratification.

Unfortunately the competitiveness of subcontracting manufacturing enterprises of Estonia is negatively affected by that the airport of Tallinn lags significantly behind the airport of Riga by number of airlines and destinations. The price-quality ratio of subcontracting in Baltic countries is more or less the same and West-European enterprises which order subcontracts from the Baltic region have therefore started to prefer Riga where they can fly from many cities without changing planes.

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Whether Estonian manufacturing is able to achieve stability in the coming years depends on economic and political decisions and surrounding economic climate. The current situation gives hope that export based on cheap production will be replaced with more qualitative final production providing higher value added. Estonian manufacturing will need to adapt and

transform to new realities in which continuing globalization, international competition and innovation will play a pervasive role.

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HUNGARIAN RENEWABLE ENERGY SUBSIDIZATION SYSTEM IN THE LIGHT OF THE SUPPORT SCHEMES APPLIED IN THE EUROPEAN UNION

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ABSTRACT
In Hungary, the introduction of the renewable energy feed-in system (Metár) designed to replace the feed-in tariff (KÁT) system has already suffered a considerable delay, which make the achievement of the - basically low - 13% share of renewable energy undertaken to be realized until 2020 doubtful. Our studies try to highlight which of the renewable energy subsidization schemes applied in the European Union (with special respect to renewable electric power generation) show the best results. It is discussed which of their elements should be integrated in the Hungarian system in order to accomplish the renewable targets, implement the equal sharing of burdens, energy security, the participation of the inhabitants, decentralization and the moderation of energy dependence.

Keywords: *feed-in premium, feed-in tariff, green certificates, KÁT system, Metár-system, renewable energy, RES-E*

1 INTRODUCTION
From among the means of supporting energy production from renewable sources, Hungary directly applies the feed-in tariff system (KÁT) with a distinction made between the rules of feeding in the renewable energies generated by industrial producers and private persons. In addition, direct investment support, research & development support, as well as the promotion of educational, training and information dissemination programs are deployed to foster broader use. The underlying goals include the improvement of the efficiency and effectiveness of renewable energy production towards the accomplishment of the Hungarian renewable energy targets. In the light of the experience earned so far, the KÁT system has been reviewed (Act XXIX of 2011), but no positive changes have been implemented, the Feed-in system for heat energy and electricity produced from renewable and alternative energy sources (Metár) designed to replace KÁT is in delay, which makes the accomplishment of Hungary's renewable targets undertaken until 2020 doubtful.

Evaluating the future concepts of the bodies regulating and operating the KÁT system, Hungary's achievements in this field, as well as comparing them with the mechanisms applied in the European Union, we will make a proposal for the establishment of a more effective system of subsidization, which would primarily focus on the increase of renewable energy production by private persons.

2 HUNGARY'S SYSTEM FOR THE REGULATION OF RENEWABLE ENERGY PRODUCTION
In Hungary, energy production from renewable sources is regulated in Act LXXXVI of 2007 on electricity (VET); Government Decree 273/2007 (Oct 19) on the enforcement of certain provisions of Act LXXXVI of 2007 on electricity (Vhr.); Government Decree 389/2007 (Dec 23) on the feed-in obligation and feed-in tariffs of electricity produced from renewable energy resources or from waste and electricity generated in co-generation facilities; Decree 76/2011 (Dec 21) of the Ministry of National Development on the financial and technical conditions of

the access to the public utility system, the so-called "Access" Decree; Decree 64/2011 (Nov 30) of the Ministry of National Development on the rules applicable to setting and implementing electricity system use charges (Rhd); as well as the legal regulations of Amendment no. 7 (29 March 2012) on the rules of cooperation in access to the distribution network.

With respect to feed-in tariffs, Government Decree 389/2007 (Dec 23) on the feed-in tariffs makes a distinction between the type of the renewable energy sources, as well as peak, valley and deep valley periods (Source: Appendix 1 to Government Decree 389/2007 (Dec 23)).

The Government Decree itself encompasses electricity generated with the use of energy made from renewable energy sources; electricity generated with the use of energy made from wastes; and co-generated electric power, but does not cover electricity produced in household-sized small power plants.

In the KÁT balance group, the scope of entities entitled to mandatory feed-in has become narrower, as from 1 July 2011 the KÁT feed-in entitlement of power plants co-generating heat and electricity from fossil energy carriers was withdrawn. As a result, the KÁT portfolio has changed, and now KÁT sellers should be power plants producing electricity with the use of energy only from renewable energy sources or wastes (Section (6) of Article 4 of Act LIX of 2011) (Source: MAVIR Zrt.).

2.1 Feed-in system for electric power generated in household-sized small power plants (HMKE)

The concept of the household-sized small power plant (HMKE) was introduced in 2008 by Act LXXXVI of 2007 on electricity and Government Decree 273/2007 (Oct 19) on its enforcement. HMKE is deemed to be any electric power generation facility that is connected to a public-utility low-voltage grid, or any low-voltage, private or connecting line grid, while the nominal capacity of the power plant does not exceed the available capacity of the user, while the maximum rated capacity of the power plant is 50 kVA[1].

The settlement of energy fed into the public-utility distribution network is conditioned on the existence of an effective Grid Usage Contract relating to HMKE. Such settlements are based on metered data. After establishing the balance between the consumed and generated energy, a settlement invoice is issued. In case in the given settlement period the balance of the generated and consumed electric power reflects feeding surplus, the excess energy has to be paid for by the electricity trader or universal service provider transacting sales via the given connection point against a proper invoice (Decree 4/2011 (Jan 31) of NFM; Decree 76/2011 (Nov 30) of NFM; Resolution 1092/2012 of MEH). The amount of payment corresponds to the average product price of electric power payable by the individual consumers (price excluding the system usage fee).

On the basis of the relative volume of energy consumed and fed back into the grid, in relation to the settlement period when the volume of consumption is smaller than the volume fed into the public-utility grid the electric power trader/universal service provider settles only the fees that are not proportionate to the turnover. The user is notified of the production surplus

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[1] The volume of energy generated by any solar panel equipment of 2–3 kVA capacity is sufficient for covering the annual consumption of an average apartment.

calculated as a result of the establishment of the balance and the associated feed-in price (on the basis of Government Decree 273/2007 (Oct 19) on the enforcement of certain provisions of Act LXXXVI of 2007 on electricity (Vhr.)). For the excess energy, the electric power trader transacting sales at the given connection point or universal service provider is required to pay - against a proper invoice - a price corresponding to the average electric power product price that would otherwise be payable by HMKE for the electric power (as a user).

The product price of electric power is not inclusive of system usage fees and other fees proportionate to the turnover (separate liquid assets). On the whole, the producer is paid a smaller fee for the volume fed in excess of consumption, while the amount by which the volume of feed-in remains under consumption (as respected in the balance) is invoiced (consumption from the public-utility grid). It means that the income in consideration of a unit volume of generated electric power under own consumption is 44.83 HUF/kWh (savings), whereas it is only 20.16 HUF/kWh (excluding VAT) for the volume of own consumption. As a user, however, the distribution base fee and distribution performance fee always have to be paid (in full amount).

The costs associated with the feed-in tariffs in the mandatory feed-in system are ultimately paid by the final users, consumers. Furthermore, the producers are no paid governmental subsidies or feed-in price subsidies in any of the categories.

3 SUBSIDIZATION SYSTEM OF RENEWABLE ENERGY UTILIZATION IN THE EUROPEAN UNION - LEGISLATIVE OBJECTIVES AND REGULATORY BACKGROUND

The European Union started to orient its member states towards renewable energy sources as early as from the 1990s. In 1997, the Commission published its White Paper on renewable energy sources to disclose that priority significance should be attributed to electric power generated from renewable energy sources, and by 2010 the renewable share of electricity generation was intended to be increased to 12 percent in the member states. In 2001, the Commission adopted a directive (RES-E Directive) to require the member states to undertake national targets until 2010, and support renewable-based electric power generation towards the accomplishment of these targets. In 2009, within the framework of the EU Climate and Energy Package, the Commission accepted another directive (RED Directive), which targeted as large as a 20 percent share of renewables by 2020. On the other hand, the new minimum targets determined separately for the individual member states as to be achieved on a mandatory basis did not solely pertain to electric power generation, but also ultimate energy consumption, thereby indicating that the attention so far exclusively turned on electric energy production should also embrace the heat generation and transport sectors.

The principles of subsidization for the use of renewable energy carriers are set forth in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, as well as Community guidelines on state aid for environmental protection (European Commission, 23 January 2008).

They involve investment supports, tax exemptions and tax benefits, tax refunds, subsidization schemes relating to the obligations that are associated with renewable energy - among other schemes, those applying green certificates - as well as the system of direct price subsidization, including the payment of feed-in tariff and subsidies.

The individual member states have different endowments in the field of the utilization of renewable energy sources, while on the national level they operate various subsidization systems for the utilization of renewable energy sources. The subsidization schemes applied in most of the member states supports only those energies from renewable energy sources that are generated within their own territories (Directive 2009/28/EC).

Beside statistical transfers in between the individual member states, joint projects, common subsidization systems and transparency platforms, their cooperation may take the form of the exchange of information and best practices, particularly on the transparency platform defined in the Directive, as well as other voluntary coordination of all the types of the subsidization schemes (Directive 2001/77/EC).

Towards the integration of renewable energies into energy systems, especially for renewable energy sources that are not available continuously, the connection of energies produced from renewable energy sources into the transportation and distribution grids, as well as the use of intermediary energy storage systems are fostered (in line with Section (6) of Article 3 of Directive 2003/54/EC).

4 MEANS OF SUBSIDIZATION APPLIED IN THE EUROPEAN UNION - SUPPORTING TOOLS FOR ELECTRIC ENERGY GENERATION BASED ON RENEWABLE ENERGIES (RES-E)

According to Directive 2009/28/EC, the European Union does not prescribe standardized practices for the member states with respect to the subsidization of renewable energy sources. In consequence, the member states apply varied subsidization systems, tools in this field: investment supports, tax exemptions or tax benefits, tax refunds, subsidization systems relating to the obligations that are associated with renewable energy - among other things, those applying green certificates, as well as the establishment of direct price subsidization schemes, the necessary institutional and legal background. The most standardized subsidization system is constituted by the support to electric power generated from renewable energies.

The two main types of means serving the subsidization of renewables are production and investment supports, of the most widely used direct tools include direct investment support, production subsidization tools, i.e. the takeover of green electricity at higher feed-in tariffs, various tax benefits, research & development subsidies, as well as the support of training, educational and information dissemination programs promoting the spread of their use. In general, member states tend to use different means of subsidization in a combined manner or in parallel. In addition to the tools of direct subsidization, certain member states also apply indirect facilities by raising the costs of the use of fossil energy carriers (e.g. with the use of energy tax, carbon-dioxide tax) or running common execution projects for the reduction of the emission of greenhouse gases via the European Union's emission trading system and in the form of green investment schemes.

In the case of electric energy generation based on renewable energies (Renewable Energy Sources - Electricity/RES-E/), subsidization is enforced primarily by promoting production, and in this context the broadly applied tools include the feed-in tariff (majority of the EU member states, e.g. Germany, Austria); tradable green certificate system (e.g. United Kingdom); and green premium system (e.g. Spain, Czech Republic) (Fig. 1).
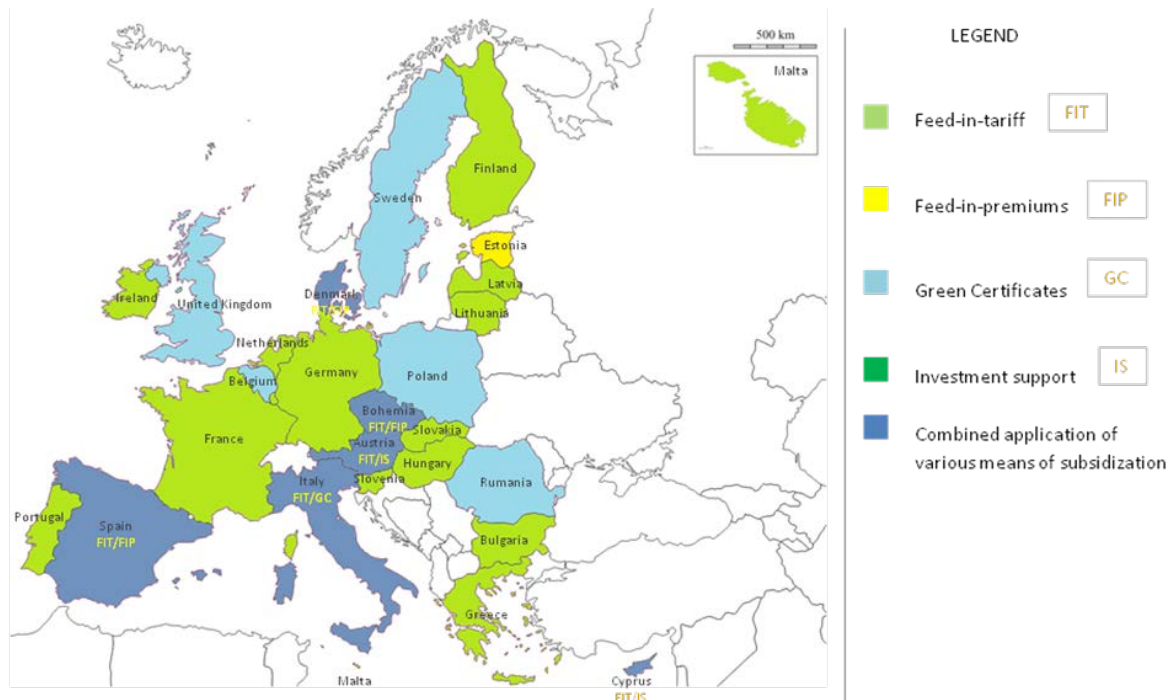
Figure 1: RES-E subsidization system of the EU member states (on the basis of EREF, 2012)

4.1. Feed-in tariff system

In the feed-in tariff system featuring guaranteed prices, RES-E producers are paid guaranteed minimum prices for the energies they generate and deliver to the electric power grid, these prices are set to be higher than the prices prevailing in the electricity market (this would be the Metár system in Hungary). Usually, a guaranteed price is determined for a certain period of time, while its amount is established on the basis of the long-term limit costs of production. For the encouragement of investments, feed-in tariffs are inclusive of an acceptable profit, as well. The countries applying feed-in tools generally differentiate the tariffs in view of the various renewable energy technologies. According to the advocates of the guaranteed-price systems, these solutions have to be protected from market competition in the short and medium term as long as the costs of renewable electric energy generation become competitive with the costs of other solutions, with one of the preconditions being the construction of production capacities in sufficient volumes, though until then - in spite of the higher costs - the system will have long-term, external benefits.

The majority of the member states rely on models that feature differentiated subsidized prices. The feed-in tariffs are usually differentiated in various ways: in view of the energy source (even with respect to the place of origin in the case of biomass), technology, power plant size, commissioning date. In the light of the experience earned so far, the countries using this model (e.g. Germany, Austria, Slovakia) have been performing significantly better in accomplishing the renewable objectives than the countries applying other subsidization systems. The underlying reason is that until the payback of the project investors shoulder smaller risks due to the guaranteed feed-in tariffs, while with appropriately elaborated framework conditions (with feed-in tariffs gradually decreasing over time in general) it can be cost-efficient if the costs of production also considering the state of maturity and development of certain technologies and the economies of scales are taken as the basis. Moreover, this model allows the direct enforcement of other aspects of the national economy (e.g. creation of jobs).

In Germany, the increase in the use of renewables is regulated in the Act on renewable energies first enacted in 1990, and then subsequently amended (Erneuerbare-Energien-Gesetz (EEG), 2004; EEG, 2009), which primarily promotes support to renewable-based electric energy generation by means of the feed-in system. The regulatory background ensures the growth of consumer demands for renewable energy-based electric power alongside the connection of the producers to the grid and the establishment of the conditions of technological development, resulting in the long-term decrease of prices. Within the meaning of these regulations, the grid operator is obliged to take over and forward electricity generated with the use of renewable energies from all the producers (power plants, enterprises, private persons). Electricity generated from renewable energy has priority over electric power originating from other sources. The legislation takes technological development into account, and determines the mandatory feed-in tariffs differentiated in view of the renewable energy carriers, in degressively, as depending on time so as to guarantee some profit for the producers. Being different for the various technologies, feed-in tariffs determined in advance for 5, 10, 15 or 20 years represent guarantee for the profitability of investments, while sliding prices also back innovation activities that promote the continuous development of important sectors in the German economy. In 2006, the annual turnover of the German renewable energy industry was EUR 21.6 billion, employed 214 thousand persons, which is a larger headcount that the combined number of employees in nuclear energy production and coal mining. By 2020, approx. 500 thousand employees are anticipated to work in the renewable energy industry.

There are two applied ways to finance feed-in tariffs: one of them is the sharing of costs among the consumers, whereas the other focuses on a special fund created for this specific fund. Germany applies the distribution of costs among the customer in equal proportions, which means a monthly amount of EUR 1.50 extra cost for each household. The advantage of this solution is that the form of financing is independent from the governmental budget, and therefore it cannot be influenced by the changing political situation.

The long-term objective of the country is to generate electric power - 35% by 2020 and 80% by 2050 - from renewable sources. Germany supports renewable energy production and innovative developments by all available means (legislation, market regulation, nation-wide energy storage, e-mobility), differentiated production and distribution systems (smart grid development), and intends to spend approx. EUR 200 billion on the accomplishment of these objectives (Rajgor, 2012).

4.2. Renewables obligation scheme
In the tradable green certificate system, the first step is that annually, for a specific period the decision-makers determine the projected share of the consumed electricity generated from renewable sources (RES-E) from the total volume of electric power consumption nationwide. The second step is that one or more actors of the electric power market are obligated to produce (in case the regulation pertains to the producers) or purchase (in case the obligors are merchants or consumers) RES-E in a proper proportion to achieve the above target (share). Instead of producing/purchasing RES-E, however, the obligors have the option to comply with their obligations by purchasing green certificates without generating RES-E, or examining the source of the electricity they purchase.

Currently, the green certificate system is operated in six member states. Its advantage is that it harmonizes with the free-market model of the internal electricity market, and for this reason

the Directive suggests applying the green certificate system in the long term as the uniform subsidization scheme of the member states. On the other hand, its disadvantage is that this subsidization system has no long-term guarantees, and therefore the accomplishment of the targets relating to the use of renewable energy is not ensured, the market risks are high.

The United Kingdom has elaborated various tradable means to moderate the emission of greenhouse gases. One of these tradable instruments in the energy sector is the system of tradable green certificates (Renewables Obligation Scheme), which was put in effect on 1 April 2002 in replacement of the Non-Fossil Fuel Obligation (NFFO) system operated until that time. This bidding system functioned as an efficient tool for cutting prices, but the quantitative outcomes proved to be inadequate, while the for their periodic nature NFFO tenders did not offer a favourable solution for potential investors in view of long-term calculability.

By 2050, the United Kingdom is planning to reduce CO_2 emission by 60%. In addition, a further goal is to encourage the exploitation of renewable energy sources towards the mitigation of dependence on fossil energy carriers. Beside the green certificate system, the program devised to urge the use of renewable energies for electric power production puts forth additional elements: e.g. exemption from the payment of the climate change levy (CCL), green supply offerings paid by the consumers on a voluntary basis in relation to renewable energy sources, R&D supports, etc. In the case of the applied tradable green certificate (TGC) system (or renewable obligations certificate - ROC), the ultimate source of demands for these certificates (or efforts to avoid the imposed payment obligations in the event of any omission in fulfilling the obligations) is the obligation determined by the government, and not the associated consumer demands or voluntary agreement within the sector. This obligation is to be satisfied by the energy suppliers who are required to obtain a unit green certificate for a certain proportion of the energy they supply each year from the producers of renewable energy. The producers are thus encouraged by the supplemental income realized on the green certificates. All the officially accredited electricity producers utilizing renewable energy are entitled to green certificates on the volume of energy supplied to the service providers.

4.3. Green premium system
In parallel to the system of subsidized prices, some of the member states have introduced the so-called "green premium" system wherein producers sells green electric power in the free market, and at the same time they are entitled to premium on the marketed green power (the amount of the premium is calculated on the basis of the average market prices in the previous year so that the market price and the amount of the premium should be larger than the subsidized feed-in price). An advantage of the system is that it can be easily fitted into the free-market model of the internal electricity market, and there are no costs lost even when subsidies are withdrawn. Its disadvantage is that it is more expensive than the subsidized price model, because larger premium need to be provided to cover the higher risks of investors. For renewable energy technologies that have already been made competitive (e.g. biomass co-incineration), there are several countries (e.g. Denmark) where only the premium system can be selected.
The Spanish Electricity Sector Act 54/1997 and the National Renewable Energy Plan pertaining to the period of 2000–2010 set the objective to increase the ratio of renewables within all the consumption to 12% by 2010. It is equivalent to a 29.4% share of renewables within electric power production as a whole.

The subsidization system of renewables is mixed and combined: for electric power generated from renewables, the feed-in system is operated, and completed by the green premium system. In the case of electric power produced with renewable, the takeover of power, feed-in is mandatory, while the electricity producer is paid a guaranteed minimum price for the electric power. The different feed-in prices belonging to the various technologies are established in the relevant legal regulations. The company generating electric power with the utilization of renewables can choose whether to be paid a fixed feed-in price for the produced electricity or market-based power price, and in addition a fixed (differentiated) premium. Both the premium and feed-in price are modified annually in view of the change of the average producer electricity price in the previous period. The premiums and feed-in tariffs are determined in a differentiated manner with respect to the individual renewable technologies, considering the costs of the given technology and the quantitative target established for the given technology. In addition to the annual modification of the premiums and feed-in prices, they are subjected to full-scale review in every four years. After the review, in case the realization of the set quantitative targets is not ensured, the amounts of the feed-in prices and premiums are also altered. In addition to the accomplishment of the objectives, the review also deliberates technological progress (any potential cost reduction), trends in the price of electric power, as well as the effect of the various technologies on the technical management of the system. The premiums are paid by the service providers to the producers, and then the associated costs are passed over, meaning that extra burdens are to be paid by the consumers in the consumer electricity price (Unk et al., 2010).

5 ADVANTAGES AND DISADVANTAGES OF THE MEANS OF RES-E SUBSIDIZATION

According to the accepted wisdom, there are two fundamental aspects confronting with each other when a choice is to be made among the main systems of subsidization: efficiency, i.e. the minimization of costs incurred with the given renewable energy consumption target and effectiveness, i.e. the extent to which the expansion of renewable energy sources should be promoted in the long term. Yet, these aspects are not necessarily contradictory, and it is also expedient to compare the subsidization schemes in view of other aspects, as well, such as the promotion of technological progress, sustainability, diversification, decentralization or the place of the emergence of additional costs.

When seeing from the perspective of effectiveness, international experience show that the largest electric power generation capacities based on renewable energy have been put in place in countries applying guaranteed prices owing to the high and nearly risk-free return indicators ensured by the high guaranteed prices. The two dominant EU member states formerly applying bidding systems have abandoned that form: France has switched over to the guaranteed price system, whereas Great Britain has preferred the green certificate system. When a feed-in system with guaranteed prices is applied, it is indispensable to be adequately familiarized with the costs of renewable-based electric energy generation so that the guaranteed feed-in prices should not be set to low to become ineffective, or on the contrary too high to be excessively effective, but less efficient. International examples show that it is rather the establishment of excessively high guaranteed prices has larger risks. With technology-related, differentiated feed-in prices, the excess incomes of producers can be reduced, and as a result the total costs of the subsidies of renewables passed over to the consumer.

The efficiency, i.e. the encouragement of price reduction with respect to market competition - if there is market competition - generally enforces the cost-efficient application of the cheapest technologies with a normal level of market profit, which is not independent from technological progress in the long run. The main drawback of the feed-in system with guaranteed prices is that it does not encourage the cutting of production costs in technologies based on renewable energies, while on the other hand it does not have sufficient influence on the reduction of the energy costs of consumers. In general, any operating subsidization system featuring guaranteed prices would respond to technological changes with shorter or longer delays, and therefore the announcement of reduced feed-in tariffs - unless there is some integrated automatism in operation - just slowly follows technological cost cuttings due to technological progress. In consequence, the application of new technologies results in extra profit for the operator, while causing unjustified additional costs for consumers.

When the tradable green certificate system is applied under the conditions of competitive markets, the reduction of the costs of electric power based on renewable energies is instantly realized in case the depression of the cost curve leads to lower green certificate prices. This way, the investor faces similar business risks to the ones confronted in other markets, because the user of an outdated technology can lose grounds in the market of any product in case a more efficient, new technology appears. In this case, the risk is rather business-related, and not regulatory. In the green certificate system, regulatory risk diminishing the prices (and therefore profitability) would occur if the targeted ratio of electric power based on renewable energies were decreased, while for the guaranteed price the same situation would emerge in case the feed-in tariffs were cut not only for the newly entering capacities, but also for the existing ones. The lack of the security offered by guaranteed prices repulses the investment inclination of potential producers.

Two key elements of technological development are research & development conducted by the developers of technologies, as well as the improvement of the technical knowledge of the users of technologies. Both of them are important for the spread and efficient operation of the new technologies, while from the perspective of the energy system cost reduction is the most essential outcome. Technological development is fostered when the largest possible amount of the extra profit arising from the cost reduction is left with the renewable energy producer. The guaranteed price system leaves all the surpluses with the renewable energy producer, considerably encouraging further cost-cutting developments and the learning of the users of the technology. Nevertheless, the decrease of guaranteed feed-in tariffs in parallel to technological progress takes away from the producer's surpluses, and moreover in case the system features differentiated prices, and the feed-in prices can be well aligned with the limit cost curve of green electric power from time to time, then all the excess profits can belong to the consumer. Therefore, the encouragement for development may as well become moderated or lost in the guaranteed price system. In the tradable green certificate system, a part of the surpluses is given to the producer, while the remaining part belongs to the consumer. This way, the encouragement for technological development is weaker than in the rigid guaranteed price system, but at the same time the consumer purchases the energy at lower rates.

When comparing the various systems of subsidization, one of the criteria of sustainability is the establishment of the largest possible proportion of renewable energy with the enforcement of the associated environmental impacts. In the light of the foregoing, this criterion is better satisfied by the guaranteed price system, but only when the subsidization system relies on securely guaranteed prices in the long run. With respect to sustainability, higher consumer

prices are more advantageous, because they encourage energy savings. On the other hand, slow technological development due to high guaranteed feed-in tariffs is less favourable in view of sustainability. In the long term, the thoroughly considered application of both systems of subsidization can satisfy the requirements of sustainability to similar extents.

The diversification of energy sources and the moderation of our dependence on imported energy are substantial aspects of the security of energy supply, and in this context the intensified utilization of renewable energy sources is one of the important tools. Therefore, in decision on subsidization policies diversification serving the security of supply has to be encouraged. When renewable energy subsidization systems are applied, this requirement is properly served by means allowing larger proportions of renewable energies.

Decentralization criteria. Due to the typically low energy density of renewable energy sources, in most cases it is more reasonable to use these resources onsite than transporting them over larger distances. In the given region, preferences differing from the national ranking of potentials can be established among the specific types of renewable energies. For this reason, in the decisions on subsidization, when the applied subsidization systems are framed, solutions that are suitable for the exploitation of local endowments and the satisfaction of local energy demands need to be encouraged. By way of the subsidization decisions and the encouragement of decentralization, positive rural and regional development effects can be realized. When framing the subsidization systems, it can be justified to enforce regional requirements for which market-based systems, such as the tradable green certificate system, are less suitable. On the other hand, subsidization systems putting forward regional differences, and mostly not functioning on a market basis carry a considerable risk that the subsidization system fails to take regional differences into account in an inappropriate manner, thereby creating uncalled advantages or unjustified disadvantages because of the limited nature of available resources.

Additional costs incurred by the consumers or taxpayers consist of two main parts: higher costs of the subsidization of renewable energies and the excess profit of producers. The frequent generosity of guaranteed price systems and the consequential, quick, nearly uncontrolled increase of the built-in capacities, as well as the transfer of all the excess profits are very costly for the consumers or taxpayers. For this reason, with respect to the applied technologies the feed-in tariffs have been differentiated in Germany, and for certain mature technologies (wind), for instance, they have been reduced in comparison with the previous years. The creation, operation, administration of the system is simple, its costs are small.

At the given point in time and with the current stage of technological development, the tradable green certificate system is equivalent to the guaranteed price system. In the long term, however, consumers may as well benefit from technological development in the tradable green certificate system, in the form of price and cost reduction, which is not true for the rigid guaranteed price system. On the other hand, the guaranteed price system better promotes innovation, the long-term reduction of production costs. Nevertheless, the consumer or taxpayer can have a share of these benefits only if the government withdraws such surpluses from the producer in the form of taxes or new, reduced feed-in tariffs. Yet, it weakens the motivation for further development. Presumably, the proper solution is that just a part of the surpluses should be taken away, meaning that the feed-in tariffs can be reduced only to a smaller extent in comparison with the decrease of the production costs of renewable-based energies. In view of (the timing/planning of) the development, the credible, long-term

projection of the schedule tariff cuts can be helpful. Yet, it is conditioned on some knowledge of the future trends of development (Unk et al., 2010).

6 CONCLUSIONS

With respect to electric power generation with the use of household renewable sources - typically the application of solar panels - the Hungarian feed-in tariff (KÁT) system does not encourage the installation of capacities that would be needed for the accomplishment of the national renewable targets. The deferment of the introduction of Metár since 1 January 2013, the further increase of the country risk premium, as well as the massive drop in the volume of disbursed credits - primarily to medium-sized and small enterprises - have aggravated the lack of the necessary investments. Until 2013, the reason for the delay in reforming the subsidization schemes was the serious insufficiency of funds, and thereafter the prioritization of specialized and social political objectives (overhead reduction, general, municipal and European parliamentary elections in 2014). The rate of the increase of the feed-in tariffs in January 2013 remained under the 2012 inflation rate, which encourages the improvement of efficiency, but the ratio of the utilization of renewables consequentially occurring does not reach the results of the extensive expansion of capacities.

In spite of all these obstacles - rather than adjuvant factors - the PV capacities of households have doubled, only for the benefits of energy savings. Consequently, the introduction of the Metár system would expectedly induce significant expansion in household capacities, and trigger broad-scaling, positive economic effects. It could contribute to stopping the startling decline of the construction industry, the modernization of the existing apartments, its local and decentralized nature would reinforce the positions of the small and medium-sized enterprises, it would offer alternative income-earning opportunities for the local inhabitants, create jobs, add to the society's knowledge of renewable energy carriers.

On the basis of the foregoing, countries efficiently using feed-in system systems with guaranteed prices - similarly to the one applied in Hungary - have achieved the largest capacity expansion, which is due to the nearly risk-free return indicators. Initially, the installation of capacities in the desired volumes calls for long-term (15–20–25 years) and guaranteed feed-in prices. The consequentially high renewable energy ratios improve the diversification of energy sources, and mitigate dependence on energy import. To keep the production costs of utilizing renewable energies low, in parallel to technological development the feed-in tariffs need to be cut gradually, which makes producers execute the necessary technological modernization moves to operate more efficiently, while the risk of excessively high feed-in price is effectively mitigated by the application of technology-related, differentiated feed-in prices, and as a result the energy costs of consumers drop.

In summary, the guaranteed price subsidization system is suitable for ensuring the desired efficiency, effectiveness, technological development, sustainability, cost sharing, diversification, and decentralization given that it is appropriately operated in view of the proper political will, calculability, commitment and long-term strategy, as well as the availability of funding.

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COGNITIVE MODELING AND MULTI CRITERIA DECISION MAKING IN MACROECONOMIC ANALYSIS

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ABSTRACT

Decision making in macroeconomics belongs to the class of ill-structured tasks with strong external factors interdependence, a limited number of management tools and experts groups' subjectivity. This paper suggests a technique of macroeconomic analysis which includes methods of cognitive modeling for formalizing a problem situation and scenario generation as a basis of the typical multicriteria decision making task. In turn, for solving this task is suggested a method based on measuring the distance to the «ideal» solution with determining importance of criteria by finding objective, common component of all values measured by experts groups. For extracting this «commonality» means of factor analysis are used. Such an approach allows separating of the objective part in experts' value from a subjective one, while the technique at whole provides formalization of macroeconomic problems and substantiation of decision-making in macroeconomics.

Keywords: cognitive modeling, combined strategies, decision making, ill-structured problems, macroeconomic analysis, method of finding generality, multicriteriality.

1 INTRODUCTION

Decision making is a critical problem for any branch of knowledge involving decision situations. However decision making theory (DM) as an applied mathematical tool for foundation of any possible choice is quite rare used yet. For most of typical economic tasks both factors influenced on their formulation and means of their solutions have high level of uncertainty. Even in cases where nominal scales are possible and estimation is conducted by expert groups these tasks are poorly satisfied with most DM methods requirements. And while in microeconomics there are particular types of task which can be adopted for DM means, macroeconomists mostly base their choice on theoretical analysis of connections and interactions.

A typical formulation of initial conditions is "while A is increasing, B is reducing". These types of connection in a fact make the foundation of macroeconomic analysis. Some of them are quite clear, while other vary much with every scientist's opinion. In dependency on which economic school he or she belongs to, what makes sphere of interests and etc. Consequently, decision making process has an obligate subjective part. From the one hand it is possible to solve the problem by using expert groups consisted of scientists from different economic schools, holding different opinions on the situation discussed. In that case we will get estimations based on sufficient amount of subjective opinions. Expectedly they will be objective enough. From the other hand it causes a number of other problems such as extracting of aforementioned objective part from the whole set of obtained estimations and determining factors used as criteria. Macroeconomics assumes existence of different points of view for the same problem, it is impossible to detect the best one, thereby an "ideal" solution as well as factors influence on its' achievement varies from each economist, each expert. Consequently, in the situation of determining criteria under the consequences of different vies existence there are two ways to adopt it: either to cut all criteria which are in doubt for at least one of the experts or to take into account any criteria suggested by any expert. The result of the first solution is the cropped model allows an effective application of mathematical tools.

Such a model however is not satisfied with economic theory point of view. While the second way results in a large dimensions evaluation matrix of alternatives (strategies) that leads to the problem of DM methods application.

Furthermore there is an explicit problem of initial set of alternatives determination. In the ideal case it is necessary to detect all possible ways of the problem's solution. Such a situation limits experts' opportunities. Instruments of fiscal and monetary politics are quite fixed in macroeconomic theory, while their characteristics are again described by statements "while A is increasing, B is reducing". So there are conditions of accurate numerical characteristics absence. It is quite obvious that for economic theory is more typical manipulating by causality, not quantity factors. Certainly, there are assumptions as "while A is increasing by 3%, B is 1% falling". However, such statements represent conclusions based on empirical observations (statistical data). Thereby DM tasks in macroeconomics unlike the task of for example choice of a family car, which is well-structured and easy formalized, require special methods providing transition from causality and verbal estimates to accurate mathematical language.

One more complication of classic DM methods application to developing effective macroeconomic strategies is influence of external factors or factors of variable external environment. This fact in substance is the essence of macroeconomic theory. Moreover dynamic nature of the tasks also results in some additional problems. Importance of criteria changes over time in case of economic long and short run as well as in general sense – every month, every day, every minute. Thus, an individual decision-maker (IDM) is in the situation of choice due to the lack of complete information about external environment conditions and quantitative dynamics of criteria what results in the absence of determinate connection between strategies and its consequences, which could be recorded as functional dependency.
Furthermore people who are IDMs in macroeconomic also form a standalone question. Two main features of specialists working in this sphere are quite obvious. First, their number is limited enough: legislative and administration affairs specialists, board of directors of national monetary authority and the president. Any others, analytics and consultants, can be considered only as experts, but they can't be a part of IDM group. It leads to the second feature – the high degree of IDM responsibility. Thus, every macroeconomic decision should be the reasoned one, separated from the subjective part. Besides it, for some cases their reasonableness must be explained for people who don't have special knowledge in the sphere, such an explanation should be clear and available for everybody. Exactly this   necessity of formal foundation together with requirements of objectiveness form factors called for strict mathematical tools as supporting means of making critical macroeconomic decisions.

So, there is a number of main problems which limit opportunities of classical DM methods. They in turn results in requirements for a new suitable for such situations method:
   1. Ill-structuring of macroeconomic theory. Using of natural language for its description.
   2. A limited leverage leading to limited number of alternative scenario.
   3. Subjective nature of theoretical part.
Let's consider each of them analyzing opportunities for their solution.

2 ILL-STRUCTURING TASKS
Methods suitable for ill-structured problems which require modeling of external and internal environment are based on using expert information processed with the help of heuristics,

common sense and intuition. This fact, however, does not detract from this approach objectivity, but only helps with accurate and literate formalization of the situation. Among these methods the most popular are cognitive maps, decision tree and the analytic hierarchy process. The main advantage of cognitive modelling for macroeconomic tasks is presentation of expert knowledge in the form of the scheme where are recorded casual effects of factors characterizing the situation. Furthermore this method is suitable for generating management solutions in the form of strategies (Avdeeva and Kovriga, 2010). In fact, the set of factors and casual network connecting them form a fuzzy cognitive map (FCM). FCM in this situation is representation of IDM's view on the system, its' features, principles and consistent patterns. Besides, FCMs meet the dynamic nature of the task, recording connections between future, present and past of the considerable process (Plotinskij, 1998). The core of FCM is signed directed graph, vertexes of which are criteria and alternatives, while arcs are causalities. In addition it is necessary to select manageable factors or concepts (which in fact are alternatives) and target factors (criteria). Beside it, graph could contain quite big amount of vertexes representing factors which are neither target, not manageable (or limited manageable). Their presence however is obligatory for accurate description of the system's rules. Such factors are called intermediate. External environment influence in such models is represented by external concepts. Their values are just observed and depend on external factors which are out of the model. DM tasks under such consequences require determination of alternatives' initial values which are necessary for achievement specified values of target factors. Examples of cognitive maps are available in (Evstegneev and Ledasheva, 2003; and Kulinich, 2001).

3 ALIMITED NUMBER OF ALTERNATIVES
Using of FCMs is however possible only for the specified set of initial alternatives. Under this method all the manageable concepts (graph's vertexes) pulses simultaneously, they represented as a vector contained initial values of factors important for the system dynamics. Thereby an alternative is not only any pure strategy but the combination of them. In such a statement pure strategy is just a part or a component of the mixed or combined one. Component is one of the part in which conditionally divided a pure (100%) alternative. Components could be some measurable parameters as well as separated structured parts of the alternative.

Thus, in macroeconomic application we speak about the combination of actions, tools which all together form the united strategy aimed at achievement the specified states of economy. Such an approach to a great extend is differ from classic methods of DM by reason of using combined strategies instead of the choice the only one what is common practice. For a linear task considering influence on manageable concepts, these concepts are directly connected with criteria through estimations. When internal and external impulses are taken into account those connections accrete by intermediate internal and external factors and can be even broken by them. It leads to a nonlinear task where the "ideal" strategy is almost always the combined one. Dealing with such tasks requires first of all the set of any possible combination from *n* alternatives generation. The resulting combinations should meet the following conditions: each of them should differ from any other by at least one part of the alternative; the set at the whole should contain all single, double and ternary and other *m* combinations of alternatives, where m is a maximum number of alternatives' combinations.

Using of combined strategies is very important for estimating possibility of the method application to macroeconomic tasks, when it is quite obvious that through influence on the

only one factor it is impossible to get quality changes in the whole system. The situation is analogical e.g. for decision making in politics.

4 SUBJECTIVE NATURE OF THEORETICAL PART

As discussed above one of the major problems in economic modelling is the variability of views on the situation and presence of significant subjective part in each of them. From the one hand it leads to criteria overgrowth that transforms the task in multicriteria one. From the other hand it entails a problem of assigning weights for them by an experts group. Classical methods of DM require numerical weights assigned by experts. This is complication enough for specialist used to deal with verbal categories. It can be solved by e.g. transition from quantity characteristics to categories like "A criteria is more important than B criteria". However, in this case we get a problem of agreed opinions. In this work is supported to use a method of commonality which doesn't require experts for assigning weights. It is described in detail in (Perminov and Leonova, 2012, pp. 1267-1276).

The essence of the method is using means of factor analysis for finding new common factors, which replace the initial ones, with the further determining the path of each combination of alternatives taking into account an objective part embedded in the set of the estimations made by an experts group. The next step is to find the best (minimal or maximal in dependency of aims) estimation using resulting path. On the base of such estimations are constructed a matrix of alternatives' paths deviations from the ideal one. The best alternative is the one gotten the shortest distance from the "ideal". Under conditions of combined strategies instead of pure, essence of the method is the same, but the size of the matrix will increase by reason of the growing number of all potential solutions due to taking into account all possible combinations of alternatives. In addition, the fact of taking into consideration external and internal environments factors transfers the system into nonlinear one. It results in requirement of using dynamic (asymptotic) estimations instead of classic static ones. The fact is quite important not only by the reason of economic system dynamic nature, but also taking into account that interaction of inverses connections could quite down the system as well as shake it.

5 PRACTICAL IMPLEMENTATION

For the demonstration of the method let's consider its' application to the generalized problem of capital outflow regulation in Russia. The subject nowadays is very popular and actual. It is complicated and questionable enough in its economic essence, that's why for this paper we limit the problem by elementary and obvious factors which characterize the indicator. It is quite enough for illustration how the method deals with typical problems of macroeconomic tasks.

Thus, we have a task of the capital outflow regulation (reduction). Let's list all the steps of the method:
1. Determination and analysis of factors and casual effects typical for the situation. FCM constructing.
2. FCM calculation with the aim at generation of combined strategies and the matrix construction.
3. Using the method of finding commonality for getting the best combined alternative.

Let's consider each step on the application to the specified task.

We take monetary policy tools (refinancing rate, reserve requirements), fiscal policy tools (aggregate indicator of tax policy rigidity) and indicator of privatization's actions as manageable concepts. So as a base concept for generation mixed strategies are considered instruments available for monetary authority and government. Open market operations are excluded by the reason of statistical data absence for the recent five years. For the same reasons there are no transfers and government expenditures in the list[1]. Inclusion of privatization's indicator concept in the consideration is due to its' importance exactly for russian economy, what is quite obvious by turning to the recent economic history of the country.

Such economic indicators as foreign direct inward and outward investment (as a main part of capital outflow), current account, GDP, CPI, economic stability and corruption level (as important ones for investment climate factors) are represented as target concepts – criteria in DM definitions. Banking sector liquidity indicator, money supply, external debt, total government debt, trade balance, dollar USA/ruble exchange rate, tax revenues, export, an aggregated indicator of metal prices, oil and gas prices, political stability and offshore policy form intermediate external and internal concepts[2]. Each of specified factors is represented by weighted digraph's vertex. Casual effects form its' arcs, each of them gets its' own weight illustrated the strength of the effect. For constructing such an presentation adjacency matrices are convenient enough. An adjacency matrix is a table with rows and columns corresponding to the nodes of the digraph while elements on their intersections reflects the presence of the arc, its' direction and strength. The adjacency matrix of the considered task is illustrated on Fig. 1[3].

FCM has been constructed on the base of the adjacency matrix. There is a great number of the special software for it. For this research is used decision support system based on cognitive modeling "IGLA" with options of FCMs modeling, generation and selection of scenario for management ill-strutted systems constructed on the base FCMs (Gulakov, Lagerev and Podvesovski, 2007, pp. 103-104).

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[1] The practical calculation in the paper intends to demonstrate the supporting method and doesn't pretend to be full and accuracy from economical point of view. From the other hand using of long enough time series guarantees identification of the rules in the indicator's dynamics. Thus, such an assumption for this paper could be quite adequate.

[2] Most of time series are constructed on the base of statistical data compiled and published by Bank of Russia, Federal state statistics service in the Russian Federation, IMF and OECD.

[3] For that class of the tasks an adjacency matrix, as well as internal and external factors of the problem are formed and signed by the experts who are specialist of this branch of knowledge.

	Reserve requirements	Refinancing rate	Banking sector liquidity	Money supply	Current account	Trade balance	Budget balance	External debt	Total government debt	Exchange rate	Outward foreign investments	Inward foreign investments	Tax revenues	Tax policy	Privatization activity	Export	Aggregated indicator of metal prices	Oil price	Gas price	GDP	CPI	Political stability	Economy stability	Corruption level	Offshore policy
Reserve requirements	-	-	-0,4	-0,9	-	-	-	-	-	0,2	-0,4	-	-	-	-	-	-	-	-	-0,3	-0,9	-	-	-	-
Refinancing rate	-	-	-0,9	-0,9	-	-	-	-	0,2	0,2	-0,4	-	-	-	-	-	-	-	-	-0,3	-0,8	-	-	-	-
Banking sector liquidity	-	-	-	0,9	-	-	-	-	-	-0,3	-0,3	-	-	-	-	-	-	-	-	-0,2	0,8	-	-	-	-
Money supply	-	-	-	-	-	-	-	-	-	-0,2	-	-	-	-	-	-	-	-	-	-	0,8	-	-	-	-
Current account	-	-	-	-	-	0,4	-	-	-	-	0,2	-0,1	-	-	-	-	-	-	-	-	-	-	-	-	-
Trade balance	-	-	-	0,8	-	0,4	-	-	-	0,6	-	-0,1	-	-	-	-	-	-	-	-	-	-	-	-	-
Budget balance	-	-	-	-	-	-	-	-0,3	-	-	-	-	-0,3	-0,8	-	-	-	-	-	-	-	-	-0,4	-0,1	-
External debt	-	-	-	-	-	-	-0,7	0,4	-	-	-0,6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government debt	-	-	-	-	-	-	-0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exchange rate	-	-	-	-	-0,6	-0,6	-	-0,4	-	-	0,2	-0,2	0,3	0,2	-	-0,9	-	-	-	-0,4	-0,4	-0,2	-	-	-
Outward foreign investments	-	-	-0,3	-0,2	-0,2	-0,4	-0,2	-	-	-0,5	-	0,2	-0,4	0,1	-	-	-	-	-	-0,2	-0,1	-0,3	-0,3	-	0,2
Inward foreign investments	-	-	0,3	0,2	0,2	0,4	0,4	-	-	0,7	0,2	-	0,4	-	-	0,5	-	-	-	0,2	0,1	0,2	0,3	-	-
Tax revenues	-	-	-	-	-	-	0,9	0,3	0,2	-	-0,1	-	-	-	-	-	-	-	-	0,1	-	-	-	-	-
Tax policy	-	-	-	-	0,2	0,3	-	-	-	-	0,6	-0,6	0,1	-	-	-	-	-	-	-	-	-0,1	-	-	-
Privatization activity	-	-	-	-	-	-	0,2	-	-	-	-	0,2	-	-	-	-	-	-	-	-	-	-0,2	-0,3	0,2	-
Export	-	-	-	0,9	0,9	0,4	-	-	-	0,1	-	-	-	-	-	-	-	-	-	0,2	-	-	-	-	-
Aggregated indicator of metal prices	-	-	-0,1	-0,2	-	0,1	-	-	-	-	-	-	-	-	-	-	-	-	-	0,1	-	-	-	-	-
Oil price	-	-	-	0,8	0,9	0,3	-0,2	-0,2	-	0,8	-	0,1	0,2	-	-	0,9	-	-	-	0,3	-	0,3	0,5	-	-
Gas price	-	-	-	0,6	0,7	0,2	-0,1	-0,1	-	0,2	-	0,1	0,1	-	-	0,7	-	-	-	0,1	-	0,2	0,2	-	-
GDP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0,2	-	-	-	-	-	-	0,2	0,2	-	-
CPI	0,1	0,1	0,1	0,2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0,1	-0,2	-	-
Political stability	-	0,1	-	-	-	-	-	-	-	-	0,4	-	-	-	-	-	-	-	-	-	-	-	-	-0,2	-
Economy stability	0,1	0,2	-	-	-	-	-0,1	-0,1	-	-	0,4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corruption level	-	-	-	-	-	-	-	-	-	0,2	-	-0,2	-	-	-	-	-	-	-	-	-	-0,5	-0,4	-	-
Offshore policy	-	-	-	-	-	-	-	-	-	-0,4	-0,2	0,2	-	-	-	-	-	-	-	-	-	0,1	-	-0,1	-

Figure 1: The adjacency matrix.

For application this method in "IGLA" software it is required to specify initial values of concepts using a special fuzzy rank scale. It consists of seven levels: very low, low, below average, average, above average, high, very high. It is quite obvious that such estimations are made by experts on the base of their view on the situation in question. Thus, analyzed task is represented by four manageable concepts; each of them could get seven different values according to the ranks scale[1]. The software generates 4^7 mixed strategies, for each of them manageable factors get one of seven different values according to the ranks scale. The result of the process is presented as a matrix contained values of the concepts for each alternative. Further, we should exclude values of non-target concepts, which are not criteria in DM definitions. The latest version of the matrix is presented on Fig. 2.

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[1] The scale differs a little from the one used for determining initial values of factors and consists of four ranks: very low, below average, above average, very high.

Alternative number	Current account	Outward foreign investments	Inward foreign investments	GDP	CPI	Economy stability	Corruption level
170	0,80	0,81	0,62	0,63	0,26	0,47	0,42
171	0,80	0,81	0,63	0,63	0,26	0,45	0,45
172	0,81	0,84	0,58	0,63	0,25	0,51	0,34
173	0,81	0,84	0,58	0,63	0,25	0,48	0,38
174	0,81	0,84	0,59	0,63	0,25	0,46	0,42
175	0,81	0,84	0,60	0,63	0,25	0,44	0,45
176	0,76	0,71	0,67	0,62	0,15	0,52	0,34
177	0,76	0,72	0,68	0,62	0,16	0,50	0,38
178	0,76	0,72	0,68	0,62	0,16	0,48	0,42
179	0,76	0,72	0,68	0,62	0,16	0,48	0,42
180	0,78	0,75	0,64	0,62	0,15	0,52	0,34
181	0,78	0,75	0,65	0,62	0,15	0,50	0,38
182	0,78	0,75	0,65	0,62	0,15	0,48	0,42
183	0,78	0,76	0,66	0,62	0,16	0,46	0,45
184	0,79	0,79	0,61	0,61	0,15	0,52	0,34
185	0,79	0,79	0,61	0,61	0,15	0,49	0,38
186	0,79	0,79	0,62	0,62	0,15	0,47	0,42
187	0,79	0,79	0,63	0,62	0,15	0,45	0,46
188	0,80	0,82	0,58	0,61	0,14	0,51	0,34
189	0,80	0,82	0,58	0,61	0,15	0,49	0,38
190	0,80	0,83	0,59	0,61	0,15	0,47	0,42
191	0,81	0,83	0,60	0,61	0,15	0,45	0,46
192	0,77	0,74	0,67	0,64	0,37	0,52	0,34
193	0,77	0,75	0,68	0,64	0,37	0,49	0,38
194	0,77	0,75	0,69	0,64	0,37	0,47	0,41
195	0,78	0,75	0,69	0,64	0,38	0,45	0,45
196	0,79	0,78	0,64	0,64	0,36	0,51	0,34
197	0,79	0,78	0,65	0,64	0,37	0,49	0,38
198	0,79	0,78	0,66	0,64	0,37	0,47	0,41
199	0,79	0,79	0,66	0,64	0,37	0,45	0,45
200	0,80	0,82	0,61	0,64	0,36	0,51	0,34
201	0,80	0,82	0,62	0,64	0,36	0,48	0,38
202	0,80	0,82	0,62	0,64	0,37	0,46	0,41
203	0,80	0,82	0,63	0,64	0,37	0,44	0,45
204	0,81	0,85	0,58	0,64	0,36	0,50	0,34
205	0,82	0,85	0,59	0,64	0,36	0,48	0,38
206	0,82	0,86	0,59	0,64	0,36	0,46	0,42
207	0,82	0,86	0,60	0,64	0,37	0,44	0,45

Figure 2: A fragment of the matrix under conditions of mixed strategies

To get an effective alternative we will use the finding commonality method. With the help of factor analysis we calculate principle components, which replace criteria. In application to our data we get three principle components, which has 100% percentage of variance. For extraction commonality from individuals scores it is necessary to multiply commonality regression coefficients at value of alternatives estimations. The next step is determining criteria goal: whether it requires to be minimized or maximized for achievement an effective

results, after that we find the "ideal" path for them and with the help of Euclidean distance[1] calculate the distance to it. Further, selecting out the shortest distance value we get the most effective alternative. Such an alternative in application to used data implies very low reserve requirement and refinancing rate, high tax policy rigidity and deceleration activity of privatization process.

6 CONCLUSION
This result doesn't satisfy all requirements to be suitable for accurate economic interpretation by the reason of excluded macroeconomic tools. However, it is quite obvious that it doesn't conflict with basic economic rules. Thus, we can say that this technique is suitable for the class of ill-structured tasks with great influence and strong variability of external environment, experts groups' subjectivity, priority of combined strategies over pure ones and a great number of criteria which an optimal solution should meet. The fact, in turn, shows possibility of the method application in wide sphere of macroeconomic tasks.

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[1] In (Perminov G.I., Leonova N.V., 2012) is demonstrated dependency between a chosen metric space and a final result.

THE VULNERABILITY OF A SMALL, OPEN ECONOMY IN A SITUATION OF GLOBAL FISCAL CRISIS: THE IMPACT OF THE GREEK DEBT CRISIS ON THE FOREIGN DIRECT INVESTMENTS TO MACEDONIA

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ABSTRACT

The objective of my research is to critique the International Monetary Fund (IMF) stance on foreign investment and the benefits for small, open economies of allowing the free movement of capital. In my research as a whole I will explore the extent to which this stance impacted upon and influenced the economic policies of Macedonia. This will involve providing a contextualized, critical account of the policy of the IMF focusing on a comparison of its policies during the early 2000s through policy documents, political discourse and enacted policies in Macedonia. The conditionality associated with these policies, such as the enforcement of austerity measures (including cutting public spending and reducing debt) and the privatization of public institutions has provoked strong reactions in countries which receive such loans (Goldstein et al., 2003; Feldstein, 1998). Moreover, the main aim of the policies and the lack of in-depth analysis on the levels of development of the economies involved has had devastating outcomes in the past (such as with the East Asian currency crisis [1997/8], Latin American – Argentinian crisis [2001], Ex-Soviet Union crisis [1998], Eurozone crisis [2007/8]) (Lal, 1987; Goldstein et al., 2003; Joyce, 2003).

My focus in this research is on exploring how the process of Financial Liberalization (FL) of the Macedonian economy affected capital flows in the form of foreign direct investments (FDI) in the private sector and how the recent Greek crisis of 2008 has impacted on this. According to Barnett and Monastiriotis, the neighboring countries (Albania, Bulgaria, Macedonia and Serbia) in which Greece is either the first or the second largest direct investor, are 'most vulnerable to negative spillover through reduced FDI flows' as Greek-owned FDI accounts for 7-9% of the GDP of those countries (2010: 47). In the case of Macedonia, the reality of FL was tested by the collapse of the Greek economy. The first part of my research will critically evaluate simplified models used in previous research to explain the influence of crisis on FDI in small economies like Macedonia. I will argue that investigating the impact of FL is much more complex and cannot be explained by linear regression. Instead, by undertaking an in-depth documentary analysis of official reports and documents, I will seek to investigate how the official view of the benefits of FL impacted on the Macedonian economy, thus implicitly testing the accepted IMF position.

Keywords: FDI, Financial Liberalization, Greece, IMF, Macedonia.

1 INTRODUCTION

At the end of the Second World War the victorious nations designed a new settlement to ensure a stable framework for political economy on a global basis as the Bretton Woods Conference, 1944 (Waltz, 1979). This settlement was instantiated in three international organisations: the International Bank for Reconstruction and Development (IBRD), the International Monetary Fund (IMF) and the General Agreement on Tariffs and Trade (GATT), which initially played a role in governing the international economy (Baldwin, 1993; Cox, 1987; Gowan, 1999; Shaw, 2000; Wallerstein, 1974; Waltz, 1979).

The main goal of these three institutions was controlling access to various types of resources, to provide assistance to the countries recovering from the war and to provide norms for global economic stability (Selznick, 1949; Pfeffer and Salancik, 1977; Oliver, 1991; DiMaggio and

Powell, 1983; Useem, 1993).The logic of the IMF was to transfer large amounts of money through loans in order to endeavour crisis management, and induce financial liberalisation (FL) by conditioning governments and controlling the flow of financial resources and deficits (Soc, 2009). Over the succeeding decades the organisation was relatively successful at ensuring stability in the economies who had attended the conference, but the IMF prescription was less effective in the case of the countries that did not have a seat at the table, particularly to those known as the 'developing world'.

Towards the end of the 1980s traditional economists developed what is known as the Washington Consensus, a combination of policies wherein governments prohibited the increase of budget deficits, and loose monetary policy increased inflation, in order to resolve the main issues of the Latin Americna financial crisis (Stiglitz, 2002). These policies were characterised as a more 'radical approach to economic development and stabilization' (Stiglitz, 2002: 17). Williamson indicates ten generalisations which are dispersed by academics as norms by which countries which are in the middle of the development process can obtain economic growth. This paper will focus on the process of financial liberalisation implemented by the IMF in Macedonia.

 The IMF held an influential role throughout the 1980s and 90s by assisting the countries-clients around the world in need of loans, but this then weakened significantly and the period leading up to the 2008 global financial crisis failed to highlight any need for IMF assistance (Chorev and Babb, 2009; Kapur and Webb, 2006; Ketkar and Ratha, 2009). However, the occurrence of the 2008 crisis returned the institution to a pedestal of importance, initially because of the IMF's monopolistic position, its background in the development in the periphery of the European Union, the need for financial help and control and finally, the EU's preference of collaborating with the IMF to provide rescue plans with unbounded conditionality (Chorev and Babb, 2009; Grabel, 2011, p. 808; Lutz and Kranke: 2010).

Section Two of this paper provides a contextualized, critical account of the policy of the IMF, focusing on a comparison of its policies during the early 1990s and the financial liberalization of various markets. Moreover, the main aim of the policies and the lack of in-depth analysis of the levels of development of various economies have had devastating outcomes in the past. By considering a number of examples, I intend to highlight that the conditionality associated with these policies has provoked strong reactions in the countries receiving IMF loans (Goldstein et al., 2003; Feldstein, 1998; Joyce, 2003; Lal, 1987;).

2 FINANCIAL LIBERALISATION AND THE IMF
The idea of financial globalization and global integration was developed through the process of cross country capital flows and the liberalisation and deregulation of domestic financial sectors and capital accounts; through these processes markets and the financial world in general were driven to transform their structures (Das, 2006, p. 1). As Stiglitz argues, whilst the industrialised markets liberalised their markets slowly (the FL process started after the second world war and was completed in the 1970), the process of FL was forced on developing markets and they were expected to instantly deregulate their markets, resulting in the lack of a safety net to cushion the blow from the recent economic (banking) crisis of 2008 (2002, p. 65). Therefore, the vulnerability that developing countries are faced with whilst undertaking the process of FL must not be disregarded; the overvalued local currency and the extended domestic borrowing might result in a currency crisis which would decrease the

markets credibility towards foreign investors, and lead to capital outflow due to speculation and contagion (Prasad et al., 2003, p. 5).

FL is a process through which banks and other financial institutions gain more freedom, thus resources are been allocated according to the market fluctuations (Wang et al., 2008, p. 315). According to some academics, financial integration can generate further development of both domestic markets and foreign financial institutions (De Gregorio and Guidotti, 1995; Guiso et al., 2004; Prasad et al., 2003, p. 6; Rajan and Zingales, 1998). Masten et al. (2008: 298;) argue that the more financial instruments that are available in an economy, the lesser the transaction and information costs and thus the financial development of an economy leads to economic growth by assisting in a better trade of financial agents, which increases the investment and generates economic growth (Guiso et al., 2004; Rajan and Zingales, 1998). Moreover, FL might have a positive effect on growth in a number of ways; by improving the allocation of capital, by developing national financial markets (the higher competition of IFI (International Financial Institutions) decreases the cost of intermediation and this in turn increases the request for funds and expands the size of the domestic market), and by improving the institutional structure of the market (fewer issues with asymmetry in the flow of information, better regulation policy and stability) (Bekaert et al., 2001; Giannetti and Ongena, 2007; Klein and Olivei, 2005; Masten et al., 2008, p. 299). However, the literature suggests that the level of materialisation of the positive effects on growth is dependent 'on the market imperfections and distortions, with weak financial institutions and legal system playing a role' thus FL has a positive influence on growth for developed economies, but for poor developing economies financial integration is damaging (Boyd and Smith, 1992; Edwards, 2001). The macroeconomic policies, along with a stable institutional framework, are some of the important factors that play a significant role on the level of growth achieved through FL by engaging 'less volatile and growth-enhancing capital flows', but the crucial factor for the underdevelopment of markets 'is the initial design of liberalisation and reform policies' along with institutional development that stimulates the growth rates and macroeconomic performance (Acemoglu et al., 2002; Masten et al., 2008, p. 300; Prasad et al., 2003; Roland, 2000). For the purpose of my research I intend to focus on the FL of economies represented by the 'removal of government interference in financial markets' and the liberalised foreign capital inflow (Stiglitz, 2002, p. 60). However, before moving to a detailed analysis of the crises worldwide (East Asian crisis, Latin American Crisis and Russian crisis), in this paper I critically analyse the main duties of the IMF, and the effects of the policies implemented.

The two main duties of the IMF are firstly, to identify and advise on the economic reforms that should be undertaken by a specific government in order to maximize the output for the initial period and secondly, at the same time control how the reforms are implemented by the government (Marchesi and Sabani, 2005). In other words, based on the idea that markets are not perfect (generating high levels of unemployment and stagnation) and that 'collective action at the global level for economic stability' (as well as politic stability) is required, the main intention of the IMF was to prevent a global crisis by influencing underachieving countries (through rising expenditures, decreasing taxes and interest rates) to increase their usage of their natural resources, increase demand and stimulate economic growth (Stiglitz, 2002, p. 13). However, the IMF found it difficult to objectively achieve one of its main duties - analysing and investigating in depth - what was the macroeconomic situation, how the country was performing economically, and whether it was maintaining a good level of budget deficits or was it over borrowing. It has been argued that the IMF places its main focus on inflation levels, without taking into regard the economy's levels of growth and employment -

low inflation does not necessarily indicate that the economy is stable, for it might have high unemployment and no growth (Peet, 2009; Stiglitz, 2002). The structural policies implemented by the IMF have as a main target the realisation the idea of market economy by decreasing government influence; these policies include various financial reforms, trade liberalisation, capital markets and exchange rate liberalisation, as well as privatisation of public organisations, labour-market reforms, pricing reforms and many more (Goldstein et al., 2003, p. 367; Joyce, 2003). As Stiglitz argues, the IMF never established the cause-effect relationship or the 'means with ends' connection between the policies or reforms implemented and the aims to be achieved; being one of the reasons why there is no thorough analysis before implementing policies (2002, p. 27).

'The policy conditionality is flawed' is another concern that many academics cite; the numerous performance conditions, measure of policy, and benchmark and program reviews have generated uncertainties in borrowers' behaviour and in the completion of structural programs (Frankel, 2000; Woods, 2001). The conditionality of IMF loans is seen by Stiglitz as imposing on a country terms that it must satisfy in order to receive the financial assistance, but which on the other hand might not guarantee repayment or might even generate negative political results (the policies might weaken the economy in the short run, but demonstrate benefits in the long run) (2002, p. 45). Stiglitz argues that it is the authoritarian position of the IMF that indicates that loan-recipient countries are colonies, not in a position to state their opinions on the matter; this relationship often results in tension and a sense of dictatorship as alternative policies suggested by the 'client country' are not permitted for discussion (2002, p. 43; Joyce, 2003).

Another crucial point that Volcker and Gyohten highlight is the different approach of the IMF's structural programmes towards the country's level of development: developing countries tend to undertake larger structural reforms than industrially developed countries, highlighting the obvious difference in economic and political power amongst nations (1992). The IMF's approach of 'one-size-fits-all' cannot be applied in significantly different economies or even when economies are going through a transition and where the market has not been present before.

A fourth criticism of the IMF's operating process is the way it strays from its policies and processes (macroeconomic and exchange rate policie) into a bundle of structural policies which result in IMF inconsistency and loss of reputation. The IMF lacks expertise and professionalism to generate sound policies in diverse areas such as trade policy, privatisation or poverty education, as many of these reforms fall outside the scope of the financial sector and instead should be duties of the World Bank (Goldstein et al., 2003, p. 368). Barro and Lee (2003) have come to the conclusion that the recent operations of the IMF are based on specific interests rather than objective professionalism; the size of the loan is larger and repeated when the country that is receiving it has a larger portion of influence in the IMF, or has political and economic linkages with the US and other shareholders. Additionally, Radelet and Sachs (1998) suggest another concern: private investors react to illiquidity by losing confidence in the market and decreasing capital flows, the main tool in resolving liquidity issues, thus deep structural reforms in servicing illiquidity will only result in frightening investors.

However, tasks that the IMF undertook to complete were not successful - the FL of markets was implemented too quickly in some developing countries, and even in transitional countries

there proved no positive effect on economic growth. The implementation of rapid trade liberalization made developing economies more vulnerable, leading to devastating economic and social results (Stiglitz, 2002, p. 18). Feldstein argues that developing countries in need of financial assistance hesitate to turn to the IMF straight away, as they perceive those borrowings as costly and over-conditional; these countries either turn to the IMF much later or decide to borrow from regional crisis lenders, resulting with even more difficulties in resolving crisis issues (1998, p. 24, Bergsten, 2000, p. 25). The IMF, in previous cases where economies were faced with crisis, implemented its well-known scheme of policies and reforms which focused on pro-cyclical adjustments, privatisation and FL of markets such as in the East Asian crisis in 1996, but Gerbel argues that ten years later the IMF policies are still characterised by inconsistency (2011, p. 806; Singh, 1999; Wade, 2007). In the section ahead I intend to focus on the history of the three main crises and provide a more detailed summary of the factors and outcomes of IMF's involvement in these major crises.

2.1. THE HISTORY OF CRISES

There are a number of studies that focus on specific IMF events, disclosure of programs, agreements amongst countries in debt, IMF agreements and the countries' progress of collaboration with the IMF (Hayo and Kutan, 2005). This section differs to previous studies and by focusing on a particular event (the FL of markets) that envisions the overall impact of IMF actions on investor behaviour.

2.1.1 East Asian crisis

In the 1980s the Thai economy was growing strongly, but by 1996 exports started decreasing, the rapid growth of the Thai economy which had resulted in a property market boom was stagnating, leading to distress in regards for the stability of 'non-bank financial institutions' and, as short-term foreign loans were issued, it was obvious that the Thai currency would be affected (McIntyre, 2001, p. 96; Stiglitz, 2002, p. 105). Government officials of Asian countries (including the Thai government) realised that the IMF policy of rapid FL of their markets was a destructive policy that would lead to a high inflow of money, and make the economy vulnerable to any outflow of capital (Feldstein, 1998; McIntyre, 2001, p. 96). Being unable to react to these effects of the FL (due to IMF's position towards a country not responding to IMF policies and leading to capital outflow) resulted in a crisis in the Thai economy, which spread to Indonesia, South Korea and Hong Kong (Feldstein, 1998; Stiglitz, 2002, p. 93).

Although a lot of research has been done both during and after the crisis, there is a difference in how the crisis and the factors that led to its occurrence were analysed and perceived. A number of academics have supported the fundamentalist approach which supports the idea that the crisis occurred as a result of distress in the economy, stagnation of growth, and stock and real estate bubbles (Corsetti, Pesenti, and Roubini, 1998; Kaminsky, 1998; and Krugman, 1979). On the other hand, a group of researchers argued that the collapse of the peg led to a self-fulfilling crisis (Eichengreen and Wyplosz, 1993; Obstfeld, 1996). However, most of the critics of the IMF argued that the crisis occurred because of tricky and problematic financial flows, the quick liberalisation of the market, the lack of government intervention especially on the vulnerability of domestic companies towards external debt, and the excessive foreign investment. All of these issues resulted in the IMF's bailout program which demonstrated a misdiagnosis and led to larger control and influence over the domestic economic operations of the country in crisis (Goldstein et al., 2003, p. 366; Gore, 2000, p. 799). It has been argued that the factors that led to the occurrence of the Asian crisis were not only macroeconomic

flaws, but more of a 'moral hazard' that emerged from the national institutional mismanagement (including the deficiencies rooted in the IMF) that influenced weak investments and generated loss of confidence and speculative attacks in the market (Chang, 2000; Kaminsky and Schmukler, 1999; Kindleberg, 1978; McKinnon and Pill, 1998).

With the previous argument, it is of great importance to lay out the main prescriptions that the IMF imposed on the East Asian economies and more specifically on the Thai economy, and whether they were successful or not. It has been argued that IMF policies which were implemented to achieve financial deregulation of the market removed many of the measures (controls on foreign borrowings in the private sector, coordination of borrowings and investments, weak bank supervision) established in the individual economies which provided 'stability conditions of the Asian high debt model' (Wade and Veneroso; 1998). The financial restructuring, recapitalizing of financial institutions and privatization was one of the prescriptions that the IMF imposed in order to make the Asian financial systems operate like western ones, but IMF did not succeed in making the systems operate like the western ones (Wade and Veneroso, 1998). Another point that Feldstein highlights is the fact that the IMF had imposed very detailed and microeconomic conditions on the Asian economies - but it is unacceptable for a financial institution to impose and intervene in the domestic economic policy and structure of the economy (1998; Radelet and Sachs, 2000). According to Wade and Veneroso (1998), the IMF approach produced enormous social costs whilst trying to westernise the Asian economies and reduce their high debt system; the institution was criticised for its failure to consider the economic and social costs of its actions. According to Krugman (1998), the presence of moral hazards and the 'dismantling of public guarantees on investment' decreases the level of investment and at the final stage, financial speculation emerges which pressures the economic system into an inefficient equilibrium as was the case in the Asian economies. The slowdown of the stock market and real estate market, which were fed through foreign direct investments, generated speculative actions which on the other hand led to losses and distress in the financial and cooperative sectors. These hazards generated speculations about the Asian market and led to reversals of financial capital, deflation of currency and investor panic (Corsetti et al., 1999).

2.1.2 RUSSIAN CRISIS

The beginning of the 1990s in the Soviet Union was characterized by 15 countries using the same currency with their own central bank creating credit, the cost of inflation was spread throughout the USSR and each government obtained their own seigniorage from the credit creation (Rosefielde, 2005). Even though, the USSR collapsed in 1991, in the period up to 1998 the Russian currency indicated stability and attracted foreign capital in flow (mostly short term) and the Russian privatization process both on small and large scale was graded 3 (out of 4), indicating that it was rather successful. However, according to Boettke this was 'an illusion' (1999; Martinez-Vazquez et al., 2001). During the period of restructuring the Russian economy, investments decreased due to a number of barriers such as inappropriate amounts of lending, a feeble economy based on non-payments among companies, weak bankruptcy procedures and socio-political and economic conditions (Martinez-Vazquez et al., 2001). At the end of 1998 the Russian economy, as well as western countries' expectations that the programs of stabilization would lead to a success, caved in (Gould-Davies and Woods, 1999). Amongst the various external institutions which provided strategic economic assistance driving the country through a stable transition to a market economy, the IMF played a central role (Gould-Davies and Woods, 1999; Sachs, 1994; Wedel, 1998).

The reforms implemented by the IMF were categorized into two generations, the first involved macroeconomic stabilization, privatization, monetary policy and control of inflation rates, trade and price liberalization, and removal of protection in the economy (Gould-Davies and Woods, 1999). Some of the criticisms in regards to the initial reforms were focused on the IMF decision to retain the common currency system in Russia which led to higher inflation rates, inability of currency stabilization, outflow of funds and distortion of the policy making (Gould-Davies and Woods, 1999; Wedel, 1998). Furthermore, the IMF did not succeed to forecast the collapse in output (Gould-Davies and Woods, 1999). Another criticism was that the IMF's engagement in providing support was rather lethargic; by the time the institution began to provide assistance, the domestic political environment had abraded (Gould-Davies and Woods, 1999; Sachs, 1994). There were numerous debates about whether Russia should implement a rapid 'shock therapy' of liberalisation of the market, which might have disadvantages in terms of economic failures/ increased political corruption, but without creating a majority of investors focusing on capitalism, people might have returned to communism (Stiglitz, 2002, p. 141). Prices that had been controlled were suddenly allowed to find their own level, leading to hyperinflation and exacerbating the inevitable problems that the process of transition brings. Monetary policy was implemented to decrease inflation by increasing interest rates, but the prices of natural resources were not liberalised, leading to a rapid rise in the black market on fuel, and people made profits off the wrongly implemented government policies (Stiglitz, 2002, p. 142).

The second generation of reforms Gould-Davies and Woods argue included the production of growth, oversight of the financial sector, transparency of fiscal policy, flexible labour markets, transparency in the judicial system, improved quality of governmental expenditure and a positive role of the state in the economy (1999). These reforms did not manage to generate substantial changes as there were continued problems relating to the close relationship between government and influential companies and tax evasion (Gould-Davies and Woods, 1999). The IMF advised Russia to borrow in foreign currency in order to save money (the rouble interest rate was higher than the dollar interest rate), but this difference in interest rates indicated that the rouble could devalue and make repayment of foreign creditors much more difficult for the government (Stiglitz, 2002, p. 147; Sachs, 1994). The inability to reform the economy and its fiscal policy remained a long term obstacle which led to intense corruption, tax evasion, mafia growth and illegal capital outflows (Gould-Davies and Woods, 1999). Another issue that was not taken under consideration by the IMF was that the social aspect of transition economies was not taken into account when applying the Washington Consensus policies. The eroded 'social capital' in Russia was easily observed, where corruption and stealing were a trend, not a case of misconduct. The IMF focus on inflation set aside other more substantial issues such as poverty, inequality and social capital, which are significant for forming an environment attractive for new investments (2002, p. 162). Furthermore, Sachs argues that the process of reforms relied on 'fly-in missions rather than on-the-ground assistance in Moscow'. The institution's relationship with the country's policy officials should have been more intense and the number of IMF representatives and the frequency of meetings should have been increased (1994).

According to Gould-Davies and Woods, the institution did not succeed at two main positions, in the specific and immediate goal to stabilize the Russian economy and it also failed to provide straight forward monetary advice or to 'disband the rubble zone' (1999; Sachs, 1994). Russia stopped payments and devalued its local currency resulting in financial crisis with

interest rates soaring in the former Soviet Union countries (Stiglitz, 2002, p. 149; Feldstein, 1998).

2.1.3 LATIN AMERICAN CRISIS

In the 1970s Latin America was subjected to a number of crises, hyperinflation and other economic distresses, but all of these turbulences had minor effects on the international environment (Hutchison and Noy, 2003; Kaminsky et al., 2003; Mishkin and Savastano, 2000). During the 80s, the Latin American countries initiated serious reforms to restructure their economies - they shifted away from protectionist regimes and governmental controls and began implementing market-oriented policies (Edwards et al., 1999).

In the 90s Argentina was one of the Latin American economies that was faced with high inflation rates. Advised by the IMF, the local currency was fixed to the US dollar which restricted monetary policy manoeuvres, leading to reducing inflation rates (Nechio, 2010, p. 2). However, the side effects of this monetary independence, such as the lack of labour and fiscal reforms, along with the occurrence of the Russian and Brazilian crises, generated significant outflows and increased prices which resulted in a raise of the financial debt, decreasing the competitiveness of the Argentinean market and driving it into depression (Nechio, 2010, p. 2). Thus, the lack of monetary policy that the Argentinian economy gained through fixing the local currency to the dollar, increased the confidence in the market temporarily, but in the long run limited the manoeuvres to face depression; because of the already increased debt fiscal policy, the Argentinian economy was not in a position to maintain the level of its local currency (Nechio, 2010, p. 3; Scott Cato, 2006). The crisis that occurred in Argentina can also be linked in a way to the recent crisis in Greece: both countries' monetary policies had a positive effect on the economy, generating confidence in the market and resulting in decreased inflation rates and lower interest rates, but at the same time, this monetary autonomy produced various problems in both economies (Nechio, 2010, p. 2). The Argentinian currency was vulnerable to outside speculations; these speculations produced increased capital outflows leading to negative foreign reserves (Nechio, 2010). The Argentinian bank system was left vulnerable to exchange rate risk and the costs from exchanging pesos to dollar resulted in currency discrepancies (Nechio, 2010). Keeping in mind that most of the assets were kept in local currency and liabilities were denominated in dollars, and due to the fact that 20% of their assets were made up of government bonds, the Argentinian banking system was exposed to higher sovereign default risk; this resulted in 90% of sovereign debt being held in foreign currency (Nechio, 2010, p. 3). As Nechio argues, Argentina was in a more vulnerable position compared to Greece as the previously created Argentinian currency board was jeopardized by speculations and later was neglected, which demonstrated inconsistency in how the crisis was resolved.

According to a number of academics the fact that the IMF programs have not been successful in Latin American countries can be explained by four main factors: external shocks combined with poor institutions, poor macroeconomic management, and the lack of policy credibility and nature of the stabilization programs. These led to the poor performance of the stabilization programs (Fernández-Arias and Montiel, 2001; Hutchison and Noy, 2003; Joyce, 2001; Rigobon, 2002). More specifically, Fernández-Arias and Montiel (2001) consider the instability of inflation rates (due to trade shocks and sudden movements of international capital) and volatile macroeconomic policy to be crucial in the instability and stagnation of the Latin American region and economy. Rigobon suggests that the main reason for the unsuccessful implementation of the IMF stabilization programs is the inconsistency of

implementing the policies in the Latin American countries, and the decision to abandon the programs because of the atypical nature of the policies implemented in a situation of high inflation rates (2002). On the other hand, Joyce reports that the lack of penalties when a program has not been completed, or the low costs of re-entering in a new program generates abandonment and repeating IMF programs as was the case in the Latin American countries (2001).

Therefore, the crisis in Latin America emerged as a 'result of separate and unrelated inadequate policies in individual countries, the IMF recommended virtually the same policy package to all of Latin America: devaluation, [and] reduction of fiscal deficits' (Pastor, 1987b; Pastor, 1989). As pointed out in previous cases, the main failure of the IMF and the policies implemented was the persistence that devaluation of inflation rates would attract capital inflow, and not considering that capital controls might generate scepticism amongst investors and lead away the capital flow (Taylor, 1986). As Pastor argues, the set of adjustments that the IMF had proposed to resolve the financial distress of the economies did not apply considering the circumstances. Even though there are a number of unsuccessful examples, traditional economists continue to consider liberalization and global monetarism as beneficial and will return capital in the markets, though this has not yet occurred (1989).

3 MACEDONIAN ECONOMIC HISTORY
The slow recovering economic situation in the transitional countries of the Balkan has faced obstacles in regards to policies implemented halfway, delay in developing market-oriented institutions, political inconsistency of the interest of the country and the implemented reforms were seen as imposed by foreign factors, not as a necessary reform for further development of the economy (Minassian, 2002, p. 45). As many other transition economies, Macedonia also demonstrated increase in unemployment and monetary inconsistency during the initial phase of its reform period in the beginning of the 90s, this effect was generated by the collapse of Yugoslavia and its economic system, shrinkage of the market and decrease in the demand, led to decrease in productivity of manufacturing companies and losses (Barker, 2010; IMF, 1998: 6). Therefore, companies began borrowing credit from banks which surpassed the banks' available funds, in order to stabilise these effects, the Macedonian Central Bank implemented a monetary policy and by becoming lender-of-first resort (Perotti, 1994; IMF, 1998). This increased the budget deficit, led to unfavourable real interest rates, hyperinflation and depreciation of the local currency; after these effects the government implemented 'credit ceilings', the supply of money was limited, the borrowing rate was increased above the inflation rate and the local currency was pegged with the German Deutsch-mark (IMF, 1998, p. 6; Perotti 1994). Moreover, the inflation pressure was strengthened by the increase of the financial institutions that functioned in the banking sector, mostly because of the government's low minimum equity capital requirements and the negative real interest rates for lending (IMF, 1998, p. 7). As the large part of the loans of the more dominant banks were non-performing, the government undertook recapitalisation of the non-performing loans and replaced them with government bonds, the intention was to impose limitation on the banking sector's lending operations and increase in the requirements for the minimum equity capital for the entry of new banks in order for monetary stability to be achieved in the economy (Brixi et al., 1999, p. 20). However, this practice has been argued to be not so efficient, as financial institutions in the banking sector exist to provide long term funding and loans; the main problem was the low confidence of the private sector as well the households in the Macedonian banking sector, which is demonstrated by the short term deposits that can be withdrawn immediately due to instability of the Macedonian banking system (the

hyperinflation, the collapse of the pyramid savings institution TAT and the deposits lost in the banks of Yugoslavia) (Stiglitz 1992, p. 40). The method which led to stabilisation of the inflation rates was followed by the appropriate method for stabilisation of the foreign exchange rates, which generated stability as macroeconomic indicators are very irritated by the exchange rates volatility (Brada and Kutan, 1999, p. 19; Minassian, 2002, p. 47). Thus Macedonia implemented a softer approach in stabilising the foreign exchange rate and after pegging its currency with the Deutsch-mark and devaluation of it against the USD, increased exports (Brada and Kutan, 1999, p. 19; Minassian, 2002, p. 47).

However, I would like to argue at this point that economic growth and stability are not as easily achievable especially in transitional economies. A linear and positive relation among monetary stability and economic growth in transition economies was detected through the research that Fisher et al. undertook on the levels of inflation and growth amongst 26 transitional economies (1998). Another research undertaken by Gelb and Gray which focused on analysing particular indicators of countries to determine the highest correlation among them with growth, indicate the same findings, macroeconomic stability is the main factor that lead to growth of transition economies (1991). Both Winkler and Roland discuss that the causes of the stabilisation policies are often dependent of the economic performing of the transitional country, thus low growth can be a result of the corporate governance or the inadequate privatisation processes (2000, 2000). Moreover, Winkler through his research demonstrates that Macedonia has not achieved economic growth because of the underdevelopment of its corporate governance; on the other hand, Roland's research indicates that not only corporate governance correlates with economic efficiency of the transition states but corporate governance is linked to the privatisation reforms implemented in the Macedonian economy (2000; 2000). Another research undertaken by Rizov comes to the findings that for transition economies to achieve economic growth a crucial role plays the access to resources and capital which limits the emergence of new enterprises; the limitations cause market imperfections and low levels of confidence amongst FDI , which are essential for achieving economic growth (2011). However, Altomonte and Guagliano argue that the reason why the Mediterranean part of Europe, to which Macedonia falls geographically, does not have a high level of FDI is the fact that this region is vulnerable to social distress and conflict which does not spread certainty and makes investors speculative of what outcome will their investment have; thus solving any unresolved political, ethnic or religious issues is one of the obstacles for this region's progress (2003).

Having the previously stated and being aware of the fact that the small but significant growth and increase in the industry production that Macedonia indicated in 2007 has led to some stabilisation of real wages, some increase in exports and decrease in unemployment rates, the country has not yet achieved macroeconomic stability (IMF, 2008; Barker, 2009). Therefore, the objective of my research is to critique the IMF stance with regard to foreign investment and the benefits for small, open economies of allowing the free movement of capital. I will explore the specific extent to which this stance impacted upon and influenced the policies of Macedonia. This will involve providing a contextualised, critical account of the IMF's policy prescriptions during the early 2000s and comparing these with policy documents, political discourse and enacted policies in Macedonia. In the case of Macedonia, the reality of FL was tested by the collapse of the Greek economy. I will analyse this relationship from a critical rationalist view in order to argue that the occurrence of the crisis was not a simple example of 'cause and effect', but a more complex situation. I intend to tackle the research through the idea that the non-linear interactions amongst heterogeneous agents, as well as feedback loops

defined as a 'circular arrangement of causally connected elements', bring economies into a state of disequilibrium (Arthur, 2013; Byrne, 1998; Capra, 1997; Lux and Westerhoff, 2009). My intention is to explore how certain variables (particularly the level of FDI) by causing a small effect on other variables (such as interest rates and growth), generate effects on the initial variables (the level of FDI). More specifically, these feedback loops will assist my argument that even small changes (positive feedback loops) can bring about more change that affects the first element of the cycle (Capra, 1997; Walby, 2007). If these interrelations are as complex as some theorists propose (Capra, 1997; Walby, 2007), the existing economic models are inadequate and misleading. My hypothesis is that the theory of FL being propagated by the IMF from the 1980s has had a negative impact on Macedonia. To address/answer/evaluate this hypothesis I will answer three specific research questions:

1. To what extent has the IMF liberalisation agenda been influential in determining Macedonia's policy towards foreign investment?
2. What has been the historical relationship between Greece and Macedonia in terms of FDI?
3. How did this relationship affect the consequences of the Greek crisis on the Macedonian economy?

4 CONCLUSION

Although critiques of the IMF began to emerge following the 2008 financial crisis (Stiglitz, 2010; Peet, 2009), few have focused specifically on the failure of the model of FL and virtually none have thoroughly analysed this specifically within the context of the vulnerable and interconnected economies of the Balkans (Barnet and Monastiriotis, 2010; Dimireva, 2010). My research fits into a tradition of literature that explores the body of knowledge on financial contagion globally (for example, the East Asian currency crisis [1997/8], Latin American – Argentinian crisis [2001], formerSoviet Union crisis [1998], crises in Ireland and Portugal [2007/8]), and will specifically provide an insight into how IFI have been involved with and contributed to the destabilisation and vulnerability of the present economic situation in Macedonia (Goldstein, et al., 2003; Feldstein, 1998; Peet, 2009; Stiglitz, 2002). This makes it a useful case-study of how small, open economies, which are to some extent still struggling with the process of transition, are affected by crisis and contagion affecting their economic neighbors.

My thesis will also make a theoretical contribution, by applying complexity theory in order to bring a fresh perspective to the economic study of the FL of small economies, with the specific consideration of Macedonia. By considering Macedonia a complex economic system I intend to argue that non-linear interactions of agents cause random and unpredictable effects on the macro-economic stability and growth of the country (Arthur, 2013; Frieden, 2007; Mowles, Stacey and Griffin, 2008).

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ABOUT CHALLENGES OF THE MODERN WORLD: HEALTH, ENVIRONMENT AND SOCIAL DEVELOPMENT AMERICA LATINA CASE

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ABSTRACT

The XXI century brings social and environmental unquestionable imbalance; therefore, current world is becoming in an imminent challenge: to reach social and economic progress for upgrading all human being quality of life and prosperity.

In this context, economic, social and environmental Latin America´s evolution turns in a continuing instability so that results in important changes and transformations, strengthening its development and sustainability.

A for developing communicational and educational basic research was oriented; this was a descriptive and qualitative study based in multiples cases. Also, governmental data from Chilean Health Ministry, Colombian Health and Social Protection Ministry, General Health Promoter Management of Mexico and Bolivian Health and Sports Ministry was analyzed. Conclusions indicated agricultural industry, property, healthcare programs and cities advance according to governmental purpose (social and economic responsability) for energizing local and regional development, facilitating healthy, productive and sustainable systems and processes to the people.

Therefore, empowering the community about development like a social project oriented to the most vulnerable people, allowing interaction between economic, social and environmental factors, according with global context, becomes neccesary.

Keywords: Health, Environment and Development Social

1 INTRODUCTION

The communication for Development concept recognizes that the protection of social, economic and environmental capitals are essential for achieving a productive development. In this sense, from the Communication and Development Project: a look at the Governmental Health Programs in Latin America. Cases: Bolivia, Chile, Colombia and Mexico some thoughts about the dynamics of development are provided to the general public to participate in a wellness facilitate its possibilities and options to your amp. In the same way, it is necessary to recognize the communication as an important and necessary element in any development intervention, as it seeks to create spaces where individuals and their social environment can generate new imaginary scenarios.

From that perspective, communication management strategies for development, in order to get results in a healthy, productive, sustainable, sustainable society is a challenge that must be assumed from any individual, industry, community, either locally regional or national. In this connection, the Latin American case is difficult or almost unapproachable, having into account the dynamics presented in this region. The region is changes frequently and therefore management depending on how healthy, productive, sustainable and sustainable it is limited to meet the basic needs of the vulnerable population as they simply lack a model of urban planning but not only, social, political and economic transformation ever.

Nowadays, the phenomenon of globalization as a challenge, particularly for developing countries that in their eagerness to achieve development working for an independent business and cultural openness is studied. Under this, Gumucio (2001) emphasizes that communication processes, as more human version that is dialogue, or in their organizational and media projections, are a tool to support the transformations in which the man is the center. There is no economic, social or political development that does not have the middle man.

It is therefore conceivable that the irrefutable globalization model requires that each country, sector or economic system interested in participating plan and structure your needs, strengths and weaknesses, this translates to own and maintain a modern public management, a solid productive method, invest in science and technology innovation, formalization of work, education and training human talent to encourage and sustain the industrial and corporate processes and last being socially responsible.

Thus, Gonzalez, (2008) states that the many dimensions of the relationship with the environment are almost eclipsed by the dominant economic approach. This also shows that some perspectives emphasize the importance of not only working on the environment, "external", but also consider the relationship between people and the environment (related to "interior landscape").

2 ABOUT CHALLENGES OF THE MODERN WORLD FOR LATIN AMERICA

The economy of countries, companies and individuals are now conditioned by unchanging external forces, it is called globalization, which by its very nature leads to late opening competitiveness and economic growth.

To that extent, any system, structure or society want a development conducive to their own livelihood, ie interact cordially with environmental, cultural, social and economic not face each other, but conveniently coinciding and responding to the needs of context, which ultimately are the inclusion, equity, participation, quality education, access to services to meet unmet basic needs, among others. It looked that way, it is pertinent that as society, other actors from interfering in the sustainability of plans, projects and programs created to balance the above, otherwise is unthinkable achieve sustainability of not only economic, social, political, cultural or environmental but human.

Thus, Gonzalez, E. et al. (2008) states that the many dimensions of the relationship with the environment are almost eclipsed by the dominant economic approach. This also shows that some perspectives emphasize the importance of not only working on the environment, "external", but also consider the relationship between people and the environment (related to "interior landscape"). Others insist on the critical investigation of the root causes of the socio-ecological problems in the deconstruction of agendas "development" and the creative search for alternatives.

From this perspective, the environment has established itself as one of the most debated issues in political, economic and academics throughout the global sphere encounters, besides arousing the interest of private organizations, companies and associations that analyze the environmental risks inherent in the human.

In connection with the above, the environmental problems in Latin American developing countries come to be determined by the combination of three variables: the external,

traditional and industrial development and capitalization. The environmental problems are both problems generated by the development and modernity and problems of backwardness and shortage.

The development of large Latin American cities from all dimensions is linked to the processes of industrialization (Gligo, 2001). For this it is necessary to mention that current cities have deep problems of planning, which leads us to show according to Sandia, (2009) when he says that the lack of comprehensive city planning makes the disorganization and chaos, as consequence of the social and economic dynamics, are in many respects the dominant axis in the development of it.

Consistent with the above, Vergara (2009) states that cities grow both a planned decision, planned and executed by an administrative political entity as the decision of its inhabitants, which makes the object of study of geography, ie, the space and the relationship established in him can not ignore the how, why and who uses the space and make it their territory of life. This ensures that even in a globalized world, where social, economic, political and cultural relationships occur at exponential rates, more rapid, more mediated, but at the same time, and that is the question, more specialized.

Consistently, the important thing is that the organization and planning of cities carried out thinking in terms of sustainability, to result in sustainable urban development, for any geographic space opportunities is in the ability to provide and expand or options of all inhabitants to the collective welfare.

In that measure, Santos (2000, p.67) cited by Vergara (2009) states that in the world of globalization, the geographic space gains new outline, new features, new definitions. And also new importance, because the effectiveness of actions is closely related to their location. The different social, environmental and economic dynamics and the need to move towards globalization lead to regional cities in particular trigger problems of Latin American urban land use planning, leading to the relocation of residential areas, deforestation and loss of reserves forest, indiscriminate expansion of avenues for commercial purposes pollution throughout their expressions and even leading to extreme poverty and inequality, all to make way for integrated systems development, which constantly affect the dynamics previously established either by political, economic or media by the inhabitants.

For Sanchez, (1984) Latin America has gone from an agrarian, rural society to an increasingly urban society, cities. This transition has been uneven across countries and within them. The Latin American city but has accompanied industrialization has accelerated over the past forming process. Its growth has been almost always extensive and impressive demographic concentration.

The already established cities alluding to the Colombian possess major problems of urbanization and planning, leading to a sudden, large green areas, districts, among other national treasures, are disappeared to make way for large-scale political projects -economic as roads, tourist parks, resorts ie development, forgetting to turn on the sustainability of ecosystems and development with environmental or just healthy purposes, leading to chaos and traffic congestion, making Cities slow in mobility, in addition to an even more remote the possibility of achieving escape underdevelopment uncompetitive physical infrastructure,

mainly roads and access to basic services. This characterizes the Colombian city. Either way there in Colombia specialized, modern or intelligent cities as the particular case of Medellin. Bogota Capital District even as this is far from.

As far as communication terms in health, environment and facilitate change processes, and is necessary manifest that is not presented to the media as the end to development, but as a medium employed as a strategy horizontally participatory and productive relevant in any area where you need your intervention. From that perspective, is preponderant think the close relationship between citizenship, participation, and development, as the first highly affects the second and both affect the latter.

A reason this, is necessary that at the level of nations and states, set the relationship between development and Growth and Economic, since from communication for development, with a focus on social change, the sustainability is the maximum level of development by which all individuals should move, which definitely should be paramount for Latin American, under which govern few sustainable models and therefore it will be difficult to achieve that level.

3 CHALLENGES AS A HEALTH

Table 1 Challenges as a health

Strengths	Needs	Risks
1. Proposals Governmental Health: emphasis on Promotion of Healthy Lifestyles	1. More and better coverage of public health services. 2. Change consumer's habits and unhealthy lifestyles 3. Strategies for Health Promotion and Health Education	1. Public Health Collective 2. Prevention of diseases and epidemics 3. Environmental, family and local health

4 CHALLENGES AS TO ENVIRONMENT

Table 2 Challenges as to environment

Strengths	Needs	Risks
1. Extensive agricultural production	1. Ecological and healthy production processes	1. Insertion to broad naturaland international markets. 2. Keep green measures according to the current economic demands.
1. FTAs 2. Trade Agreements 3. Active participation in international negotiations and multilateral regimes.	1. The distribution and marketing of processing technologies and ever more efficient distribution. Increase the processes of sustainable development. 2. Educate depending on the socio-environmental sustainability s	1. Regional economic resources (Need to spread progress in the periphery.) 2. The transition to a solid economy and a competitive and globalized commercial production. 3. Mobility and urban planning.

		April. The environmental health because of waste and emissions from industry and large-scale construction.

5 CHALLENGES AS A SOCIAL DEVELOPMENT

Franco (2011) helps us to come up with five ways of understanding the process of social development. These forms are detailed as follows:

Table 3 Challenges as a social development

Social Development as:	Definition:
Involvement in Society:	Process of advancement of a society that is approaching a desirable goal, involves economic, social, political and cultural aspects.
Human Welfare:	Process that seeks to lift the standard of living and improved public access to goods and services.
Support Social Sectors:	Improving the quality and coverage of quality basic social services such as education, health and housing.
Structural Change:	The process by which inequalities between different social groups are reduced.
Social Support:	Improving the level of satisfaction of basic needs of the population.

This ultimately allows us to conclude that e l as the environmental component and Economic listed as means of ensuring the "future" of these cities as to the consolidation of a sustainable and productive development. To that extent, urban sustainability is conceived as a systemic concept, from which an alternative vision of the city originates, in this system, a settlement has the ability to provide durable and efficient resources that would help offset the inequality depending on the social context. (Lopez, 2008)

6 CONCLUSIONS

It is a must for Latin America, as a region in constant transformation, achieve socio-economic and environmental development in cities achieve a process healthy, productive, sustainable, sustainable, where prime fairness and respect, where these prevail suitable for healthy and free development, where human presence is socially just and environmentally sustainable. The sustainable city is, ultimately, a challenge of the current generation and passes through a comprehensive understanding of the city as a living, special and exclusive system that is built every day with planned, participatory and concerted action of its inhabitants.

In this vein, the important thing is that the organization and planning of cities carried out thinking in terms of sustainability, to result in sustainable urban development, for any geographic area is in the ability to provide and expand opportunities or options for all residents.

From that perspective, Sandia, (2009) states that in the case of Latin America, the pursuit of sustainability must also be one of the challenges to be achieved in the coming decades, in order to guarantee all its inhabitants cities for healthy life , decent work and healthy

enjoyment, where the individual and the community can achieve increasing levels of development and prosperity. This ultimately would overcome the almost dominant contemporary city, largely overwhelmed by the urban chaos, pollution, crime, violence, and where most, especially the poorest, suffering city rather than live it and enjoy it. (Sandia, 2009).

Looked like a sustainable society with a view to sustainability, should purify itself of pollution, acquire new skills, make your more efficient and sustained production processes, improve their own management, distribute resources equitably and be diversified. (Lopez, 2008). For these reasons, it is inevitable that mobilize society towards sustainability, otherwise social, economic, political, productive and environmental conditions will be pejorative.

Thus, the relationship between the productive and sustainable, viable long survive as the dominant economic model is ductile as facilitate the provision of resources according to the environmental, health and invest in technology, education towards sustainability and not only for life but in life, as the immediate future requires decisive action today in terms of maintaining a satisfactory development, intending to enjoy an environment and a horizontal economically and socially productive.

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OPTIMIZATION UNDER UNCERTAINTY WITH APPLICATIONS TO PERSONNEL MANAGEMENT PROBLEMS IN TOURISM

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ABSTRACT
A large number of problems in production planning and scheduling, location, transportation, finance, and engineering design require that decisions be made in the presence of uncertainty. In the present paper, for improvement or optimization of statistical decisions under parametric uncertainty, a new technique of invariant embedding of sample statistics in a performance index is proposed. This technique represents a simple and computationally attractive statistical method based on the constructive use of the invariance principle in mathematical statistics. Unlike the Bayesian approach, an invariant embedding technique is independent of the choice of priors. It allows one to eliminate unknown parameters from the problem and to find the best invariant decision rule, which has smaller risk than any of the well-known decision rules. In order to illustrate the application of the proposed technique for constructing optimal statistical decisions under parametric uncertainty, we discuss the following personnel management problem in tourism. A certain company provides interpreter-guides for tourists. Some of the interpreter-guides are permanent ones working on a monthly basis at a daily guaranteed salary. The problem is to determine how many permanent interpreter-guides should the company employ so that their overall costs will be minimal? We restrict attention to families of underlying distributions invariant under location and/or scale changes. A numerical example is given.

Keywords: Invariant embedding technique, Optimization, Personnel management problem.

1 INTRODUCTION
Most of the operations research and management science literature assumes that the true distributions are specified explicitly. However, in many practical situations, the true distributions are not known, and the only information available may be a time-series (or random sample) of the past data. Analysis of decision-making problems with unknown distribution is not new. Several important papers have appeared in the literature. When the true distribution is unknown, one may either use a parametric approach (where it is assumed that the true distribution belongs to a parametric family of distributions) or a non-parametric approach (where no assumption regarding the parametric form of the unknown distribution is made). Under the parametric approach, one may choose to estimate the unknown parameters or choose a prior distribution for the unknown parameters and apply the Bayesian approach to incorporating the past data available. Parameter estimation is first considered in (Conrad,

1976) and further development is reported in (Liyanage and Shanthikumar, 2005). Scarf (1959) considers a Bayesian framework for the unknown demand distribution. Specifically, assuming that the demand distribution belongs to the family of exponential distributions, the demand process is characterized by the prior distribution on the unknown parameter. Further extension of this approach is presented in (Chu, Shanthikumar and Shen, 2008). Within the non-parametric approach, either the empirical distribution (Liyanage and Shanthikumar, 2005) or the bootstrapping method (e.g. see Bookbinder and Lordahl, 1989) can be applied with the available past data to obtain a statistical decision rule. A third alternative to dealing with the unknown distribution is when the random variable is partially characterized by its moments. When the unknown demand distribution is characterized by the first two moments, Scarf (1958) derives a robust min–max inventory control policy. Further development and review of this model is given in (Gallego and Moon, 1993). In the present paper we consider the case, where it is known that the true distribution function belongs to a parametric family of distributions. It will be noted that, in this case, most stochastic models to solve the problems of control and optimization of system and processes are developed in the extensive literature under the assumptions that the parameter values of the underlying distributions are known with certainty. In actual practice, such is simply not the case. When these models are applied to solve real-world problems, the parameters are estimated and then treated as if they were the true values. The risk associated with using estimates rather than the true parameters is called estimation risk and is often ignored. When data are limited and (or) unreliable, estimation risk may be significant, and failure to incorporate it into the model design may lead to serious errors. Its explicit consideration is important since decision rules that are optimal in the absence of uncertainty need not even be approximately optimal in the presence of such uncertainty. The problem of determining an optimal decision rule in the absence of complete information about the underlying distribution, i.e., when we specify only the functional form of the distribution and leave some or all of its parameters unspecified, is seen to be a standard problem of statistical estimation. Unfortunately, the classical theory of statistical estimation has little to offer in general type of situation of loss function. The bulk of the classical theory has been developed about the assumption of a quadratic, or at least symmetric and analytically simple loss structure. In some cases this assumption is made explicit, although in most it is implicit in the search for estimating procedures that have the "nice" statistical properties of unbiasedness and minimum variance. Such procedures are usually satisfactory if the estimators so generated are to be used solely for the purpose of reporting information to another party for an unknown purpose, when the loss structure is not easily discernible, or when the number of observations is large enough to support Normal approximations and asymptotic results. Unfortunately, we seldom are fortunate enough to be in asymptotic situations. Small sample sizes are generally the rule when estimation of system states and the small sample properties of estimators do not appear to have been thoroughly investigated. Therefore, the above procedures of the statistical estimation have long been recognized as deficient, however, when the purpose of estimation is the making of a specific decision (or sequence of decisions) on the basis of a limited amount of information in a situation where the losses are clearly asymmetric – as they are here. In this paper, we propose a new technique to solve optimization problems of statistical decisions under parametric uncertainty. The technique is based on the constructive use of the invariance principle for improvement (or optimization) of statistical decisions. It allows one to yield an operational, optimal information-processing rule and may be employed for finding the effective statistical decisions for many problems of the operations research and management science. The illustrative application of the invariant embedding technique to personnel management problems in tourism is given below.

2 INVARIANT EMBEDDING TECHNIQUE

This paper is concerned with the implications of group theoretic structure for invariant performance indexes. We present an invariant embedding technique based on the constructive use of the invariance principle for decision-making. This technique allows one to solve many problems of the theory of statistical inferences in a simple way. The aim of the present paper is to show how the invariance principle may be employed in the particular case of improvement or optimization of statistical decisions. The technique used here is a special case of more general considerations applicable whenever the statistical problem is invariant under a group of transformations, which acts transitively on the parameter space (Nechval and Vasermanis, 2004; Nechval, N.A., Berzins, Purgailis, Nechval, K.N. and Zolova, 2008; Nechval, N.A., Nechval, K.N., Danovich and Liepins, 2011; Nechval, N.A., Nechval, K.N. and Purgailis 2011; Nechval, N.A., Nechval, K.N., Purgailis, Rozevskis, 2012; Nechval, N.A., Purgailis, 2012).

2.1. Preliminaries

Our underlying structure consists of a class of probability models (X, A, P), a one-one mapping ψ taking P onto an index set Θ, a measurable space of actions (U, B), and a real-valued function r defined on $\Theta \times U$. We assume that a group G of one-one A - measurable transformations acts on X and that it leaves the class of models (X, A, P) invariant. We further assume that homomorphic images $\overline{G}$ and $\widetilde{G}$ of G act on Θ and U, respectively. ($\overline{G}$ may be induced on Θ through ψ; $\widetilde{G}$ may be induced on U through r). We shall say that r is invariant if for every $(\theta, \mathbf{u}) \in \Theta \times U$

$$r(\overline{g}\theta, \widetilde{g}\mathbf{u}) = r(\theta, \mathbf{u}), \quad g \in G. \tag{1}$$

Given the structure described above there are aesthetic and sometimes admissibility grounds for restricting attention to decision rules $\varphi: X \rightarrow U$ which are $(G, \widetilde{G})$ equivariant in the sense that

$$\varphi(g\mathbf{x}) = \widetilde{g}\varphi(\mathbf{x}), \quad \mathbf{x} \in X, \quad g \in G. \tag{2}$$

If $\overline{G}$ is trivial and (1), (2) hold, we say φ is G-invariant, or simply invariant.

2.2. Invariant functions

We begin by noting that r is invariant in the sense of (1) if and only if r is a $G^{\bullet}$-invariant function, where $G^{\bullet}$ is defined on $\Theta \times U$ as follows: to each $g \in G$, with homomorphic images $\overline{g}, \widetilde{g}$ in $\overline{G}, \widetilde{G}$ respectively, let $g^{\bullet}(\theta, \mathbf{u}) = (\overline{g}\theta, \widetilde{g}\mathbf{u})$, $(\theta, \mathbf{u}) \in (\Theta \times U)$. It is assumed that $\widetilde{G}$ is a homomorphic image of $\overline{G}$.

Definition 1 (Transitivity). A transformation group $\overline{G}$ acting on a set Θ is called (uniquely) transitive if for every $\theta, \vartheta \in \Theta$ there exists a (unique) $\overline{g} \in \overline{G}$ such that $\overline{g}\theta = \vartheta$. When $\overline{G}$ is transitive on Θ we may index $\overline{G}$ by Θ: fix an arbitrary point $\theta \in \Theta$ and define $\overline{g}_{\theta_1}$ to be the unique $\overline{g} \in \overline{G}$ satisfying $\overline{g}\theta = \theta_1$. The identity of $\overline{G}$ clearly corresponds to θ. An immediate consequence is Lemma 1.

Lemma 1 (Transformation). Let $\overline{G}$ be transitive on Θ. Fix $\theta \in \Theta$ and define $\overline{g}_{\theta_1}$ as above. Then $\overline{g}_{\overline{q}\theta_1} = \overline{q}\overline{g}_{\theta_1}$ for $\theta \in \Theta$, $\overline{q} \in \overline{G}$.

Proof. The identity $\overline{g}_{\overline{q}\theta_1}\theta = \overline{q}\theta_1 = \overline{q}\overline{g}_{\theta_1}\theta$ shows that $\overline{g}_{\overline{q}\theta_1}$ and $\overline{q}\overline{g}_{\theta_1}$ both take θ into $\overline{q}\theta_1$, and the lemma follows by unique transitivity. $\square$

Theorem 1 (Maximal invariant). Let $\overline{G}$ be transitive on Θ. Fix a reference point $\theta_0 \in \Theta$ and index $\overline{G}$ by Θ. A maximal invariant M with respect to $G^\bullet$ acting on $\Theta \times U$ is defined by

$$M(\theta,\mathbf{u}) = \widetilde{g}_{\theta}^{-1}\mathbf{u}, \quad (\theta,\mathbf{u}) \in \Theta \times U . \tag{3}$$

Proof. For each $(\theta,\mathbf{u}) \in (\Theta \times U)$ and $\overline{g} \in \overline{G}$

$$M(\overline{g}\theta, \widetilde{g}\mathbf{u}) = (\widetilde{g}_{\overline{g}\theta}^{-1})\widetilde{g}\mathbf{u} = (\widetilde{g}\widetilde{g}_{\theta})^{-1}\widetilde{g}\mathbf{u} = \widetilde{g}_{\theta}^{-1}\widetilde{g}^{-1}\widetilde{g}\mathbf{u} = \widetilde{g}_{\theta}^{-1}\mathbf{u} = M(\theta,\mathbf{u}) \tag{4}$$

by Lemma 1 and the structure preserving properties of homomorphisms. Thus M is $G^\bullet$–invariant. To see that M is maximal, let $M(\theta_1,\mathbf{u}_1) = M(\theta_2,\mathbf{u}_2)$. Then $\widetilde{g}_{\theta_1}^{-1}\mathbf{u}_1 = \widetilde{g}_{\theta_2}^{-1}\mathbf{u}_2$ or $\mathbf{u}_1 = \widetilde{g}\mathbf{u}_2$, where $\widetilde{g} = \widetilde{g}_{\theta_1}\widetilde{g}_{\theta_2}^{-1}$. Since $\theta_1 = \overline{g}_{\theta_1}\theta_0 = \overline{g}_{\theta_1}\overline{g}_{\theta_2}^{-1}\theta_2 = \overline{g}\theta_2$, $(\theta_1,\mathbf{u}_1) = g^\bullet(\theta_2,\mathbf{u}_2)$ for some $g^\bullet \in G^\bullet$, and the proof is complete. $\square$

Corollary 1.1 (Invariant embedding). An invariant function, $r(\theta,\mathbf{u})$, can be transformed as follows:

$$r(\theta,\mathbf{u}) = r(\overline{g}_{\theta}^{-1}\theta, \widetilde{g}_{\theta}^{-1}\mathbf{u}) = \ddot{r}(\mathbf{v},\eta), \tag{5}$$

where $\mathbf{v} = \mathbf{v}(\theta,\widehat{\theta})$ is a function (it is called a pivotal quantity) such that the distribution of $\mathbf{v}$ does not depend on θ; $\eta = \eta(\mathbf{u},\widehat{\theta})$ is an ancillary factor; $\widehat{\theta}$ is the maximum likelihood estimator of θ (or the sufficient statistic for θ).

Corollary 1.2 (Best invariant decision rule). If $r(\theta,\mathbf{u})$ is an invariant loss function, the best invariant decision rule is given by

where

$$\varphi^*(\mathbf{x}) = \mathbf{u}^* = \eta^{-1}(\eta^*,\widehat{\theta}), \tag{6}$$

$$\eta^* = \arg\inf_{\eta} E_{\eta}\{\ddot{r}(\mathbf{v},\eta)\}. \tag{7}$$

Corollary 1.3 (Risk). A risk function (performance index)

$$R(\theta,\varphi(\mathbf{x})) = E_{\theta}\{r(\theta,\varphi(\mathbf{x}))\} = E_{\eta_\circ}\{\ddot{r}(\mathbf{v}_\circ,\eta_\circ)\} \tag{8}$$

is constant on orbits when an invariant decision rule $\varphi(\mathbf{x})$ is used, where $\mathbf{v}_\circ = \mathbf{v}_\circ(\theta,\mathbf{x})$ is a function whose distribution does not depend on θ; $\eta_\circ = \eta_\circ(\mathbf{u},\mathbf{x})$ is an ancillary factor. For instance, consider the problem of estimating the location-scale parameter of a distribution belonging to a family generated by a continuous cdf F: $P = \{P_\theta: F((x-\mu)/\sigma), x \in R, \theta \in \Theta\}$,

$\Theta=\{(\mu,\sigma): \mu,\sigma \in R, \sigma > 0\} = U$. The group G of location and scale changes leaves the class of models invariant. Since $\overline{G}$ induced on Θ by $P_\theta \rightarrow \theta$ is uniquely transitive, we may apply Theorem 1 and obtain invariant loss functions of the form

$$r(\theta,\varphi(x)) = r[(\varphi_1(x) - \mu)/\sigma, \varphi_2(x)/\sigma], \tag{9}$$

where

$$\theta=(\mu,\sigma) \text{ and } \varphi(x) = (\varphi_1(x),\varphi_2(x)). \tag{10}$$

Let $\hat{\theta} = (\hat{\mu},\hat{\sigma})$ and $\mathbf{u}=(u_1,u_2),$ then

$$r(\theta,\mathbf{u}) = \ddot{r}(\mathbf{v},\eta) = \ddot{r}(v_1 + \eta_1 v_2, \eta_2 v_2), \tag{11}$$

where

$$\mathbf{v}=(v_1,v_2), v_1=(\hat{\mu} - \mu)/\sigma, v_2=\hat{\sigma}/\sigma; \tag{12}$$

$$\eta=(\eta_1,\eta_2), \eta_1=(u_1 - \hat{\mu})/\hat{\sigma}, \eta_2=u_2/\hat{\sigma}. \tag{13}$$

3 APPLICATION TO PERSONNEL MANAGEMENT PROBLEM IN TOURISM

Personnel management forms a significant proportion of overall costs in hotels, tourism companies and fast food restaurants. A reduction in this by even 1% represents considerable cost savings. Demand for services is not generally known with certainty before hand and management often relies on a combination of intuition, software systems and local knowledge (particularly of marketing campaigns, events and attractions). Staff scheduling is a key element of management planning in such circumstances. There have been a number of general survey papers in the area of personnel management; these include (Bechtold, Brusco and Showalter, 1991) and (Tien and Kamiyama, 1982). The latter survey concentrates on general labour scheduling models. A survey of crew scheduling is given in (Bodin, Golden, Asad and Ball, 1983). Surveys of the literature in airline crew scheduling appear in (Arabeyre, Fearnley, Steiger and Teather, 1969; Gamache and Soumis, 1998). A good survey of tools, models and methods for bus crew scheduling is (Wren, 1981). A survey of the nurse scheduling literature is provided in (Bradley and Martin, 1991; Sitompul and Radhawa, 1990). As can be seen from this review, a large amount of work has already been done in the area of personnel scheduling. Nevertheless there is still significant room for improvements in this area. We see improvements occurring not only in the area of tools, models and methods for personnel management, but also in the wider applicability of these tools, models and methods. In this paper, we consider the following personnel management problem in tourism. A certain company provides interpreter-guides for tourists. The number of permanent interpreter-guides employed by the company is such that u of them are permanently working on a monthly basis at a daily guaranteed salary c_1 (in terms of money); when the demand for their services exceeds u, supplementary interpreter-guides or extras are taken on at a daily salary c_2 ($>c_1$). Sometimes the shortage of extras will necessitate canceling a tour, and when this happens, the loss is reckoned at c_3 ($>c_2$). How many permanent interpreter-guides should the company employ so that overall costs will be minimal? Following Kaufmann and Faure (Kaufman and Faure, 1968), we review the personnel management model and provide a broader interpretation to the structure of its solution. In development of the personnel management model, we will assume that the daily demand for tours X is a continuous nonnegative random

variable with the probability density function $f_\theta(x)$ and cumulative distribution function $F_\theta(x)$. The notation, we use for the personnel management model, is given below.

X Random variable representing the daily demand for tours
$f_\theta(y)$ Probability density function of a demand X
$F_\theta(y)$ Cumulative distribution function of a demand X
θ Parameter (in general, vector)
Y Random variable representing the daily supply of extras
$p(y)$ Probability of a supply y, where $y=0, 1, ..., \infty$
c_1 Daily guaranteed salary for the permanent interpreter-guide
c_2 Daily salary for the supplementary (or extra) interpreter-guide
c_3 Shortage cost per unit of X
u Variable representing the number of the permanent interpreter-guides
u^* Optimal quantity of the number of the permanent interpreter-guides
$C(u)$ Expected overall costs as a function of u

Thus, the function of overall costs is given by

$$c(u, X, Y) = \begin{cases} c_1 u, & 0 \le X \le u \\ c_1 u + c_2(X - u), & u \le X \le u + Y \\ c_1 u + c_2 Y + c_3(X - u - Y), & u + Y < X < \infty \end{cases} \quad (14)$$

We write the expected overall costs as

$$C(u) = E\{E_\theta\{c(u, X, Y)\}\} = \sum_{y=0}^{\infty} p(y) \int_0^{\infty} c(u, x, y) f_\theta(x) dx = \sum_{y=0}^{\infty} p(y) C(u, y), \quad (15)$$

where

$$C(u, y) = \int_0^{\infty} c(u, x, y) f_\theta(x) dx = c_1 u + c_2 \int_u^{u+y} (x - u) f_\theta(x) dx + \int_{u+y}^{\infty} [c_2 y + c_3(x - u - y)] f_\theta(x) dx. \quad (16)$$

The function $C(u)$ can be shown to be convex in u, thus having a unique minimum. Taking the first derivative of $C(u)$ with respect to u and equating it to zero, we get

$$\sum_{y=0}^{\infty} p(y) \left(c_1 - c_2 \int_u^{u+y} f_\theta(x) dx - c_3 \int_{u+y}^{\infty} f_\theta(x) dx \right) = 0. \quad (17)$$

The value of u that minimizes (17) is the one that satisfies

$$c_2 \overline{F}_\theta(u^*) + (c_3 - c_2) \sum_{y=0}^{\infty} p(y) \overline{F}_\theta(u^* + y) = c_3 - c_1, \quad (18)$$

where

$$\overline{F}_\theta(x) = 1 - F_\theta(x). \quad (19)$$

If $p(y=0) = 1$, then

$$F_\theta(u^*) = \frac{c_3 - c_1}{c_3}. \quad (20)$$

In this case, we should choose the u^* such that the cumulative distribution function of u^* equals the ratio of the difference of the underage and overage costs to the underage cost. A relatively high underage cost results in a higher number of the permanent interpreter-guides, whereas a relatively high overage cost leads to a lower number of the permanent interpreter-guides, as one would expect. If the daily demand for tours X follows the exponential distribution with the probability density function

$$f_\sigma(x) = \sigma^{-1} \exp(-x/\sigma), \quad \sigma > 0, \tag{21}$$

and the cumulative distribution function

$$F_\sigma(x) = 1 - \exp(-x/\sigma), \tag{22}$$

where σ is the scale parameter ($\sigma > 0$), then

$$C(u) = \sum_{y=0}^{\infty} p(y) C(u, y), \tag{23}$$

where

$$C(u, y) = \sigma \left[c_1 \frac{u}{\sigma} + c_2 \exp\left(-\frac{u}{\sigma}\right) + (c_3 - c_2) \exp\left(-\frac{u+y}{\sigma}\right) \right] \tag{24}$$

and the value of u that minimizes (23) is the one that satisfies

$$c_2 \exp\left(-\frac{u^*}{\sigma}\right) + (c_3 - c_2) \sum_{y=0}^{\infty} p(y) \exp\left(-\frac{u^*+y}{\sigma}\right) = c_1. \tag{25}$$

If $p(y=0) = 1$, then

$$u^* = \sigma \ln\left(\frac{c_3}{c_1}\right) \tag{26}$$

and

$$C(u^*) = c_1 \left[1 + \ln\left(\frac{c_3}{c_1}\right) \right] \sigma. \tag{27}$$

Parametric uncertainty. Consider the case when the parameter σ is unknown. Let $X_1 \leq \dots \leq X_n$ be the past observations (of the daily demand for tours) from the exponential distribution (21). Then

$$S = \sum_{i=1}^{n} X_i, \tag{28}$$

is a sufficient statistic for σ, S is distributed with

$$g_\sigma(s) = [\Gamma(n)\sigma^n]^{-1} s^{n-1} \exp(-s/\sigma) \quad (s > 0), \tag{29}$$

To find the best invariant decision rule u^{BI}, we use the invariant embedding technique (Nechval and Vasermanis, 2004; Nechval, N.A., Berzins, Purgailis, Nechval, K.N. and

Zolova, 2008; Nechval, N.A., Nechval, K.N., Danovich and Liepins, 2011; Nechval, N.A., Nechval, K.N. and Purgailis 2011; Nechval, N.A., Nechval, K.N., Purgailis, Rozevskis, 2012; Nechval, N.A., Purgailis, 2012).

to transform (24) to the form, which depends on the pivotal quantity $v=s/\sigma$, the ancillary factor $\eta=u/s$ and y/s,

$$C(u, y) = \sigma\left[c_1 \frac{u}{s}\frac{s}{\sigma} + c_2 \exp\left(-\frac{u}{s}\frac{s}{\sigma}\right) + (c_3 - c_2)\exp\left(-\frac{u+y}{s}\frac{s}{\sigma}\right)\right]$$

$$= \sigma\left[c_1\eta v + c_2 \exp(-\eta v) + (c_3 - c_2)\exp\left(-\eta + \frac{y}{s}\right)v\right] = C(\eta, y, v \mid s). \tag{30}$$

We find the expected overall costs for the statistical decision $u=\eta S$ as

$$C(\eta \mid s) = \sum_{y=0}^{\infty} p(y)C(\eta, y \mid s), \tag{31}$$

where

$$C(\eta, y \mid s) = \int_0^{\infty} C(\eta, y, v \mid s)g(v)dv,$$

$$= \sigma\left[c_1\eta\, n + c_2 \frac{1}{(1+\eta)^n} + (c_3 - c_2)\left(1+\eta+\frac{y}{s}\right)^{-n}\right], \tag{32}$$

$$g(v) = [\Gamma(n)]^{-1}v^{n-1}\exp(-v) \quad (v > 0). \tag{33}$$

The value of η that minimizes (31) is the one that satisfies

$$c_2 \frac{1}{(1+\eta^*)^{n+1}} + (c_3 - c_2)\sum_{y=0}^{\infty} p(y)\left(1+\eta^* + \frac{y}{s}\right)^{-(n+1)} = c_1. \tag{34}$$

Thus,

$$u^{BI} = \eta^* S. \tag{35}$$

If $p(y=0) = 1$, then

$$\eta^* = \left(\frac{c_3}{c_1}\right)^{1/(n+1)} - 1 \tag{36}$$

and

$$C(\eta^* \mid s) = \sigma\left[c_1\eta^*\, n + c_3 \frac{1}{(1+\eta^*)^n}\right] = c_1\left[\left(\frac{c_3}{c_1}\right)^{1/(n+1)}(n+1) - n\right]\sigma. \tag{37}$$

Comparison of decision rules. For comparison, consider the maximum likelihood decision rule that can be obtained from (26) as

$$u^{\text{ML}} = \hat{\sigma} \ln\left(\frac{c_3}{c_1}\right) = \eta^{\text{ML}} S, \tag{38}$$

where $\hat{\sigma} = S/n$ is the maximum likelihood estimator of σ,

$$\eta^{\text{ML}} = \ln\left(\frac{c_3}{c_1}\right)^{1/n}. \tag{39}$$

Since u^{BI} and u^{ML} belong to the same class

$$\mathsf{C} = \{u : u = \eta S\}, \tag{40}$$

it follows from the above that u^{ML} is inadmissible in relation to u^{BI}. If, say, c_1=50, c_3=3500 (in terms of money), and n=1, we have that

$$\text{rel.eff.}_{C(\eta|s)}\{u^{\text{ML}}, u^{\text{BI}}, \sigma\} = C(\eta^* \mid s)\big/ C(\eta^{\text{ML}} \mid s)$$

$$= \frac{c_1 \eta^* \, n + c_3 \dfrac{1}{(1+\eta^*)^n}}{c_1 \eta^{\text{ML}} \, n + c_3 \dfrac{1}{(1+\eta^{\text{ML}})^n}} = 0.90. \tag{41}$$

Thus, in this case, the use of u^{BI} leads to a reduction in the expected overall costs of about 10 % as compared with u^{ML}. The absolute expected overall costs will be proportional to σ and may be considerable.

Predictive inference. It will be noted that the predictive probability density function of the daily demand for tours, X, which is compatible with (15), is given by

$$f(x \mid s) = \frac{n+1}{s}\left(1 + \frac{x}{s}\right)^{-(n+2)} \quad (x > 0). \tag{42}$$

Using (42), the predictive overall costs are determined as

$$C^{(p)}(u \mid s) = \sum_{y=0}^{\infty} p(y) C^{(p)}(u, y \mid s), \tag{43}$$

where

$$C^{(p)}(u, y \mid s) = c_1 u + c_2 \int_u^{u+y} (x-u) f(x \mid s)\,dx + \int_{u+y}^{\infty} [c_2 y + c_3(x - u - y)] f(x \mid s)\,dx$$

$$= \frac{s}{n}\left[c_1 \frac{u}{s} n + c_2\left(1 + \frac{u}{s}\right)^{-n} + (c_3 - c_2)\left(1 + \frac{u}{s} + \frac{y}{s}\right)^{-n} \right], \tag{44}$$

which can be reduced to

$$C^{(p)}(\eta, y) = \frac{s}{n}\left[c_1\eta\, n + c_2\frac{1}{(1+\eta)^n} + (c_3 - c_2)\left(1+\eta+\frac{y}{s}\right)^{-n}\right]. \qquad (45)$$

Thus, It follows from (32) and (45) that u^{BI} can be found immediately from (43) as

$$u^{\mathrm{BI}} = \arg\min_u C^{(p)}(u\,|\,s). \qquad (46)$$

4 CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

In this paper, we propose a new technique to improve or optimize statistical decisions under parametric uncertainty. The method used is that of the invariant embedding of sample statistics in a performance index in order to form pivotal quantities, which make it possible to eliminate unknown parameters (i.e., parametric uncertainty) from the problem. It is especially efficient when we deal with asymmetric performance indexes and small data samples. More work is needed, however, to obtain improved or optimal decision rules for the problems of unconstrained and constrained optimization under parameter uncertainty when: (i) the observations are from general continuous exponential families of distributions, (ii) the observations are from discrete exponential families of distributions, (iii) some of the observations are from continuous exponential families of distributions and some from discrete exponential families of distributions, (iv) the observations are from multiparametric or multidimensional distributions, (v) the observations are from truncated distributions, (vi) the observations are censored, (vii) the censored observations are from truncated distributions.

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ECONOMIC IMPACT OF RENEWED SOUTH-SOUTH DEVELOPMENT CO-OPERATION - THE CASE OF INDIA

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ABSTRACT

This paper refers, to the economic impact of India as the provider of concessional resources for foreign development. This renewed phenomenon in international economic relations has significant meaning not only for economic development of India and aid recipients, but also for the pattern of trade and foreign direct investments between those countries. The organization and instruments of India's foreign assistance were presented in connotation with motives and strategic commercial and economic objectives. The paper describes gains for India and Indian companies and for partner countries, as well as possible threats resulting from such a cooperation. Furthermore, the paper points out unique features of the India's economic assistance programme in comparison to other so called "emerging donors".

Keywords: aid, assistance, development, economic co-operation, India.

1 INTRODUCTION

Development assistance became a noticeable manifestation of renewed South-South economic and political relations after the Cold War and transition period in 1990s. A group of developing countries re-appeared as development assistance providers with the beginning of 21st century. The aid-related activities of those countries largely attracted attention of Western scholars and donor community who gave them the label of "emerging donors". The fact is, however, that some of those countries such as China, Brazil and India have been constantly delivering development assistance, since the 1950s, and by now means should be perceived as new actors. The assistance provided by them during the Cold War period and in 1990s was marginal in comparison to foreign aid volumes of industrialized Western nations, therefore the contemporary sharp increase in their aid volumes provoked discussion on the role and impact of those donors on the international aid system, aid effectiveness, and impact on recipients (Manning 2006; Naim 2007; Davies 2008; Rowlands 2010; Zimmermann and Smith 2011).

India is one of the most significant among the "emerging donors" in terms of volume of aid provided and the geographical reach of the impact of its programmes in the developing world. India's aid activities began soon after country's independence, and over 1960s and 1970s India was reputed provider of aid, especially technical assistance. The situation changed, starting from 1980s, due to internal economic difficulties India was forced to largely scale down its aid activities. After adopting a package of reforms liberalizing economy, at the beginning of 1990s, and then nearly ten-year long transition period, India began to revitalize its aid programmes, starting from 2003-04 budget. Administration reform, massive increase of funding for aid-related activities, increased country presence, and new instruments of aid provision were the clear manifestation of the rejuvenation.

The large volume and impressive scale of growth of India's aid programmes clearly impact position of India within global economic relations and the process of economic development of recipient countries, across Asia and Africa. The aim of the paper herein is to provide short account on the contemporary India's aid programmes and to discuss their economic impact

both on India's and on recipients countries' economic development. Unlike in case of China, there is still little research conducted on India's aid programmes. Therefore the paper also aims to address the gap indicated, providing some insight on actual but little explored phenomenon in international economic relations.

2 MOTIVES AND QUANTUM OF THE ECONOMIC ASSISTANCE PROVIDED BY INDIA

Next to the foreign trade and foreign direct investments, the development co-operation activities constitute the foundation of India's economic engagement in developing world. Within the period of twenty years after economic liberalization in India, the immense growth was clearly noticeable in reference to each of those dimensions, relocating country's economy from the position of poorhouse into the global hub of services, manufacturing and knowledge. India's economy became truly globalized. For instance, country's total exports rose from US$18bn in 1990-91 up to $245bn in 2010-11. In the year 2000 the outward of India's FDI stocks was close to US$1.7bn in comparison to US$92.4bn in 2010. Foreign assistance rocketed from merely $114m in 1997 up to US$1.2bn in 2013 (Nunnenkamp, et. al, 2012, p. 3; The Economic Times, 2011; Nowik, 2012). The increase in the volumes of India's foreign assistance was presented in the Figure 1 below. All of those three manifestations of international transfer of resources are inter-connected and reinforcing each other. Indicating causative relationships is thus a delusive task. Owning to the objective of the paper herein, the focus was put on the impact of aid-related activities. The explanation was also provided how foreign aid activities of India impact on the growth of exports and outwards FDI volumes.
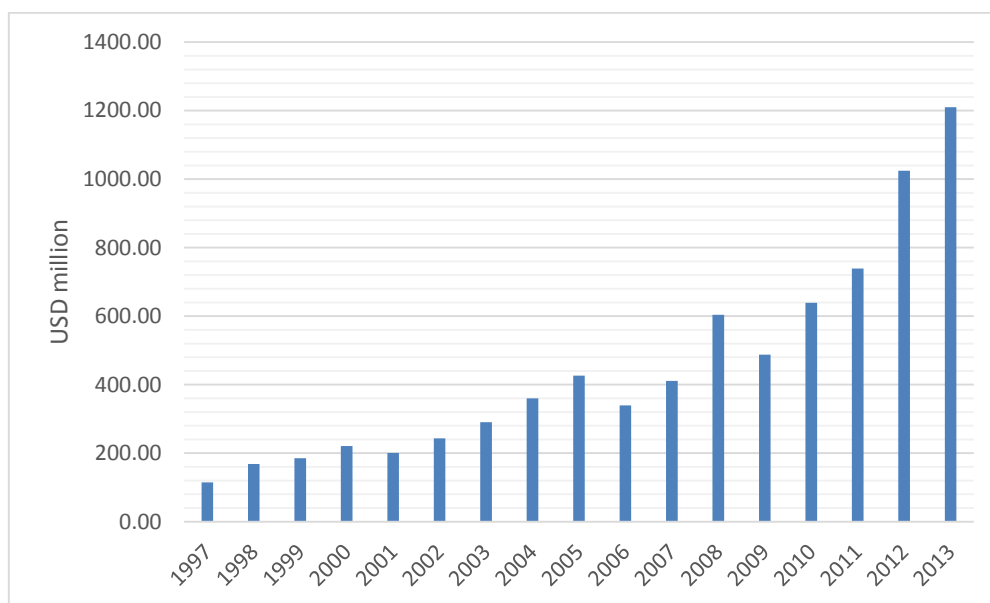
Figure 1: Allocations for India's foreign assistance (excluding lines of credit)
(source: Authors work based on Union Budget for the fiscal years 1997-98 up to 2013-14)

An important issue for understanding contemporary India's foreign assistance is a question of the motives. Why the country, with a larger population living below poverty lines than in all Sub-Saharan Africa, is engaged in providing foreign assistance? (Burke, 2010). Soon after country's independence, assistance was provided with huge dose of idealism and solidarity, aiming to help other developing states to preserve their hardly won independence. Prime Minister Nehru believed that to gain full independence, economic development is necessary,

and all countries are obliged to contribute to that process. However, already in 1960s, motives changed towards more pragmatic - geo-political and security. Economic gains were treated as secondary, partly due to the high barriers in foreign trade and investments exchange between developing countries during the Cold War. The situation changed with the rejuvenation of aid programmes at the beginning of 21st century. Although the motives behind foreign assistance remained pragmatic, the centre of gravity moved from political towards economic goals. The list of motives behind contemporary India's programme was included in the Table 1 below. In the Ministry of Finance's 2003-04 budget speech, the aims of the "India Development Initiative" were explicitly about economic self-interest of India. Namely, "to promote India as a production centre and an investment destination and leverage and promote India's strategic economic interests abroad" (GOI, 2003, p. 117). However, later the Government of India, adopted more balanced and recipient-oriented approach, "we must willingly assume greater responsibility in promoting development in other developing countries" (GOI, 2007, p. 107). Despite officially declared objectives, the fact is that altruism, sympathy or merely human considerations do not constitute the reasons for aid provision. The ideology of India's aid programmes puts an emphasis on mutually beneficial relationship and creating goodwill between partner countries in order to pursue economic co-operation. From India's point of view, aid is effective when it creates goodwill and enables economic co-operation, no eradicates poverty in recipient country. This is the key difference between Western and Indian understanding of foreign assistance.

Table 1: Motives of India's contemporary aid-related activities and programmes salaries (source: Author's own work)

Geo-political motives:
• strengthen India's negotiating position in international fora, especially the UN,
• actively shape institutional development in South-South framework,
• diversify the country's alliance and partner structure,
• exercise political and economic influence in the neighbouring countries.
Commercial and business motives:
• open up new, emerging markets for Indian companies,
• boost foreign trade (import and exports activities) in the framework of South-South co-operation,
• increase foreign investments opportunities for Indian companies.
Motives linked to domestic economic development:
• guarantee energy security (oil and electricity supply),
• guarantee access to strategic mineral resources,
• develop remote border regions due to improving cross-border connectivity and trade.
National security motives:
• strengthen regional security in South-Asia and Indian Ocean Rim,
• suppress separatist movements, organised crime and terrorist activities in South Asia,
• balance or diminish Pakistani influence in Afghanistan and Nepal.

A significant obstacle, in regards to assessment the economic impact of India's foreign assistance programmes, is the lack of reliable overall statistics. India does not provide aggregated data on all aid-related activities. One of the reasons for this seems to be that India has not developed methods of accounting that capture all concessional financing provided

abroad by different governmental ministries, agencies and entities, such as state owned corporations. Only funds managed by Ministry of External Affairs and EXIM Bank of India are reported in the annual reports of respective institutions. The large number of institutions involved, the lack of accounting system, and the high complexity of agreements, make it impossible to clearly indicate the volume of assistance provided.

Agrawal (2007, p. 5) provides an example of the Tala and the Punatsangchu hydroelectric projects in Bhutan that are being built with Indian material and money but the MEA and the Ministry of Power share the project costs. Whereas an interesting example of complex agreement, involving state-owned corporation and assistance component, was the contract of ONGC-Mittal Energy Ltd (OMEL) in Nigeria. The company - a joint venture of ONGC Videsh Ltd (OVL), an overseas investment arm of India's largest public-sector oil company ONGC, and a private company of Indian origin Mittal Investment Sarl, the world', won rights in July 2005, to explore two Nigerian blocks in return for an infrastructure investment. It committed the construction of a coal-fired independent power project, a 1,000 km railway to run from Port Harcourt to Kano, an export-based oil refinery of 120,000 bpd capacity and large-scale agricultural development in Nigeria, of total value about $6bn (Kura, 2009). It is extremely difficult to differentiate the assistance component provided by the Government of India in case of such a complex contract.

3 THE OVERVIEW OF INDIAN AID PROGRAMMES

Contemporarily, three main pillars of India's development partnership programme can be distinguished based on modalities, administration patterns and literature available. I. Pillar: Grant assistance and advances to foreign governments, administrated by MEA; II. Pillar: Capacity building programmes and disaster relief, administrated by MEA; and III. Pillar: Concessional Lines of Credit administrated by the EXIM Bank of India (Chaturvedi, 2013; Mullen, 2013; Raghavan cited in Aspen Institute India, 2013).

The first pillar consists of grant assistance (project and programme support) and advances to foreign governments, understand as budget to budget support and preferential bilateral loans. Out of Rs. 69,670m, allocated to MEA for technical and economic co-operation, Rs. 66,361.2m, i.e. 95,25%, was dedicated for the I. pillar of India's development partnership. Out of which 77% was dedicated as an aid towards Indian neighbouring countries, namely Bangladesh, Bhutan, Nepal, Sri Lanka and Maldives. More recently as the volume and geographical scope of India's aid related activities increased, more attention has been paid towards Myanmar and so called 'extended neighbourhood' in South Asia, including Afghanistan, Gulf States and Central Asia. The other regions of the world, although included, receive limited assistance in forms of grants and loans. For instance an allocation for African countries has been at steady level of 4% since the year 2000 up to the newest budget, despite the nominal increase from Rs. 50m in 2000-01 up to Rs. 3,000m in 2013-14 budget. According to Raghavan (cited in Aspen Institute India, 2013) roughly half of finance for grants and loans within the first pillar is dedicated for grant projects. The grant assistance has been utilized across variety of fields and initiatives, including cross-border connectivity, hydroelectricity, infrastructure development, power transmission, agriculture, industry, education, health and other sectors. Bilateral projects are also undertaken in archaeological conservation, information and computer technology (ICT) and small & medium enterprises (MEA, 2012).

The second pillar - capacity building, understood as an enhanced technical co-operation, has become India's trademark and globally renowned advantage, nearly since the inception of the country's foreign assistance programmes. Currently there are following active, bilateral initiatives to foster Indian technical co-operation: ITEC (India Technical and Economic Cooperation Programme), SCAAP (Special Commonwealth Assistance for Africa Programme) and Technical Cooperation Scheme (TCS) of Colombo Plan. Under those three programmes Rs. 1,696m was allocated in 2013-14 budget. It gave only 2,43% for the second pillar of India's development partnership, out of entire MEA budget for technical and economic co-operation and advances to foreign governments. In 2012-13, over 8500 civilian training slots were offered under Indian technical co-operation programmes for nominees from 161 developing countries. Moreover about 1500 defence personnel from several partner countries were imparted training in various defence institutions in India (MEA, 2012). The largest share of slots for technical co-operation was provided for Asian countries, nearly 60% of all slots available (India's neighbours, CIS with an exception of Belarus and Moldova, Pacific Island States and the rest of Asia), Africa accounted for 33%, whereas allocations for European states, the Caribbean and Middle East were marginal (below 2%).

The third pillar of India's contemporary development partnership programme are concessional lines of credit (LOC). Unlike the previous two pillars, Lines of Credit are administrated by the EXIM Bank of India and subsidised by the Ministry of Commerce. Concessional credit is, by no mean, a new instrument of India's foreign assistance, although recently largely gained on importance. Within the last few years the value of aggregated operative lines of credit significantly increased, from merely $0.953bn in fiscal year 2004-05 up to $8,569bn in the year 2012-13. EXIM Bank raises the funds for the LOCs from the international debt market and therefore is not limited by India's budget allocations. The government, according to the policy requirements, compensates to the bank the difference between market and concessional rate of a loan (interest equalisation subsidy).The geographical distribution also significantly differs in comparison to the previous instruments described. The allocations for African countries significantly increased balancing and finally overlapping those for Asia. In 2005, LOCs for African countries equalled 32% of total operative LOCs, in 2009 it was more than 60%. Currently there are 167 LOC open covering 75 countries. The majority of credit has been allocated to African countries (59%) and to Asia (36%), the share of other countries is marginal (EXIM Bank, 2013).

3.1. The impact of India's aid programmes on the domestic economy

Taking into consideration the impact of development assistance pillars on economic gains for India, probably the largest share can be associated with LOC. The recipients are nearly entirely bound to purchase to India's good and services. EXIM Bank does not deny that has been using the LOC mechanism for promoting India's exports and as an effective market entry and market diversification mechanism for Indian exporters, especially for SMEs (EXIM Bank, 2013). There is a variety of projects in different sectors of economy financed by the LOCs mechanism, such as low cost housing and economical building projects, power transmission projects, pharmaceutical manufacturing plant, development of sugar industry, cassava plantation project, tractor assembly plant and farm equipment manufacturing unit, irrigation network, fisheries development project, agricultural development and mechanization of agriculture, water supply schemes, milk powder processing plant and multi-specialty hospital (EXIM Bank, 2013). The economic gains of increased exports, new markets entry for Indian companies, diversification of customers portfolio and secured international transactions are among the most important. An impressive soar in trade between Africa and

India is the best example of flourishing economic relationships fuelled by the Lines of Credit . At the beginning of 1990s bilateral trade does not exceeded $1 billion, due to slow increase it reached $4.6 billion in 2000. By 2008, that figure had hit $36 billion and in 2011 it had risen to $45 billion. An impressive growth made Indian policy makers to revise the 2015 trade target from $70 billion up to $90 billion (Business Standard, 2013).

When it comes to project and grant assistance, provided mainly towards India's neighbouring countries, the economic gains for India are also significant, although different than in case of LOC. Despite the fact that Indian companies, both private and state-owned, are being chosen in the procurement procedures to conduct particular projects, the other gains are even more important and long-term strategic oriented. The investments in road infrastructure, railways, power-links in the neighbouring countries of India, especially Nepal, Bhutan and Myanmar is the condition for intensification of cross border trade and economic activities. Furthermore, it results in greater economic dependency of those countries on India, as a trading partner and transit country. A separate case are gains in power sector. Emerging Indian economy is one of the fastest growing consumers of energy in the world. Joint projects with aid component in energy sector, and Indian grants and loans for power plants investments, are conducted in order to stabilize and diversify supply of energy, from Bhutan, Nepal, Myanmar and Sri Lanka. India fully founded three out of four major hydro-power plants in Bhutan. All those projects were fully funded by the Government of India with 60% grant and 40% loan. The earliest investment was Chhukha Hydro Power Project conducted between 1974 and 1988. The project encompassed not only construction of four hydro-turbine units of power plant but also infrastructure development, like access to roads, schools, hospitals and residential colonies. The second was Kurichhu Hydropower Plant, initiated in 1995 and finished in 2002. The third project, Tala Hydro-Electric project, was completed between 1997 and 2007. It is significant that this is only power-plant designated to serve domestic power demand of Bhutan, whereas the other produce for exports exclusively to India (Druk Green 2013). In Nepal, India funded up-gradation of Thame Khola Small Hydropower Plant in Solukhumbu District. Myanmar, India and Singapore will partner to build a 500 megawatt coal-fired power plant in Myanmar, located in the Yangon region. Furthermore, Indian power producer Tata Power has reached an agreement, in 2013, with the government of Myanmar to build a new coal-fired plant in Ayeyarwady Region. Also in 2013, Sri Lanka and India announced a finalised $512-million joint venture coal-powered electricity plant in the island's north-eastern district of Trincomalee. However, it is not clear whether mentioned investments in Myanmar and Sri Lanka were backed with assistance funds provided by India and whether can be qualified as development assistance. Although the fact is that Sri Lanka and India's electricity grids were interconnected with the support of India's concessional line of credit.

The last pillar of development assistance to mention are capacity building programmes (mostly training and scholarships schemes but also equipment purchase). Unlike in case of the LOCs, and grants and loans the direct positive impact on the development of Indian economy is difficult to indicate. The fact is that officials from developing countries receiving training and scholarships in India may possess later positive attitude towards the country in general what can result in the future in favourable treatment of Indian companies, nationals or policy goals in their respective countries.

The aid packages including the instruments from all three pillars of India's development assistance are provided for instance for African countries. Business transactions in regards to the access of Indian companies to oil extraction rights and mineral resources are backed with

state-led aid activities. Even if the assistance is not provided in direct link with particular bid of Indian company, the previous or parallel assistance activities aim is to create goodwill towards Indian businesses and enable their smooth operations. The significant example are Indian foreign direct investments in Africa, that largely increased since 2001-02. Only in between 2008 and 2011, the total stock rose from $9.2bn to $14bn, according to IMF estimates. Other estimate cumulative Indian investments into Africa at over $35bn (CII/WTO, 2013). Investments are concentred in few recipient countries and in few industries. Ethiopia, Egypt, Ghana, Kenya, Mauritius, Mozambique, Nigeria, South Africa, Sudan and Tanzania are primary destinations for Indian companies' investments. The majority of these is limited to extractive industries: oil, natural gas and mineral ores, although few examples of other branches of economy can also be pointed out. As Bijoy (2010) enumerates India's flagship state-owned oil corporation ONGC/OVL increased its holdings from two in 1995 to fourteen in 2005 with investments in Sudan, Nigeria, Ivory Coast, Libya, Egypt, and Gabon. In 2005 ONGC/OVL entered into a joint venture with other Indian-origin company Mittal Steel (now Arcelor Mittal), signing a US$6bn infrastructure deal with Nigeria, in exchange for two offshore acreages. ONGC/OVL also invested heavily in Sudan's hydrocarbon sector, oil pipeline, refinery production bloc (exceeding US$2.15bn), in an offshore drilling bloc in Ivory Coast (US$12.5m) and two onshore oil exploration blocks in Libya (Barka and Mlambo, 2011). Arcelor Mittal, which is now the leading global steel company, launched a US$1bn iron ore mining project in Liberia. In Zambia another Indian company Vedanta Resources invested recently more than US$2.6bn between 2010-12 in copper mines projects (Times of Zambia, 2012). All those mentioned investments serve to the domestic development of India's economy, providing stable, secure and diversified supply of mineral resources and oil.

3.2. The impact of India's aid programmes on the recipient's economy

The following section is an attempt to answer the question on the impact of India's aid programmes on socio-economic development of the recipient country. First of all, recipient countries have greater choice in applying for funds for development, and are not only limited to the Western assistance. There is larger quantum of assistance to be utilized by developing countries, owning to the contribution of India. Furthermore, assistance is provided in less bureaucratic, more flexible manner and of lower transaction costs than in case of Western aid providers. An important feature and comparative advantage of India's development partnership is demand-driven approach. It is the recipient country that determine the sectors of economy or the projects that could be assisted by India. Although the fact is that the recipients, especially in case of LOC and technical assistance, are bounded to choose among Indian products and services. The next feature is non-conditionality, it means that India does not require any policy changes or country's reforms when providing assistance in form of loans, grants or lines of credit. All in all, the development effectiveness of assistance provided relies entirely on utilization of funds by the recipients. Whether the supply of additional assistance funds would be utilized for development-oriented investments or for consumption and prestigious projects is up to the recipient's choice. In case of misuse and waste of assistance falling into the trap of debt is a real threat.

The other advantage, next to inflow of additional funds, especially in comparison to other "emerging donors", is the excellence of India in particular industries and services key for economic development. Those include infrastructure development, pharmaceuticals, healthcare, IT, telecommunications and automobiles industries. Also development oriented services like, for instance, rural electrification, irrigation, development of small scale

industries are highly developed by Indian companies and their expertise in these fields is world-wide unique. The examples of India's funded projects where presented in the Table 2 below.

Table 2: Selected examples of projects funded by India under varies assistance instruments, extended over last few years to India's partner countries (source: Author's own work)

Recipient country	Industry/sector	Project description
Afghanistan	transportation	Gifting of vehicles (400 buses, 200 mini-buses, 105 municipality and 285 army vehicles).
Eritrea	food assistance	6,500 metric tonnes of wheat and 200 metric tonnes of sugar.
Guinea Bissau	rural development	Mango juice and tomato paste processing unit and purchase of tractors and water pumps for development of the agricultural sector.
Mozambique	industries	Supply and setting up of a cashew processing plant in Nangade.
Myanmar	road network	Trilateral Highway Project involving development of 1360 km of highway connecting Moreh in India to Mae Sot in Thailand through Myanmar.
Myanmar	capacity building	Setting up Advance Centre for Agricultural Research and Education in Yezin
Myanmar	telecommunications	Up-gradation of the microwave link between Moreh to Mandalay under a LOC from India. The project includes also a new optical fibre line between Monywa to Rhi-Zawkhathar.
Nepal	education	Construction and equipping school, colleges and library buildings across the country, totalling to 220.
Nepal	health care	Construction of Bharat-Nepal Maitri Emergency and Trauma Centre in Kathmandu; gift of ambulances.
Nepal	rural electrification	Support for the electrification of 25 villages through Nepal Electricity Authority grid and for solar electrification of 15 villages.
Senegal	transportation	feasibility study of the Dakar-Tambakounda-Ziguinchor railway line.
Sri Lanka	rural development	Supply of Farming machinery and means of transport were delivered, including 500 tractors and 10,000 bicycles.
Sri Lanka	health care	construction of a 150-bed hospital in Dickoya; supply of equipment to Jaffna Teaching Hospital and to Kilinochchi and Mulaittivu General Hospitals.

Furthermore, technology developed by Indian companies, is highly relevant for other developing countries. They are affordable for African and Asian customers, adjusted to operate in the environment of developing country, and accessible owing to extensive lines of credit. There are plenty of examples including Kirloskar pumps, Tata buses, Bajaj three-wheelers and many others. Also pharmaceutical industry in India delivers affordable generic drugs for customers and governments all over developing world. Companies like Ranbaxy and CIPLA are present, and recognised globally.

4 CONSLUSIONS

The phenomenon of large increase funds for India's development assistance programmes has extensive impact both on the recipients and on India's own economic development. Unlike the Western donors, India admits that the motives behind her aid programmes are pragmatic, and oriented to secure economic, commercial and geopolitical goals of India. Although being mutually beneficial, also serve partner countries in achieving theirs development goals.

The three pillars of India's development partnership programme are not equal in terms of budget allocations, are not coherent when it comes to geographical distribution and the recipients are being chosen on a base of different economic and political criteria. Fore sure there are different aims and motives behind each of those pillars. Also the economic gains for India depends on particular instruments. In case of lines of credit there is increased exports and new market entries, whereas grants and loans contribute to secure supply of power, oil and mineral resources to India. Technical assistance schemes, on the other hand, work for creating goodwill in partner countries. From the recipient's point of view, the gains largely depend on its own policies, demand and utilization of additional resources received from India. If utilized well, the impact on economic development can be substantial, owning to particular qualities of India's programmes indicated in the paper. In case of misuse there is a risk of falling into debt trap and economic dependency on India without entering the path of economic development.

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THE FORMULATION OF LOCAL VALUES-BASED RECOVERY PROGRAM (LEARNING FROM THE EXPERIENCE OF THE PROVINCIAL GOVERNMENT OF EAST NUSA TENGGARA-INDONESIA)

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ABSTRACT

The research aims to determine how the social design of policy formulation in recovery after disasters and social conflicts. The method used in the study is a qualitative research design, data collection techniques through documentation and interviews with key informants. The recovery of the public life after reconstruction due to natural disasters and social conflicts demanding greater government attention to solve bersoalan arising through the formulation of programs oriented to local values. The importance of such a policy given that the public is the target to be met interests, and basically in their social life with values that serve as a guide in achieving a common goal. The Formulations recovery program based value is essentially a process of public policy formulation design also is social design process that relies on the dimension; (1) a value appreciation of relevant actors; (2) an orientation toward conflict resolution, problem solving, and change. The first dimention concerns an administrator's to listen to other voices, share in others experiences, and gain new knowledge. The second describes the administrator's orientation toward conflict resolution, problem solving, and change; the administrator's actions can range from proactive to reactive. Research indicates that, the experience of local government in the province of East Nusa Tenggara post-disaster and conflict should be a lesson for having successfully implemented local values-based formulation design in formulating regional development programs.

Keyword: Local Values, Policy Formulation, Social Design

1 INTRODUCTION

The Province of Nusa Tenggara Timur-Indonesia, province in Indonesia is vulnerable to natural disasters and social conflicts. The catastrophic natural disaster ever to hit this province is the tsunami disaster in 1992 that killed 1952 people and injured 2126, whereas social conflict in general is the issue of land, namely disputes regarding boundaries of neighboring communities, and communal land ownership issues.

The implications generated by disasters and social conflicts are people suffering and trauma. The question then becomes the main concern of local governments to find a way out to feel peaceful and well-being to be recovered.

Efforts taken by local governments to recover after disaster strikes the community and social conflicts are addressed through a range public policies oriented development programs of local values. Local values are the values that flourish in a society that has been used as interact to achieve the purpose of the society.

Importance Of these local values in the formulation of policies to improve social conditions after the disaster and social conflicts become urgent because the top-down policies that are sometimes ignored the interests and needs of the affected communities and social conflict. Mapping to the needs and interests of local communities are less accommodated because the policies are made not consider the perspective of the target group. According to Edward III

(1980:13), that if public policy is viewed from the perspective of policy customers, then value judgments are inevitable. This view confirmed that policies that work should pay attention to the condition of the people, because they will be affected by a policy. Just as also noted by Saifullah (2008:39), which states:

"The problem that arises due to a mismatch between the policy taken by the state in the field, sometimes the problem is regarding the aspects that cannot be measured quantitatively. For example, in relation to the system of values, cultural differences, understanding or perception, sense of justice, and freedom, and so forth"

The views of both writers are reinforced by the opinions Nurjaya (1985), which states that the policy that ignores local values ultimately led to the marginalization of local communities. Model Policies into top-down and not rooted in local cultural values.

In the last three decades product public policy are taken by the government in dealing with natural disasters and social conflicts tend to showed characteristics of patterned centralized, exploitative, sectoral, closing the space for transparency and public participation, ignoring the rights of local communities. The ways that resulted in: (1) neglect of the principles of justice; democracy, public participation; (2) create marginalization and destruction of the social order, local culture as a centralized government is required to be standardized; (3) occurred the criminalization process, victimization, and dehumanisasi of local community activity in the utilization of development, stigma tends degrade existence of local communities, (Nurjaya, 1985).

Therefore the need for reform in post-disaster management policy and social conflict by considering local values. The reason for the local community as a layer of grass roots support system with the knowledge that they have quite thick and flexible in the face of various challenges, they remain survival through a process of continuous adaptation over the centuries with the environment in which they live. This article aims to determine the extent of social design formulation of policies adopted in recovery after disasters and social conflict case study of East Nusa Tenggara province of Indonesia.

2 THEORETICAL FRAMEWORK

2.1. The value and Decision Making

Any decision regarding public interest should consider the values prevailing in society. The attention to the dimensions of this value also because of the condition of the administration-politic dichotomy (Waldo, 1949:169), which explains that, values and political power has been in operation starting from the stage of agenda setting up the policy process to street-level policy implemementasi.

The assumptions built into the decision-making is also based on the notion that politics is generally defined as allocating values authoritatively or determination process, who gets what, where, and how? Of course this is in line with the diffusion theory (Frederickson, 1997, p. 41), which states the importance of the fit between the goals and the change of the dominant values in society. Values such as empathy., honesty, ability to innovate, and the value of concern for the public interest so to help policy-makers perform the duties entrusted to him.

The values are used as the basis for policy-making is also influenced by other factors in the decision-making process, as proposed by Winarno (2002, p. 93), which states that:

"The problem then is the criterion (of values or measures) such as whether that influence political decision-makers? To answer these questions we will be faced with many factors that influence the decision makers, such as political pressures and social, economic conditions, procedural requirements, prior commitments, etc".

According to Anderson (2003, pp. 126 - 127), that there is various values that surround and guide the policy makers in the decision-making process, namely organizational values, professional values, personal values, the values of the policy, and ideological values . Overall these values are widely considered by the decision maker. There is a tendency of public decision-makers to ignore the values held in the decision making process, when actually they are very helpful in determining what is good, bad, desirable or undesirable. The relationship between decision making and attention to the values of the public or the public interest represented by Michael (2003, p. 21), in his book entitled "The Foundation of Public Policy", that there are 5 main elements of any decision that is supposed to represent the public interest / public values namely: (1) recognition of the rights of the individual; (2) attention to the public; (3) accountability of decision makers to the public; (4) representation public; (5) a formal process to separate and restrict the role of the decision maker.

Rational decision makers to always be rational, namely the manner in which effective policies that can be implemented. Rationality based on means-ends logic, which assumes that the best option was approved by the policy objectives. In the decision-making process, alternatives have been considered a great way for the achievement of goals. Therefore in decision theory, rationality is to minimize risk and ensure institutional continuity as a goal or value (Simon, 1947, p. 164). Rationality in decision-making processes be concerned to the selection of alternatives, actually intended not merely to maximize their values, but simply reached a level of satisfactory or good enough (Wahab, 1990, p. 65). Satisfaction is described and rational attitude allows administrators which face certain decisions, simplifies the problem by not examining all possible alternatives. In this case the administrator seems to follow common sense, making important choices that may be overlooked. Hence the concept of rational according to Simon (1947, p. 165) called bounded rationality.

The policy analyst careful that bias make recommendations on the goals and values, because these recommendations help the analyst to provide input to a conclusion about the main alternatives in decision-making can actually be applied to problem Solving the problem faced by the public. Associated with this, Dror in Wahab (1990, p. 66), presented a number of suggestions that rational decisions can be made, namely: (a) knowing the values of the whole society; (b) knowing precisely the policy alternatives available; (c) knowing all the possible consequences of each alternative selected policy; (d) calculate the ratio between the value achieved by the community with the sacrifice that has been given by them for each policy alternative selected; (e) choosing the most efficient alternative.

To carry out suggestions as proposed above, according to Wahab (1990, p. 66), public policy makers should take the following steps: (a) formulate and create hierarchy that it controls values; (b) formulate specific goals that match those values; (c) identify all relevant options or the means to achieve these goals; (d) calculate all the result of earlier choices and compare them with each other; (e) set options or combine the best choices are seen to maximize the achievement of the values that   have been defined previously.

2.2. The Role of Values in Public Policy

Some studies show that the success of a policy is determined by the extent to which the policy attention to the values embraced, either by formulators, implementing policies and values held by the target policy, where the policy is applied. The results of study done by Nursalam (2009) showed that the implementation of the policy because the results are not optimal since the policy formulation to implementation factors ignored public values.

The value in the organization is essentially something that is considered important to be used as a guide in achieving a common goal. According to Schein (1985, p. 7) value is expressed as:

"The basic assumption, which is discovered or developed by a group of people as they learn to cope with problems of external adaptation and internal integration, that has worked well so it is considered valid to be taught to members of the code of conduct".

From that perspective, the value of the system can be expressed as a composition of the principles and rules to help someone choose alternatives, resolve conflicts, and make decisions, materialized into a cultural value. As such a value includes an interconnected pattern or structured values that appear on each level, both at the individual, group, organization or society, the values are placed in a hierarchical arrangement is significant. A normal value is relatively stable or slow change, and have the ability to influence behavior and decision making specific choices or decisions. The value judgment occurs when a value applied to the policy-making situation, or on some aspect of the policy process.

Tachjan (2006, p. 119), further argued that:

"The norms of behavior and attitude patterns are a set of values of shared meaning of the members of the organization in the belief, assumptions, perceptions, preferences, outlook and attitude in overcoming the problem. Shared meaning, shared understanding, or collective mind, is a sense of togetherness in the organization's members have and use those values as a characteristic, prevailing the long time, different from other organization, and can be taught from one generation to the next ".

These values are creating artifacts in the form of technology, art, patterns of behavior. These values arise due to the presence of the basic assumptions relating to the mutual relationship with the environment, the nature of the reality of time and place; nature of human nature; nature of human activity, and the nature of human relationships. The shared values will become members of the organization in carrying handle and is the foundation obligation to behave, as well as a guide for dealing with problems of external adaptation and integration efforts into the organization so they know how they should act. Thereby the values of the organization can be used to achieve a competitive advantage and organizational effectiveness through the formation of attitudes and behavior patterns of members of the organization work.

Based on the views of some of the functions of the values or culture as presented above, the in the development of public policy formulation theory of Jones (1994, p. 164) take relevant dimension of value as an important determinant. As also stated by Dunn (1981, p. 87), that value is *"The Systematic, reasoned, and critical examination of values is an essential element of policy analysis"*. The condition empirical policy formulation showed that the failure of government programs related efforts with the values embraced by the formulators and implementers apparatus as well as the target of the policy. Several main values such as accountability, transparency, efficiency, effectiveness, responsibility, and competition, as well

as the values of social justice is less in the formulation and implementation of government policy.

Such as the value of social justice according to Frederickson (1984, p. 43), emphasizing on: (1) equality in government service; (2) accountability for decision-making and implementation of programs of public managers; (3) changes in public management; (4) responsiveness to citizens' needs rather than the needs of public organizations; (5) an approach to the study of the administration that is interdisciplinary, applied and solve problems as well as theoretically healthful.

The issue of the importance of the dimension values or environmental factors in the formulation of public policy has been included by some authors as a-dimensional, as proposed by Simeon (1976, p. 550), which states:
"Machine politics and policy-makers are and work within a framework that severely limit their alternatives and innovations. The framework is shaped by socio-economic, power systems, the ideas, the values dominant in society, as well as the institutional structure of society. The policy process cannot be separated from the ideas, namely culture and ideology. A policy is a function of the ideas, values, theories, and beliefs dominant in society ".

Meanwhile Smith (1973, p. 200) in his book entitled "The policy implementation process", suggests environmental factors as one of the dimensions to see the implementation of public policy. Smith (1973, p. 200), argues four variables in policy implementation, namely: the idealized policy, the implementing organization, the target group, and environmental factors. Environmental factors are factors that may affect or be affected by the implementation of the policy, may be a condition of cultural, social, political, and economic. The understanding of influence of environmental factors is very important because public policy may not be separated from the influence of the environment in which policy is made and implemented, including the environmental factor is the political culture, public opinion, social systems, and economic systems. According to Nakamura and Smallwood (1980, p. 22), environmental of policy implementation are occupied by different people, depending on the policy that is being implemented. They are policy makers, policy implementers official, middleman, voter groups, community groups affected by the policy, the media and the policy evaluator.

Various problems faced by the community is not enough to just set a formal policy through so many failures in policy implementation, as it by Kartodiharjo (2006, p. 31), to minimize the limitations, policies need to be put in at least five aspects, namely:
1. Values are shared;
2. Academic or empirical evidence already known the truth;
3. Getting political support, that gets a deal or win the votes obtained by the limits set representation;
4. Implemented by the organization or institution is capable perform it;
5. Be accepted by society at large, especially the direct contact with the running of these policies.

3 METHODS
The research uses a qualitative research design with a descriptive analysis method. According to Creswell (1994, p. 173) argues that qualitative research is interpretative research. As such, the biases, values and judgement of the researches become stated explicitly in the research report. Such openess is considering to be useful and positive. The use of this method is to

describe and assess qualitatively, extent of the formulation of local value-based recovery programs after disasters and social conflict in the province of Nusa Tenggara Timur.

Determination of the informants in this study are determined by purposive, with the snowball technique. At first the researchers met informants base, namely: members of the House of Representatives of the Republic of Indonesia, officials in the Regional Development Planning Agency, academic observers of social development who knows the other as informants or key informants. Key informants in this study obtained or known based on a recommendation from the base of the first informants researchers encountered.

4 RESULTS AND DISCUSSION

4.1. Overview Nusa Tenggara Timur Province

Nusa Tenggara Timur Province (NTT) consists of 20 regency and 1 city with a population of 4,679,316 inhabitants. NTT consist of 1,192 islands but only 42 inhabited islands, which lie between 8 ° - 12 ° South latitude and 118 ° - 125 ° East Longitude, with a total land area of 48,718.1 km2. In climatology, NTT is a semi-arid areas with low rainfall. Wet or rainy season is usually quite short about 3 to 4 months with average lowest annual rainfall of 800 mm and 3,000 mm high.

NTT province's economy depends on agriculture which contribute 39.62% of the Gross Domestic Product (GDP). NTT economic growth rate was 5.63% in 2011 while the growth in the national economy in the same year reached 6.46% (Gismar dkk, 2013).

NTT Human Development Index increased gradually in recent years. Yet low income levels and high prevalence of malnutrition in NTT puts ranked 31 out of 33 provinces in 2009 (Map of Food Security and Vulnerability NTT, 2010). NTT provincial government determined to bring prosperity to the community by Setting 8 (eight) agenda development strategy, namely: (1) strengthening the quality of education; (2) health Development; (3) economic development; (4) infrastructure development; (5) systems development of a righteous law; (6) consolidation of spatial and environmental stewardship; (7) empowerment of women, children, and young; (8) special agenda including poverty reduction, development of border areas, the development of the islands, and development of a natural disaster-prone areas.

NTT provincial government with the support of all local government in NTT province strive to develop their leading centers to make this area as a provincial livestock, corn provinces, sandalwood province, and the provincial co-operative. With largely topography of the area is hilly and mountainous, land slope reaches > 40% most of the production area is located on land with a slope of 8-40 °, consequently very high erosion potential and cause degradation rate of land resources is high, even vulnerable to natural disasters.

In the following table 1 shows the number of disasters in the province of NTT over the period 1992-2008.

Table 1: The Type Natural Disaster in Nusa Tenggara Timur Province (Village Potential Statistics of Province Nusa Tenggara Timur, 2008)

No	The Types of Natural Disaster	Frequency
1	Landslide	51
2	Flood	177
3	Flood with Materials	29
4	Earthquake	6
5	Earthquake with Tsunami	1
6	Tide	153
7	Tornado	223
8	Volcanic Eruption	5
9	Forest on Fire	53
	Total	**698**

The incidence of the biggest disasters that ever happened NTT province, which is earthquakes with tsunami in 1992, when the amount 152 dead, 2126 injured people (NTT Natural Disaster Management Agency, 2008).

4.2. Social Conflict in Nusa Tenggara Timur Province
The conflicts that have occurred since 2005-2010 in communities in the province of Nusa Tenggara Timur has caused many losses including the number of people who died 14 people, 259 injuries, losses estimated 681 billion Rupiah. In general, a conflict dominated by conflict over land, which is caused by: (1) the issue of ownership of Indigenous / indigenous, either individually or in groups, (2) Land boundary problems and, (3) Land tenure issues.

The latest incident happened is 20 attack on the home of inhabitant in the village of Langga Lete,Wewewa Barat, Sumba Barat Daya - NTT. The incident was triggered by a land dispute between the perpetrator and the victim that resulted in disaster. Chronological events namely: on 6 March 2013, 20 people attacked the victim who has just wrapped up happily on his new home. A three-year-old son was also hit by a stone in the head. The child was treated at Caritas Hospital, Waitabula (capital Sumba Barat Daya), but his soul is not saved. He died on March 10, 2013.

Land disputes in various areas in NTT, there has been a long time. Previously, also in June 2011, in the village of Reda, Southwest Sumba, five people were killed over a land dispute. (Peace and Policy Studies, 2013). As a whole in NTT from 2005 to 2010 the amount land disputes as many as 255 cases, of the amount of new 189 was already resolved 66 cases while in handling. (Report on the work visit Council of Representatives, 2010)

4.3. Design of Policy Formulation Based Local Value
Jun (2006) argues that accommodate local values are very vital in the formation of public policy, to reach the value of one of the models offered are social model. Design or social model is the interaction of two main dimensions, namely: (1) a value appreciation of relevant actors; (2) an orientation toward conflict resolution, problem solving, and change. The first dimention concerns an administrator's to listen to other voices, share in others experiences, and gain new knowledge. The second describes the administrator's orientation toward conflict

resolution, problem solving, and change; the administrator's actions can range from proactive to reactive.

Furthermore according to the Jun (2006) social design is a synthesis between the rational and incremental design frame (science and art) offers a conceptual lens that leavens interactive processes with political and social skills. The public administration should be seen as science but more than science, more than art— constructive syntesis—with skillful administrators drawing from either or both perspectives to understand the complex dimentions and move their facilitative and deliberative process forward, anticipating contestation among the stakeholders and any actor who might be affected by the outcome of a decision.

The social design as a conceptual metaphor for this field because it goes beyond the range of the other approaches to include philosophical and social considerations that better represent the real world of public administration. Therefore, the social model is combines a high appreciation of the values of relevant actors by focusing on interpretation, understanding, sharing, and learning in organizational and social relationship and by taking a proactive stance regarding conflict resolution, learning, problem solving, and change. The essence of social design is develop of prosess that facilitates interaction and participation stakeholders in policy formulation.

In the process of policy formulation is created as viable alternatives are formulated through sosial interaction and networking among administrators, experts, politician, social groups, clients, and citizens associated with specific issues and problems. The process of social design assues that design participants work to create solution that are relevant to the problem and the means for implementing these solution.

Purposes and goals are socially constructed, developing out of human interaction, dialogue, and mutual learning. Political consensus is not then ultimate goal of social design. The focus, instead, is on understanding different ideas, experiences, and technical and social knowledge and on developing shared responsibility through decentralization.
Through this social model of the social conflicts can be overcome and find a way out. According to Schattschneider (1960) public policy can be seen as a conflict between various groups in society are different views and interests.

4.4. The formulation of Public Policy-oriented local value
The formulation of public policy is the beginning of a series of policy process, with the understanding that the actual formulation of policy will provide direction in order to implement the policy effectively. Results will direct policy formulation and impact to the people, that is the impact of not only the behavior of administrastif agencies responsible for implementation of and compliance with the target group, but also a network of direct and indirect political power, economic, social involved in the implementation of the program.

The formulation of programs or policies, may not be implemented in empty space, therefore environmental factors will affect the program formulation process. According to Lindblom (1968), in understanding the process of policy formulation we need to understand the actors involved in the policy formation process, both the actor and the actor is not officially authorized. The actors have a role, a form of power, have interaction with each other, and they watch each other.

This paper focuses on how policy formulation associated with local values. As noted by Anderson (1969) that in the formulation and formation of policies to consider local values, due to the formation of policy is basically the result of a dynamic social process.

Policy formulation is a dynamic social process of implementation and continuous improvement of the policy as a result of changes in resources and environment. Winarno (2011), argued that in order for an organization remain alive, then changes may be made so that the organization can adapt to its environment. Changes taking place, both related to organizational resources and the environment should respond through changes to organizational policies. As such, the processes that occur within the organization regarding policy formation as adaptation to changes in society.

Based on the data obtained that the programs drawn up by the government based on local values indicated in the table 2.

One example of the program as shown in the table 2 is the Community Food Institutional Development Program, designed to; (1) institutional strengthening food security in support of rural household food security; (2) increasing the role of the community in the improvement of household food security. The main activities of this program are: (1) develop a model of independent food institutions in rural; (2) optimizing the role of social institutions in the rural culture of food security; (3) coordination of food security across sectors, regions, and actors.

Table 2: Programs Based on Local Values (Nusa Tenggara Timur Province Local Regulation No. 2 of 2004)

Item	Programs	Sector
1	The Program of Improvement Production and Productivity of Farmers.	Ekonomi Economy
2	The Program of Institutional development of Community Food.	Economy
3	The Program of Cooperative Partnership Model Development	Economy
4	The Program of Improvement and Maintenance of Roads and Bridges Infrastructure	Economy
5	The Program of Settlement Facilities and Infrastructure Development	Economy
6	The Program of Development of Basic Education	Human Resources
7	The Program of Health Service Quality	Human Resources
8	The Program of Family Planning, Reproductive Health and Family Empowerment	social welfare
9	The Program of Strengthening Inter-Religious Harmony Life	religion
10	The Program of Rehabilitation of Critical Land	Spatial and the Environment

As a follow-up program has been drawn up, the government allocates funds for the implementation of the program to, as shown in the table 3

Table 3 Financing Development in Nusa Tenggara Timur Province during 2006-2010 (Report of the Working Visit House of Representatives, 2010)

Year	The Local Revenue (Rp)	Central Government Transfers (Rp)	The local Revenue (%)	Central Government Transfers (%)
2006	151.158.639.000	513.639.600.000	22,74	77,26
2007	191.852.909.366	657.845.006.000	22,58	77,26
2008	208.190.685.000	730.741.315.000	22,17	77,83
2009	223.882.850.000	1.536.272.665.334	12,72	87,28
2010	286.095.616.683	789.653.559.386	26,60	73,40

The data in the table 3 showed that the ability of local governments to allocate funds for the development is still very limited, which is only capable of 26, 60% of all outstanding loans. Central Government dominates the whole process of development financing.

5 CONCLUSIONS

The Local value as a public value for a particular locality are become very urgent for the guidance of government administration and development, government task is to accommodate local values in carrying out its duties and functions. This obligation is actually a form of government responsibility in the welfare of its people. In extreme Moore (1994) argues that the government should carry out the task of accommodating the local value through the creation of public value by arguing that managers should create public value encourages a kind of leadership, entrepreneurialism, and opportunism that should be reserved for those who run for office, not those who run public organisations. It gives public managers too much encouragement to lose the constraints of principle and effective democratic oversight and pursue their own self-serving or idiosyncratic notions of the public's interest.

The importance of this local value to be used as a reference for the government in making the program considering that society needs leadership from these managers to help it learn what is both desirable and possible to do in public domains for which these managers are temporarily responsible. Nearly always, the politics surrounding a public enterprise are sufficiently contentious to suggest several different plausible and sustainable conceptions of public value (Moore, 1995).

Related with the public value, Smith (2004) suggested the value of the public as a result of social and political interaction. Such interaction involves politicians, officials and communities. Focusing on public value enables one to aggregate issues for scholarly analysis in terms that should also make sense to citizens and communities, political activists and people responsible for delivering public services. Focusing on public value can help communities, service providers and political leaders ask and answer a new and wider range of questions while continuing to learn from recent experience, however complex and contested. Therefore the value of the public can provides a path to reconciling democracy and efficiency through dialogue and exchange.

This study finds that formulation of value-based programs in recovery after disaster and social conflict implemented by the provincial government of Nusa Tenggara Timur successfully identifying local values so put it in local development planning. These programs are consistent with the needs and problems encountered by the affected communities and social conflict.

The formulated programs that are relevant to the local value consists of programs that derived from sectors of the economy, human resources, religion, spatial and the environment. Whole the program is related to the communities needs of the affected disaster and social conflict.

The ability of local government financing from local revenue to fund the program that is have not only capable of handling up to a maximum of 26.60%, while the remaining derived from central government transfers.

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DEREGULATION OF THE NIGERIAN ECONOMY : THE THEORETICAL MILIEU

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ABSTRACT
The deregulation of Nigerian economy was the main thrust of the Structural Adjustment Programme (SAP) introduced in the country in 1986 under the leadership of General Ibrahim Babandiga (1958-1993). Prior to that period the Nigerian economy was almost a command one with wide range of government control. Indeed, the introduction of SAP was said to be a final solution to the economic crisis faced by the Country. Unfortunately, SAP was introduced yet, the economy became more crunched. During the General Abach's regime (1993-1998), SAP was suspended out rightly. When General Abdulsalami Abubakar (1998-1999) took over, he continued pursuing the privatization programme which is a synonym of deregulation of the economy with the promulgation of another privatization decree. The civilian government led by President Obasanjo which took over from 1999 made deregulation the core with vigour. It is basked on this development that this paper intends to unravel the theoretical paradigm under which the deregulation of Nigerian economy could be explained. This includes capitalism, imperialism, colonialism particularly the incorporation of Nigerian into international capitalist system.

Keywords: Deregulation, economy, capitalism, colonialism, Structural Adjustment .

1 OVERVIEW OF THE NIGERIAN ECONOMY
The Nigerian economy has been undergoing fundamental structural changes over the years. There is evidence, however that the structural shifts in the economy have not resulted in any appreciable and sustain economic growth and development. The economy which was largely at a rudimentary stage of development has been experiencing some structural transformation immediately after the country's independence since 1960. Unequivocally up to the early 70s, agriculture was the core of the economic activities in Nigeria. During that period, manufacturing and mining activities were at a very low level of development. The country's participation in the external trade was based on the level of economic activities in agriculture. Thus, agricultural commodities dominated the country's export trade while manufactured items dominated imports (CBN, 1993).

However, the oil boom of 1973/74 brought a new dimension into the economic activities of the country. The sharp increases in oil revenue from N735 million in 1972 (Ibid.) had a pervasive effect on the Nigerian economy. This was because the increase in revenue led to large increases inn public spending designed to expand infrastructure, non-oil productive capacity, human capital and to heal the wounds of the civil war that ravaged the country between 196t7 and 1970. In other words, the performance of Nigerian economic growth during 1975-1985 period has its antecedent in the quadrupling of crude oil prices in 1973-1974. The resulting large windfall gain enabled the country not only to expand the public investment almost three folds over the subsequent years but also to build up its foreign reserves. But many of those investments were carried out without sufficient attention to their economic viability (Oyejude, 1991).

These rising wages and an appreciating domestic currency squeezed the profitability exports of non-oil exports, while cheap imports competed with domestic food production. As a result, the country's resources shifted from the production of non-oil traded goods mostly agricultural to hat of non-traded goods mostly public services. Thus, the emergence of the oil boom, relegated agriculture to the background and within a short period, Nigeria became a major food importer which cost the country N116.40 billion (1998), N119.87 billion (1999), N134.81 billion (2000) and N174.76 billion (2001). In addition, production of export crops declined substantially, making the country dependent on a volatile international oil market for almost all her export earnings and most of the Federal, State and Local government revenues (Shariff, 2004).

Consequently, with the sharp fall in the international oil price in the early 1980s, early 1985 and late 1986, Nigeria's economy was almost at the verge of collapse. This led to the country's built up of large fiscal and external deficits and other macroeconomic imbalances which ensured. To address this problem, government introduced several policy measures which started with the Stabilization Act or 1982, budget-tightening measure of 1984 and finally the 'Structural Adjustment Programme (SAP) of late 1986. SAP was aimed at laying the foundation for a self-reliant and dynamic economy. The corner stone of the SAP is the deregulation of the economy in other words called privatization of the economy.

Indeed, SAP was aimed through the combination of exchange rate and trade policy reforms, at revitalizing the non-oil sector of the economy with stabilization policies in order to restore the Balance of Payment equilibrium and price stability. SAP emphasized the downsizing of public sector and improving the efficiency of public asset management. Import license and agricultural marketing board were eliminated, price controls were lifted and liberalization of the financial system was almost important instrument of stabilization (CBN, 1993). However, the problems of internal and external imbalances and the undue depend fenced on oil which brought about the adjustment problems still persist. This implies that there is as relative insensitivity of the economy to the corrective policies.

It should be noted that, the genesis of deregulation of the Nigerian economy could be hinged substantially on the economic crisis faced by the country. This economic crisis could be traced to the lopsided character of the post-colonial developmental path followed by the country. The foundation of this lopsidedness was laid from 1945 when the country was under colonialism. During the period, the country in alliance with foreign capital promoted import-substitution industrialization. This was carried out through the use of peasant surpluses to fiancé the importation of the inputs necessary for the growth and expansion of manufacturing activities (Olukoshi, 1993).

In explaining the causes of this economic crisis sin Nigeria many reasons have been adduced. Some of these reasons emanated from the neo-capitalist Economist the nationalists and the neo-Marxist. The neo-=capitalists, toeing the Nigerian official line, submitted that it was the international oil market glut and the rescission in the world market rather than domestic reason that the economic crisis. And that the solution is for the world market to return to the path of economic expansion before Nigerian economy could improve. The Nationalist, it was the prevalent of fraud and mismanagement of Nigeria resources that caused the economic crisis. And that as far as such attitude continues definitely the economy would never be back on track. To the neo-Marxist, the economic crisis could be anchored on specific role of contractors, consultants and middlemen and their various ruinous activities. That, the way in

which the patron client network operates contributed to the country's economic decline. It suffices to say here that; the Nigerian economy is characterized by lack of organic linkages between agriculture and industry, production and consumption an autochthonous capital base, development of indigenous manufacturing sector, balance of payment problem, heavy debt burden, low gross domestic product (GDP), labour inflexibility, high unemployment rate, inadequate provision of social services and poor maintenance of infrastructural facilities, the near collapse of the manufacturing sector etc. (Ibid:57).

2 CONCEPTUALIZATION

Deregulation of a Country's economy could be conceptualized as privatization, divestiture, and marketization of the economy. In essence no government but private participation in the Country's economic activities. This is kin order to ensure competitive economic system devoid of monopoly and allow price mechanism of demand and supply's principle of economy to prevail. According to Ahmed (1993:iii). Deregulation of an economy entrails according greater weight to the private sector as the prime mover of the economy's opposed to the emphasis son the dominance of public sector. To achieve this objective, greater role are assigned to market factors as against the use of pervasive administrative controls. This is aimed at stabilizing and fundamentally restructuring the economy and places it on a durable and suitable growth path.

As a major solution to the economic crisis experienced in Nigeria, in 1986y Structural Adjustment Programme (SAP) was introduced with the central aim of deregulating the economy. To Ayodele (1994), Privatization in other words deregulation is one essential aspect of price and market reforms which entrails both unshackling private sector development through removal of government restrictions on private economic activity and divestiture of the state assets particularly State Owned Enterprises (SOEs) into private hands.

The main objectives of deregulation include: introducing a market economy; increasing economic efficiency; establishing democracy and guaranteeing political freedom and increasing government revenue (Dhaji and Milanovic, 1991). It is also assumed that economics based on private prosperity a re better institutions for preserving individual freedoms than economies where the productive apparatus is socially owned (Ijhaiya, 1999). Moreover, for government to be effective, it has to restrict itself surely to the areas of governance and within that duty provide guidelines for the operation of economic activities which can be performed better by private individuals. This is needed the situation under which deregulation of the economy is introduced in Nigeria.

3 THE THEORETICAL MILIEU

The theoretical foundation of deregulation draws largely from the general equilibrium theory which among other things indicates the relevance of efficient pricing in ensuring optimal allocation of society's limited resources for efficient production of the various needs of society and efficient distribution of the commodities and services among various consumers. Thus, the concept of perfect competition and free market imply that the general equilibrium analysis will tend to yield an optimal allocation of resources since competitive equilibrium prices ensures that supply and demand are equal and in the long-run, all firms which can produce profitably will enter the industry to ensure long-run stable and sustainable growth (CBN, 1993).

It is obvious that such optimality results cannot be achieved under centralized planning or command economies which depend on elaborate control. This is because such system is hardly able to arrive at a set of efficient prices which will ensure that all firms maximize their profits by covering their costs and earning reasonable margins, while consumers maximize their unity. And even in recent times, there has been some ferment in economics about the role of the state in economic life (Killick, 1989).

Traditionally, the state's economic role has been defined in terms of a reasonability to correct or eliminate various market failures which place serious limitations on the allocative efficiency of the free market and justify the need for government intervention. Foremost among these are failures of competition, existence of externalities, incomplete markets, information failures, public/merit goods, macro economic instability, creative failures and poverty/inequality. Although development economists no longer assume that the existence of market failures constitutes adequate cause for state interventions. This is because, experience, especially in the peculiar circumstances of developing counties, has taught that government has a duty to rectify these failures through the use of taxation and subsidies to moderate if not remove the observed distortions arising from the market failures. Even among the Socialist Economist (Social Democrat), the case of market globalization is widely accepted (Ibid).

Importantly, there is indeed a symbiosis among capitalism, colonialism and imperialism as theoretical milieu underlying deregulation. Colonialism which implies the policy and practiced of a strong power extending its control territorially over a weaker nation or people has a long history but commonly regarded as an attribute of the late 19th century imperialists who conquered large tracts of the globe to find themselves ruling area. Indeed, colonialism of that latter period had been usually used pejoratively to denote an unwarranted sense of racial superiority and the set of at tributes, beliefs and practices that sprang from it Walter Rodney, 1985).

That is, the contradiction in capitalism in terms of the transplanting reduced the rate of profit and arrests the capitalization of surplus blue in the western world in the 19th century. In addition to this development was the sole aim of profit maximization by capitalism both of which culminated in the need for a new environment in which the process of accumulation could continue. Therefore, the capitalists turned to foreign lands, attacked and subjugated them and integrated their economies to those of Western Europe through colonizing imperialism. To date that experience of western imperialism, particularly colonialism cum capitalism remain the most decisive phenomena in the history of Nigeria like any other colonized countries of the world (Ibid.).

Unequivocally, colonialism severally decaptialised the third World Countries, distorted and dislocated their economic and social systems. Their economics were disarticulated and specialized unconsciously in the production of raw materials to the metropolis in an international market with unequal exchange. Thus, the colonized periphery countries were made to depend on the metropolis (the developed countries) for almost everything. Base on this promise, it could be concluded that the deregulation of Nigerian economy is an idea packaged and sold by the metropolis thorough their agencies such as World Bank and International Monetary Fund (IMF) (Thonvbere, 1989).

Moreover, the classical political economy which is capitalist was more concerned with the

best way to engage in the production distribution, exchange and consumption of goods and services with no role for government but the market in such growth and development. The aim was to remove encumbrances placed by ambitious governments and bureaucrats on the free operation of a market economy and therefore in favcour of the market economy with its vaunted claim to efficiency (Mishan, 1983). In the bid of classical political economy to preach and promote capitalism and liberalism, it argued essentially, that a nation's true economic wealth is derived from the industry and the economic right of the people to choice. That the state should therefore only engage in the provision of internal and external security. It further argued against the various restrictions in international trade. Based on this premise, the current deregulation of the Nigerian economy could be said to have its root in the contest of the classical political economy and should be situated therein (Momoh and Hundeyin, 1999).

Furthermore, the world economic system that is essentially capitalist promotes an international division of labour in which the industrialized Capitalist Countries (IOCs) produced the manufactured goods while the third World Countries were forcefully made to produce raw materials needs of the IOCs whose price are determined by the latter. This unjust and unbalanced international division of lab our began through the process and logic of colonialism driven by imperialism and currently propelled through the political legislation of the Bretton Woods system as represented by the World Bank and IMF which hegemoniezed the Euro-dollar as an international currency of convertibility and a god reserve (Onimode, 1988).

In order to sustain this world economic system an international capitalist financial system was established made up of multilateral institutions comprising General Agreement on Tariffs and trade (GATT), the International Monetary Fund (IMF), the World Bank Group; International Reconstruction and Development (IBRD), International Development Agency (IDA) and the International Financial Corporation (IFC). The World Bank and IMF were established to help give aid to European countries to enable them come out from ruins of the First and Second World Wars in order to reconstruct their economies. Unfortunately, their orientation and policy objectives changed with time. AS ARGUED BY Onimode (1988:278).

Since 1979, IMF has been offering more assistance to third world countries under its stands-by arrangements of Extended and Facility, with preconditions. Similarly, the IMF gives :letter of intent" (clean bill of health) to member states that are in need of World Bank loans with harsh conditionalities among which is the deregulation of the economy among others. And even a look at those conditionalities reveals their pernicious effect on the countries such as Nigeria which are caught in a "debt trap" have to take the bitter pills. Unequivocally, the adoption of the policy measures and initiatives couched in economic liberalism or deregulation of the economy has further pauperized the third World Countries and made their economic crisis assume a tragic proportion. In a nutshell, the activities of the World Bank and the IMP have in recent times further contributed to the underdevelopment of the Third World Countries such as Nigeria and have made them to be more dependent on and subservient to the West (Momoh and Hundeyin, 1999)P. Unequivocally, the basis of the World Bank and IMF conditionality is the deregulation of the economy which has also been added to the democratization of the polity.

Thus, this IMF conditionalities such as trade liberalization, monetary anti-inflationary measures, fiscal anti-inflationary programmes, anti-inflation control, wage increase, anti-inflationary dismantling of price controls and minimum wages door policy on foreign

investment and Multinational Corporation: reduction of spending on social services and privatization of public enterprises`1 are part of the deregulation of economic process.

4 CONCLUSION
The deregulation of the Nigerian economy as discussed in this paper is no doubt has a capitalist undertone with the notion that capitalism produced colonialism and imperialism. Unfortunately, right from the time the Nigerian economy began to be deregularized as part of SAP in 1986 it had only succeeded in pauperizing a larger population of the country. And even with the emphasis on the deregulation of the economy of the economy of the present civilian government in the country the material condition of the citizens is yet to improve.

5 RECOMMENDATIONS
Based on the development, that deregulation of the Nigerian Economy implies privatizations and privatization is based on maximization of profit. Consequently, majority of Nigerians 70% of whom are below poverty line might not be able to afford those deregulated goods and services. Therefore, the current government in Nigeria should review its deregulation policy. This is because an economic system that could not improve the material condition of the majority of the citizens of a country is not a good economic system. Though, the deregulation of economy policy might have been successful in developed countries, it has been a failure in developing countries due mainly to differences in socio-political environment. Therefore, the deregulation programme should either be discarded or refined in Nigeria.

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THE IMPACT OF REMITTANCES ON THE BALANCE OF PAYMENTS DYNAMICS IN SOUTHEAST EUROPEAN COUNTRIES

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ABSTRACT

Remittances are crucial and growing source of external financing in many countries of Southeast Europe. They have grown faster than the private capital flows and official aid. Southeast Europe is one of the most dependent regions on remittances flows. They have proven to be more stable than other private capital funds, which make them good absorbers of economic and financial crises.
The purpose of this paper is to analyze the impact of remittances in ensuring balance of payments stability in Southeast Europe. This capital flows offset chronic balance of payments deficits by reducing the shortage of foreign exchange and have a more positive impact on the balance of payments than other monetary flows.
The paper has three parts. The first part discusses the impact of remittances on the balance of payments adjustment in SEE countries. Second part deals whit levels and trends of remittance flows in the region of Southeast Europe. Third part analyses negative effects of remittances on balance of payment in this countries.

Keywords: *balance of payments, current account deficit, remittances, Southeast Europe*

1 INTRODUCTION

Emigration has been an important phenomenon in Southeast Europe for many years. These countries have a long tradition of sending "guest workers" abroad, and the remittances sent back by these workers have acted as a lifeline for families back home. SEE stands out among transition countries as the region with the most significant diaspora and the largest inflows of remittances relative to GDP.

In fact, while EU countries were attracting immigrants, SEE countries recorded a negative net migration. According to Regular Economic Report, net emigration in 2010 was the highest in Albania (-15%), while it stayed between -4 and 0 per 1000 people for the rest of the countries in the region. The nature and composition of that emigration also matters: In SEE countries, one in five citizens with tertiary education has emigrated. By country, R. Macedonia had the highest rate, where nearly one in three citizens with tertiary education has left the country, while Albania had the lowest (17.5 percent) (World Bank, 2012).

This paper's main objective is to examine the impact of remittances in ensuring balance of payments stability in Southeast Europe.

2 REMITTANCES AND BALANCE OF PAYMENTS ADJUSTMENT

The most important recipients of remittances, among the Southeast European countries, are: Moldova, Bosnia and Herzegovina, Albania, Serbia, Bulgaria, Romania, and Republic

of Macedonia. Total amount of remittance inflows, or of current transfers, net, is one of the most important items of the balance of payments, and they largely contribute into providing sustainable balance of payments, especially for covering the deficits in the foreign trade. (Petkovski et al., 2012)

Transfers of money across national boundaries by migrant workers, appears in both, the current and capital account of the balance of payments. International transfer of money by private individuals such as workers' remittances appears in the current account of the balance of payments. Migrants' capital transfers are transfers of money that can arise from the migration of individuals from one economy to another, for example money that accumulates in bank accounts or returns from portfolio investments that is sent remitted home. Funds sent by migrants to their country of origin to purchase real estate or invest in local business are recorded not as remittances, but as foreign direct investment transactions.

Internationally, after inward foreign direct investment, migrants' capital transfers are now the second largest source of capital inflows to emerging markets and developing countries and they provide an increasingly important means of helping to fund the current account deficits of economies with balance of payments problems.

Remittances offset chronic balance of payment deficit, by reducing the shortage of foreign exchange. They have more positive effects on the balance of payments than other monetary inflows (foreign investments, loans, financial aid etc.), because their use is not tied to particular investment projects, bear no interest and do not to have been repaid. SEE countries quickly recognized this obvious and clearly estimable positive balance of payments effect of remittances, and measures were taken to increase such inflows of foreign exchange.

Analyses shows that remittance inflows in 2009 had an effect on reducing the current account deficit by almost 4 times in Moldova, 2 times in Serbia, and almost 2 times in Albania. Only in Bulgaria and Romania, remittance inflows are ranked behind foreign direct investment as a source of external funding. In other countries such as Albania, Bosnia and Herzegovina, Macedonia and Moldova, remittances are significantly larger than other types of capital flows. This is in line with international experience, which confirms that poorer and smaller countries receive relatively larger remittances. Inflows from portfolio investments are negligible by size, indicating a high level of underdevelopment of the secondary stock exchange markets in these countries (Petkovski et al., 2012).

Furthermore, remittance inflows have allowed domestic consumption and investment to be substantially higher, than what would have been possible otherwise and have contributed significantly to the development prospects of the transition economies. In addition, the outflow of labor from these economies has helped to relieve chronically high unemployment which has characterized many of them, since transition process began in the early 1990s (Shelburne and Palacin, 2008)

Remittances are large, stable source of foreign exchange for the countries and they contribute in a mayor way both to alleviation of poverty and to development of small business. In many transition countries, access to finance is limited, especially for micro,

small and medium enterprises. In these countries remittances help to alleviate a lack of credit for business start-ups.

Remittances improve a nations creditworthiness and can thereby enhance access to international capital markets to finance infrastructure and other development projects. Remittances generate foreign exchange essential for making up any shortfall in the balance of payments and in dealing with problems of poverty (Malik and Junaid, 2009).

There is a consensus in the literature that remittances make a significant difference in the standard of living of the remittance receiving households. While the beneficent effects of remittances on the migrants and migrants sending households are undeniable, it is legitimate to ask whether these beneficent effects are replicable for larger social groups, such as the community and the economy a whole. In other words, can remittances catalyze development at the local, regional, and national levels?

Remittances have both, macroeconomic and microeconomic consequences. The macroeconomic ratios presented about underscore the enormous significance that remittances may have for a labor exporting economy. Diaspora's economic input can enhance the growth potential of the country. While the macroeconomic implications of remittances are huge, they also have microeconomic implications for individuals. Remittances directly increase the income of the recipient and can help smooth household consumption, especially in response to adverse shocks, such as crop failure, death of a family member, or a health crisis. Migration and remittances allow households to overcome two major obstacles they face: the credit constraint and lack of insurance to hedge against unforeseen adverse shocks.

Low-skilled migration is particularly conducive to poverty alleviation. Migration of low-skilled workers is usually beneficial, because of their low marginal productivity and higher probability of being unemployed, ceteris paribus. Thus, low-skilled migration can improve labor market conditions for other poor workers who stay behind. Given the high and persistent unemployment in these countries, we would expect migration to relieve unemployment pressure in SEE countries and contribute directly to the reduction of poverty in so far as there is high correlation between unemployment and poverty. Given the high unemployment rate in the economy, reduced supply of skilled and unskilled workers is likely to not only relieve unemployment pressure in the economy, but is also expected to increase the wage rate for the remaining body of workers (Mughal, 2008).

3 REMITTANCE FLOWS IN SOUTHEAST EUROPE: LEVELS AND TRENDS

Remittances to the SEE countries have been increasing quite rapidly and have more than doubled over the last decade. In the mid-1990s, remittances to these economies were smaller than the three other main financial flows - foreign direct investment, official development assistance (ODA), and private capital flow. However, remittances were significantly larger than either private capital flows and ODA during 1998-2003. Next table are presented inward remittance flows in some SEE countries.

Migrant remittances are steadily growing external source of capital for SEE countries. While foreign direct investment and capital market flows fell sharply in the last years due to the recession in the high income countries, migrant remittances continued to grow.

Table1: Inward remittance flows in some SEE countries (in USA $ million)
(World Bank, 2011)

	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Albania	889	1161	1290	1359	1468	1495	1317	1285
Bosnia and Hercegovina	1749	2072	2043	2157	2700	2735	2167	2228
Bulgaria	1718	1723	1613	1716	1694	1874	1558	1602
Macedonia	174	213	227	267	345	407	401	414
Serbia	2661	4129	4650	4703	5377	5538	5406	558

According to World Bank, remittance flows to developing countries and transition economies proved to be resilient during the recent global financial crisis-they fell only 5.5 percent in 2009 and registered a quick recovery in 2010. By contrast, there was decline of 40 percent of FDI flows and 46 percent in public debt and portfolio equity in 2009 (see table 2) (World Bank, 2011)

Table 2: Remittances compared with other resource of flows (World Bank, 2011)

|	**1995**	**2000**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
FDI	95	149	208	276	346	514	593	359	-
Remittances	55	81	159	192	227	278	325	307	325
ODA	57	49	79	108	106	101	128	120	-
Private debt and portfolio equity	83	57	93	165	211	434	157	85	-

Note: Remittance flows are large and resilient

The charts in Figure 1 below show the composition of capital flows in six Southeast European countries: Albania, Bosnia and Herzegovina, Bulgaria, R. Macedonia, Moldova and Romania.

The simplest way to explain the importance and the size of remittances in Southeast Europe is to express them as a share of GDP (see figure 1). From the figure 1 it is evident that this percent is more than significant, and in some countries it reaches 34,7 percent (e.g. Moldova in 2006). With the exception of Bosnia and Herzegovina, where the data shows a decreasing trend over time (as a result of GDP growth in recent years, and low coverage of remittances flows), all other countries have stable remittance inflows over the period 2000-2008 (Albania, Serbia and Bulgaria), or a continual trend of growth (Romania, Moldova and Republic of Macedonia). Remittance inflows declined in 2009 in almost all of the analyzed countries (with the exception of Serbia and R. Macedonia), due to the global crisis that caused remittance inflows in developing countries to fall by 5.2 percent (Petkovski et al., 2012).

Figure 1: Remittance inflows and other capital inflows - selected countries from Southeast Europe (2000-2009) (In US$ million)
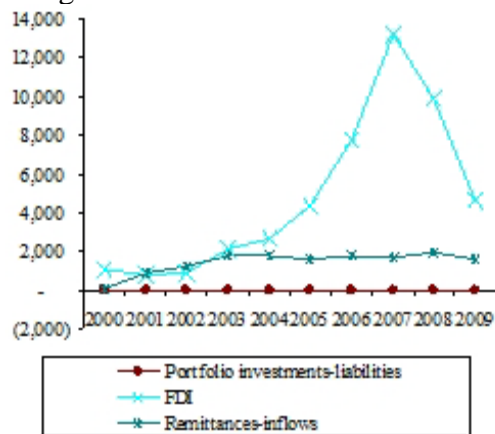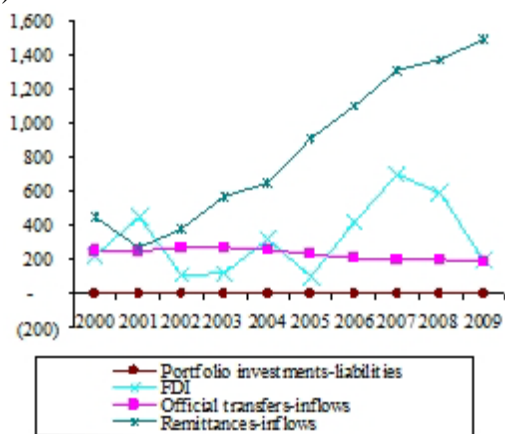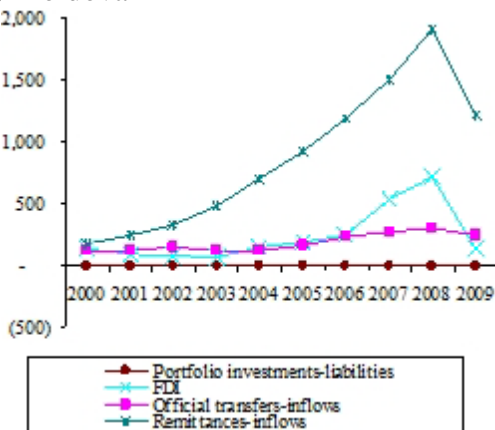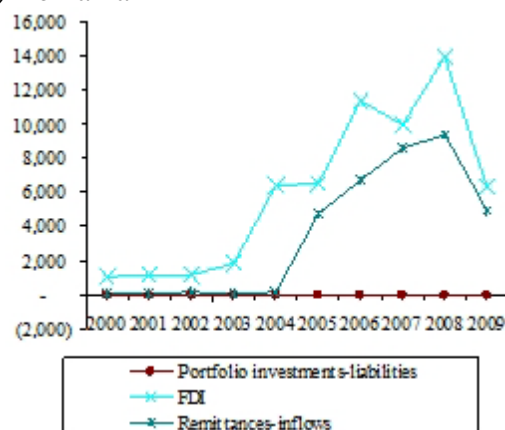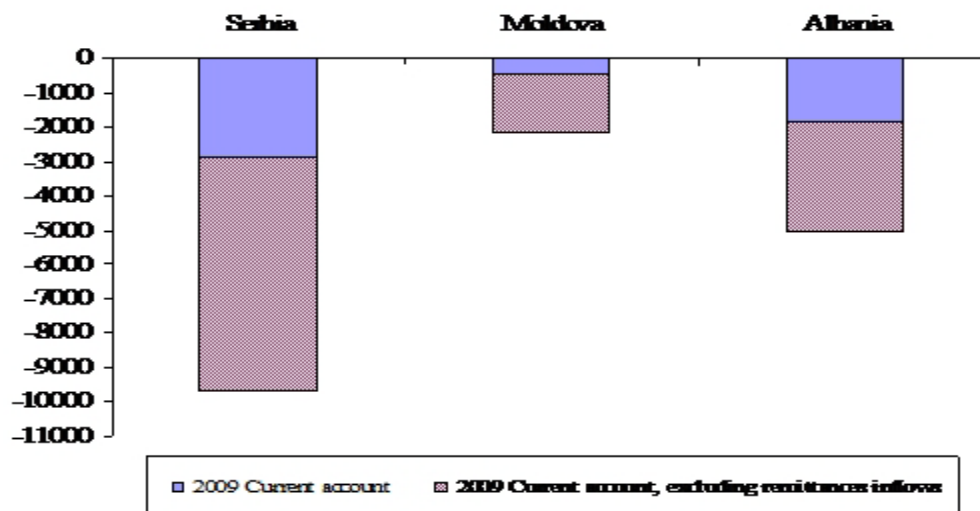*(Petkovski et al., 2012)*
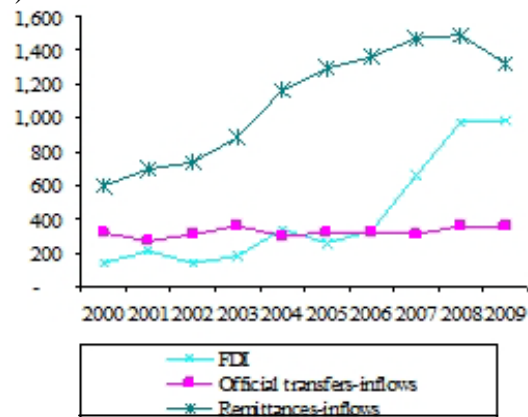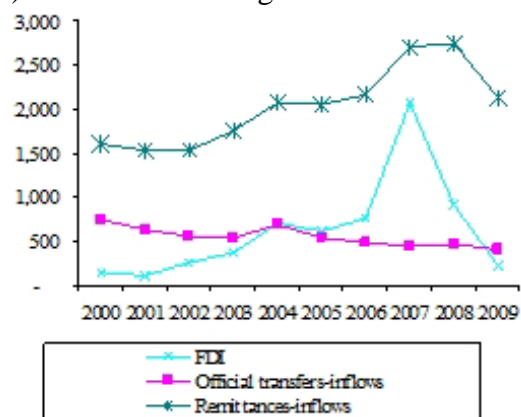
Figure 2: Remittance inflows as a share of GDP-selected countries from Southeast Europe (2000-2010) (Petkovski et al., 2012)

There are several reasons of resilience of remittances in the face of economic downturn in host countries. First, remittances are sent by cumulated flows of migrants over the years, not only by the new migrants of the past year or two. This makes remittances persistent over time. If new migration stops, than over the period of a decade or so, remittance can stop growing. But, they will continue to increase as long as migration flows continue. Second, remittance usual are a small part of a migrants incomes, and migrants continue to send remittances when affected by income shocks. Third, if migrants do indeed return, they are likely to take back accumulated savings. Migrants sent home remittances to support their relatives or friends.

Unlike remittances, FDI inflows to the SEE countries stagnated in 2008 and 2009. In some of this countries, in 2008, the amount of repatriated income exceeded the amount of FDI inflow. This negative direct effect of FDI on the balance of payments was partly countered by the foreign trade surplus generated by foreign affiliates (World Bank, 2011).

Fiscal and debt crisis in the euro area, has significant impact on remittances in SEE countries, especially in Western Balkans. Emigration is a critical safety valve for the unemployed in the Western Balkans as well as a source of vital foreign exchange. Yet, migrants are frequently the first to lose their jobs when crisis strikes. In 2008, remittance constituted 14.8% of Bosnia and Herzegovina's GDP, 12.2% of Albania's, 11.1% of Serbia's but only 2.3% of Croatia's and 4.3% of Macedonia The downside is that this has also left the region vulnerable to downturns in European economies. More than 600,000 Albanians have been working in Greece, and their repatriated earnings have constituted an important component of that country's GDP. Remittance payments fell from US$141,496 million in 2008 to US$1,275 million in 2009 in Albania, and from US$ 2,735 million in 2005 to US$2,210 million in 2009 in Bosnia and Herzegovina (World Bank, 2012).

According to World Bank, remittances declined in almost all SEE countries in 2012 compared whit previous year. Reaching the amount of euro 2.1 billion, remittances in Serbian marked the largest annual decline of 15.2 percent in 2012. Only Croatia and Kosovo were characterized by increased in remittances, with 1.2 and 3.6 percent, respectively in 2012. In December 2012, remittances in Croatia amount to euro 1.1 billion,

while remittances in Kosovo amounted to euro 605.5 million (Central Bank of the Republic of Kosovo, 2013).

In the SEE region, remittances have yet to return to pre-crisis levels and the year to mid-2013 saw further contractions. The negative growth in all SEE countries reflects the large percentage of remittances which come from the euro-zone periphery. Outflows from Greece, Italy and Spain have dropped substantially, since their economies went into recession.

4 NEGATIVE EFFECTS OF REMITTANCES ON BALANCE OF PAYMENT

Despite positive contributions of remittances on foreign exchange earnings and national income, remittances could also have their downside. Extensive and continuing inflows of remittances sometimes can lead to a significant appreciation of the real exchange rate. The overvalued exchange rate reduces the competitiveness of the domestic industries in the foreign markets (by expensive exports) in the home market (by cheap imports). This may further lead to balance of payments pressure, slower growth of employment opportunities and consequently to a further increase in the incentive to emigrate.

Although the empirical evidence of negative effects from remittances on terms of trade and growth are limited, usually these negative effects exist in cases of small and open economies which are, at the same time, large remittance receiving countries. For example, one IMF report finds the significant appreciation of the exchange rate in Moldova, as a result of the extensive remittance inflows. Lucas (2005) argues that Albania greatly benefited from remittances as a source of foreign exchange and as a safety net for the poor people, but this has also postponed the depreciation of its currency and thus potential export growth (Petkovski et al., 2012).

Negative effect of remittances on current account is the boomerang effects. This occurs when remittances induced an increase of imports and trade balance deficit in remittance receiving countries.

Depending on how remittances are spent or invested, their effects on production, inflation and imports will be different. A crucial factor in this respect is the extent to which the additional demand induced by remittances can be met by expanding domestic output. The flexibility with which domestic supply reacts to extra demand, will determine whether remittances will have positive employment effects or adverse inflation effects, and whether additional imports.

Another negative effect of remittances on SEE countries due to the fact that average monthly remittances are higher than the net monthly average wage in most of this countries. The consequences of having monthly remittance higher than net monthly average wage are likely to promote a culture dependency; recipients might be tempted to give up work, or to abandoned searching for a job (Daianu, Voinea and Tolici, 2001). Furthermore, migrants incur substantial psychological costs in being separated from their loved ones: immigrants (particularly undocumented or irregular immigrants) are subject to exploitation, loss of status and abuse.

Regardless of the possibility of remittances causing negative effects in the recipient countries, most researches would agree that the positive effects of remittances are far more

important then the negative ones. Therefore, the analyst and the policy makers are interested very much in the stability and sustainability of the future remittance flows.

5 CONCLUSION

Southeast Europe is one of the most dependent regions on remittance flows. Even six Southeastern European countries (Bosnia and Herzegovina, Albania, Serbia, Macedonia, Moldova and Croatia) are placed among the top 20 emigration countries, measured as percentage of their total population. With the exception of Croatia, in all of these countries the amount of remittance inflows exceeds 10% of their GDP.

This paper looks at the sources of financing the current account deficit. It concludes that foreign remittances, included compensation of employees and workers remittances play an increasing role in the SEE economies. Remittances are an important source of financial resources and have traditionally provided a cushion against external shocks in this countries. These capital flows offset chronic balance of payments deficits, by reducing the shortage of foreign exchange and have a more positive impact on the balance of payments than other types of monetary flows.

However, on the other hand we argued that foreign remittances sometimes might generate demand greater than the economy's capacity to produce goods and services. When this demand falls on tradable goods, remittances can induce an appreciation of the real exchange rate. The overvalued exchange rate reduces the competitiveness of the domestic industries both in the foreign markets (by expensive exports), and in the home markets (by cheap imports), This may further lead to growing balance of payments pressures, to a slower growth of employment opportunities, and consequently to a further increase in the incentive to emigrate. But we have to take into the account that additional import of cheap capital goods may increase productivity and therefore improve the competitiveness of domestic products. Moreover, the imported capital goods may be used to substitute other imports and/or to produce exportable goods.

In this paper we underline that positive effects of remittances are far more important then the negative ones. Balance of payments difficulties in SEE economies would have been bigger and the downward trend of consumption and saving ratios would have been even steeper in the absence of the foreign remittances.

Furthermore, these flows tend to be more stable than other external flows and may even be counter cyclical to the receiving economy. As migrants tend to send more during hard times to help families and friend, remittances tend to go up when the receiving economy suffer from an economic recession. In contrast, many other types of capital flows move pro-cyclical, rising in booms and falling in recessions.

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ANALYSIS OF THE IMPACT OF LABOR PRODUCTIVITY AND EDUCATION WORKERS TO REDUCE UNEMPLOYMENT

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ABSTRACT
The aim of this paper is to present and point to the significance of increasing labor productivity and education of people as well as their impact on reducing unemployment. In this paper the productivity of the labor force expressed as the rate of productivity, then the education of people observed through the enrollment rate for tertiary education and unemployment expressed in the unemployment rate observed for the 34 countries of the world for the 2012th year were observed.
The first hypothesis of this study is that an increase in the rate of labor productivity has a significant impact on reducing the unemployment rate in a country. The second research hypothesis is that increasing rates of attending tertiary education has a significant impact on reducing the unemployment rate of a country. The third hypothesis is that the increase in labor rates to attend tertiary education has a significant impact on increasing the rate of labor productivity of a society.

Keywords: human capital, productivity, tertiary education, unemployment, labor force

1 INTRODUCTION

The study, which analyzes the impact of labor productivity and education workers to reduce the unemployment rate , is divided into three parts . The first section gives a short theoretical explanation of the variables used in this paper to analyze or variables that represent labor productivity and attending tertiary education as a basis for analysis of the impact on the unemployment rate of a country. The second section presents the methodology and explains the data that were used for research and analysis on the countries of the world . Variables used in the work and analyzed are primarily labor productivity expressed as the rate of productivity , then the education of people as seen through the enrollment rate for tertiary education and unemployment expressed through unemployment. The third part of the paper gives the analysis and interpretation of the research results that show the impact analysis of labor productivity and education workers to reduce the unemployment rate.

2 THE THEORETICAL EXAMINATION OF THE OBSERVED VARIABLES

Productivity is commonly defined as a ratio of a volume measure of output to a volumemeasure of input use. While there is no disagreement on this general notion, a look at the productivity literature and its various applications reveals very quickly that there is neither a unique purpose for, not a single measure of, productivity. The objectives of productivity measurement include:

- **Technology**

  A frequently stated objective of measuring productivity growth is to trace technical change. Technology has been described as "the currently known ways of converting resources into outputs desired by the economy" (Griliches, 1987) and appears either in its disembodied form (such as new blueprints, scientific results, new organisational techniques) or embodied in new products (advances in the design and quality of new vintages of capital goods and intermediate inputs). In spite of the frequent explicit or implicit association of productivity measures with technical change, the link is not straightforward.

- **Efficiency**

  The quest for identifying changes in efficiency is conceptually different from identifying technical change. Full efficiency in an engineering sense means that a production process has achieved the maximum amount of output that is physically achievable with current technology, and given a fixed amount of inputs (Diewert and Lawrence, 1999). Technical efficiency gains are thus a movement towards "best practice", or the elimination of technical and organisational inefficiencies. Not every form of technical efficiency makes, however, economic sense, and this is captured by the notion of allocative efficiency, which implies profit-maximising behaviour on the side of the firm. One notes that when productivity measurement concerns the industry level, efficiency gains can either be due to improved efficiency in individual establishments that make up the industry or to a shift of production towards more efficient establishments.

- **Real cost savings**

  A pragmatic way to describe the essence of measured productivity change. Although it is conceptually possible to isolate different types of efficiency changes, technical change and economies of scale, this remains a difficult task in practice. Productivity is typically measured residually and this residual captures not only the above-mentioned factors but also changes in capacity utilisation, learning-by-doing and measurement errors of all kinds. Harberger (1998) re-stated the point that there is a myriad of sources behind productivity growth and labelled it the real cost savings. In this sense, productivity measurement in practice could be seen as a quest to identify real cost savings in production. In the field of business economics, comparisons of productivity measures for specific production processes can help to identify inefficiencies. Typically, the relevant productivity measures are expressed in physical units (e.g. cars per day, passenger-miles per person) and highly specific. This fulfils the purpose of factory-to factory comparisons, but has the disadvantage that the resulting productivity measures are difficult to combine or aggregate.

- **Living standards**

  Measurement of productivity is a key element towards assessing standards of living. A simple example is per capita income, probably the most common measure of living standards: income per person in an economy varies directly with one measure of labour productivity, value added per hour worked. In this sense, measuring labour productivity helps to better understand the development of living standards. Another example is the long-term trend in multifactor productivity (MFP). This indicator is useful in assessing an economy's underlying productive capacity ("potential output"), itself an important measure of the growth possibilities of economies and of inflationary pressure.

The tertiary graduation rate is the share of each age cohort that will complete tertiary-type A education based on current patterns of graduation; this indicator only includes first-time graduates, and provides a measure of the current output of the tertiary educational system.

The tertiary entry rate is an estimate of the share of a youth cohort that will enter different types of tertiary education during their lifetime; it is computed as the sum of entry rates for students by single year of age. The two indicators inform about the rate at which countries produce advanced knowledge. The data on tertiary education shown here refer to traditional university degrees, i.e. those associated with completion of "type A" tertiary courses. Excluded from these data are shorter and often vocationally oriented courses, which usually lead to direct labour market access (i.e. "type B" tertiary).

Graduation is measured by the sum of net graduation rates. For countries that are unable to provide information on net graduation, the data refer to gross graduation rates, i.e. the number of graduates, regardless of their age, divided by the population at the typical graduation age. The graduation rates for countries with a high proportion of international students (e.g. Australia and New Zealand) may be artificially inflated, as all international graduates are considered as first-time graduates, regardless of their previous education in other countries. Entry rates correspond to the sum of net entry rates for all ages. The net entry rate for a specific age is obtained by dividing the number of first-time entrants to each type of tertiary education by the total population in the corresponding age group. The sum of net entry rates is calculated by adding the rates for each year of age.

Based on current patterns of graduation, 39% of an age cohort in 2007 is estimated to complete tertiary education among the 22 OECD countries with comparable data. This share ranged from less than 20% in Greece to 45% or more in Ireland, Denmark, New Zealand, Finland, Poland, Australia and Iceland. On average, across OECD countries, tertiary graduation rates increased by 18 percentage points over the last twelve years. In virtually every country for which comparable data are available, these rates increased between 1995 and 2007, often quite substantially. It is estimated that 56% of young adults in OECD countries will enter tertiary programmes during their lifetime, assuming that current patterns of entry continue. In Australia, Poland, New Zealand, the Slovak Republic, Iceland, Sweden and Finland 70% or more of young adults enter tertiary programmes. On average, in all OECD countries with comparable data, the share of young adults who entered tertiary programmes in 2007 is 9 percentage points higher than in 2000, and 19 percentage points higher than in 1995. Entry rates in tertiary education increased by more than 15 percentage points between 2000 and 2007 in the Slovak Republic, the Czech Republic, Australia, Israel and Korea.

Entry rates estimate the proportion of people who are expected to enter a specific type of tertiary education programme during their lifetimes. They also indicate the accessibility of tertiary education and the perceived value of attending tertiary programmes, and provide some indication of the degree to which a population is acquiring the high-level skills and knowledge valued by today's labour market. High entry and enrolment rates in tertiary education imply that a highly educated labour force is being developed and maintained.

In OECD countries, the belief that skills acquired through higher education are valued more than those held by people with lower educational attainment stems from the depreciation, both real and feared, of "routine" jobs that could be performed instead in low-wage countries or mechanised, as well as from the growing understanding that knowledge and innovation are key to sustaining economic growth in countries. Tertiary institutions will be challenged not only to meet growing demand by expanding the number of places offered, but also to adapt

programmes and teaching methods to match the diverse needs of a new generation of students.

Based on current patterns of entry, it is estimated that an average of 17% of today's young adults will enter tertiary-type B (shorter and largely vocational) programmes over their lifetimes: 19% of women and 16% of men. In 2010, more than 40% of students entered this type of programme for the first time after the age of 25, on average among OECD countries with available data. In 2010, the expected rate of entry into tertiary-type A programmes was 25% higher for women than for men. In the 24 OECD countries with available data, an estimated 2.8% of today's young adults will enter advanced research programmes. In all countries except Finland, Korea and Saudi Arabia, the most popular fields of education chosen by new entrants into tertiary programmes are social sciences, business and law.

Between 1995 and 2010, entry rates for tertiary-type A programmes increased by nearly 25 percentage points, on average across OECD countries, while entry rates for tertiary-type B programmes remained stable. This increase is due to the increased accessibility of tertiary education in many countries, but also because of structural changes in the educational systems of some countries, such as the creation of new programmes (in relation to labour market needs) or shorter programmes (with the implementation of the Bologna process). Entry rates for tertiary programmes have also risen due to the expansion of access to such programmes to a wider population, including international students and older students. In addition, the increases in entry rates may be overstated, as part of the increase can be attributed to better data coverage. In the past decade, many countries have improved their data collection systems, and the 2010 data better reflect access to tertiary education.

Entry rates represent the estimated percentage of an age cohort that is expected to enter a tertiary programme over a lifetime. This estimate is based on the number of new entrants in 2010 and the age distribution of this group. Therefore, the entry rates are based on a "synthetic cohort" assumption, according to which the current pattern of entry constitutes the best estimate of the lifecycle behaviour of today's young adults. These entry rates are thus sensitive to any changes in the education system, such as the introduction of new programmes or the variation in the number of international students. Entry rates can be very high, and even greater than 100% (thus clearly indicating that the synthetic cohort assumption is implausible), during a period when an unexpected category of people decides to enter tertiary education. For example, this is the case in Australia, where in 2010 a large proportion of students came from other countries (the entry rate decreases from 96% to 67% when international students are excluded from consideration) or in Iceland, where a large number of women went to university to pursue their studies (entry rates for women decrease from 113% to 74% when students above the age of 25 are excluded from consideration).

It is estimated that 62% of young adults in OECD countries will enter tertiary-type A programmes during their lifetimes if current patterns of entry continue. In several countries, at least 70% of young adults are expected to enter these programmes, while in Belgium, China, Indonesia, Luxembourg and Mexico, not more than 35% are expected to do so. The proportion of students entering tertiary-type B programmes is generally smaller, mainly because these programmes are less developed in most OECD countries. In OECD countries for which data are available, an average of 17% of young adults will enter these types of programmes. Proportions range from 3% or less in Italy, Mexico, the Netherlands, Norway, Poland, Portugal and the Slovak Republic, to 30% or more in Argentina, Belgium, Korea and

New Zealand, to more than 50% in Chile. Although the Netherlands offers relatively few of these programmes, this is expected to change with the introduction of new associate degrees. Finland and Norway have, respectively, no or only one tertiary-type B programme in their education systems. Belgium, Chile and China are the three countries where the expected proportion of students who will enter tertiary-type B programmes is higher than those expected to enter tertiary-type A programmes. In Belgium and Chile, broad access to tertiary-type B programmes counterbalances comparatively low entry rates into academic tertiary programmes. Other countries, most notably Israel and the United Kingdom, have entry rates around the OECD average for academic (type A) programmes, and comparatively high entry rates for vocational (type B) programmes. New Zealand's entry rates for both types of programmes are among the highest in OECD countries. However, these entry rates are inflated by a greater population of older and international students.

The unemployment rate is the ratio of people out of work and actively seeking it to the population of working age either in work or actively seeking it (15 to 64-years old). The data are gathered through labour force surveys of member countries. According to the standardised ILO definition used in these surveys, the unemployed are those who did not work for at least one hour in the reference week of the survey but who are currently available for work and who have taken specific steps to seek employment in the four weeks preceding the survey. Thus, for example, people who cannot work because of physical impairment, or who are not actively seeking a job because they have little hope of finding work are not considered as unemployed.

The unemployment rate is one measure of the extent of labour market slack, as well as being an important indicator of economic and social well-being. Breakdowns of unemployment by gender show how women are faring compared to men.

Unemployed persons are defined as those who report that they are without work, that they are available for work and that they have taken active steps to find work in the last four weeks. The ILO Guidelines specify what actions count as active steps to find work; these include answering vacancy notices, visiting factories, construction sites and other places of work, and placing advertisements in the press as well as registering with labour offices. The unemployment rate is defined as the number of unemployed persons as a percentage of the labour force, where the latter consists of the unemployed plus those in paid or self-employment.

The unemployment rates shown here differ from rates derived from registered unemployed at labour offices that are often published in individual countries. Data on registered unemployment have limited international comparability, as the rules for registering at labour offices vary from country to country. When unemployment is high, some persons become discouraged and stop looking for work; they are then excluded from the labour force. This implies that the unemployment rate may fall, or stop rising, even though there has been no underlying improvement in the labour market.

All OECD countries use the ILO Guidelines for measuring unemployment in their labour force surveys. The operational definitions used in national labour force surveys may, however, vary slightly across countries. Unemployment levels are also likely to be affected by changes in the survey design and the survey conduct. Despite these limits, the unemployment rates shown here are of good international comparability and fairly consistent over time.

When looking at total unemployment rates averaged over the three years ending 2011, countries can be divided into three groups: a low unemployment group with rates below 5% (Austria, Japan, Korea, Luxembourg, Norway, the Netherlands and Switzerland); a middle group with unemployment rates between 5% and 10%; and a high unemployment group with unemployment rates of 10% and above (Estonia, Greece, Hungary, Ireland, Portugal, Spain, the Slovak Republic and Turkey). In most OECD countries, unemployment rates grew over the last three years, with marked increases in Estonia, Greece, Ireland and Spain. The breakdown of unemployment by gender shows that, in line with the overall rate, the unemployment rates for both men and women increased sharply from 2007 to 2010. The unemployment rate for men, which had been lower than the rate for women, rose considerably faster and by 2009 was higher than the rate for women. This is first explained by the fact that job losses over the stage of the crisis were particularly severe in sectors which traditionally have been occupied by men – namely construction, manufacturing, mining and quarrying. Between 2009 and 2010, the rise in the overall OECD unemployment rates decelerated faster for men so that the men to women unemployment ratio began to decrease. In 2011, the OECD rate fell for the first time since the crisis began, and the rate for men had dropped back to a lower level than the rate for women.

3 DATA COLLECTION AND RESEARCH METHODOLOGY

The collected data refer to a sample of 34 countries observed the world and their statistical data on labor productivity, which is expressed in the rate of productivity, then educating people through the observed rate of attending tertiary education and unemployment, which is expressed in the unemployment rate for the observed, 2012 year.[1] These are the official statistics OECD publicly released 2013 year.

3.1. Analysis of research results

The collected data were processed and analyzed using the statistical software package SPSS analysis using the matrix of linear correlation, matrix of correlation correlation and multiple linear correlation, and the results of research are presented and interpreted assist crafted table.

3.2. Analysis of the mutual influence of the observed variables

The research looked at the mutual influence of the following variables: the rate of productivity, then the attendance rate of tertiary education and unemployment.

Table 1: Matrix of linear correlation.

The matrix of linear correlation			
variables:	rate of productivity	attendance rate of tertiary education	unemployment rate
rate of productivity	1,00	0,03	0,02
attendance rate of tertiary education	0,03	1,00	- 0,01
unemployment rate	0,02	- 0,01	1,00

As shown in Table 1. (Matrix of linear correlation analysis) with the study weren't noticed significant correlations between observed variables, and wasn't shown any kind of significant

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[1] The collected data and monitoring methodology and calculation data was explained in detail on the web – site: www.oecd.org (01. 10. 2013.). The collected data are part of the annual statistical report of the OECD called: "Education at a Glance – OECD Indicators". List of the observed countries participating in the research is attached (Table 4).

impact of some of the observed variables to another variable, where coefficients show that the observed sample gives almost none cause - effect relationship between productivity rates, attendance rates of tertiary education and unemployment. The result of this research, according to the author, is very worrying and points to possible serious flaws in the methodology of monitoring and calculating the rate of labor productivity, as well as the fact that higher rates of tertiary education, nowadays trends extremely high rates of enrollment and completing of tertiary education obviously not guarantee lower rates of unemployment of a society.

Table 2: The matrix of correlation correlation.

The matrix of correlation correlation	
rate of productivity	+
attendance rate of tertiary education	- +
unemployment rate	- -

As shown in Table 2. (The matrix of correlation correlation) the study found that there was no significant impact and interconnectedness between variable rates of productivity with the other two observed variables, the rate of attending tertiary education and unemployment, however there is shown a little causal relationship between attendance rates of tertiary education and unemployment.

Table 3: Multiple linear correlation matrix.

Multiple linear correlation matrix	
constant:	- 0,02
squared coefficient:	0,36
standard error of regression:	11,8
number of observations:	34
degree of freedom:	31
dependent variable:	**unemployment rate**
variables:	**coefficient:**
rate of productivity	0,02
attendance rate of tertiary education	- 0,01

As shown in Table 3. (Multiple linear correlation matrix), in this study weren't noticed any significant correlations between observed variables, or any significant impact productivity rates and attendance rates of tertiary education on the dependent variable, the unemployment rate. The result of this study also, according to the author, points to the possible serious flaws in the methodology of monitoring and calculating the rate of labor productivity, as well as the fact that higher rates of tertiary education, nowadays trends extremely high rates of enrollment and completion of tertiary education, obviously does'nt guarantee lower rates of unemployment of a society any more.

As an argument for an explanation of these a bit surprising results of the study should be taken into account the fact that the observed sample included countries that belong to the group of richer and better organized countries with high gross domestic product per capita in which very small differences in the rate of labor productivity as well as the enrollment rate for tertiary education, but with relatively large deviations and differences in the unemployment rate of the population.

4 SYNTHESIS OF RESEARCH

The study has for the aim to test the hypothesis that an increase in the rate of labor productivity has a significant impact on reducing the unemployment rate in a country. Furthermore, research checked hypothesis that an increase in attendance rates of tertiary education has a significant impact on reducing the unemployment rate of a country. Also, the aim of the research was to test the hypothesis that an increase in rates of attending tertiary education has a significant impact on increasing the rate of labor productivity of a society.

The hypothesis that the increase in the rate of labor productivity has a significant impact on the reduction of unemployment in a country proved to be negative in this study. Furthermore, the hypothesis that the increase in rates of attending tertiary education has a significant impact on reducing the unemployment rate of a country is also in this research showed negative. Finally, the hypothesis that the increase in rates of attending tertiary education has a significant impact on increasing the rate of labor productivity of a society in this study also showed negative.

The research didn't notice any significant correlation between the observed variables , and doesn't show any kind of significant impact of some of the observed variables to another variable , with coefficients show that the observed sample is almost not there is any cause - effect relationship between productivity rates , attendance rates tertiary education and unemployment . The result of this research , according to the author , is very worrying and points to possible serious flaws in the methodology of monitoring and calculating the rate of labor productivity , as well as the fact that higher rates of tertiary education , nowadays trends extremely high rates of enrollment and completion of tertiary education obviously not guarantee lower rates of unemployment of a society . As an argument for an explanation of these a bit surprising results of the study should be taken into account the fact that the observed sample included countries that belong to the group of richer and better organized countries with high gross domestic product per capita in which very small differences in the rate of labor productivity as well as the enrollment rate for tertiary education , but with relatively large deviations and differences in the unemployment rate of the population.

The conclusion of the research implies that a clear causal relationship between the rate of labor productivity, attendance rates of tertiary education and the unemployment rate of a society it has to be proved, although it is quite logical that the productivity of workers should be encouraged and that higher labor productivity positively and significantly affect on higher rates of profit in companies, as well as the rate of attending tertiary education should be encouraged because it will also have a positive and significant impact on the development of society and improve the abilities and skills of individuals.

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6 APPENDIX

Table 4: List of countries involved in the research

List of countries involved in the research			
Australia	France	Korea	Slovenia
Austria	Germany	Luxembourg	Spain
Belgium	Greece	Mexico	Sweden
Canada	Hungary	Netherlands	Switzerland
Chile	Iceland	New Zealand	Turkey
Czech Republic	Ireland	Norway	United Kingdom
Denmark	Israel	Poland	United States
Estonia	Italy	Portugal	
Finland	Japan	Slovak Republic	

THE IMPORTANCE OF ECONOMIC DIPLOMACY TO ECONOMIC RECOVERY – THE CASE OF SLOVENIA

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ABSTRACT
This paper discusses the importance of economic diplomacy to economic recovery in the case of Slovenia. For a small open economy like Slovenia, economic diplomacy is very important for several reasons. One of them is the importance of foreign trade for economic growth and development, which is evident especially during the current economic crisis.

Keywords: *diplomacy, economic crisis, economic diplomacy, economic promotion, economic recovery, foreign trade, foreign trade diversification, foreign trade promotion, Slovenia, small open economy.*

1 INTRODUCTION

Economic relationships between two or more countries affect other relationships between them, and vice versa. Additionally, they also affect the economic and other relationships between them and other countries as a result of their economic and other interdependence. This is, inter alia, the result of an international division of labour, which affects the economic and other situations in these countries. Changes in the international division of labour, therefore, pose a threat to national security, which is one of the reasons that countries affect the international division of labour, for example, through economic diplomacy (Rueschemeyer, 1986, p. 179).

2 ECONOMIC DIPLOMACY

Economic diplomacy (i.e. the management of economic relationships between two or more countries) is a subtype of diplomacy. It plays an increasingly important role both in Slovenia and elsewhere in the world due to several reasons. One of them is the growing need for economic cooperation between countries, which is partly the result of the effects of the current economic crisis on their economy and the need for joint action against the crisis (Romih, 2013a).

The current economic crisis is therefore an important factor of Slovenia's economic diplomacy. Another reasons for this is the need for more effective and efficient economic diplomacy as a result of changing economic and other conditions both at home and abroad. Increasing the effectiveness and efficiency of Slovenia's economic diplomacy is therefore essential to accelerate Slovenia's economic growth and development, which are crucial for improving Slovenia's economic situation. However, economic diplomacy is not a panacea for all economic problems (Woolcock and Bayne, 2013).

3 FOREIGN TRADE AND FOREIGN TRADE DIVERSIFICATION

Foreign trade is the activity of trading goods and services with other countries. It is very important for Slovenia, contributing to its economic growth and development, which are the main goals of Slovenia's economic policies (Romih, 2013b, p. 95). Foreign trade promotion (which is a subtype of economic promotion) is therefore essential to achieve these goals, especially in times of economic crisis like the current one. This is one of the reasons that foreign trade promotion has become one of the main tasks of Slovenia's diplomatic and consular representatives, especially of those representing Slovenia in non-European countries such as Chile.

Foreign trade diversification (in terms of increasing the number of goods and services and the countries with which Slovenia trades) is essential to accelerate Slovenia's foreign trade. Additionally, it is also essential to accelerate Slovenia's economic growth and development, which are needed to restore economic stability (which is in addition to the political stability essential for peace and prosperity) in Slovenia. Removing foreign trade barriers is therefore essential to achieve some of the main goals of Slovenia's economic policies. These are more or less inconsistent with each other, making them less effective and efficient, which is one of the reasons that Slovenia is less competitive in comparison to some other countries. Chile, for example, ranks 34th out of 148 countries, according to the Global Competitiveness Index 2013–2014, which is 28 rankings higher than Slovenia (Schwab, 2013, p. 15). This requires immediate action at all levels of governance.

In order to become more competitive, Slovenia needs to implement some economic reforms which should be consistent with each other, making them more effective and efficient (Romih, 2013a, p. 101). This is essential to increase public confidence in these reforms (especially during the current economic crisis) and to create an environment conducive to economic reforms which are necessary to adapt to changing economic conditions both at home and abroad. Additionally, this is essential to accelerate Slovenia's foreign trade, which is crucial to improve labour market conditions in Slovenia and stop the 'brain drain' to more competitive countries. This is another reason for Slovenia to accelerate its foreign trade promotion. In doing so, it should follow the example of Chile (particularly ProChile [see http://www.prochile.gob.cl/]).

4 FOREIGN TRADE PROMOTION

Foreign trade is crucial for a large number of Slovenian enterprises (regardless of their size) (Romih and Logožar, 2011, pp. 113–114). Removing foreign trade barriers is therefore essential for their continued survival, especially in the times to come. Economic diplomacy, which can help in entering foreign markets, is becoming increasingly important for Slovenia's economy, which is too dependent on trade with European countries (see figure 1).

Foreign trade is therefore an important factor in Slovenia's economic relationships with other European countries. Additionally, it is also an important factor of Slovenia's economic security, the provision of which is essential to accelerate Slovenia's economic growth and development. For a small country like Slovenia, economic diplomacy is particularly important because its economy is heavily dependent on other economies, which are larger and stronger, and this makes it more difficult for Slovenia to enforce its economic interests abroad. Making alliances is therefore very important for it, although it can be a double-edged sword, especially when used as a device to 'beggar thy neighbour'.
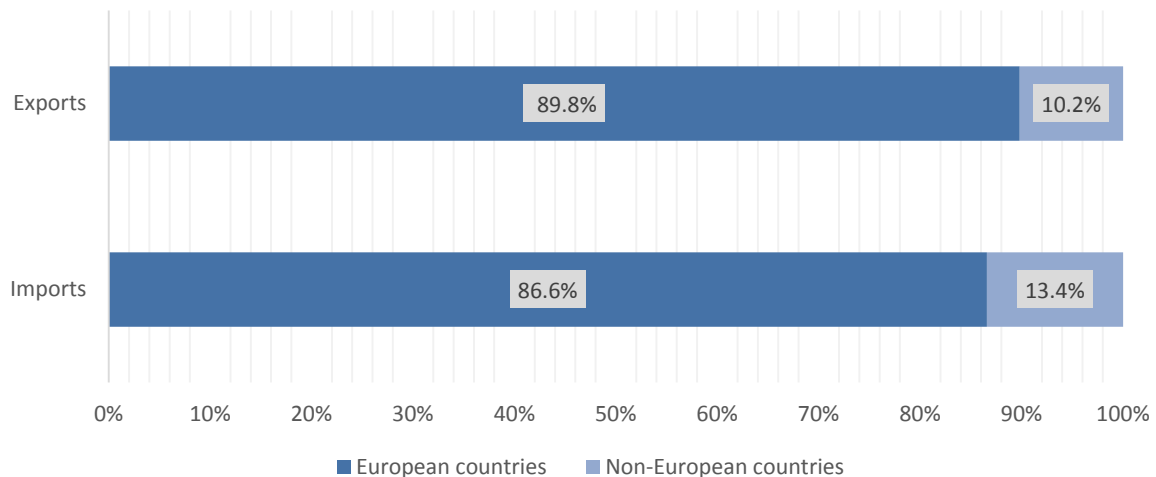
Figure 1: Slovenia's exports and imports of goods by groups of countries, 2012 (Statistical Office of the Republic of Slovenia, 2013, pp. 398–402)

5 OUR RECOMMENDATIONS TO THE SLOVENIAN GOVERNMENT

Our recommendations to the Slovenian government are:

- further coordination of Slovenia's economic and other policies in order to increase their effectiveness and efficiency,
- further modernisation of Slovenia's economic and other policies in order to adapt to changing economic and other conditions both at home and abroad,
- further implementation of economic and other reforms in order to improve Slovenia's economic environment,
- further implementation of other measures in order to accelerate Slovenia's economic growth and development,
- further development of Slovenia's economic relationships with other countries in order to improve Slovenia's economic situation,
- further development of Slovenia's economic diplomacy in order to improve the enforcement of Slovenia's economic interests abroad and
- further improvement of Slovenia's economic promotion.

4 CONSLUSION

Economic diplomacy is very important for Slovenia. One of the reasons for this is the importance of foreign trade for its growth and development. Economic diplomacy, which can help promote foreign trade, is therefore essential to improve the economic situation in Slovenia (in both the short and long-term).

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MONETARY POLICY AND
TIME VARYING STRUCTURAL VECTOR AUTOREGRESSIONS

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ABSTRACT

Monetary policy transmission mechanism is a largely investigated phenomenon by Central Banks due to the importance of ensuring price stability as long as sustainable economic growth.

This mechanism is modeled for the Romanian economy by using a time varying structural vector autoregression model with drifting coefficients and heteroscedastic shocks. Both changes in the transmission mechanism and changes in the exogenous innovations are emphasized by using this model. Drifting coefficients are used in order to capture nonlinearities or time variation in the lag structure of the model and multivariate stochastic volatility is used to capture possible nonlinearities in the simultaneous relations between the variables of the model.

Numerical methods are needed for estimation, therefore the posterior distribution of the parameters of interest, such as the unobservable states and the hyper-parameters, are evaluated by using Bayesian inference instead of classical maximum likelihood estimator. More precisely, Gibbs sampling is a particular variant of Markov Chain Monte Carlo method and is used for posterior numerical evaluation of the parameters.

On the one hand, the objective of this paper is to analyze whether non-systematic monetary policy responses vary over time and whether the estimated coefficients show much time variation. Therefore, the stability of the responses of those variables forming the non-policy block to policy shock is estimated. On the other hand, the purpose is to observe whether the simultaneous and long run systematic monetary policy responses are correlated, whether the response is gradual or not, whether the Central Bank reacts faster to the evolution of a certain variable than to a different one and how these responses did evolve over time.

Keywords: Heteroscedastic Innovations, Markov Chain Monte Carlo Algorithm, Monetary Policy, Romanian Economy

1 INTRODUCTION

The purpose of this paper is to estimate both systematic and non-systematic part of the monetary policy by using a time varying methodology. The econometric framework is based on two instruments: first, time varying parameters are needed with the purpose of measuring policy changes. Second, a model with multiple equations is needed in order to understand how changes in policy are affecting the rest of the economy.

Based on the last two statements, a time varying structural vector autoregression model is used and the source of time variation derives from both drifting coefficients and the variance covariance matrix of the innovations. Therefore, time variation of the simultaneous relations between economic variables and heteroschedasticity of the innovations are included in this model. The posterior of the parameters of interest are estimated by using numerical methods, more precisely, Gibbs sampling algorithm – including Kalman smoother. This algorithm is a particular case of Markov Chain Monte Carlo algorithm.

The section EMPIRICAL EVIDENCE offers some insight on the arguments for the usage of Bayesian methods, and also general information about the variables used for estimation and data transformation. Details about the estimation methodology, such as the importance of the ordering of the variables, initialization of the priors, simulation methodology are also

described in this section. The following section, RESULTS OF THE ESTIMATION, presents the results of both non-systematic and systematic monetary policy measures adopted by the Central Bank. The final section, CONCLUSIONS comes with a brief description of the main results of the paper and also with several ideas for further research.

2 EMPIRICAL EVIDENCE

2.1. Reasons for using this model

The posterior distributions of the parameters of interest, such as the unobservable states and the hyper-parameters are evaluated by using Bayesian methods.

Bayesian inference is used instead of classical maximum likelihood estimator because of the following drawback of this method: difficulties in dealing with high dimensionality and nonlinearity. It is possible that the likelihood to have multiple peaks some of them being in unreasonable areas of the parameter space. Also, due to these peaks, the likelihood might reach high values and might become fewer representatives for the model's fit. This drawback is removed by the Bayesian setting, with the help of uninformative priors' usage.

Moreover, even though it might be possible to write down the likelihood, it is very difficult to maximize it over such a high dimensional space. Bayesian methods are those that deal efficiently with the issues related to high dimension of the parameters space and the non-linearity of the model. A particular variant of Markov Chain Monte Carlo methods is Gibbs sampling, which is used for posterior numerical evaluation of the parameters and consists of drawing from conditional posteriors with lower dimension than joint posterior of the whole parameter set.

Another reason for using Bayesian setting is that the estimates are based on the entire available set of data, therefore smoothed estimates are delivered. The objective of the paper is to investigate the true evolution of the unobservable states over time and smoothed estimates are more efficient in achieving this goal than filtered ones.

2.2. General information about the data

A model of the Romanian economy is estimated by using monthy data, covering the period between 1999:M6 to 2013:M6. Three variables are included in the model: harmonized index of consumer prices, unemployment rate and money market interest rate, in this order. The first two variables represent the non-policy block and the short term interest rate represents the policy block. They are used in the model as endogenous variables and the sources of the data is represented by *Eurostat*.

Harmonized index of consumer prices is the only time series used in logarithm. The following transformation are applied to the data before starting estimating the model.

As a first step, time series are checked for seasonal adjustment in Demetra+ software, by using TRAMO/SEATS method with RSA4 specification, which means that series as kept in level or in logarithm and the adjustment is done for working days, Easter and outliers by using an automatic model identification (Demetra+ automatically identifies and estimates the best Arima model).

In the next step, series are checked for the existence of unit roots and level of integration, by using Augmented Dickey Fuller (ADF) test and Kwiatkowski–Phillips–Schmidt–Shin (KPSS) test. ADF test assesses the null hypothesis of a unit root in univariate time series. If the probability computed by the test is larger than the significance level of five percent, the null hypothesis is accepted, series are integrated and they need to be differentiated in order to become stationary. Same results are returned when using KPSS test. The difference is that KPSS test assesses the null hypothesis that a univariate time series is trend stationary against the alternative that it is a nonstationary unit-root process. Both tests are used in the analysis to ensure better evidence regarding the existence of unit roots.

Based on the results displayed by the two above mentioned tests, harmonized index of consumer prices and unemployment rate are differentiated once in order to become stationary and money market interest rate is left in level.

2.3. Methodology and ordering

The model is formed out the following equations:

a) The measurement equation:

$$Y(t) = B_0(t) + B_1(t) * Y(t-1) + \ldots + B_p(t) * Y(t-2) + u(t), with\ u(t) \sim N(0, \Omega_t)$$
(1)

The following triangular reduction of Ω_t is considered:

$$A_t * \Omega_t * A'_t = \Sigma_t * \Sigma'_t \tag{1.1}$$

- A_t *is the lower triangular matrix*:

$$A_t = \begin{bmatrix} 1 & 0 & & 0 \\ \alpha_{21,t} & 1 & \cdots & \\ \vdots & & \ddots & 0 \\ \alpha_{n1,t} & \cdots & \alpha_{nn-1,t} & 1 \end{bmatrix} \tag{1.2}$$

- Σ_t *is the diagonal matrix*:

$$\Sigma_t = \begin{bmatrix} \sigma_{1,t} & 0 & \cdots & 0 \\ 0 & \sigma_{2,t} & & \cdots \\ \vdots & & \ddots & 0 \\ 0 & \cdots & 0 & \sigma_{n,t} \end{bmatrix} \tag{1.3}$$

Applying (1.1), (1.2) and (1.3) mentioned before, (1) becomes:

$$Y(t) = B_0(t) + B_1(t) * Y(t-1) + \ldots + B_p(t) * Y(t-2) + A_t^{-1} * \Sigma_t * \varepsilon(t)$$
(2)

- $V\big(\varepsilon(t)\big) = I_n$

The order of the variables in the measurement equation matters due to the lower triangular structure imposed on the matrix A. The identifying assumption for the monetary policy shock is that monetary policy shocks do not affect inflation and unemployment contemporaneously and the response is lagged. For this reason, interest rate is ordered last in the model. This is an identification condition, essential for identifying monetary policy shocks. With regard to the

simultaneous interaction between inflation and unemployment, it is modeled in a lower triangular form with inflation first.

b)   The transition equation:

$$B(t) = B(t-1) + \vartheta_t, where\ B(t) = [B_0(t), B_1(t), B_2(t)] \tag{3}$$
$$\alpha(t) = \alpha(t-1) + \xi(t) \tag{4}$$
$$\log \sigma(t) = \log \sigma(t-1) + \eta(t) \tag{5}$$

Where:
- $Y(t) is\ an\ n \times 1\ vector\ of\ observed\ endogeous\ variables$
- $B_0(t)\ is\ an\ n \times 1\ vector\ of\ time\ varying\ coefficients\ that\ multiply\ constant\ terms$
- $B_1(t), \dots, B_p(t)\ are\ n \times n\ matrices\ of\ time\ varying\ coefficients$
- $u(t) are\ the\ heterochedastic\ unobservable\ shocks\ with\ variance\ covariance\ matrix\ \Omega_t$
- $p\ is\ the\ number\ of\ lags\ in\ the\ VAR\ model$

All the inovations of the model are assumed to be jointly normally distributed, with the following form of the variance covariance matrix:

$$V = Var \begin{bmatrix} \varepsilon(t) \\ \vartheta(t) \\ \xi(t) \\ \eta(t) \end{bmatrix} = \begin{bmatrix} I_n & 0 & 0 & 0 \\ 0 & Q & 0 & 0 \\ 0 & 0 & S & 0 \\ 0 & 0 & 0 & W \end{bmatrix} \tag{6}$$

- $I_n\ is\ an\ n-dimentional\ identity\ matrix$
- $Q, S, W\ are\ positive\ definitie\ matrices$

The following additional asumption is adopted: S is block diagonal, with blocks corresponding to parameters belonging to separate equations. The economic interpretation is that the coefficients of the contemporaneous relations between variables are assumed to evolve independently in each equation. This assumption is not crucial, but it increases the efficiency of the estimation.

2.4. Priors
The initial states for the coefficients, for the covariances, for the log volatilities and the hyperparameters are independent of each other.
- The priors for the hyperparameters – Q, W and the blocks of S – are assumed to be distributed as independent inverse-Wishart.
- The priors for the initial states of the time varying coefficients, simultaneous relations and log standard errors – p(B(0)), p(α(0)) and p(logσ(0)) – are assumed to be normally distributed.
- These assumptions imply normal priors on the entire sequence of the B's, α's and logσ's, conditional on Q, W and S.

The first 40 observations are used to calibrate the prior distributions. The priors take the following forms [5]:

$$B_0 \sim N(\widehat{B_{OLS}}, 4 * V(\widehat{B_{OLS}})) \tag{7}$$
$$A_0 \sim N(\widehat{A_{OLS}}, 4 * V(\widehat{A_{OLS}})) \tag{8}$$
$$\log \sigma_0 \sim N(\log \widehat{\sigma_{OLS}}, I_n) \tag{9}$$
$$Q \sim IW(k_Q^2 * 40 * V(\widehat{B_{OLS}}), 40) \tag{10}$$
$$W \sim IW(k_W^2 * 4 * I_n, 4) \tag{11}$$
$$S_1 \sim IW(k_S^2 * 2 * V(\widehat{A_{1,OLS}}), 2) \tag{12}$$
$$S_2 \sim IW(k_S^2 * 3 * V(\widehat{A_{2,OLS}}), 3) \tag{13}$$

Degrees of freedom and scale matrices are needed for the inverse-Wishart prior distribution of the hyperparameters. The degrees of freedom are set as one plus the dimension of each matrix. $k_Q = 0.01$, $k_S = 0.1$ and $k_W = 0.01$ are set in this way so that the priors to be diffuse and uninformative and not flat.

2.5. Simulation method
The model is estimated by simulating the distribution of the parameters of interest given the data. Gibbs sampling is being used as methodology. As a first step, the priors are being set. $B_i, i = 1..p$ are estimated afterward, using Kalman Filter methodology and backward recursions or Kalman Smoother. Having $B_i, i = 1..p$ computed, the error from the transition equation can be computed and based on the error, Q matrix. A(t) is computed afterwards, then Σ(t). Having estimated all these matrices, the VAR covariance matrix is also estimated. Computations are kept for each iteration that is not dropped and then used for generating impulse response functions for each time period.

3 RESULTS OF THE ESTIMATION

3.1. Non-systematic monetary policy
The measure of non-systematic policy actions is given by the identified monetary policy shocks. The changes in the effect of non-systematic policy are presented in Figure 1 and Figure 2. The responses of inflation and unemployment rate after a shock in interest rate are plotted in these figures. Three points in time are investigated: 2006: M1 (after the adoption of inflation targeting monetary policy strategy), 2009:M6 (during the latest economic crisis) and 2012:M10 (in order to form an image on the current economic situation).

After an increase in the level of interest rate, inflation decreases in each one of the three moments of time, which is according to the theoretical view and it is a proof of the existence of the interest rate channel. After several periods of time, the response of inflation dissipates, which confirms the theory regarding the long term neutrality of money. The response is good after the adoption of inflation targeting monetary policy strategy (in 2006), decreases during the crisis (in 2009) and then increases towards 2012.

The difference between the responses in each pair of moments is also plotted.
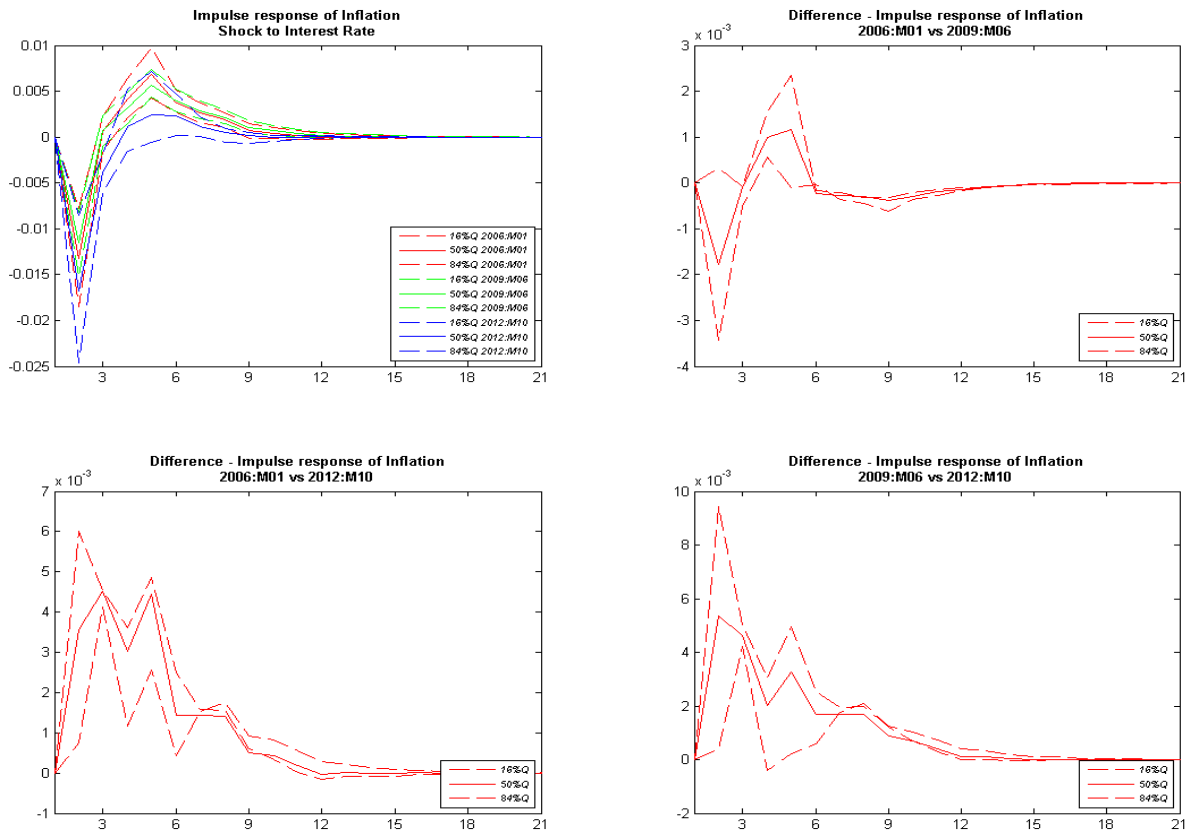
Figure 1: Impulse response of inflation to monetary policy shocks in 2006:M01, 2009:M06 and 2012:M10 and also difference between the responses in the three moments in time

Even though the responses are stabilizing after a period of one year, they do vary over time, indicating that the estimated coefficients show time variation.

After an increase in the level of interest rate, unemployment increases only in 2012:M10, which shows more concern for the Central Bank regarding the situation of the economy overall besides inflation rate, after the recent economic crisis. The response of unemployment dissipates too in time and the differences between responses prove also that the estimated coefficients show time variation.

Figure 2: Impulse response of unemployment to monetary policy shocks in 2006:M01, 2009:M06 and 2012:M10 and also difference between the responses in the three moments in time

3.2. Systematic monetary policy

The responses of the interest rate to shocks in inflation and unemployment are measures of the systematic monetary policy. These responses can be seen in Figure 3 and Figure 4.

After a shock to inflation, the monetary policy interest rate should increase in order to lower the level of investments and the level of consumption with the purpose of decreasing inflation. The best reaction can be noticed in 2012-2013.

After an increase in unemployment rate, the interest rate should decrease in order to stimulate the economy, the investors' decisions and the employment rate. The best response can be noticed in 2012-2013, which means that the monetary policy strategy become a stimulating one after the crisis.

Figures 5 and 6 present plots of the evolution of the responses of interest rate after a shock in inflation and unemployment over the last 12 years. The 21-month response may be considered the long run response.
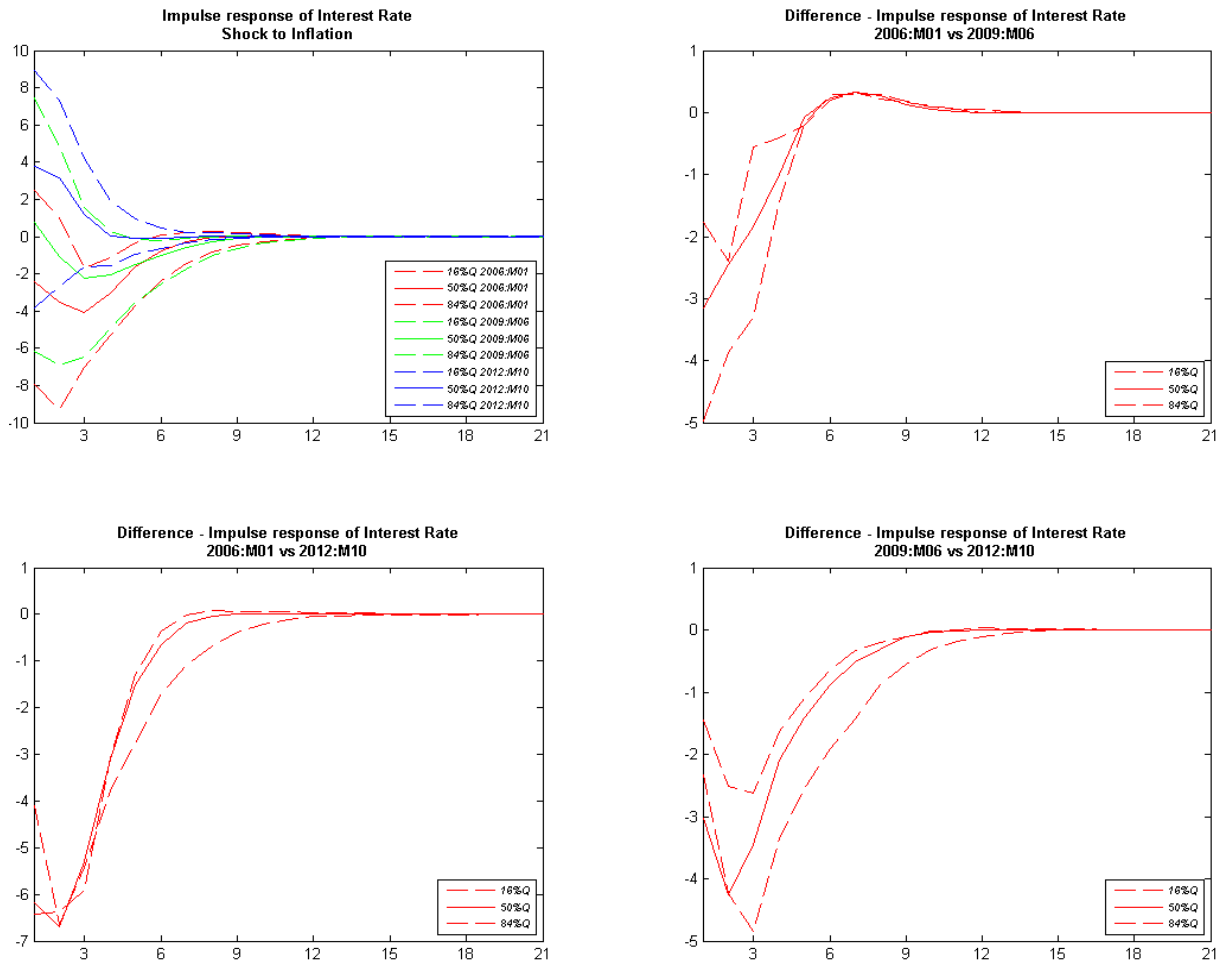
Figure 3 Impulse response of interest rate to inflation shocks in 2006:M01, 2009:M06 and 2012:M10 and also difference between the responses in the three moments in time
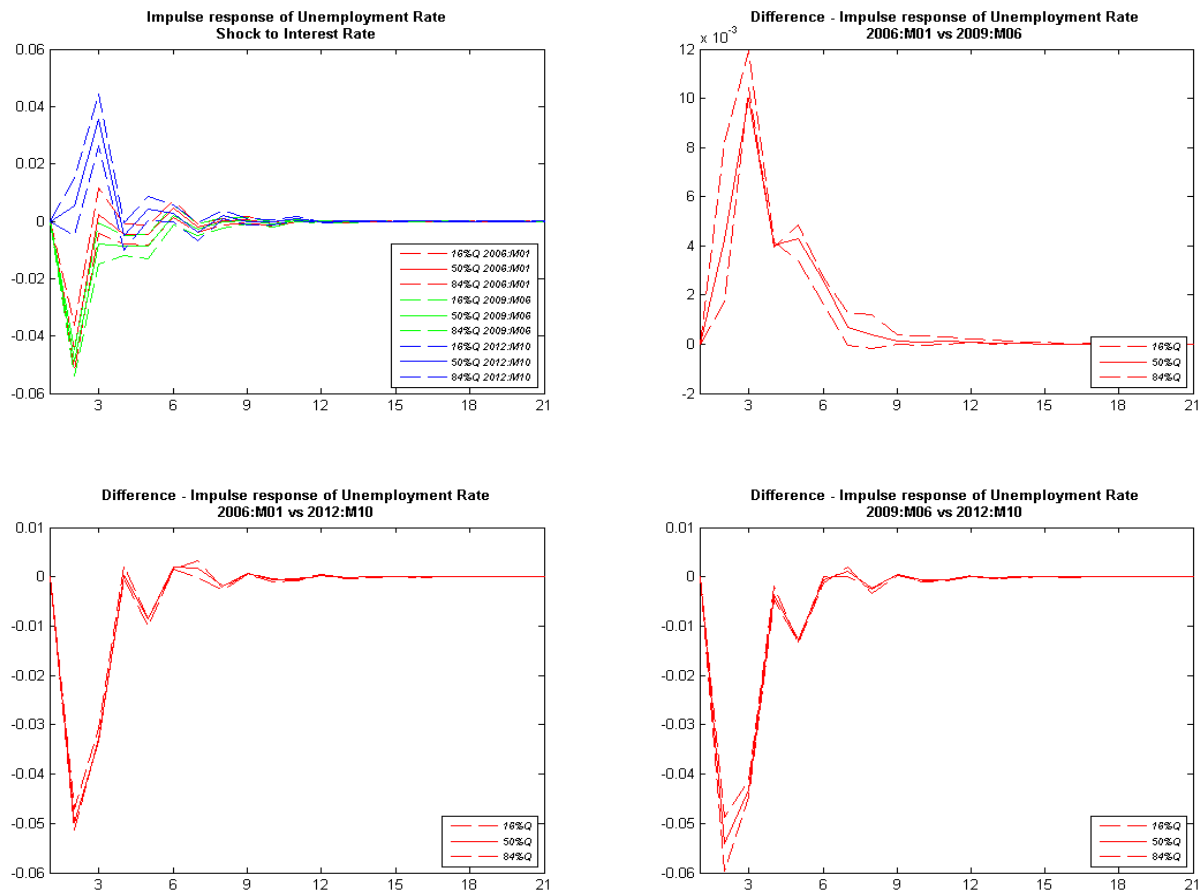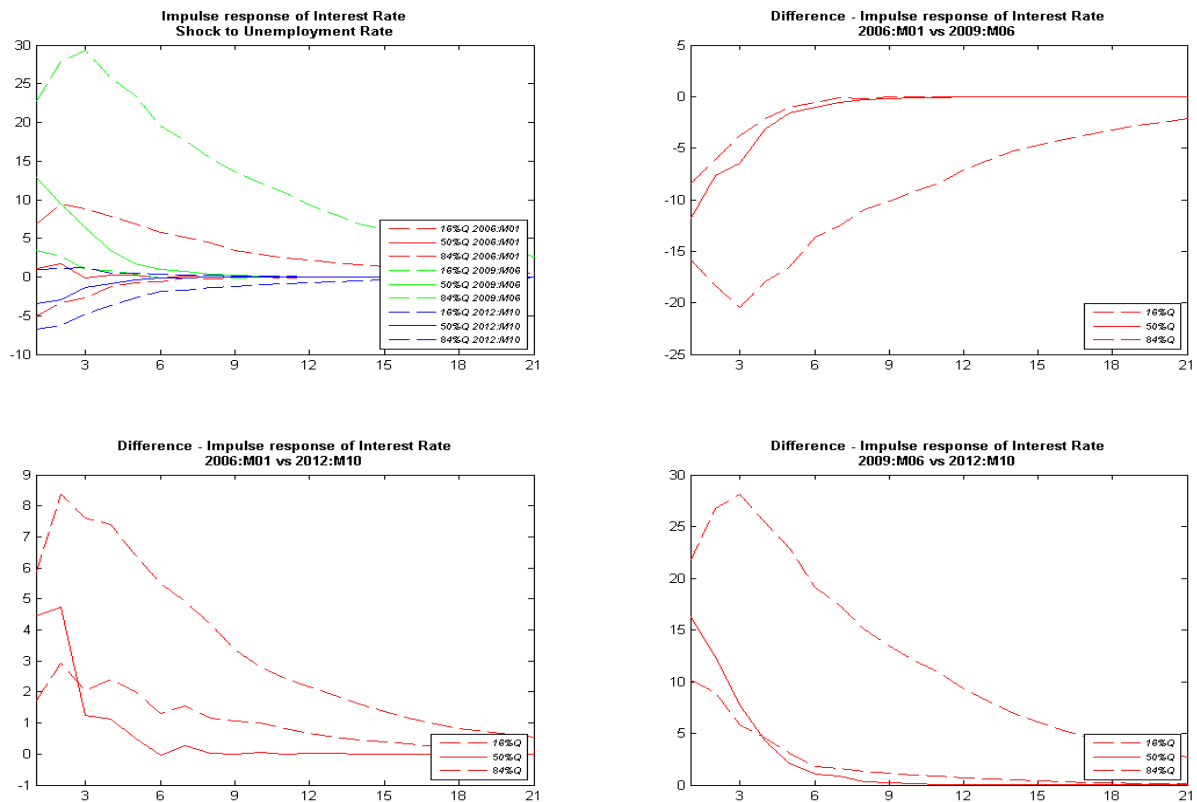
Figure 4: Impulse response of interest rate to unemployment shocks in 2006:M01, 2009:M06 and 2012:M10 and also difference between the responses in the three moments in time

These figures show that the correlation between short term, medium term and long term responses to inflation and unemployment is high.

The responses are gradual, which means that it takes time for the interest rate to reach the long run response level after a shock in inflation or unemployment.

Also, the differences between responses is smaller after a shock to unemployment rate, which suggests that the Central Bank reacts much faster to unemployment rate than to inflation.
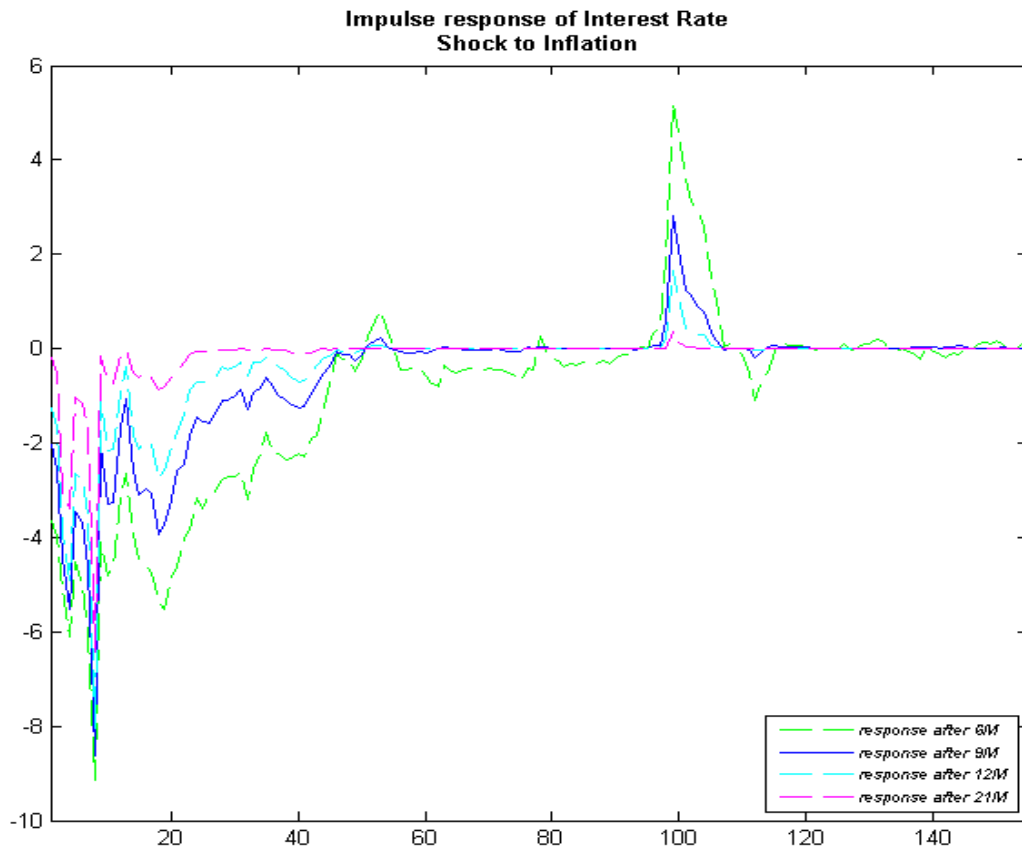
Figure 5: Impulse response of interest rate to inflation shocks in each moment in time
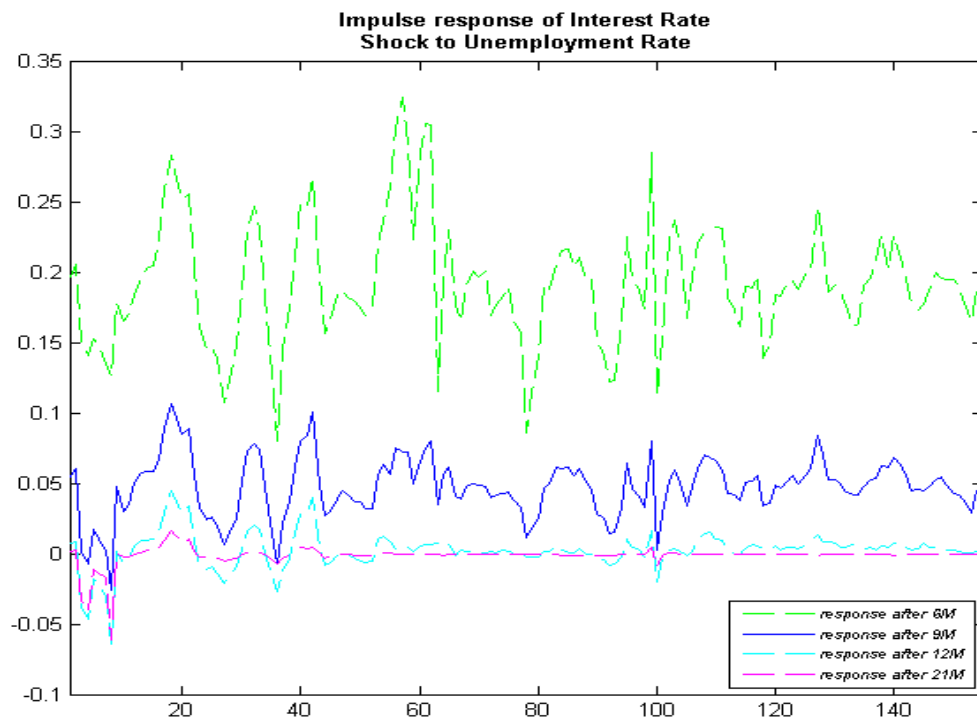
Figure 6: Impulse response of interest rate to unemployment shocks in each moment in time

4 CONCLUSIONS

Several observations can be made after estimating the TVP-VAR model with time varying coefficients and also stochastic volatility on a sample database consisting of: inflation, unemployment and interest rate time series for Romanian economy. Three moments in time were chosen for the investigation: 2006: M1 (after the adoption of inflation targeting monetary policy strategy), 2009:M6 (during the latest economic crisis) and 2012:M10 (in order to form an image of the current economic situation).

Regarding non-systematic monetary policy, after an increase in the level of interest rate, inflation decreases in each one of the three moments of time, which is according to the theoretical view and it is a proof of the existence of the interest rate channel. After an increase in the level of interest rate, unemployment increases only in 2012:M10, which shows more concern for the Central Bank regarding the situation of the economy overall besides inflation rate, after the recent economic crisis. Also, even though the responses are stabilizing after a period of one year, they do vary over time, indicating that the estimated coefficients show time variation.

Regarding systematic monetary policy, the correlation between short term, medium term and long term responses to inflation and unemployment is high, the responses are gradual and the differences between responses is smaller after a shock to unemployment rate, which suggests that the Central Bank reacts much faster to unemployment rate than to inflation.

Further research might include the estimation of a Factor Augmented VAR model or a mixture between TVP-VAR and Factor Augmented VAR model, which results in a TVP-FAVAR model.

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TOWARD A NON-DISCRIMINATIVE DISTRIBUTION OF EDUCATIONAL OPPORTUNITIES: A MATHEMATICAL MODELLING APPROACH

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ABSTRACT
A fair and equitable distribution of educational opportunity could be classified under the term sustainable developmen. Each syudent from any social and/or economical class should be able to have a fair chance to access to suitable educational opportunity. In this paper, a mathematical optimization model is proposed to determine the share of each social class in each state-owned school. The share is based on the student population in each class. The model also minimizes the total transportation distance in order to decrease the environmental impact of the solution. The proposed model is used in a real case study in the city of Bushehr in Iran.

Keywords: Social class, Social Fairness, Student Allocation to School, Mathematical Modelling, Bushehr

1 INTRODUCTION
The concept of social justice arose in political language in the industrial revolution and simultaneously could find its place in the socialist doctrine (Baudot, 2006). Social justice makes sense in social and economic equality and democratic community which every member have equal access to public goods, institutional resources and life opportunities and have the right to participate in control and decision-making process through institutions such as families, schools and workplace (Vaillancourt, 2012).

Social justice is a moral and political construction aimed at equal rights and collective solidarity, any person just because of being human, without any discrimination, has the right to benefit from economic and social progress (Balaceanu, Apostol and Penu, 2012). Therefore, societal member must be able to choose according to their opportunities. Education facility is one of the opportunities in the context of social justice. Turhan (2010) argues that education system must be sensitive to issues like social justice in schools, which is in accordance to the principle of "education is necessary throughout community". This principle gives schools a multi-dimensional feature. Moreover, having different students with different socio-economic and socio-cultural background in a school helps them to live together and the resulting social life is very useful for the society.

Social justice in education is still not respected in many countries, although it is undeniable but sometimes this right is violated just because of poverty, gender, race and religious. The

different household income level may results in a discriminative distribution of education opportunities even in rich countries (Baudot, 2006).

Operation research (OR) can have prominent role in this issue. Although OR began in world war two with helping military projects but it's a long time that OR is a tool employed by industrial engineers, economists, mathematicians, computer system analysis, system engineers. The U.S Department of Labor defines OR as "the discipline of applying advanced analytical techniques to help make better decisions and to solve problems" (Wong, 2006) which is applied in many issues such as transportation, routing, scheduling, supply chain management and network optimization.

In the late 1960's, OR techniques was used for school problems (Stimson and Thompson, 1974). The high costs of public education persuade school administrators to use these techniques for managing education (Bruno, 1970).

Most of the researches in school issues have studied school bus routing problems which includes two approaches, bus stop selection and bus route generation. The problem solution includes a set of bus stops for picking up students (Riera-Ledesma and Salazar-Gonzalez, 2012).

School bus routing problem was presented by Newton and Thomas (1969) (Park and Kim, 2010) provided a comprehensive review of the school bus routing problems. They mentioned various assumption, constraints and solution methods (Knutson, Marquis, Ricchiute and Saunders, 1980) used a goal programming model to achieve racial balance in schools. (Dale and Mcdaniel, 1975) considered transportation approach to assign students to school such that the total cost of the system is minimized. He used this procedure for school districting under federal integration guideline.

In this paper an integer programming method is proposed to allocate students to schools. The objective is to find an optimum solution for the total transportation distance such that each student from any household income level (social and economic class) is able to access to the nearest school.

The remainder of the article is organised as follows. Section 2 provides a breif description to the problem statement. Section 3 presents the mathematical model proposed for the problem. A real case study is discussed in Section 4 and findings related to the application of the mathematical model to the case study is covered in Section 5. Finally, the paper is concluded in Section 6.

2 PROBLEM STATEMENT

In order to formulate the problem in OR terms, a graph-based modelling method is used. A graph is applied for satisfying relationships among a collection of items which consists of a set of objects, called nodes and with certain pairs of these objects connected by links, called edges. Graphs can be served as mathematical models of network structures (Easley and Kleinberg, 2010), which have a great number of applications in the literature.

Every day, students leave their home to go to school and travel distances to receive to their destinations. This displacement can be illustrated as a graph in which each node represents

either a tracts or a schools, and an edge represents the transportation distances between a tract and a school.

The city can be divided into different tracts or neighborhoods according to some geographical criteria. The student population is assigned to schools such that the total distances they travel from the tracts to schools are minimized. In order to satisfy some non-discriminative policy, there must be some predefined proportion of students from each social class in each school. In other word, the model seeks a solution to where a social-balance in schools is guaranteed.

3 MATHEMATICAL MODEL

A linear programming program is presented to allocate students to schools. The proposed modelling approach is based on the method presented by Stimson and Thompson (1974). We have used some notations (presented in Table 1) in modelling the problem.

Table 1: mathematical notations.

d_{ij}	Transportation distance student traveled from tract i to school j
x_{ijk}	Number of student of income level k in tract i assigned to school j
y_{ik}	Percentage of students of income level k in tract i
s_i	Total number of students in tract i
c_j	Maximum student capacity of school j
U_{jk}	Upper bound on the percentage of students of income level k assigned to school j
L_{jk}	Lower bound on the percentage of students of income level k assigned to school j

It is argued (Macário, 2004) that the longer the student travel to school, the more the risk for them to be involved in an accident which sometimes may result in their death. Distance strongly influences the type of transportation alternative to be used by students. Using car or public transport has a higher cost than biking and walking. Neighborhood schools are useful not only for economic benefits but also for decreasing the traffic and pollution of air which damages the life of the society (Muller, Tscharaktschiew and Haase, 2008). Moreover, long traveling hours influence students learning because they reach at school while they are tired and sleepy (Carvalho, da Cruz, Câmara and de Aragão, 2010). Therefore, the objective of the problem is to minimize the total distance all students travel from the tract they live in to the schools they are assigned to. The objective function is formulated as Equation (1), where the total summation of distance traveled by all students is minimized.

$$\min \sum_i \sum_j \sum_k x_{ijk} \cdot d_{ijk}$$

(1)

This objective function assigns students to schools such that a balance in household income level in each school is achieved. The constraint (2) assigns students of each tract to schools such that in any school j there must be some percentage y_{ik} of students of social class k.

$$\sum_j X_{ijk} \geq y_{ik} \cdot S_i \quad \text{for each } i \text{ and each } k$$

(2)

Each school j has a finite capacity for students defined as C_j. Therefore, it is not possible to assign students to a school j if the total number of students exceeds C_j. Constraint (3) ensures

that the total number of students of each tract from each income level assigned to school *j* has not violate the school capacity

$$\sum_i \sum_k X_{ijk} \leq C_j \qquad \text{for each } j \qquad (3)$$

To ensure some level of social justice, the total number of students of each social class in a school j is bounded by a lower bound L_{jk} and an upper bound U_{jk}. Constraints (4) and (5) restrict the total number of students of each social class to a predefined bound.

$$\sum_i X_{ijk} \leq U_{jk} \cdot \sum_i \sum_k X_{ijk} \quad \text{for each } j \text{ and each } k \qquad (4)$$

$$\sum_i X_{ijk} \geq L_{jk} \cdot \sum_i \sum_k X_{ijk} \quad \text{for each } j \text{ and each } k \qquad (5)$$

4 CASE STUDEY

This research is focused on a case study in the city of Bushehr, in the southern part of Iran.
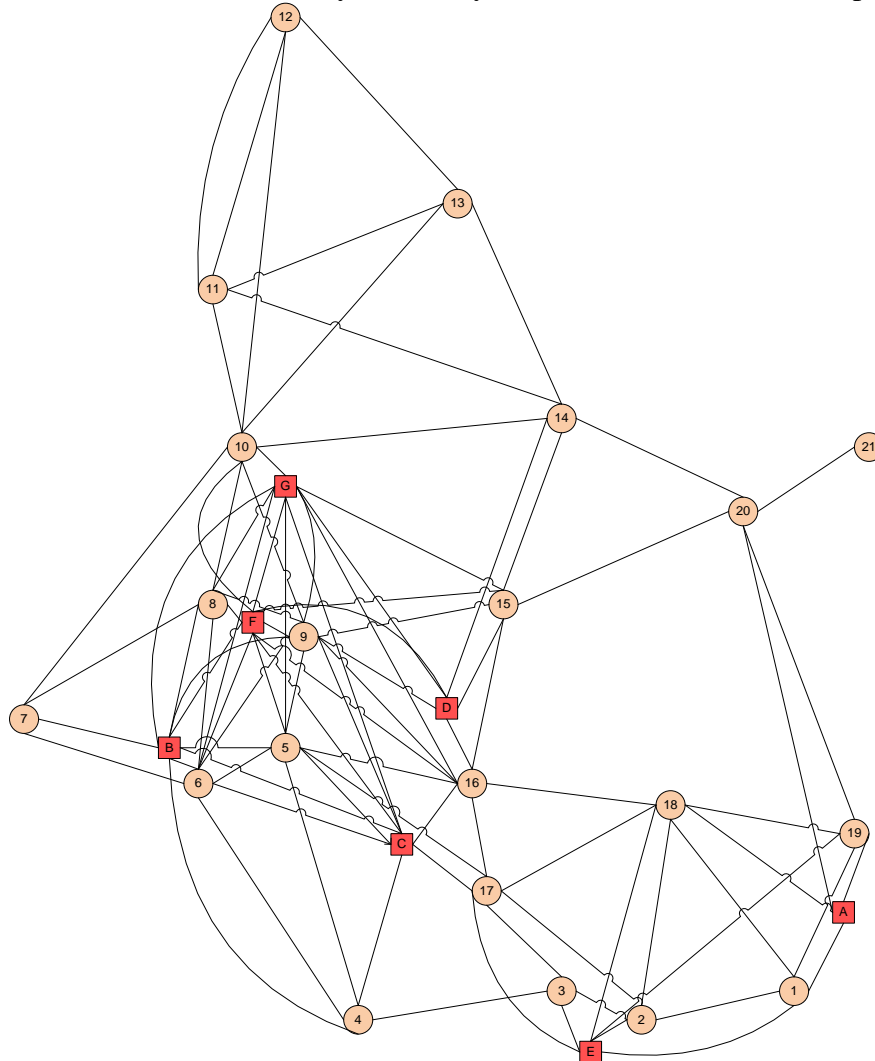

Figure 1: The network model of the city of Bushehr.

This city is divided into 21 tracts according to the geographical zoning introduced by the city council. Based on the zoning, the total population of the city is distributed in different tracts. Each tract is presented as a node in the corresponding graph using a population-centric method. That is, the related node on the graph is placed where the tract has the most population density. Figure 1 illustrates the graph which each square is the place of school and each circle is a node. All of the nodes are matched with city map of Bushehr and distances between them are accounted.

The city has 7 high schools, denoted by *A*, *B*, *G*. Each school *j* has a capacity C_j = {220, 95, 280, 314, 250, 100, 280}, respectively. Table 2 shows the distances between each tract *i* and each school *j*. For example, if students in tract 1 go to school *A*, they need to travel 500 meter each. As it can be seen in Table 1, the maximum distance to travel (6450 meter) is the distance between tract 12 and school *E*. It can be seen in Figure 1 that the school E is far from the tract 12. Also, the minimum distance (100 meter) is related to travel from tract 2 to school *E*.

Table 2: distancese between each tract and each school

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
A	500	1450	2100	3050	2750	3100	5200	4750	3650	5250	6150	6400	5000	3850	3600	2550	2500	1300	600	2500	3200
B	4300	3350	2700	1750	600	350	1850	1250	900	2050	2950	4350	3850	3200	1350	1900	2000	3000	3900	2200	2600
C	2700	1750	2050	1100	1350	950	3050	1950	1050	2650	3550	4950	3650	2500	1400	350	500	1500	2400	2250	2650
D	3650	2700	2850	3800	2000	2350	4450	1950	850	2450	3350	4250	2850	1700	350	700	1450	1950	2850	1200	1600
E	2050	100	300	1250	2400	2850	4750	3950	2850	4450	5350	6450	5050	3900	2800	1750	1000	1350	3250	5150	5550
F	4300	3350	3500	2400	800	800	1850	200	900	700	1600	3000	3650	2500	1400	1350	2100	2600	3500	2250	2650
G	4850	3900	4050	3100	1550	1500	2450	800	1450	200	1100	2500	1900	1350	1350	1900	2650	3150	4100	2200	2600

The total student population of each tract *i* (S_i) is presented in Table 3. Tract 9 has the maximum population and tract 12 has the minimum student population.

Table 3:student population in each tract

1	2	3	4	5	6	7	8	9	10	11
98	94	83	65	74	90	45	74	99	64	45

12	13	14	15	16	17	18	19	20	21
34	48	53	58	48	68	73	84	58	50

Household income level is categorized in three different types, *k1*, *k2*, and *k3*, where $k_1 < k_2 < k_3$. The percentage of student of each income level living in tracts *i* (y_{ik}) is shown in Table 4. For example in tract 1, 10 percent of student come from k_1, 30 percent come from k_2, and 60 percent are from class k_3.

Table 4: percent of students of each household income level in each tract

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
K1	0.1	0.1	0.1	0.1	0.1	0.4	0.8	0.4	0.2	0.2	0.2	0.8	0.7	0.6	0.1	0.1	0.1	0.1	0.5	0.6	0.6
K2	0.3	0.2	0.1	0.1	0.3	0.3	0.1	0.3	0.5	0.5	0.5	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.2
K3	0.6	0.7	0.8	0.8	0.6	0.3	0.1	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.6	0.6	0.5	0.5	0.3	0.2	0.2

Each school may consider different limitation for regesring students of each household income class *k*. School adminstaration decide which combination of income level would be proper for the school to keep a social balance. The upper and the lower bounds of household income level, L_{jk} and U_{jk}, is determined for each school and presented in Table 5 and Table 6.

Table 5: lower bound of household income level in each school

	A	B	C	D	E	F	G
K1	0.05	0.1	0.1	0.2	0.1	0.5	0.5
K2	0.1	0.2	0.3	0.05	0.2	0.1	0.1
K3	0.1	0.02	0.1	0.1	0.3	0.03	0.3

Table 6: upper bound of household income level in each school

	A	B	C	D	E	F	G
K1	0.4	0.5	0.2	0.5	0.3	0.7	0.7
K2	0.3	0.4	0.5	0.3	0.5	0.2	0.2
K3	0.5	0.1	0.3	0.2	0.5	0.2	0.4

5 FINDINGS

In this paper, we have proposed a mathematical modelling approach to student assignment school problem. The resulting integer programming model is solved using branch ad bound algorithm and the software tool Lingo 14.0. Each student of tract *i* being in social class *k* goes to school *j*. Table 7 shows the number of students of each household income level *k* assigned to school *j*. For example, in school *A* there are 59 students from income level 1, 61 students from income level 2, and 100 students from income level 3. The final row of the table shows the total number of all students in each school, while the most right-hand side column shows the total number of students of each income level *k*. The total number of students in school A, B, F and G is equal to the capacity of the school, but the number of students assigned to schools D and E is less than the capacity of the school.

Table 7:the number of students of each income level in each school

	A	B	C	D	E	F	G	Ssum
K1	59	5	66	100	20	63	100	413
K2	61	5	96	88	40	22	82	394
K3	100	85	100	100	100	15	98	598
Ksum	220	95	262	288	160	100	280	1405

Table 8 shows the number of students which travel from tract *i* to school *j*. For example, 98 students from tract 1 go to school *A* which is the maximum number of students of a tract assigned to any school.

Table 8: Total Assignment of students of each tract to each school

Tract	A	B	C	D	E	F	G	Tract	A	B	C	D	E	F	G
1	98							12							34
2	15		16		63			13							48
3					83			14				14			39
4		14	51					15				58			
5		47	27					16			20	28			
6		27	63					17			68				
7		7				34	4	18	23		12	24	14		
8						66	8	19	84						
9			5	64			30	20				50			8
10							64	21				50			
11	0	0	0	0	0	0	45	Ksum	220	95	262	288	160	100	280

6 CONSLUSION

This paper presents a mathematical model to assign students living in different tracts of a city to school, such that the total transportation distances is minimized and a social balance policy is achieved.

We have found some related works in the literature trying to provide racial balance in school bus routing (Stimson and Thompson, 1974), in which a balance between black and white students was the main concern. In our paper, we have focused on economical/social class and a balance between students of different social class. Schittekat et al. (Schittekat, Kinable, Sörensen, Sevaux, Spieksma and Springael, 2013) used a meta-heuristic algorithm to find a solution to bus stop selection in school bus routing problem. They did not considered any classification among students. Zhang and Li (2012) applied quantum-behaved particle swarm algorithm to school bus routing problem and no social and/or economical balance has been considered.

Comparing with the other articles we came to a conclusion that the research presented in this article is novel in its own for re-considering social balance in assigning students to school. Claiming that, educational authorities can use the approach proposed here to achieve some social balance in school which may result in less social/racial problem in societies.

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THE ROLE AND IMPORTANCE OF ECB'S MONETARY POLICY IN THE GLOBAL ECONOMIC CRISIS

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ABSTRACT
This paper presents the role and importance of the European Central Bank (ECB) in the context of measures and effects that are being taken to repair the consequences of the current economic crisis. The ECB, together with the european single currency, the euro, symbolizes long-lasting monetary integration of the EU states. Such form of integration has created the possibility of a supranational action of ECB in the banking sector and financial markets in general. Along with the other most important central banks in the world, the ECB applies various unconventional instruments of monetary policy to stimulate economic growth and development. In this context, the paper explains the nature and mechanism of such measures in order to influence on the insufficient liquidity in the financial markets.

Keywords: *ECB, monetary policy, non-standard measures, financial markets*

1 INTRODUCTION

After the first indications of the global financial crisis in 2007 and its intensification one year later (the bankruptcy of one of the largest investment banks – Lehman Brothers), new circumstances were generated, which called for the implementation of non-standard and unconventional measures of monetary policy by the most significant central banks in the world. Addressing the issue of insufficient international liquidity and boosting the weak aggregate demand implied the establishment of new mechanisms that would be at the central banks' disposal within the scope of their instruments. After September 2008, in the aftermath of the mentioned bankruptcy, the financial market, in particular money markets have been hit by a considerable increase in insecurity and panic. Interest rate spreads at the European, US an UK markets reached the unprecedented levels, whereas, on the other hand, the volume of transactions drastically fell (especially when it comes to forward transactions). Effectiveness of transmission mechanism of monetary policy was brought into question given that the financial market players ended up in the position of a "liquidity trap"[1]

Such circumstances called for a swift and decisive reaction of monetary authorities. In addition to carrying out expansionary monetary policy by means of traditional instruments (including, for instance, reduction of reference interest rates), the central banks presented a set of the so-called non-standard measures in order to adequately adjust to the current developments. The mechanism and forms of these measures somewhat differ among the central banks involved, but, despite this, they all strive towards the same objectives – support to the financial markets and prevention of the financial systems' disruption, which would in the mid term threaten the macroeconomic and price-related stability. The differences in the

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[1] "Liquidity trap" is a situation described in Keynesian economics, occurring when expansionary monetary policy (increase in money supply in the banking sector) has no effect on the reduction of interest rates and, consequently, on the stimulation of economic growth. Its characteristics are extremely low interest rates (approaching zero) and fluctuations in the monetary base which are not "mirrored" in the general price level.

"design" of the central banks' measures which are being topical from the late 2008 depended on several factors: structure itself of the present standard monetary policy measures, balance sheet size of the concerned central banks, and structure of the financial systems of the region in which a certain country was located.

The separateness of standard and non-standard measures of monetary policy has been explicitly demonstrated through their effects on the financial markets, especially if one follows in parallel the development before and during the global financial and economic crisis. The mechanism of standard measures of open market operations is rather familiar and many scientific reference books analyze their impact on real economy and the price level. When it comes to non-standard measures, however, the situation is somewhat different. By their nature, they are located outside the regular scope of monetary actions and, as such, impose the need for their further analyses and required scientific justifiability. Many non-standard measures implemented from 2007 represent a modification of the existing instruments and procedures used in monetary policy. These modifications implied the changes in the role of the central banks themselves: ranging from mediators at the interbank money market through holders and portfolio managers to lenders of the last resort.

The existence of a single currency in a multi-country area can be seen to create disincentives for individual governments to properly tackle fiscal and structural policies as well as to safeguard financial stability. The crisis has shown that the original institutional set-up of EMU only partially corrected for such disincentives. Excessive debt and leverage had built up prior to the crisis, in private and public, financial and non-financial sectors, with imbalances emerging across the euro zone and elsewhere. The paper reviews the ECB's specific non-standard monetary policy responses in the three main phases of the crisis, which mutated from a global financial crisis to a sovereign debt crisis in the euro zone and was later intertwined with renewed strain in the banking system in parts of the euro zone, with significant fragmentation across countries.

2 QUANTITATIVE EASING

The most widespread and most frequently used non-standard measure of monetary policy is so-called *quantitative easing*. In situations when traditional instruments no longer have impact on macroeconomic aggregates because the reference interest rate reached its lowest possible level, and at the same time there is no other economic stimulus, central banks undertake a different set of measures. Namely, they purchase various forms of financial assets from commercial banks and other (non)financial institutions, thus generating additional money supply in order to inject "fresh" capital into the financial flows. This measure differs from the typical buying or selling of government securities with a view to impacting the reference interest rate. Quantitative easing increases the surplus of banks' reserves and causes an increase in financial assets prices, at the time reducing their returns[2].

As opposed to open market operations where the focus is on short-term government securities, when implementing quantitative easing central bank purchase long-term government bonds in order to impact additional reduction of long-term interest rates on the revenue curve (in the mentioned situations when short-term interest rates are close to zero or zero, the classic monetary policy can no longer reduce them in the long run). How does the process of quantitative easing implementation actually work?

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[2] Elliot, L; *Guardian Business Glossary: Quantitative Easing,* London, The Guardian, 2009.
http://www.guardian.co.uk/business/2008/oct/14/businessglossary

Direct injection of capital into the financial system by the central bank, through purchasing mostly government securities, may have various effects (Diagram 1). The sellers of financial assets acquire a surplus of cash which, they may spend, thus triggering further economic activity. Alternatively, they may purchase other financial assets, such as shares or corporate securities. This results in a growth of prices of financial instruments, increasing the wealth of their owners. Ownership may be direct or indirect, through a share in certain intermediary financial institutions, such as, for instance, private pension and investment funds. Growth of financial instruments' prices also implies lower revenues, which in turn leads to the lower borrowing costs for the corporate and retail sectors. This additionally boosts the consumptions. On the other hand, the banks are in the position to hold a surplus of reverses, which to a large extent they can extend to their clients, thus enhancing their lending activity. However, the question is whether commercial banks would react adequately or whether they would be unwilling to extend loans, thus keeping the surplus of money as part of their reserves. This is exactly why central banks may conduct the process of quantitative easing with other financial institutions as well, which would then involve the purchase of various corporate securities.
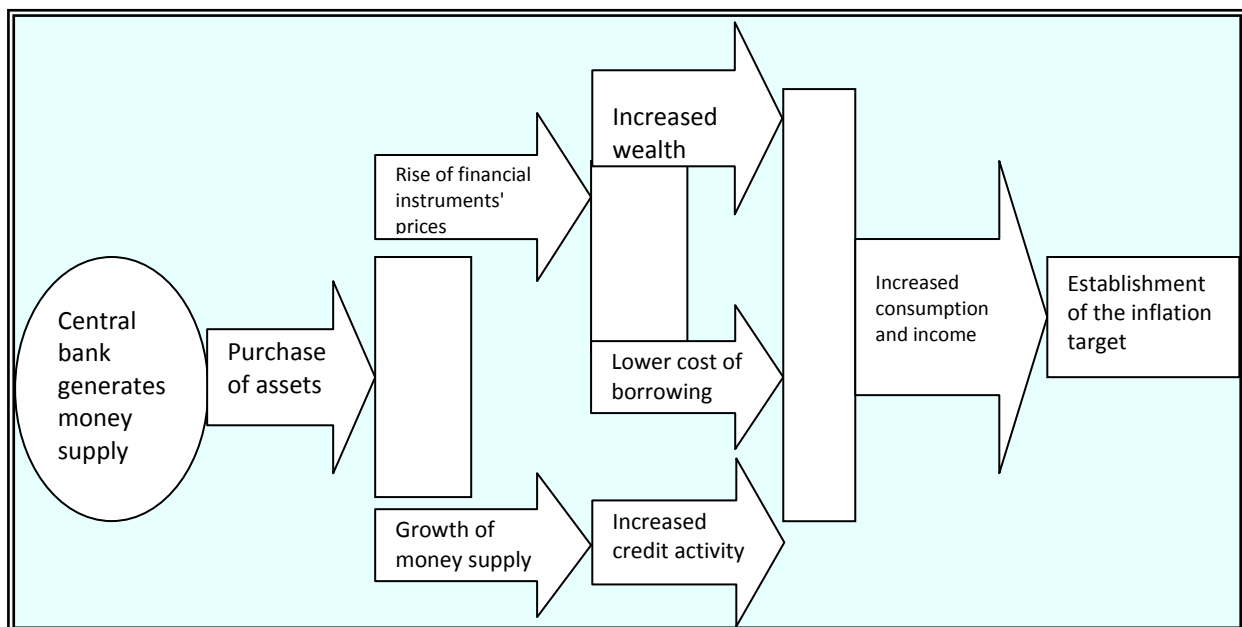

Diagram 1: Quantitative easing implementation process (Author)

3 FINANCIAL STRUCTURE OF THE EURO ZONE

The euro zone's financial structure differs from that of other large economies. Financial intermediaries – in particular banks – are the main agents for channeling funds from savers to borrowers (ECB, 2007). Banks are the primary source of financing for the economy, most obviously in the case of households. As for firms, more than 70% of the external financing of the non-financial corporate sector – that is, the financing other than by retained earnings – is provided by banks, and less than 30% by financial markets (and other funding). In the United States it is the other way around (Figure 1). After the collapse of Lehman Brothers, bank funding started contracting (i.e. a net redemption) at a rate of €100 billion a year, in sharp contrast to its prior net expansion at a rate which could go up to €600 billion in 2007. Part of the decline in bank funding was offset by a rise in market funding: debt securities issued by

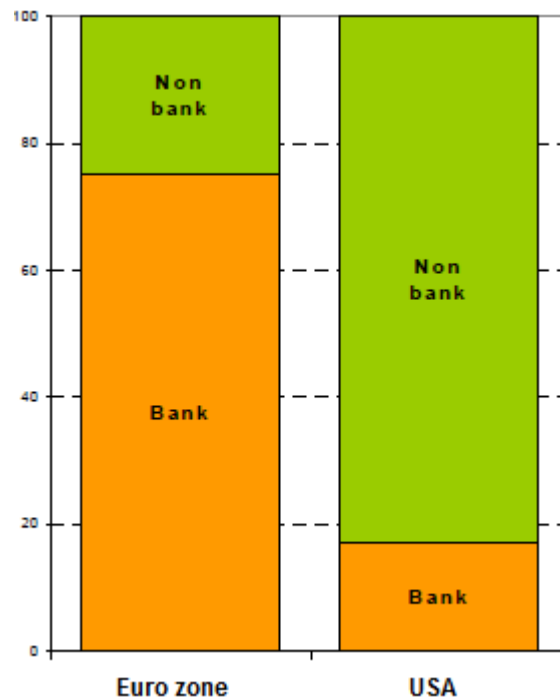corporations (but also quoted shares issued) increased by more than €100 billion a year in net terms[3].

Figure 1: Funding of the non-financial corporations in the Euro zone and USA (Eurostat, ECB and FED)

Banks still play a crucial role in the transmission of policy interest rate decisions to the euro zone economy. In this respect, the ECB's non-standard response to the crisis has accordingly been primarily focused on banks. The operations mainly consist of refinancing operations, to which a large number of counterparties are granted access so as to ensure that the single monetary policy reaches the banking system in all the euro zone countries. This is again different from the US set-up, where the Federal Reserve Bank of New York implements monetary policy on behalf of the entire Federal Reserve System and the operations consist mainly of outright purchases and sales of assets in the open market, in line with the essentially market-based structure of the economy. The number of counterparties involved is relatively small, even after having risen during the financial crisis.

In Eurosystem refinancing operations, the individual national central banks grant loans at normally uniform conditions across the euro zone to their counterparties against assets pledged as collateral for a limited, pre-specified period. The list of eligible collateral – about 40,000 assets with a combined value of around €14 trillion or around 150% of GDP in 2012 – contains a very wide range of public and private sector marketable debt securities and also includes some non-marketable assets[4].

Since they steer the marginal cost of the refinancing of banks, the monetary policy operations are at the beginning of the transmission chain of the policy signal. The monetary policy stance

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[3] Cour-Thimann, P; Winkler, B; *The ECB's non-standard monetary policy measures*, ECB Working Paper No. 1528, April 2013, 7.

[4] Cour-Thimann, P; Winkler, B; *The ECB's non-standard monetary policy measures*, ECB Working Paper No. 1528, April 2013, 9.

is signaled by three key ECB interest rates: the rates on the main refinancing operations, the marginal lending facility and the deposit facility. Prior to the financial crisis, decisions and expectations regarding the main refinancing rate were smoothly reflected in the money market yield curve, which was the same throughout the euro zone. The interbank market seemed fully integrated. The creation of EMU had thus been an engine of financial integration: the distinction between a domestic transaction and a cross-border transaction within the euro zone had disappeared. This also meant that if bank transactions during the day led to a net payment outflow, the bank would find the offsetting funding in the interbank market at uniform conditions across the euro zone.

4 THE ECB'S MONETARY POLICY RESPONSE TO THE CRISIS
This section reviews how the ECB and the Eurosystem responded to the financial crisis. For simplicity, the measures decided by the ECB's Governing Council are described in this paper as 'ECB' measures; they are actually implemented by the Eurosystem as a whole. Beyond the period of financial turmoil that preceded the financial crisis, it is useful for the purpose of the review to distinguish between two phases, marked by the following:
1) The start of the global financial crisis in September 2008 (Lehman collapse);
2) The start of the euro zone sovereign debt crisis in May 2010 (Greek crisis).

4.1. The global financial crisis and the ECB's response
The ECB had already been actively amending its monetary policy implementation in the 13 months of financial turmoil preceding the eruption of the global financial crisis in September 2008. Banks had started to have doubts about the financial health of their counterparties in the interbank market. This drove money market rates up and threatened the appropriate transmission of the ECB's interest rate decisions. From the first day of tensions in interbank markets on 9 August 2007, the ECB acted by accommodating the funding needs of banks, which were seeking to build up daily liquidity buffers so as to reduce uncertainty about their liquidity positions. In particular, the ECB de facto provided unlimited overnight liquidity to banks, allocating €95 billion on the first day. Later on, the ECB conducted supplementary refinancing operations with maturities of up to 6 months, compared with a maximum of 3 months in normal times[5]. To reduce bank liquidity uncertainty over the turn of the year, all bids above the previous operation's marginal rate were allotted in full in the last main refinancing operation of the year. Temporary swap lines were established with other central banks, primarily to address the mounting pressure in short-term US dollar funding markets. As a result, the tensions in the short-term segment of the euro zone money market abated considerably.

Following the bankruptcy of Lehman Brothers on 15 September 2008, the uncertainty about the financial health of major banks worldwide led to a virtual collapse in activity in many financial market segments. Banks built up large liquidity buffers, while shedding risks from their balance sheets and tightening loan conditions. Given the crucial importance of banks for the financing of the euro zone economy and in the ECB's monetary policy implementation, this situation was alarming in view of a high risk of a credit crunch and a high risk of the central bank's inability to steer monetary conditions.   The ECB, like other major central banks, rapidly reduced its key interest rates to historically low levels, but a key element of its response to retain effectiveness in influencing monetary conditions consisted of its non-standard policy measures. The aim was to continue preserving price stability, contributing to

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[5] ECB, (2010*b*), '*The ECB's Monetary Policy Stance During the Financial Crisis*', Monthly Bulletin, January 2010, 5.

stabilizing the financial situation, and limiting the fallout on the real economy. As regards interest rate policy, the ECB cut the main refinancing rate by 50 basis points on October 2008, in a concerted and historic move with other major central banks; it reduced its key interest rates further by a total of 325 basis points within a period of 7 months until May 2009. The main refinancing rate was brought to a historic low of 1%, a level not seen in euro zone countries in decades.

At the same time, the ECB adopted a number of non-standard measures to support financing conditions and credit flows to the euro zone economy over and beyond what could be achieved through reductions in key interest rates alone (so-called 'enhanced credit support'). The nonstandard measures implemented from October 2008 onwards were tailored to the specific, bank-based financial structure of the euro zone, aiming at supporting bank liquidity and funding. They comprised five key elements, drawing in part on the experience with non-standard measures during the financial turmoil, which include:

- *Fixed-rate full allotment.* A fixed-rate full allotment tender procedure was adopted for all refinancing operations during the financial crisis. Thus, contrary to normal practice, eligible euro zone financial institutions have unlimited access to central bank liquidity at the main refinancing rate, as always subject to adequate collateral.
- *Extension of the maturity of liquidity provision*. The maximum maturity of the longerterm refinancing operations (LTROs) was temporarily extended (subsequently to 12 months in June 2009). In combination with the first element, this contributed to keeping money market interest rates at low levels and increased the Eurosystem's intermediation role aimed at easing refinancing concerns of the euro zone banking sector, especially for term maturities. Reduced liquidity costs and uncertainty and a longer liquidity planning horizon were expected to encourage banks to continue providing credit to the economy.
- *Extension of collateral eligibility*. The list of eligible collateral accepted in Eurosystem refinancing operations was extended, in fact allowing banks to refinance a larger share of their balance sheet with the Eurosystem. The ability to refinance less liquid assets through the central bank provides an effective remedy to liquidity shortages caused by a sudden stop in interbank lending.
- *Currency swap agreements*. The Eurosystem temporarily provided liquidity in foreign currencies, at various maturities, and against euro-denominated collateral. For this, the ECB used reciprocal currency arrangements, notably with the US Federal Reserve. A massive shortfall in US dollar funding was thus avoided: euro zone banks and associated off-balance-sheet vehicles had significant liabilities in US dollars, having provided major financing to several US market segments, including real estate and subprime.
- *Covered bond purchase programme (CBPP).* The Eurosystem committed to purchasing covered bonds [6]denominated in euro and issued in the euro zone for a total value of €60 billion gradually over the period between June 2009 and June 2010. The aim of the programme was to revive the covered bond market, which is a primary source of funding for banks in large parts of the euro zone. It is the largest and the most active segment of the fixed income market alongside the public sector bond market. Such covered bonds – known as 'Pfandbriefe' in Germany, 'obligations foncières' in France and 'cédulas' in Spain – are long-term debt securities that are issued by banks to refinance loans to the public and private sectors, often in

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[6] http://www.ecb.europa.eu/mopo/liq/html/index.en.html

connection with real estate transactions. These covered bonds – unlike mortgage-backed securities – have the specific legal characteristic of 'double protection': recourse to the issuer as well as additional security provided by the legal pledge of the assets financed. The size of the programme represented around 2.5% of the total outstanding amount of covered bonds, which in the given context was effective as a catalyst to restart activity in this market.

4.2. The ECB's response to the euro zone sovereign debt crisis
In early 2010 the euro zone sovereign debt crisis began with acute market expectations about a possible Greek sovereign default, with a risk of impact on Ireland, Portugal, and even Spain and Italy. In May 2010 some secondary markets for government bonds began to dry up completely; large-scale sale offers faced virtually no buy orders and yields reached levels that would have quickly become unsustainable for any sovereign. Given the crucial role of government bonds as benchmarks for private-sector lending rates and their importance for bank balance sheets and liquidity operations, this development was considered to impair the transmission of policy interest rate decisions to the real economy.

To help calm the market down and support a better functioning of the monetary policy transmission mechanism, the ECB established its Securities Markets Programme (SMP) to ensure depth and liquidity in those market segments that were dysfunctional. Under the SMP, Eurosystem interventions could be carried out in the euro zone public and private debt securities markets. In line with Treaty provisions, interventions in sovereign bond markets were strictly limited to secondary markets. In addition, they were also fully sterilized through liquidity absorbing operations, so as to not affect central bank liquidity conditions. In alleviating disruptions, the SMP was effective at the outset and led to some stabilization in markets as well as to an immediate and substantial decline of government bond yields. Its impact was re-enforced by the parallel announcement on the establishment of a European Financial Stability Facility through which governments could provide mutual financing support in adjustment programmes for specific countries.

SMP helped to avoid for some time an uncontrolled increase in sovereign bond yields and thereby in general financing costs for the economy with adverse implications for price stability. In addition, it helped to reduce contagion across countries and thereby shielded monetary policy transmission in large parts of the euro zone. Other non-standard measures also contributed to dampen the implications of impairments in the sovereign bond markets. The ECB mitigated the impact on bank funding through a renewed lengthening in the maturity of its liquidity provision and through changes in its collateral framework. As a result, government bonds amounted to less than 20% of the assets deposited as collateral in Eurosystem operations, compared to close to 30% in 2006. The remaining 80% included covered bonds, asset-backed securities, or other financial instruments.

5 CONCLUSION
The current economic crisis, which has entered its sixth year of existence, has triggered some new mechanism that should respond to the various economic problems. The combination of deflationary shocks and financial market turbulences has led the central banks to get more actively involved in addressing non-standard, unconventional measures of monetary policy. The global recession forced monetary regulators to strictly abide by the policy of low interest rates. In addition to the reference interest rates, which should serve as the key parameter in the transmission mechanism, what also characterizes these measures are huge liquidity reserves

channeled into the banking sector, purchase of long-term securities, and direct interventions in certain segments of the financial market.

This paper has reviewed the ECB's non-standard monetary policy measures during the global financial crisis and the euro zone sovereign debt crisis. Monetary policy clearly cannot directly address the underlying causes of the crisis and the associated need for deleveraging by financial and non-financial sectors or the need for rebalancing within the euro zone. This requires reforms and action on the part of governments and regulators, individually and collectively, with respect to fiscal consolidation, structural reforms, financial regulation and the European governance framework. At the same time, in financial crises central banks have an important role to play in providing liquidity, averting disorderly deleveraging and fire-sales of assets, and hence adverse self-fulfilling dynamics, as well as, more broadly, in safeguarding monetary policy transmission to ensure price stability .

The ECB's response to the crisis has, in particular, relied on banks as intermediaries to ensure the continuous financing of households and firms, rather than intervening in asset markets directly. The rationale of safeguarding monetary policy transmission across the euro zone and addressing dysfunctional market segments differs from that behind quantitative easing, which is aimed at providing extra monetary stimulus via outright transactions when the lower bound for policy rates has been reached.

6 SUMMARY
The global financial and economic crisis has put the spotlight on central banks using their balance sheets as backstops to the financial system. Against this background the paper reviews the ECB's specific non-standard monetary policy responses in the two main phases of the crisis, which mutated from a global financial crisis to a sovereign debt crisis in the euro zone.

The ECB's approach to date appears to stand out among central banks: its non-standard measures have been aimed not at providing additional direct monetary stimulus to the economy but primarily at supporting the effective transmission of its standard policy. Hence, for the ECB, non-standard measures are a complement to rather than a substitute for standard interest rate policy. By supporting the effective transmission of interest rate decisions to the wider euro zone economy they have improved financing conditions and credit flows, in a context of dysfunctional developments in some segments of the financial system.

The largely bank-based structure of the financing of the euro zone economy is reflected in the way the ECB's monetary policy is implemented, which is mainly through lending to a large number of banks against collateral, in normal times as during the crisis, with a relatively limited role for outright asset purchases. This is in contrast to the case of other major central banks, such as the US Federal Reserve System and the Bank of England. The ECB's non-standard measures have been mainly focused on banks, to improve their funding and liquidity conditions and thereby prevent disorderly deleveraging in the euro zone economy.

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OFFSHORE INVESTMENTS-CUI PRODIS? SCHRÖDINGER'S CATS IN OFFSHORE FINANCING: BOTH ALIVE AND DEAD.

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ABSTRACT

Trends of FDI in offshore tax havens were compared to efforts and efficiency of regulatory authorities to prevent money laundering. Based on available data it was stated that current position in offshore FDI stays alive and officially dead at the same time, keeping the balance of interests for the main stakeholders: corporations, authorities and financial institutes support further offshore investments. Analysis based on volumes of trade and financial transactions between offshore centers, developed and developing countries. As a result withdrawal of financial resources from the developing countries degrades social capital funding and supports corruption growth.

Keywords: FDI, money laundering, offshore financing, offshore investment, Tax havens

1 INTRODUCTION

Years of struggling with the illegal capital flow to tax havens resulted in numerous legal restrictions, law enforcement, FATF-GAFI regulations, declaring in 2008 that all the suspicious offshore jurisdictions are "clean", and an offshore capital pie is doubling in 10 years. Under modest Boston Consulting Group estimates the main offshore investments have sized more than 7.5 trillion, the more severe evaluations were made by James S. Henry, states it is about 21-33 trillion. (Don't ask, won't tell, 2012) (Henry, 2012) The total direct and indirect losses associated with the withdrawal of assets from the budgets of the countries, comparing to an annual global GDP- $70 trillion and the average share of state budgets in the national GDP- about 40-50%, then "grey zone" of economies accounts for at least 10-12% of budget expenditures. This is roughly the same amount spent on the reproduction of social capital (health and education) in the countries. "After over 20 years of money laundering prevention, the results are disappointing: Organized crime and drug trafficking still prosper. Banks face a high burden because of their active involvement in money laundering prevention. The various prevention schemes have weakened the basic rights of the bank clients, who have to pay for the prevention measures." (Hans and Wuensch, 2006, p. 37)

The reason why offshore jurisdictions still exist and what is the final destination for the infinite stream of laundered money - these questions were answered in the paper by the example of two neighboring countries: Russia and Ukraine, several Group of Eight countries (Germany, United States of America and United Kingdom) and one of the leaders among developed countries in attractiveness for the offshore investments - Switzerland.

The main reasons for investing in offshore areas: tax planning, international trade and economic cooperation, protection of assets from creditors or derived from illegal activities (arms trade, drug trafficking), switching of jurisdiction to resolve legal disputes, if incomes, obtained as a result of locally restricted activities (corruption or insider trading), to improve the efficiency of resources allocation by investors contrary to the existing budget expenditures in donor countries. Of the above the majors in referenced countries are tax evasion and asset protection, disregarding crime activity. (Kar and Freitas, 2013)

Money laundering has a disastrous influence on economics, political and social situations in all the countries. According to "Multidisciplinary Economics of Money Laundering" by J. Ferwerda (Ferwerda, 2012), negative economic effect appears in decreased investment appeal, unfair competition between honest and dishonest business, distortion of prices and eventually the crowding out of honest business; political effect appears in disruption of the democratic systems by criminals (for example, drug dealers to be appointed to a high public post); social effect - increased corruption and business crime. But at the same time money laundering provides billion dollars investments in European banking system which result in additional loans for consumers and businesses, especially during financial crisis, and liquidity growth. So the question is whether money laundering harms anyone, and if it is, who are the victims and what amount of money would be enough to cover all the problems, caused by it, and to become beneficial for the developed countries' banking systems and economics.

Estimates of global amounts of money laundering vary from 2 to 5% of GDP (John Walker, 1995, 2.8 trillion US$, Michael Camdessus, 1998, 1.5 trillion US$, Buehn and Schneider, 2006, 603 billion US$, 1.74% US GDP). Till the nowadays disputes on growth or decline and volumes of money laundering stay unresolved.

To keep consistency of the below analysis in my paper, cash flows volumes are mainly estimated according to official data (i.e. Central Banks, Federal Reserve System and Deutsche Bundesbank data). The data then used to answer the question whether offshore jurisdictions would exist and for whom money laundering is beneficial and whom it harms. In order to answer these questions this paper is divided in three sections: the impact on developed countries (USA, UK, Germany and Switzerland), developing countries (Russia and Ukraine) and comparison of the effect of money laundering consequences on all these countries.

2 DEVELOPED COUNTRIES

In the developed countries, outflow offshore investments lead to the reduced tax revenues and the budget detriment. As a result offshore investments originated from those countries are rigorously scrutinized by authorities. (Gravell, 2013) For example, a 2013 U.S. law comes into force - Foreign Account Tax Compliance Act (FATCA), under which foreign financial institutions will be required to monitor the payment of taxes to U.S. customers and report to the U.S. tax authorities. In case of failure of these institutions will be forced to pay 30% tax on their investments in the U.S.
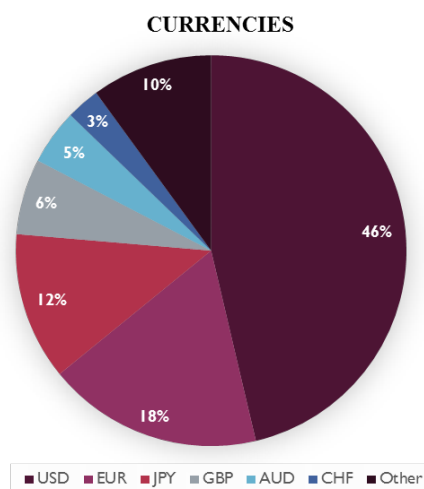

Figure 1: Turnover by currency (BIS, 2013, p. 7)

On the other hand, offshore investments made by the developing countries contribute to the budget of the developed countries due to the surplus of an external capital (1.2 trillion), profiting from its allocation in the domestic market, geography of offshore zones and investing in the major convertible currencies. Most of the calculations are carried out in offshore areas, usually in major convertible currencies: U.S. dollars, euros, pounds, Swiss francs et al. According to the Triennial Central Bank Survey from September 2013 (Figure 1), the most traded currency are: USD (United Stated dollar), EUR (euro), JPY (yen), GBP (pound sterling), AUD (Australian dollar) and CHF (Swiss franc) As a result, the offshore assets allocate in the correspondent accounts of banks in the countries issuing those currencies. This, in turn, increases the amount of credit available in these countries and their emission revenues.
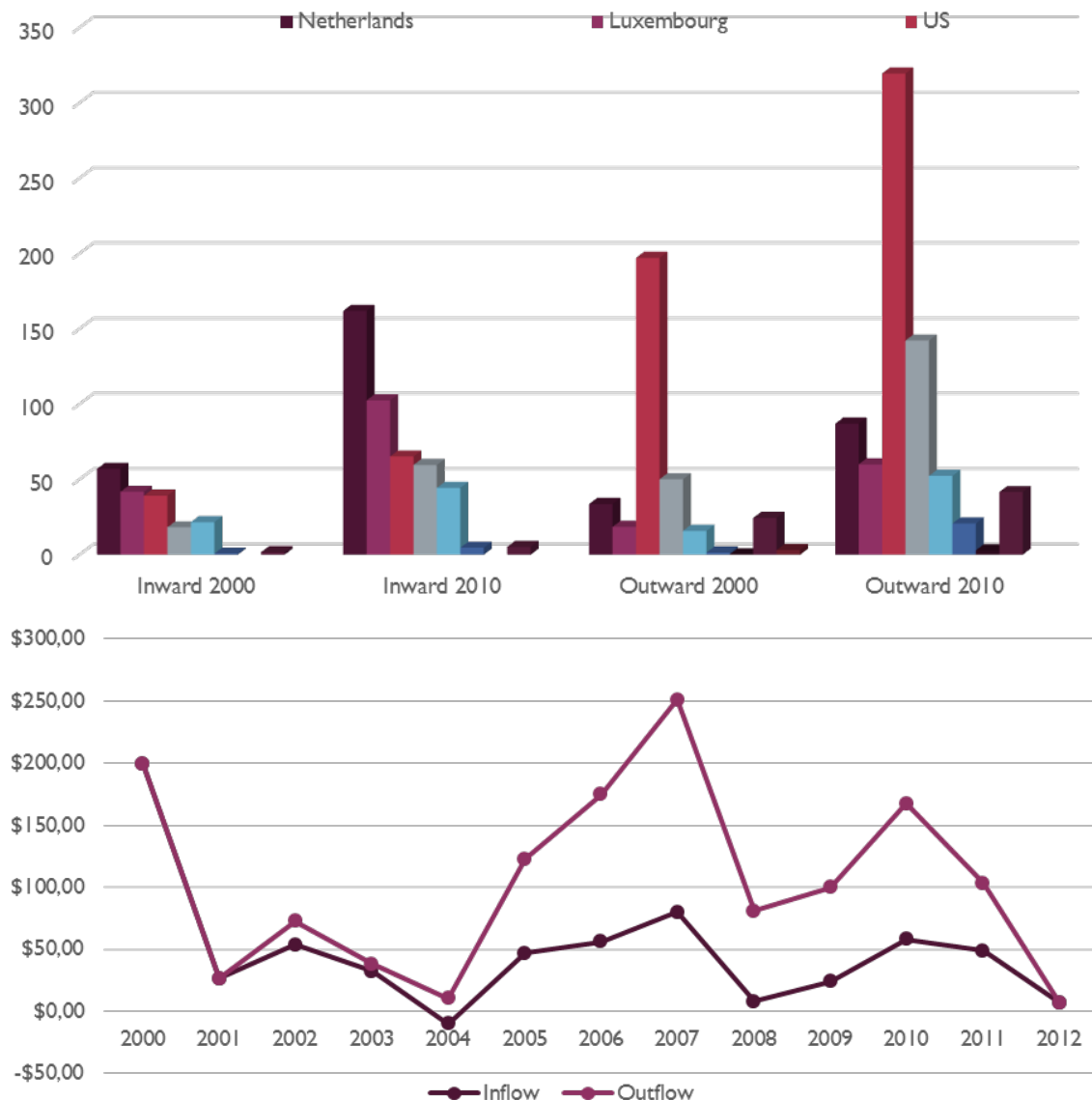
GERMANY FDI stock

Figure 2: Germany FDI stock by countries and flows (Jost, 2013, p.7-10)

Another benefit from the money laundering to the developed countries could be seen from official FDI data: most of the beneficiaries prefer to have their money on deposits in strong

and well-performed bank, i.e. in banks of the developed countries, for example Deutsche Bank, Barclays, JPMorgan, etc. They also prefer to invest in countries with stabilized and well-developed economics.

Investigation of capital flight in Germany gave us results, proving that money from offshore jurisdictions end up in developed countries. Great part of FDI inward Germany comes from Netherlands and Luxembourg, moreover this quantity is much more than these countries' GDP (additional material in Appendix).(Figure 2)

Capital flight chart shows that cash flows in offshore jurisdiction are much higher that annual GDP in these countries. That fact brings us to the conclusion that money sent to these countries end up somewhere else. Negative account balance in developing countries and positive in developed (exc. US, which could be explained with Governmental debt) leads to making a suggestion that money laundered by investors of the developing countries do not come back to these countries and do not stay in offshore jurisdiction, but are sent to the developed countries, i.e. Germany, UK. (Figure 3)
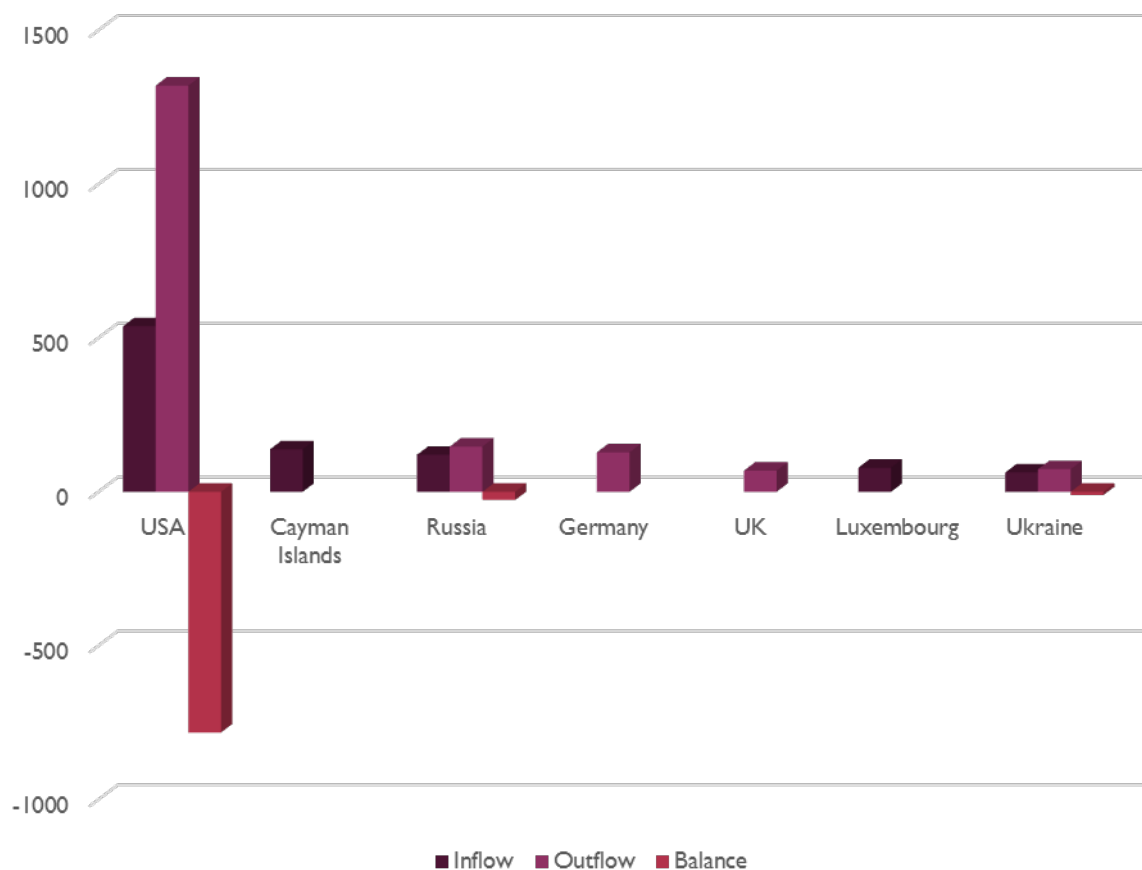
Figure 3: Capital Flight (Smith, 2011)

3 DEVELOPING COUNTRIES

In developing countries, offshore investments also depress tax revenues. However, such investments improve efficiency of the assets protection, increase not taxable base, and profits from reinvesting the previously withdrawn capital as seen at the above draw. Reinvestment of offshore assets also raises investment attractiveness of the developing countries. The more important is that the "locally legal" capital, i.e. acquired as a result of "globally illegal"

activities (corruption, insider trading, criminal offenses in the developed countries), can obtain legal guarantees of property rights in form of offshore investment. The owners of these investments gain an opportunity to appeal to independent judicial institutions for resolving property disputes, which are not dependent on the local authorities. That is the offshore investments from the developing countries are invigorated de-facto by any authorities.

These conclusions are observed comparing FDI stocks and FDI cash flow data in Chart 4 (for Russia, additional data could be found in Appendix): if the developed countries allocated their FDI in the same developed countries or new emerging markets, the developing countries put their FDI in offshore centers: to hide them away from own authorities and own population. The same concerns FDI cash flow: it's negative for the developed countries, because of their capital export to gain new markets and positive for the developing countries: so-called the «returning» laundered capital, which is times less than exported to FDI capital.
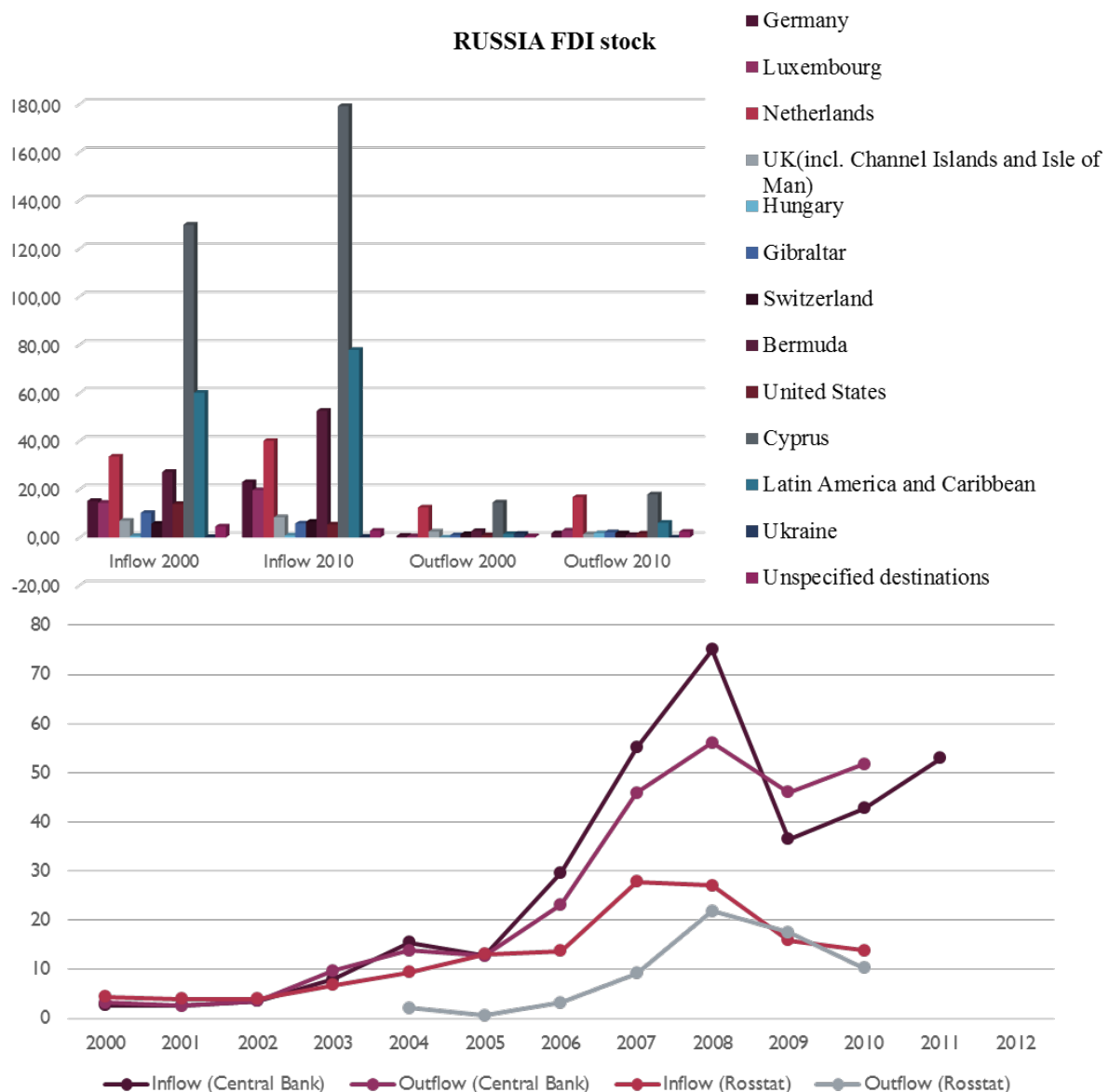

Figure 4: Russia FDI stock and flows (Kuznetsov, 2012)

To make things «worse» in disclosing the details of transactions statistical data from the developing countries usually lack of transparency or artificially ambiguous transforming the problem their adequacy to famous Schroedinger cat paradox: half alive, half dead. For FDI example, there are two official sources statistics in Russia (Figure 4). Bank of Russia estimates FDI figures by using balance-of-payments data. As a result, it includes all forms of FDI. Its statistics are the source for the FDI data for Russia in UNCTAD's FDI database (though UNCTAD usually receives preliminary data for the latest year and updates it only in subsequent reports). However, the Bank of Russia's data lack detailed information on the sectorial structure of FDI. The Federal State Statistics Service (Rosstat) collects data from companies and publishes detailed information (since 2005). However, its data do not include information for some countries and industries because the level of transparency of some Russian MNEs is inadequate. The differences in times put under the question robustness of their integrity, especially comparing them to data collected from national statistics bureaus of host countries. If in Cyprus in 2010 outflow was 120,09; 13,15; 3,61, that is actually from 120 US\$ bln only 3,6 US\$ bln landed in Cyprus, then in Germany - vice versa 0,11; 7,44 and 2,93 or in Netherlands 12,40; 24,11; 0,45. (Figure 4) It means that capital nominally forwarded to Cyprus goes to alternative destinations, Germany is bad choice for money laundering, i.e. to cap «invoices« extra funds had to be transferred from other sources to fill the gap. The Netherlands illustrates its position as corporate holding best place - nominal transfers are not supported with actual capital inflow to the country.

4 COMPARISON OF DEVELOPED AND DEVELOPING COUNTRIES

The developed countries apart from gaining advantage of inward outer financial resources extensively utilize tax loopholes while shifting profits to low-tax jurisdictions. The well-known example of the "double Irish, Dutch sandwich" scheme has been used by Google, Apple, Amazon, Facebook and Starbucks. In such cases an Irish holding company gain rights to sell advertising (Google's revenues) via its subsidiary, but between them established a Dutch company, which collects royalties. This scheme allows the Irish operator pay zero tax in its tax shell in Bermuda or the Cayman islands (Yahoo) and also, by using the Dutch sandwich, to avoid Irish withholding taxes. The data from the Report for Congress in January 2013 by Chief economist Jane G. Gravelle also provide comparison of US profits generated in tax havens with their GDP. "In three of the islands off the U.S. coast (in the Caribbean and Atlantic) profits are multiples of total GDP. In other jurisdictions they are a large share of output. These numbers clearly indicate that the profits in these countries do not appear to derive from economic motives related to productive inputs or markets, but rather reflect income easily transferred to low-tax jurisdictions". (Gravell, 2013) If US Company Profits Relative to GDP in G-7 countries has the weighted average 0.6%, then in the Netherlands - 4.6%, Luxembourg - 18%, Bahamas - 43%, Bermuda - 646%, British Virgin Islands - 355% and Cayman Islands - 546%

So far, the developed countries gain two advantage-"free" outward financial resources and mechanism for tax optimisation. Oppositely the developing countries drain their money supply and tax revenue both together.
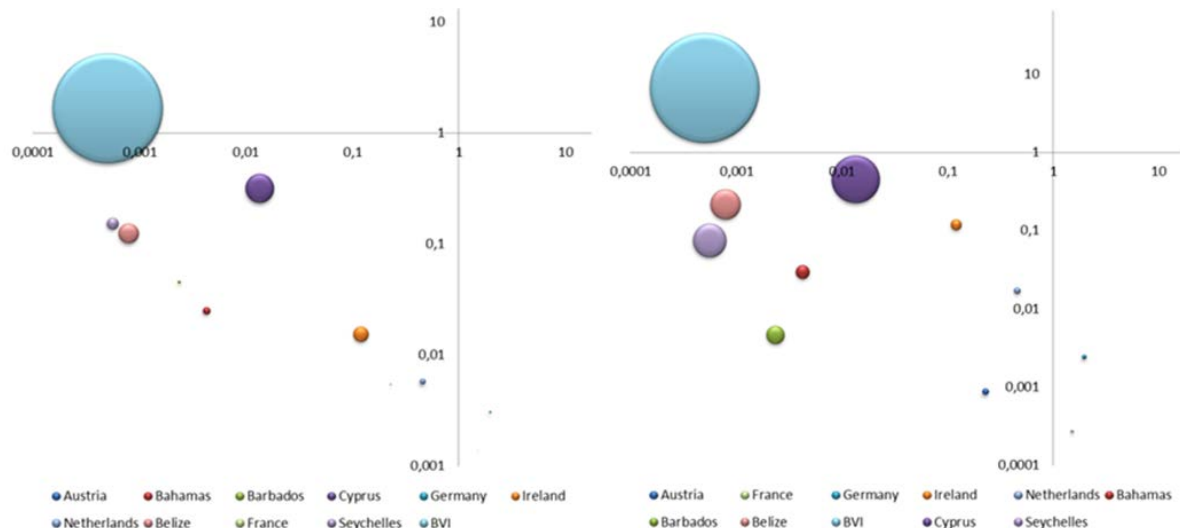
Figure 5: FDI capital transfers and trade based transfers normalized to GDP of the host countries (Federation, 2013) (The World Bank, 2013)

Utilizing the data of Central Bank of Russia, the drawn Figure 5 illustrates investment (FDI) capital (direct and portfolio investments) flows and trade based transfers normalized to GDP of the host countries. These figures clearly demonstrate abnormal distribution of funds transfers between offshore centres (Cyprus, BVI, Barbados, and Seychelles) and the developed countries (Austria, Germany, the Netherlands). Such way of presenting let outline the destination of "suspicious" transactions' destinations as graphical indicators for gravitational (Walker) money laundering framework.

5 CONSLUSION
Analysis of the presented data in capital flight, FDI stocks, the long lasting regulatory efforts to prevent money laundering or cleptocracy assets allocation combine together complex socio-economic task, which reminds in some way the famous Copenhagen interpretation (introduced by Niels Bohr in 1920) of coherent superposition in quantum mechanics and the famous Schrödinger's cat (suggested by Erwin Schrödinger in 1935) living in the box with radioactive material, hydrocyanic acid and a Geiger counter for detecting radiation. In this imaginary experiment the cat in the box could not be observed, and therefore it is hard to be said whether it was alive or dead. It's sort of superposition of life and death simultaneously. In the same manner they may say that, when cash flow is observed, its attribute (legality) is forced to take one state or another (licit or illicit), oppositely it's veiling with offshore secrecy then illegal financing becomes both alive and dead at the same time. Multiple sources of capital from heavy crimes to white collar kickbacks mixed with the legal funds together with the vested interests of key players: illegal capital businesses, corrupt authorities and financial institutes put under the question traditional ways of regulations.

There're three major findings of the made analysis. Firstly, balance of interests of the major stakeholders (authorities, transnational corporations and financial institutes) in developed and developing countries does support offshore investments both inward and outward. Secondly, referencing to volumes of trade and financial transactions, the developing countries are mostly donors, contrary to some of the developed countries or their dependent territories, some of which are recipients of offshore FDI. Thirdly, withdrawal of financial resources from the developing countries degrades their business and investment infrastructure, detoriates social capital and keeps corruption growth up.

But still, there're a lot of unsolved problems for further investigations. Is there any upper limit of the withdrawal of capital to the offshore jurisdictions from developing countries, which inevitably would lead to social collapse or disorder? How profitable are cash flows from offshore jurisdiction and allocation of offshore assets on correspondence accounts for developed countries' government.

Flight capital and money laundering still imply heavy costs on societies, which incudes in direct expenditures on AML, collateral damages for the society: a loss of privacy, use of common goods by criminals (transportation, education system, health care, legal institutes), economic damages: increases costs for using international financial system and discrimination in trade and co-operation.
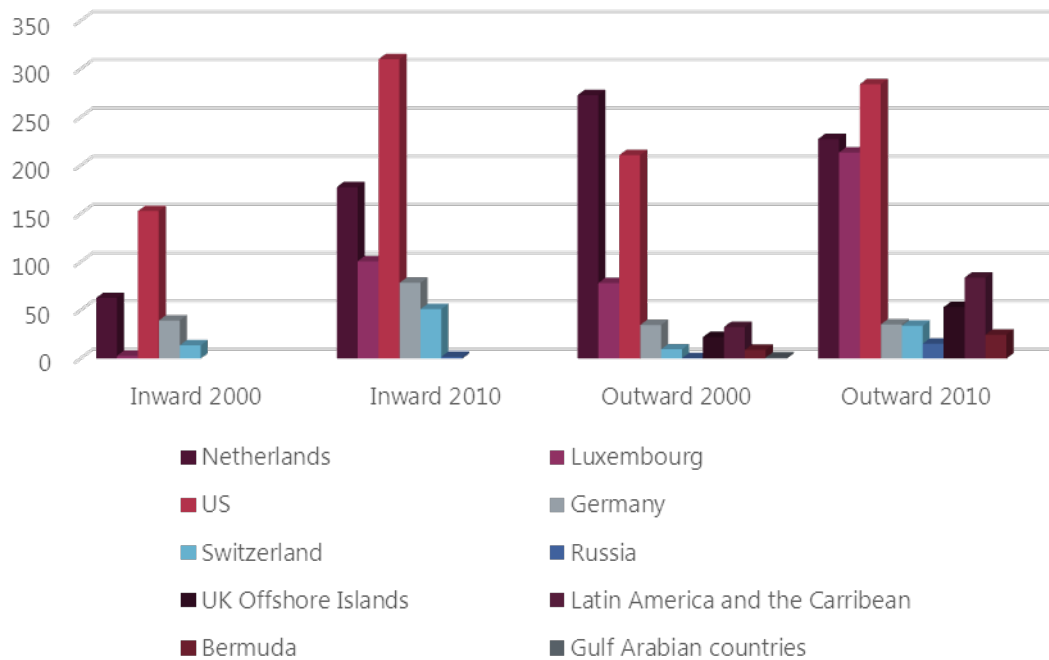
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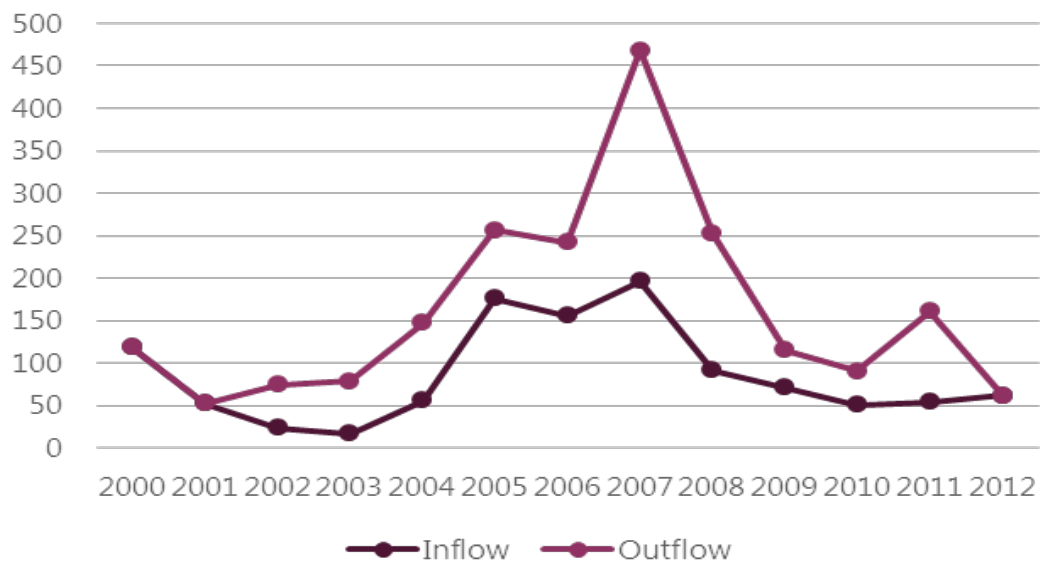
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APPENDIX (Driffield, Lancheros, Temouri and Zhou, 2012) (Kornecki, 2013) (Kononov, 2012) (Guglger and Tinguely, 2010)

UK FDI stock

UK
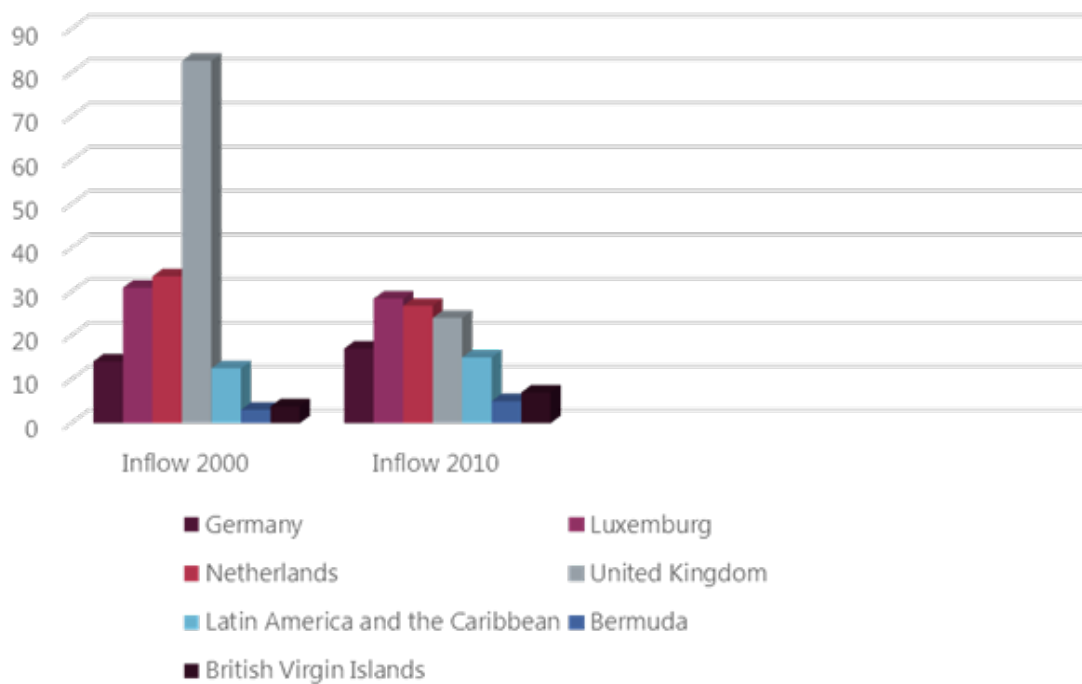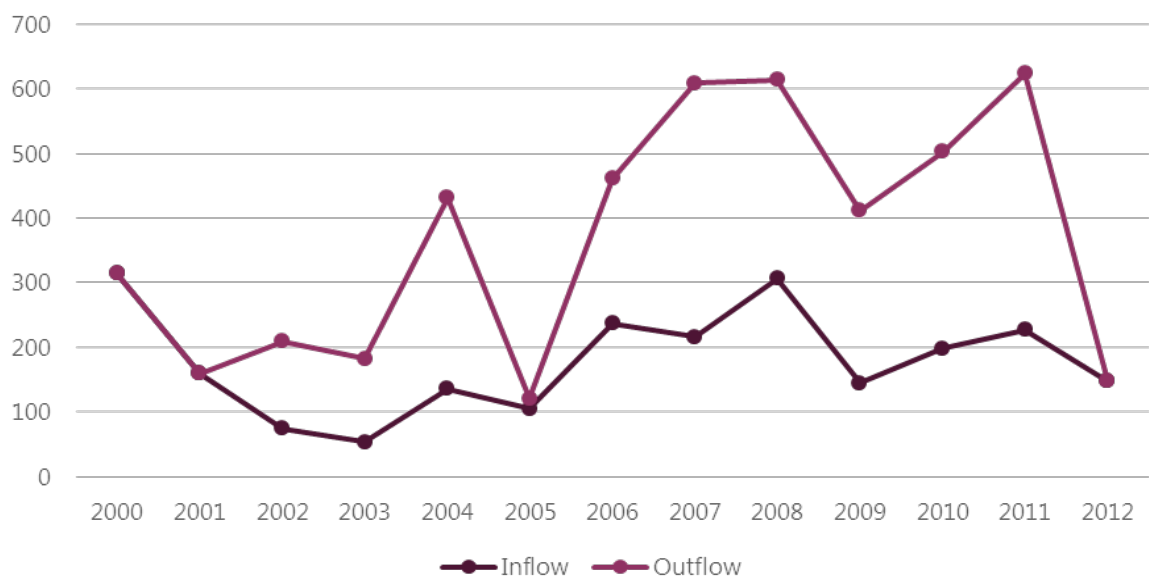
US FDI stock

US

UKRAINE FDI stock

Germany • Cyprus • Netherlands • United Kingdom • Russia • US • British Virgin Islands • Switzerland

UKRAINE

Inflow • Outflow

SWITZERLAND FDI stock

- Netherlands
- Luxembourg
- US
- Germany
- Russia
- UK
- Offshore financial centers*

SWITZERLAND

Inflow   Outflow
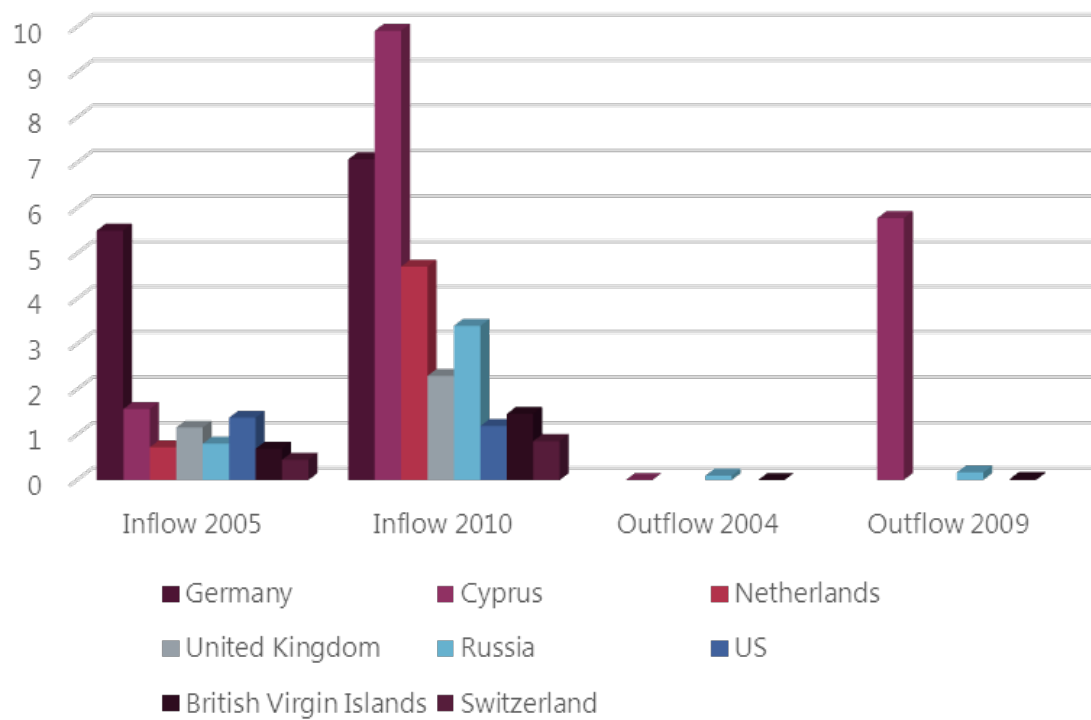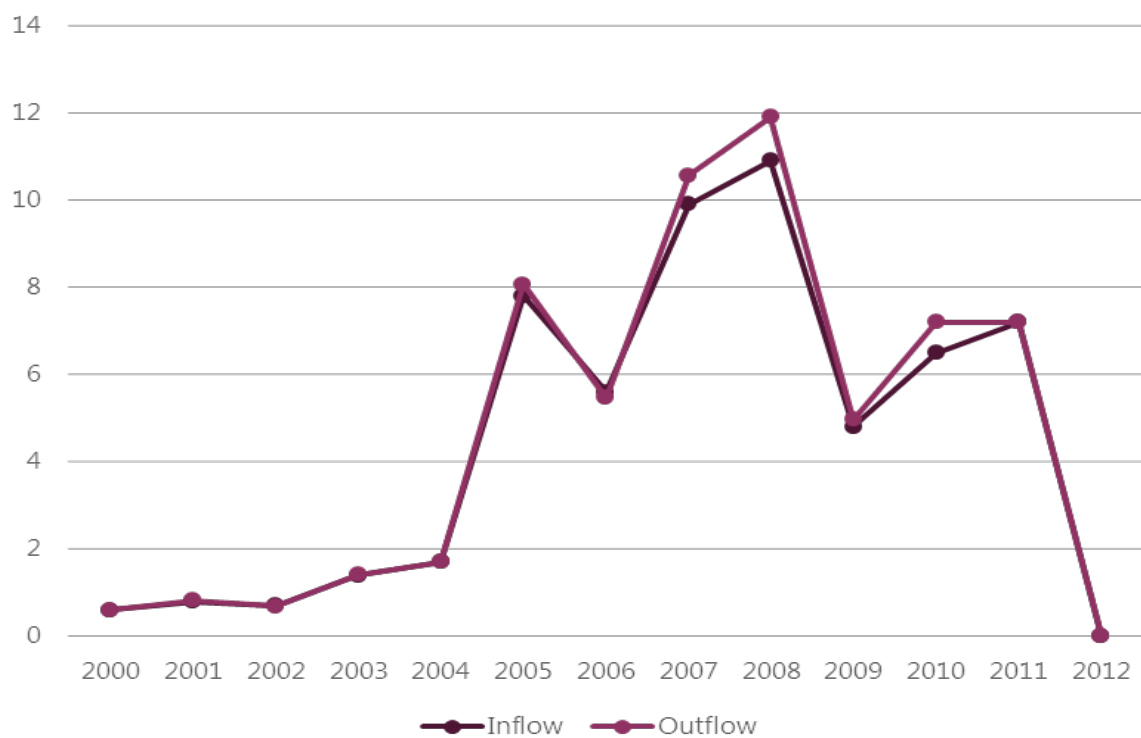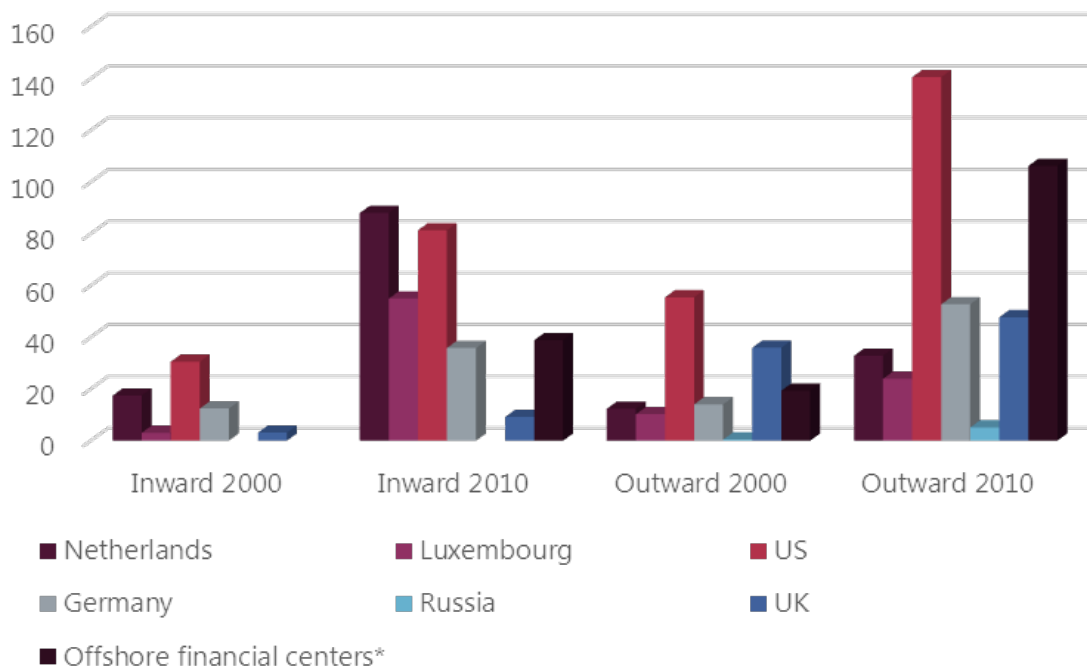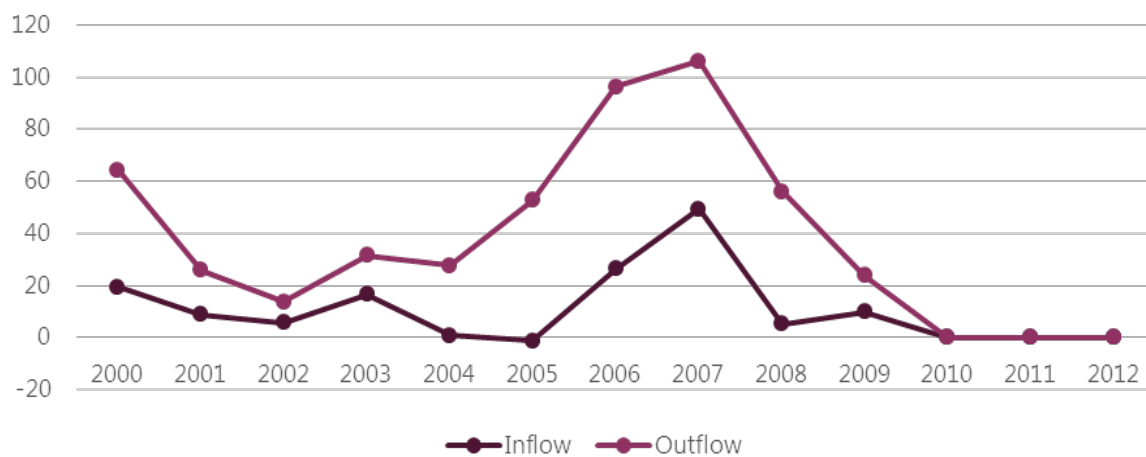
FACTORS SHAPING COMPETITIVENESS OF THE REGION

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ABSTRACT

Regions are competing between themselves for the highest position in the country. Achieving and maintaining this position is associated with benefits such as attracting investors, the growth of entrepreneurship living in the region or commune, improvement of housing conditions, local enrichment, lower unemployment, lower social spending and the development of the real estate market.
The inventors of the region potential are: entrepreneurs, groups connecting various environments (clusters, associations), Special Economic Zones, knowledge, innovation, and the living conditions of citizens.
Regions compete with each other by using monuments, attracting investors and investing funds. The main factors of territorial competition are associated with local resources. The most common and most general division of territorial competitiveness factors are classified into internal and external. External factors include national and global environment, social, economic and spacious politics of the state and other organizations. Internal factors are local opportunities and development needs. They are in the local coordinate system and depend on local resources (quantity and quality of education inhabitants of commune or region, natural resources in the region, the policy of the region - pro-health, pro-family and pro-environmental, infrastructure), their accessibility, quality and efficiency of their use.
The aim of this article is to discuss about creators of region potential (mainly entrepreneurs, clusters, associations, Special Economic Zones), and the relationships between them.

Keywords: clusters, local associations, special economic zones, the development of the region

1 INTRODUCTION

Region is contractually separated area, relatively homogenically differed from neighboring areas of natural features or acquired historically. Regions are organized and artificial creations, which by coordinating the activities and relationships of its members and resources perform planned transactions with the environment, realizing goals of (administrative or economic) founders and participants (Jabłoński and Jabłoński, 2012, p. 11).

Regions want to achieve a high position in the country. Achieving and maintaining a high position is associated with numerous benefits: attracting investors, increase of entrepreneurship residency in the region or commune population, improvement of housing conditions, local enrichment, lower unemployment, lower social spending and the development of the real estate market - its activity and increase in value. Local governments have been equipped with various instruments that create the conditions for local development, such as the ability to develop programs and strategies, activity in the sphere of budget, regulatory powers in the area of tax law and spatial development, administrative decision, contracting and the ability to benefit from aid funds: domestic and foreign. Local development strategies are result of rationalization deployment of the forces, resources, and responsibilities of local authorities for shaping and stimulating development.

Regions compete for monuments, investors, financial resources and territory. The main factors of territorial competition are result the offer local resources that affect location choices

of companies. The most common and most general division of territorial competitiveness factors are classified into internal and external.

External factors are politics, national and global environment of the region, linked to the social, economic and spatial policy state and other organizations.

The internal factors include all the local opportunities and development needs (Jewtuchowicz, 2005, p. 30) These factors are present in the local coordinate system and depend on local resources (quantity and quality of education inhabitants of the commune or region, natural resources in the region, regional policy - pro-health, pro-family and pro-environmental, infrastructure), their accessibility, quality and efficiency of their use.

The creators of potential of regions are: entrepreneurs, groups connecting the various environmental groups (clusters, associations), Special Economic Zones and innovation.

2 THE ENTREPRENEURS

The role of entrepreneurs in the region is very high. They create new and varied jobs, unique products, the people of region show their creativity and innovation (Szymańska, 2012, p. 42-54). The development of entrepreneurship contributes to reducing unemployment, creating infrastructure and cooperative service for incoming foreign investment getting them to influx of new technologies and methods. The entrepreneurs also are actively involved in process of changing industrial structure of the region through creating production areas and services (Piasecki, 2001, p. 79).

Indicator of the economic activity of the region's population is the number of economic entities per capita. It is one of the most commonly used indicators for measuring disparities in economic development of community. But this is not a perfect indicator because it contains information on all registered entities - including those that do not have activity or it is not completed and checked out of the base (Dziemianowicz, Łukomska, Górska and Pawluczuk, 2009, p. 14).

3 THE CLUSTERS

Changes taking place in the world (social, economic, technological) are a great challenge for market operators (Szymańska, 2013, p. 222). With the advance of globalization, maintaining the international competitiveness of the economy becomes more and more challenging. A new way of creating competitiveness of enterprises and regions is the concept of clusters (The Ministry of Economy, 2009, p. 1).

According to M. Porter's cluster is a geographic concentration of interconnected companies, specialized suppliers, companies from other related sectors or industries and economical institutions (e.g. universities, chambers of commerce) (Porter, 1990).

A more detailed definition of the cluster was reported by the Ministry of Economy in the Regulation of 11 December 2006 - [...] *This cluster spatial and sectoral concentration entities acting for economic development and innovation, and at least 10 businesses involved in business activities in one or several neighboring regions, competing and cooperating in the same or related industries and associated developed network of formal and informal nature, at least half of the entities within the cluster are entrepreneurs* (The Ministry of Economy, 2009, p. 12).

Enterprises operating in clusters are characterized by higher productivity, economic, scientific and research. In the cluster enterprises can achieve higher degree of innovation - the company starting in the cluster have external suppliers and partners. The benefits of cluster activity is the ability to generate higher productivity, innovation and competitiveness (Miszczak, 2010, p. 7).

A cluster or its surroundings can function well as other specialized units that make up the regional innovation system (Maskell, 2001, p. 921-943), such as technology transfer centers, technology incubators, incubators, technological parks and industrial parks (Boekholt and Thuriaux, 1999).

4 THE ASSOCIATION OF LOCAL
Opportunities for the development of local communities depend on the ability to self-organize their efforts and the creation of collective action. The condition for local community engagement in the development of the area and use of its resources is to create social and economical capital in the country. Due to the low level of activity and involvement of rural communities in the local structures of particular importance for the development of rural areas have local action groups.

Local Action Group (LAG) is a type of partnership units typically created in rural areas, bringing together representatives of local organizations (public, private and non-government) and inhabitants of the area designated border communities States. Local Action Group implements Local Development Strategies in the area of population from 10 thousand to 150 thousand residents. This condition is, on the one hand - to provide "local" character, on the other hand - to provide adequate capacity for implementation of the Strategy (Fundusze Europejskie, 2012). A very important part of creating a LAG is that least 50% of its members belonged to the private and non-governmental sector.

Local Action Groups are responsible for creating and implementing a local development strategy for the territory and the spending of grants allocated for these purposes. Among the objectives pursued by the LAG show: prevention of unemployment, promotion/production of local products, social integration, social mobilization, cultural tradition, environment, natural values, development of tourism, entrepreneurship, development of agriculture and agricultural processing (Ministry of Agriculture and Rural Development, 2009, p. 14).

Creating environment conducive entrepreneurship and innovation is the most promising instrument to stimulate local development and building competitive advantage municipalities, cities and counties, but requires shaping appropriate intellectual capital, innovation culture, specialized resources and expertise. Therefore, this environment has taken various measures to maintain a high growth region. One such measure is the establishment and maintenance of Special Economic Zones.

5 THE SPECIAL ECONOMIC ZONES
The Special Economic Zones (SEZs) are separated administratively Polish areas where investors can pursue economical activity on preferential terms - economical activity is regulated by a special, different than the rest of the country rules of taxation, customs duties, foreign exchange law, labor law, social rights, trade union rights, construction law, regulations governing land ownership, facilitated the transfer of profits and capital.

The purpose of the SEZs is to accelerate the development of regions by attracting new investment and promote the creation of jobs (Ługowska, 2012).

The Special Economic Zones (Tynela, 2010):
- are an instrument to compete for new investment;
- offer a comfortable and safe budget form for the state of public assistance;
- offer modern workplace - in the counties where is SEZs, unemployment is lower, sometimes even by 3 percentage points and GDP by up to 7.5% higher than in counties without zone;
- observed increased revenues to local budgets;
- stimulate local authorities to arm areas;
- cause the influx of innovative technologies;
- initiate the formation of cluster structures.

In Poland there are 14 SEZs. Their area is almost 16 thousand hectares. Special Economic Zones created more than 186 thousand new jobs. As of the end of the third quarter of 2012, the value of the investments in SEZs from the beginning of their existence was 83 billion 868 million zł, and the number of new jobs created in the SEZ was 186 584[1].

The primary objective of creating Special Economic Zones is to attract capital, especially foreign, for economic activation of selected areas (Brezdeń and Spallek, 2008, p. 217). The special economical zones invest most companies from Poland, Germany, the United States, the Netherlands, Japan and Italy (according to the origin of the capital)[2].

6 INNOVATIONS

The essence of the modern concept of constructing the competitive advantages of the region's is the ability to manage potential by using innovation. Innovation is one of the most important factors of economic growth of regions and community. In the modern world the ability to create and adopt innovations is the biggest challenge for regional and national governments, because innovation processes create their current and future economic situation (Szymańska, 2012, p. 324-326).

Innovation of the region is defined as "*the ability of the region to change, improve, reform and innovate in various fields of economic and social life [...] in order to improve the functioning of mechanisms to support development in the region.*" (Przygocki, 2007, p. 144) Innovative region consists of: research potential, the level of human and social capital (education, matching education to the needs of the region), entrepreneurship and innovation, public authorities (own and foreign), innovation of enterprises operating in the region, the development of the business and international environment (A broad-based innovation strategy for the EU, 2009).

Innovative commune is able to use the effects of the environment to increase the potential in an economic and ecological way (Donnelly, Gibson and Ivancevich, 1990, p. 27). Surroundings of innovative region are a set of institutions such as business incubators, centers for the promotion and development of innovation, technology parks, technology transfer centers, networks and relationships that bind them. A well-organized innovative surroundings commune stimulates local entrepreneurship, enables the transfer of technology and allows

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[1] Source: www.premier.gov.pl (2013)
[2] Source: www.premier.gov.pl (2013)

companies to support projects at any stage of development - from idea, through incubation, support in the development and exit the market (Okoń-Horodyńska and Zachorowska-Mazurkiewicz, 2007, p. 7).

7 CONCLUSION

The aim of the article was to characterize the creators region potential (mainly entrepreneurs, clusters, associations, Special Economic Zones) and the relationships between them.

The paper shows that differences in the level of socio-economic development of regions are inevitable, but appropriate use of potential of the region (businesses, community groups, clusters, Special Economic Zones and innovation) will increase the value of the region on a national and European level. This will improve the ability of quick introduction of modern technological solutions dependent on the knowledge, the skills of workers and entrepreneurs, which will form the basis for the economic success of regions and strengthen their position in the country and abroad. Competitive regions will attract capital for further development (domestic and foreign investments), stop owned factors of production, workers and residents. The high value of the region will be demonstrated by the ability to adapt to changes in the economy, technology and society.

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MARITIME CLUSTERS PRODUCTIVITY AND COMPETITIVENESS EVALUATION METHODS: SYSTEMATIC APPROACH

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ABSTRACT
Many scientists underline the importance of the clusters as agglomerated industries, working for the same purpose with joined resources and potential. This article analyses the basic assumptions which turn organizations to be clustered: the Productivity and the Competitiveness. For the evaluation of those assumptions in Maritime Clusters, many of the methods practically are applied without systematic approach – some are focused to the port efficiency, others provide quantity of resources growth dynamics, infrastructure parameters or even explain productivity and competitiveness as the same assumption. This article presents the analysis of Maritime Clusters' Productivity and Competitiveness evaluation methods in systematic approach, providing the analysis on the mostly-used variables and parameters of the evaluation the assumptions to be examined.

Keywords: *Clusters, Competitiveness, Evaluation Methods, Productivity*

1 INTRODUCTION

Fostering Maritime clusters is a way to enhance the competitiveness of regions and industry agglomerations, stimulate innovation, find ways to conserve and share resources, reduce business costs, and create sustainable employment in regions. The theory and practice of maritime cluster development effects and impacts to competitiveness and productivity is relatively new, but shows considerable efforts in helping to make the development of economies in the region more sustainable.

Summarizing many of the different scientists presented assumptions of Maritime clusters, two basic ones are analyzed in this paper: the Productivity and the Competitiveness. The Productivity is defined and presented from internal subject and capacity point of view; the Competitiveness is more linked to be presented from external variables and factors entire. Both of them are widely used in many of studies and reports, while calculating impacts and effects, capacities and potential, investments and innovations environment. The systematic approach of productivity and competitiveness evaluation may increase more objective and wider, more inclusive application of evaluation methods to be used and results to be obtained by following those techniques.

The main goal of this article – to analyze the Maritime Clusters' Productivity and Competitiveness evaluation methods in systematic approach: define statistically significant variables, which lead us to apply appropriate evaluation method for the assumptions to be examined.

Methods to be used: qualitative analysis of provided technique, scientific literature analysis and synthesis, analysis of statistical evaluation programs parameters.

2 PRODUCTIVITY EVALUATION METHODOLOGY

The standard notion of productivity in maritime cluster refers to the productive efficiency of a given workforce that is labor productivity, measured in terms of output per input of labor (Gardiner, P. et al, 2004). Productivity analysis is relatively simple if there is only one type of input to produce one type of output (Coelli, 2005). In this case it is simply the ratio of output and input which makes it easy to compare companies as well as sectors (clusters) one to each other. However, in reality, various inputs are used to produce various outputs. In such cases, partial productivity is measured, e.g. output per worker, output per working hour, etc. Though these ratios are very limited and might be misleading. Thus, more elaborated analysis of productivity is necessary.

2.1. Total or partial factor productivity

Productivity analysis is very flexible, depending on the objectives either total factor (multifactor) or partial productivity can be estimated. Total factor productivity is estimated including various types of input and is more appropriate to evaluate total productivity of cluster. Main inputs are capital and labour, however, material and energy are sometimes met in various studies of productivity. Partial productivity can be either capital or labour productivity, and then accordingly only one type of output is chosen, i.e. capital or labour (number of employees or number of working hours).

The easiest way to compare productivity of two enterprises in cluster is their profitability i.e. ratio of income and expenditure. One should be careful as prices here are essential (both input prices and output prices). There are cases when one company has an advantage to access cheaper inputs or to sell production at higher prices. Thus, it is recommended to eliminate the effect of prices using prices deflators.

2.2. Productivity evaluation methods

There are various methods to estimate productivity out of which there are four the most common ways to measure it.

First way to measure productivity is to compare production growth with output growth which is known as Hicks Moorsteen index.

$$\text{HM index} = \frac{\text{production growth}}{\text{input growth}} = \frac{\text{production quantity index}}{\text{index quantity index}}$$

Even though it is easy to estimate and interpret this index, yet the reasons of productivity growth are not easy to be identified. Productivity growth may be caused by technical change or by increase in efficiency.

Total factor productivity (TFP) can also be measured by profitability growth after regulating price changes (by price deflator):

$$\text{TFP} = \frac{(R_t/R_s) \ /\text{production price index}}{(C_t/C_s) \ / \text{input price index}}$$

Where C_i is cost at time i, R_i is revenue at time i. As the effect of price changes is eliminated, total factor productivity depends on technical change or technical, allocate and economies of scale efficiency.

One more way to measure productivity is known as Caves, Chsitensen, Diewert (CCD). Generally, their idea was to compare current production with maximum feasible production (using the same technology and production set). This index is calculated from output and production distance functions.

The last method is to measure all sources or productivity and its components i.e. technical change, efficiency change and return on scales separately. Afterwards all these values are summed in order to get total factor productivity. This method is explained more in detail by Balk (2001).

Malmquist index is well-known total factor productivity index. It measures TFP change between two time moments as a ratio of distance between two points of certain technology (Coelli, 2005). Technical change and efficiency change can be estimated separately by this index.

Thus, if the objective is to find the level of productivity or its change without necessity to identify the source one can use Hicks Moorsteen or Malmquist TFP indices. However, the later requires wide range of panel data. On the other hand, second method is more applicable in financial analysis.

2.3. Productivity analysis appliance
Productivity analysis often is used for measuring Maritime cluster companies input to general economic cluster result. There are two ways of maritime clusters choice of productivity analysis appliance: to evaluate sectorial productivity and to evaluate Firm-linked productivity.

2.3.1 Sectorial productivity
In the analysis of airline performance and productivity growth Barros and Couto (2013) calculate Luenberger and Malmquist indexes, where they use revenue per passenger per kilometre and revenue per ton of cargo as output variables and number of workers, operational costs and number of seats as input.

If technology is a set $T \subseteq R_+^N \times R_+^M$, then $T_t = \{(x_t, y_t): x_t \text{ can produce } y_t\}$, where $x_t \in R_+^N$ is input vector and $y_t \in R_+^M$ is output vector at time t. Then directional *distance function is* $D_t: R^{n+p} \times R^{n+p} \to RU\{-\infty\} \cup \{+\infty\}$, where direction is g = (h,k) from which Luenberger productivity index can be calculated.

Fare et al (1994) analysed 17 OECD countries efficiency by Malmquist index. In his study production variable is Gross domestic product of a country while equity of all enterprises and work are considered as output. Every country is compared to the best practice productivity frontier that is created from the countries all around the World.

When Chang and Oxley (2009) evaluate the effect of geographical innovation to total factor productivity, the later is calculated for each enterprise, from values of which average sector's (cluster's) total productivity is derived. Total factor productivity is measured by this function:

$$Q_i = F(X_{1i}, X_{2i}, X_{3i}, X_{4i}) \text{ where}$$

X_{ij} with j=(1, 2, 3, 4) are accordingly capital, labour, energy and materials. Later functional form needs to be chosen, in practice, trans log function as being the most flexible is the most common.

However, Martin et al (2011) apply Cobb-Douglas TFP function to industrial (it can be applied also to maritime) clusters of France and use general method of moments instead of OLS to find coefficients.

There are a few studies of Cullinane et al (Cullinane et al. (2002), Cullinane ir Wang (2006), Cullinane ir Wang (2010)) about the efficiency and productivity of Asian container terminals where Stochastic frontier analysis and Data Envelopment analysis were applied. According to the researchers containers throughput is the most important and the most common output variable in studies about container and port productivity. Cullinane et al (2002) describes throughput as the number of containers moving through the territory of quay or it can be expressed in monetary terms as the revenue related to this process. Whereas, as input variables length of terminal, area of terminal, equipment that is necessary to move cargo (various types of cranes) is chosen. In their later studies as the most significant variables were used terminal length, area, gantry cranes and straddle cranes. Moreover, according to Cullinane et al (2005), including the number the most important (and necessary) equipment moving the biggest amount of cargo, that in container (or port) sector are yard gantry cranes and straddle carriers handle cranes, is sufficient for the analysis.

Díaz-Hernández et al (2008) with reference to Cullinane analysed ports of Spain during the reform and declared that productivity function comprise of three variables: containerized general cargo, no containerized general cargo, solid bulk and other two types of variables that are working hours of cranes and workers.

2.3.2 Firm-level productivity

Some authors (Giuliani et al, 2013; Hulten, 2001; Syverson, 2011) use productivity as outcome variable of measuring efficiency in Firm-level. Despite of Firm-level productivity variable, as part of efficiency measuring, there are also outcome indicators groups to be involved: Export-related indicators, Innovation-related indicators and Employment-related indicators. On this point of view, Firm-level productivity covers those indicators: Annual value of production, Number of employees (number of permanent and temporary employees), Materials (value of materials used in the production process), Capital stock (net book value of machinery and equipment) and Labor cost.

Measuring productivity is not simple task. There are several measures relating to the productivity of companies, two of which are to consider the productivity of one input, such as labor productivity, or to consider the productivity of all inputs, such as total factor productivity. With regard to total factor productivity, all matters related to the measurement of input and output, are present and change in output cannot be explained as change in input (Giuliani et al, 2013). Several methods exist to obtain total factor productivity, all of which hint to varying assumptions relating to the production process and the degree to which the market is competitive. This suggests that each method has strong and weak parts.

When the interest is in the productivity or maritime industry, cluster or of a geographical region, it is also important to study the reallocation of resources between firms. If more productive maritime companies gain market share, there is as improvement of the aggregate

level of productivity, since the aggregate level of productivity over headed average of the productivity of each unit. The weight is the market share, but in some cases, the employment share also is used as the weight. So to gain the effect at the aggregate level, it is necessary to evaluate its effect on the productivity and growth-measured by sales or employment – of each firm and on the firm's decision to enter or exit the market (Van Biesebroeck, 2007). There are several variables that are related to productivity: value of exports, R&D expenditures, technology adoption and innovation.

3 ESSENTIALS OF COMPETITIVENESS ANALYSIS METHODOLOGY

A cluster is competitive if it is able to generate synergetic advantages through innovation and the efficient use of resources across company and industry borders. Competitiveness on the cluster level can be measured by looking at the market shares, the growth of value added and the gross production of the cluster (Viitanen et al, 2003).

Maritime clusters enhance competitiveness of economies in many ways: by development of networks, by development of innovation systems and innovative milleaus, by investment Spin-Offs from research and development outcomes and others.

Competitiveness analysis as any other analysis can be performed from various points that depend on nothing but prior objectives of the every study. There is a vast majority of methods, models and indices that might be applied, as well as intersect with each other and be supplemented. Also scientific literature covers the competitiveness meaning in majority of different meanings and variables; competitiveness analysis includes most of the elements, analysed in productivity chapter.

According to macroeconomic theory, revealed comparative advantage uncovers the advantage of international trade of one country against another.

The most frequent methods of competitiveness analysis are Porter's Diamond model and Analytical Hierarchy Process model that may follow after other methods such as experts survey according to which results the most important factors are anticipated.

Moreover, corporate finance is not less important issue in competitiveness analysis. Indices such as return on investment (ROI), return on assets (ROA) are worth to be evaluated and compared. Apart from these value added growth and market share are common in this type of studies.

Herciu (2013) analysis of International Competitiveness of Romania comprise of two parts. Firstly comparative advantages and disadvantages were identified and evaluated by the model of Porter's Diamond and later in the analysis revealed comparative advantage was estimated.

Comparative advantage is found by the following formula:

$$RCA_{ij} = (X_{ij}/X_{wj})/(X_i/X_w), \text{ where:}$$

X_{ij} – export of good j from country i,
X_{wj} – export of good j worldwide,
X_i – total export from country i,
X_w – world export.

The range of value is from minus infinity to plus infinity. Positive value means comparative advantage, while negative value has a meaning of comparative disadvantage.

J. Tongzon, W. Heng (2005) evaluated port competitiveness by the index, where total throughput is chosen as a proxy and the significance of all the determinants is estimated by running a regression. According to their results adaptability of a port to changing customer needs is the crucial factor in competitiveness of a port. Other less important determinants are investment in marketing and Port selection preferences of carriers and shippers.

Port competitiveness analysis and competitiveness strategy development can also be evaluated by less common multi criteria decision making methods as PROMETHEE, Technique for Order Performance by Similarity to Ideal Solution (TOPSIS), Gray Relation Analysis and Hierarchical Fuzzy process (Lirn et al., 2003, 2004; Ugboma et al., 2006; Castillo-Manzano et al., 2009; Guy ir Urli, 2006; Celik et al., 2009; Teng et al., 2004; Huang et al., 2003; Yeo and Song, 2006) (Lee Lam and Zhang).

3.1. M.Porter "Diamond" model adoption

Porter in 1990 created a model that is called Porter's Diamond that later was modified by various scientists (Trabold (1995), Krugman (1996), Aiginger (1998), Mitschke (2008), etc.). According to the model, in microeconomic level competitive advantage is determined by factor conditions (natural conditions such as location and climate and human created conditions – telecommunications, energy maintenance, high quality universities, laboratories, quality of financial services, quality of the whole infrastructure, etc.), demand conditions (that include size of the market, trade taxes, R&D investments, etc.) and related industries, where the quality and the quantity of the providers play the main role). Beside microeconomic conditions there are macroeconomic factors that are not less important as the later ones, these are government and unpredicted events. When all these conditions are put together the way they intersect one with each other created the nature of international competitiveness (Sirikrai and Tang, 2006).

Not only researchers, but also Cities Communities for equitable development adopt Porter's diamond model for the evaluation of relative competitiveness (Choe et al, 2011). Analysis use cardinal or alphabetic scale or symbols ("+"or "-") to score the strength of five conditions. Besides, chance is a random occurrence, so it is not generally included in the analysis. Total amount of elements under the five conditions are analyzed for each cluster using a semi-qualitative scoring method. The relative competitiveness of each condition is measured on a numeric scale of 0-5. A Delphi technique is used in scoring (Bordecki, 1984).The scores recorded by the assessors are averaged then discussed and adjusted to arrive at the final score for the industry cluster.

The next step of the analysis involves what are the gaps in the competitiveness conditions and elements of a cluster. Where are the significant differences, the need of action to strengthen the weak elements and improve a cluster's overall competitiveness and economic performance is indicated (Table 1).

Table 1: Sample analysis of Competitive Elements of Clusters using Porter's Diamond Model (Choe et al, 2011, p. 107)

Competitive element	Current status	Requirements for future Competitiveness	Actions
Markets			
Expanding domestic and local markets	3	1	Market intelligence
Expanding export markets	2	4	Collaborative marketing
New products			
Demand expansion capacity for new products	2	4	New technologies
Responsiveness to change and innovativeness	2	3	Change management

The analysis of competitiveness deficiency gaps provides an indication of the strengths and weaknesses of the five factors affecting the competitiveness of industry clusters as well as the potential threads and opportunities facing the development of an industry cluster. Projects and programs that should be considered in an action plan to strengthen the industry cluster and promote industry cluster development can be identified on this way.

3.2. Essence of the Analytical Hierarchy Model
Analytical Hierarchy Model (AHP) that was found by Thomas L. Saaty in 1970's and applied for many years in mathematical decision making, nowadays may help to identity and evaluate, which indicators of organizational behaviour and to what level are important when competitiveness of a sector is being analysed (Sirikrai, Tang, 2006). Moreover, the model that enables to measure the importance of factors helping organizations to perform better compose of three steps:
1) organizing a problem to a hierarchical structure;
2) prioritizing elements in the model;
3) making the final decision according to the results.

In the study of competitiveness of ports Yuen et al (2012) apply the AHP model that consists of three levels. The objective level is port competitiveness, that is succeed by the second level – determinants of port competitiveness (such as port location, port expenditure, port equipment, operators, information systems, communication services in port territory, customs and government regulation). The factors were carefully selected from antecedents. The third level is made of sub factors that expand in each category of the later. In order to select the crucial factors, authors used Government specialist and Decision maker's surveys. All factors and sub factors were weighted in accordance to the results of surveys.

3.3. Financial and non-financial indicators importance
Financial indicators reflect the financial management part of the unit. However, the overall performance of one depends on many other factors that are necessary to be evaluated.

Benito et al (2003) analyse international competitiveness of Norwegian maritime cluster through revealed comparative advantage and OECD market share as well as sales, creation of net value, return on assets, capital return, export of sales and services.

According to Viitanen (2003) cluster is competitive if it is able to generate advantage of synergy through innovations and effective use of recourses. Market share, value added growth and total production of a cluster are its determinants. The researcher also applies Porter's Diamond model that was explained above.

Sirikrai and Tang (2006) apart from the return on assets consider return on investments as the indicators of competitiveness. They suggest to pay attention to other, non-financial indicators: satisfaction of clients, market share, sales and sales growth. When one evaluates financial as well as non-financial indicators, wider analysis is accomplished.

4 CONSLUSIONS
Although there is considerable debate amongst academics for the precise definition of productivity, there can be agreed that productivity represents ones of its most important competition measure elements, which may be presented by using not just financial, but also non-financial indicators, marketing and strategic management techniques.

In this paper, we have investigated some of the conceptual and measurement problems that arise in measuring assumptions of maritime cluster productivity and competitiveness: Firm-related and industry based Productivity analysis methodology differ; Export, Foreign investment, Innovations and Employment are the variables can be met in both assumptions; many of input and output variables are used accordingly to the developed models, which also are flexibly modified and adopted by the authors.

Total factor productivity "traditional" inputs are capital and labour, however, material and energy are sometimes met in various studies of productivity. Partial productivity covers capital or labour productivity, and then, accordingly to previously chosen variable - number of employees or number of working hours. Hicks Moorsteen index, Luenberger and Malmquist indexes are mostly used as Productivity measurement tools; Total factor productivity is mostly universal tool for Productivity measurement in cluster and Firm-based levels.

Although many of criticism follows with the classical models of competitiveness evaluation, the Porter "Diamond" model and Essence of the Analytical Hierarchy Model still remain as mostly practically used ones.

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STRATEGIC ASSET ALLOCATION IN THE TIMES OF FINANCIALIZED COMMODITY MARKETS

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ABSTRACT

The paper concentrates on the benefits of passive commodity investments in the context of the phenomenon of financialization. I investigate the implications of increase in the correlation between equity and commodity investments for commodity investors. The paper is composed of several parts. First, I describe the attributes of commodity investments and their benefits in the portfolio optimization. Second, I define the phenomenon of the finanzialization and develop my research hypothesis. Third, the section includes a description of data sources, research methods employed. Next, I present the results of the empirical analysis. I simulate the mean-variance spanning tests to examine the benefits of commodity investments before and after accounting for the impact of financialization. I proceed separate analysis for pre- and post-financialization period. The empirical research is based on asset classes' returns and other related variables from years 1991-2012. The performed research indicate that the market financialization may have significant implications for commodity investors. Because of the increase in correlations, the inclusion of the commodity futures in the traditional stock-bond portfolio appears to be no longer reasonable.

Keywords: commodities, fnacialization, mean-variance spanning, portfolio optimizatio.

1 INTRODUCTION

The commodity futures once seemed to be a bit of a holy grail of the stock market. Almost a decade ago a few influencing papers documented that commodity investment are able to increase the portfolio expected return and while at the same time decreasing its risk. The publications were quickly followed by an explosion of various commodity investment vehicles and a huge inflow of money into the commodity markets. This process was later described as the "financialization" (Domanski and Heath, 2007). From this time on, the landscape of the commodity markets has changed profoundly. From the market of refineries, mines and farmers, which it once was, it became a market of hedge funds, exchange traded funds and commodity advisors.

It is still under discussion how the financialization affected the commodity markets. Some researchers suppose, that it underwent a deep and structural change. The financial literature usually indicates emerging of price bubbles (Masters, 2008; Gilbert, 2009; 2010; Einloth, 2009), increased correlation among commodities and with other asset classes (TDR, 2009; Tank and Xiong, 2010; Silvennoinen and Thorp, 2009) and changes in term structure of commodity markets (Schindler, 2007; Mayer, 2010; Tang and Xiong, 2010; Vdovenko, 2013; Brunetti and Reiffen, 2011).

As the phenomenon of the financialization is relatively new, we still do not have firm answers if and how it did change the commodity markets. Additionally, what is the most important from the investors' perspective, we do not know, how it affected the investment conditions and opportunities in the commodity markets. This paper aims to investigate a single aspect financialization's consequences – the increase in correlation with the equity market – and assess its implications for the commodity investors. The analysis is performed from the point of view of a traditional US dollar stock and bond investor. In other words, what I try to

achieve is to find an answer to a question, whether after accounting for the changes in the term structure due to the financialization, it still makes sense to invest in commodities.

The paper is composed of several parts. First, I describe the characteristics of commodity investments. I also review the existing literature referring to the benefits of commodity investments. Second, I define the phenomenon of the finanzialization and develop my research hypothesis[1]. The third section includes description of the research methods employed and the data sources. Next, I present the results of the empirical analysis, which consists of two main stages. In the first stage, I perform the correlation analysis, to assess the impact of financialization on the commodity markets. In the second stage, I simulate mean-variance spanning tests to examine the benefits of commodity investments after accounting for the impact of financialization. The empirical research is based on asset classes' returns and other related variables from years 1990-2012. Finally, the paper ends with the concluding remarks and indication of some areas for further research.

2 COMMODITIES AS AN INVESTMENT

One of the key distinctions of commodities as an asset class is that there is no single way an investor can obtain exposure to them. In practise, there are three basic methods (Idzorek, 2007): direct physical purchase, commodity related stocks, commodity futures.

Each way of the exposures above has different risk and return characteristics. Physical investment is simply not very practical. Some commodities (particularly cattle and agricultural commodities) tends to perish quickly. Even those who does not perish, demand complicated storage and transportation. Actually, the only exceptions are precious metals, like gold or silver. Besides them, direct physical investment is fairly rare.

Commodity related stocks seem rather a part of a broader asset class of equities than commodities. They provide exposure to business skills of managers and specific factors related to companies, which in many cases may even hedge out their equity exposure. Therefore, some analysis indicate that commodity-related stocks tend to be stronger correlated with equities rather than with commodities (Zaremba, 2011). Gorton and Rouwenhorst (2006) build commodity stocks portfolio based on SIC codes and investigate its behaviour during 41 years period. The correlation to a commodity futures index is 0.40, while in case of S&P500 it is 0,57. Moreover, it appears that commodity stocks not only resemble rather equities than commodities, but also deliver lower rates of return and it is not very clear if they are an efficient inflation hedge (Gorton and Rouwenhorst, 2006). Many authors conclude that the portfolio of commodity related stocks is not a satisfactory way to gain exposure to commodities.

The third method, widely recognized as the most appropriate, is a direct investment in a portfolio of commodity futures. It can be done either by hiring a professional portfolio manager (CTA), who will actively manage the portfolio (managed futures) or by taking a passive long position in a commodity index. Further on, I will concentrate on the second way, as it is free from influence of active investment strategies.

The passive index investment is basically a purchase of a fully collaterized commodity futures portfolio, which are systematically rolled when (or before) they mature. The previous research

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[1] Some issues in this paper is also discussed in Zaremba (2013a) and Zaremba (2013b).

in the field indicates numerous traits of such investments which make them particularly interesting for traditional equity and bond investors: positive skewness of the returns' distribution (Deaton and Laroque, 1992; Armstead and Venkatraman, 2007), returns' mean reversion properties, (Sorensen, 2002), hedging properties against inflation (Bodie, 1983; Gorton and Rouwenhorst, 2006; Froot, 1995; Till and Eagleeye, 2003a; Till and Eagleeye, 2003b; Akey, 2007), long-term positive risk premium (Till, 2007a; 2007b; 2007c), and low correlation with traditional asset classes, like stocks or bonds (Ankrim and Hensel, 1993; Becker and Finnerty, 1994; Kaplan and Lummer, 1998; Anson, 1999; Abanomey and Mathur, 2001; Georgiev, 2001; Gorton and Rouwenhorst, 2006).

The two previously mentioned characteristics – low correlation and long term risk premium, which is not fully explained by the behaviour of other asset classes - make commodity futures particularly attractive for the strategic asset allocation. This issue has been in the scope of interest of researchers since the '70s in the twentieth century (Till, 2007a), so the literature in the field is relatively rich. The papers below are presented in chronological order.

The initial research focus on the agricultural market in the USA and do not deliver promising results. Dusak, who in 1973 (Dusak, 1973) analyses listings of singular commodities in years 1962-67, is not able to confirm existence of the positive risk premium. The breakthrough in the field should be subscribed to Greer (1978), who treat commodities as an asset class. Greer shows that a risk associated with commodity investment may be effectively reduced by a full collateralization. Using a price index from years 1960-76 Greer documents, that commodity investment performs better than equities, particularly by delivering higher returns with lower drawdowns than equities. Bodie and Rosansky, in their frequently cited paper from 1980 (Bodie and Rosansky, 1980), argue that commodity futures deliver the positive risk premium. They confirmed that the risk premiums was present in 22 out of 23 analysed markets in years 1950-73, however the statistical significance is rather weak. The reason is probably that the relatively high volatility of single futures, so Bodie and Rosansky performe also similar computations for a commodity index, which provided statistically significant rates of return. Similar results are later delivered by Bodie (1983), Carter et al. (1983), Chang (1985) and Fama and French (1987). Bessembinder (1992) notices that the presence and size of risk premium is dependent on the term structure, and Bjornson and Carter (1997) observed that the premium is correlated with macroeconomic factors: economic activity, inflation and interest rates. The higher risk premiums were historically usually observed when the interest rates were downward sloping, while the downward sloping interest rate curve coincided with the lower premiums. The research of Chong and Miffre (2006) reaches similar conclusions. Kaplan and Lummer (1998) concentrate on fully collateralized investments in S&P GSCI index and finds that the index investment historically achieved higher returns than equities, but at higher risk. The returns in the commodity markets are also in the scope of interest of Greer (2000), Till (2000a; 2000b) and Dunsby et al. (2008).

The more recent research on commodities' risk premium emphasize the difference between premiums delivered by indices and by single commodities. Garcia and Leuthold (2004) confirmed the risk premium for an index in years 1982-2004, but reached equivocal conclusions concerning single future. Anson (2006) calculated, that commodity portfolios achieved higher returns than bonds and equities in years 1970-2000, but at slightly higher risk. Erb and Harver (2006a) concludes that a confirmation or rejection of the risk premium hypothesis is highly dependent on research data and methodology. An important breakthrough happened in 2004, when a working paper of Gorton and Rouwenhorst was first time

published. The article entitled "Facts and Fantasies about Commodity Futures" (Gorton and Rouwenhorst, 2006) is widely recognised as a birth of commodities as an asset class (Rogers, 2007; Authers, 2010). Gorton and Rouwenhorst find the statistically valid risk premium for a 36-commodities index in years 1959-2004. The portfolio performed slightly better than equities, particularly in the risk terms. On the other hand, they are unable to confirm statistically significant rates of return in single markets. The most of later papers confirms the findings of Gorton and Rouwenhorst. Kat and Oomen (2007a) do not prove risk premium for a broad spectrum of 42 commodities in years 1965-2005, and Scherer and He (2008) document risk premiums in years 1989-2006 for Deutsche Bank indices, but not for their constituents. Long-term index returns are also indicated by Hafner and Heiden (2008) in their analysis of years 1991–2006, Fuss et al. (2008) in the analysis of years 2001–2006, and Shore (2008), who observe the S&P GSCI index in years 1969–2006. Positive rates of return higher than these of stocks and bond are also documented by Nijman and Swinkels (2008), but the authors notice, that the volatility was historically higher than in case of the traditional asset classes. The risk premiums in commodity markets are also analysed by Gorton et al. (2012).

Another important field in the commodity research is the diversification properties and their benefits in portfolio context. Probably the first scientific analysis of this kind is performed by Greer in 1978. In his pioneer work (Greer, 1978) Greer proves, that the rebalanced portfolio of commodities, stocks and bonds delivers more stable and higher rates of return than pure bond-stock portfolio. Bodie and Rosansky (1980) notice, than allocation of 40% of portfolio to commodity future decreases risk while simultaneously increasing expected returns. Similar conclusions concerning benefits of commodity investing, are later reached by Jaffe (1989), Satyanarayan and Varangis (1994), Frood (1995), Kaplan and Lummer (1998) Fortenberry and Houser (1990), Jensen et al. (2000), Woodard et al. (2006) ,Anson (2006). Idzorek (2006) in calculations performed for Ibbotson Associates proves that commodities are weakly correlated witch stocks and bonds, because they are correlated to inflation, which is not true in case of stocks and bonds. Kat and Oomen (2007a) present that allocation of a part of portfolio to GSCI improves the portfolio's Sharpe ratio, and Woodard (2008) documents that commodities in years 1989-2006 delivered positive risk premium, which could not be explained by returns of stocks or bonds. The shift in efficient frontier due to commodity allocation was indicated also by Scherer and He (2008) and Shore (2008). Finally, a paper of Heidon and Demidova-Manzel (2008) is one of the most interesting among the newest research. Both authors analyse return patterns of portfolio made of equities, sovereign and corporate bonds and real estate in years 1973-97, and conclude that investors should allocate between 5% to 36% proc. of their portfolio to commodities. Among the most recent researches, the benefits of commodities in the context of strategic asset allocation were also documented by Doeswijk et al. (2012) and Bekkers et al. (2012).

3 MARKET FINANCIALIZATION
Recent years brought a massive influx of money into commodity related products. It is said that at least 100 bilion dollars moved into commodity futures markets during years 2004-08 (Irwin and Sanders, 2011). Trading volume increased dramatically, and the presence of financial investors was constantly increasing. According to CFTC, the share of open interest held by non-commercial market participants surged from 15% in the beginning 1990 to over 42% in the end of 2012. Domanski and Heath (2007) coined term the "financialization" to describe the growing presence and importance of financial institutions in the commodity markets. The changes doesn't seem to be temporal, but rather structural (Irwin and Sanders, 2012).

It seems rather rational to suppose, that such profound changes could have somehow altered the way the commodity markets work. A lot of research has been done in this field. Recent papers pointed a few structural changes, that could took place in the commodity markets as the result of financialization: emerging of price bubbles (Masters, 2008; Gilbert, 2009; 2010; Einloth, 2009), increased correlation among commodities and with other asset classes (TDR, 2009; Tang and Xiong, 2010; Silvennoinen and Thorp, 2009) and changes in term structure of commodity markets (Schindler, 2007; Mayer, 2010; Tang and Xiong, 2010; Vdovenko, 2013; Brunetti and Reiffen, 2011).

In this paper I concentrate on a single particular aspect of the financialization: the increase in correlation with equities. Numerous publications on benefits of investing in commodities and their diversification properties triggered a surge in popularity of commodity-related investments among institutional investors: investment funds, retirement funds and university endowments. The phenomenon is nicely depicted by the famous example of the Harvard University Endowment (Faber and Richardson, 2009). The allocation to commodities in years 1995-2010 increase over twice. The result of the increased presence of financial investors in the commodity markets may be some rise in correlation with traditional asset classes and lower diversification properties, than it is often suggested in popular research (Büyüksahin et al., 2008; Chong and Miffre, 2008).

There are two primary mechanisms which may lead to the soar in correlation. The first of them functions at the strategic allocation level and the other on the tactical allocation level. When the increasing number of investors have similar investment portfolios allocated to stocks, bonds and commodities, and the investors try to keep more or less stable asset allocation structure, then the external shocks resulting in capital outflows will enforce selling of all the asset classes in the portfolio. On the other hand, the capital inflows will result in the bigger demand for all the asset classes (Kyle and Xiong, 2001). As the result, the external shocks affecting stocks will also affect commodities, so the correlation will rise. What is more, in many papers the commodities are described as an asset class which benefits from the economic growth (Strongin and Petch, 1995; 1996; Gorton and Rouwenhorst, 2006; Armstead and Venkatraman, 2007; Kat and Oomen, 2007a; 2007b). It this way, that makes them similar to equities, so the demand for equities may be somehow synchronized with the demand for commodities. It may be an additional factor contributing to the correlation.

Increased correlation is documented in the paper of Tang and Xiong (2010). Similar conclusion are drawn by Silvennoinen and Thorp (2009) which analysed correlations between 24 commodities an equity indices in the USA, Great Britain, Germany and France. The computations are based on weekly data from the period May 1990 - July 2009. The research indicates growing cointegration of various asset classes, even after accounting for various external factors, like changes in volatility. The increase in intra-asset class correlation is also investigated and documented in papers of Tang (2011), Inamura et. al. (2010), Oztek and Ocal (2013), Dwyer et al. and Bhardwaj and Dunsby (2013).

4 DATA AND RESEARCH DESIGN
In the empirical analysis in this paper I try to investigate whether commodities as an asset class are still beneficial in a portfolio context after taking into account for the increase in the correlation. Therefore, I simulate mean-variance spanning tests with and without potential changes. The mean-variance spanning test is designed to verify whether inclusion of an asset

class into portfolio results in expanding investor's efficient frontier. The test was initially proposed by Huberman and Kendel (1987), and later developed by for example Ferson et al. (1993), DeSantis (1993) and Bekaert and Urias (1996). Additionally Jobson and Korkie (1988) as well as Chen and Knez (1996) showed, that such test could be used to asses investment performance, and DeRoon, Nijman and Werger (2001) proved, that the test may be used for non-marketable assets[2]. Finally, there are many examples of mean-variance spanning test performed in the context of the commodities.

Let K denotes the set of benchmark assets with rates of return R_{1t}, and N are the tested assets with rates of return R_{2t}. Then, the formal test (the notation of Kan and Zhou (2001)) based usually on an simple OLS regression looks as follows (Kooli, 2006):

$$R_{2t} = \alpha + \beta R_{t1} + \xi_t, \quad t = 1, 2, ..., T \ , \tag{1}$$

where the null hypothesis of mean-variance spanning is that:

$$H_0: \quad \alpha = 0_N, \quad \delta = 1_N - \beta 1_K = 0_N \ , \tag{2}$$

Where 0_N is defined as N-element vector of zeros. Kooli (2006) notices, that the test may be divided into two stages. The first stage is the verification of the shift of the tangency portfolio. If the tangency portfolio is moved, than an investor is able to build better optimal portfolios composed of risk-free asset and the tangency portfolio. It is worth noticing, that the improvement in the tangency portfolio is actually the improvement in the Sharpe ratio.

The aim of the mean variance spanning test in this paper is to examine, whether inclusion of commodities expands the efficient frontier of traditional portfolio composed of stocks and bonds. The test is made from the perspective of an US investor, so it encompasses dollar denominated assets. The equities as an asset class are represented by Willshire 5000 Total Market and the proxy for US government bonds is Bloomberg/EFFAS US Government Bonds All 1+. The JP Morgan Commodity Curve Index is used as the commodity portfolio. There are now many indices available, however JPM CCI is chosen due to several reasons. Firstly, it is dated back to December 1989, so it represents relatively long time series. Secondly, it is calculated in total, excess and spot return convention. Thirdly, it avoids a common front-run bias, because it exposes an index investor to a full commodity curve. Fourthly, its constituents are weighted according to open interests, which seems to be a good representation of investors' universe. Finally, it does not assume any sophisticated active portfolio allocation methods, that could distort the pure returns to commodities as an asset class. All the indices are calculated in a total return regime. Additionally, USD BBA 1-month Libor is used so as to calculate excess returns over the risk-free asset (interpreted as the risk premium). All the data comes from Bloomberg and encompasses time-series 12/31/1991-12/31/2012, so from the very beginning all three indices are calculated. I compute arithmetical rates of return on a monthly basis.

In this paper I test the mean-variance spanning in two ways: using traditional OLS regression and with help of Monte Carlo analysis. The details of both methods are described below.

Most of mean-variance spanning test are based on total rates of return. In such case, it is rational to assume, that expositions to various asset classes should sum up to 1. However, in this research, I use risk-premiums defined as excess returns over money market. The regression model looks as follows:

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[2] A nice review of mean-variance spanning tests could be found in a paper of DeRoon and Nijman (2001).

$$R_{it} - c_t = \alpha_i + \sum_{k=1}^{K} \beta_{ik} \times (R_{kt} - c_t) + \varepsilon_{it}$$

, (3)

where R_{it} is the return on the examined asset class' (commodities), c_t denotes money-market return in month t, and R_{kt} is k-asset's rate of return (stocks and bonds). If α, as specified in the model above, turns out to be statistically different from and higher than 0, one can say, that i constitutes a distinct asset class that generates its own risk premium. However, if that does not hold true, than an investor can probably replicate i's returns without bearing higher risk or losing some of return.

This method is consistent with remarks of Anson (2009) and Scherer and He (2008), and was used in the commodity market for instance by Nijman and Swinkels (2008). The risk premium approach appears to be reasonable due to at least three reasons. Firstly, it does not imply, that the betas need to sum up to 1. Missing allocation can be filled with cash, or negative cash in case of leverage. Secondly, it makes the graphical interpretation and further analysis easier, because the tangency line of the tangency portfolio comes out from the origin of the coordinate system. Finally, it seems more practical as it corresponds with employing futures contracts in order to gain exposition to particular asset classes.

The main problem with the asset traditional OLS regression in case of commodities is that the return distribution of commodities seems to be far from normal (Anson, 2009; Gorton and Rouwenhorst, 2006; Erb and Harvey, 2006). In consequence, due to skewed distributions and fat-tails, the standard deviation may underestimate the true risk level. The problem is further explored by Johaning et al. (2006). Some papers in the field suggest to take into account also higher moments in the proces of portfolio analysis (Arditti and Levy, 1975; Markowitz, 1952; Samuelson, 1970; Harvey, Liechty and Muller, 2004; Cvitanic, 2005; Fang and Lai, 1997; Dittmar, 2002).

Therefore, in the second way I test the mean-variance spanning. As the risk measure, I use the modified value at risk (*MVaR*) proposed by Favre and Galeano (2002):

$$MVaR = \mu - \left[z_c + \frac{1}{6}\left(z_c^2 - 1\right)S + \frac{1}{24}\left(z_c^3 - 3z\right)K - \frac{1}{36}\left(2z_c^3 - 5z_c\right)S^2 \right]\sigma$$

, (4)

where μ denotes the mean return, σ is the standard deviation, S is skewness, K is kurtosis, and z_c is the number of standard deviations appropriate for the calculated *VaR*. The *MVaR* is analytical in its character, but thanks to *VaR* Cornish-Fisher expansion (Cornish and Fisher, 1937) it better approximates distributions different from normal. Using *MVaR* is consistent with investor's approach, who prefer distributions with positive skewness and low kurtosis (Scott and Horvath, 1980; Pratt and Zeckhauser, 1987) [3].

So in the second approach, I proceed the statistical analysis as follows. First, I resample 10 000 times the panel data encompassing four time-series of monthly arithmetical returns, which included JP Morgan Commodity Curve Total Return Index, Willshire 5000 Total Markets, Bloomberg/EFFAS US Government Bonds All 1+ and USD BBA 1-month Libor. Second, for each resampling, I compute three monthly risk-premiums' time series, which are differences between asset class' indices and preceding month-end's Libor. Third, in each case I find the risk-return efficient frontier based on excess frontier for stocks and bonds the *MVaR*

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[3] Some examples of alternative investments' analysis with the MVaR can be found in papers of Lamm (2003), Signer and Favre (2002), Amenc, Goltz and Martellini (2005), Kooli (2006), Coste, Douady and Zovko (2011).

as the proxy for risk. Fourth, I add the commodities to the asset class' universe and find the efficient frontiers for all the three asset classes. Fifth, I calculate the tangency portfolios' Sharpe ratios[4] for both efficient frontiers. It is worth noting, that in the case of the *MVaR* approach, it is actually a measure called modified Sharpe ratio, which was described by Bacon (2008, p. 102). Sixth, I compute the improvement in Sharpe ratios, as the difference between the values after and before the commodity inclusion. As I noted this before, in the case of excess return framework (or in other words: risk premium framework), the improvement in the maximum achievable Sharpe ratio is actually equal with the mean-variance intersection. So seventh, I calculated the percentage of resampled efficient frontiers (out of 20 000), which involved Sharpe ratio's improvement. The percentage of the cases, in which the Sharpe ratios *did not* increased, is my *p*-value.

Finally, all the analysis above are performed for three time-frames. First, for the full research period 1991-2012. Second, for the period of the low correlation ending in December 2004. Third, for the high correlation period beginning in January 2005. The dates are chosen intentionally, as the year 2004 is a symbolic breakthrough, it was the year when "Facts and Fantasies about Commodity Futures" were published for the first time. Finally, it is important to point out that the average monthly returns in the sample subperiods were adjusted in order to equalize them with the full sample period. Thanks to this operation, the mean-variance simulation will emphasize the changes in the covariance matrix, while ignoring the changes in expected rates of return.

5 EMPIRICAL RESULTS
Figure 1 represents the 5-year rolling correlation between monthly returns of equities and commoditises along with its volatility bounds. The computations are based on monthly returns. One can see, that the correlation was clearly increasing in the recent years.
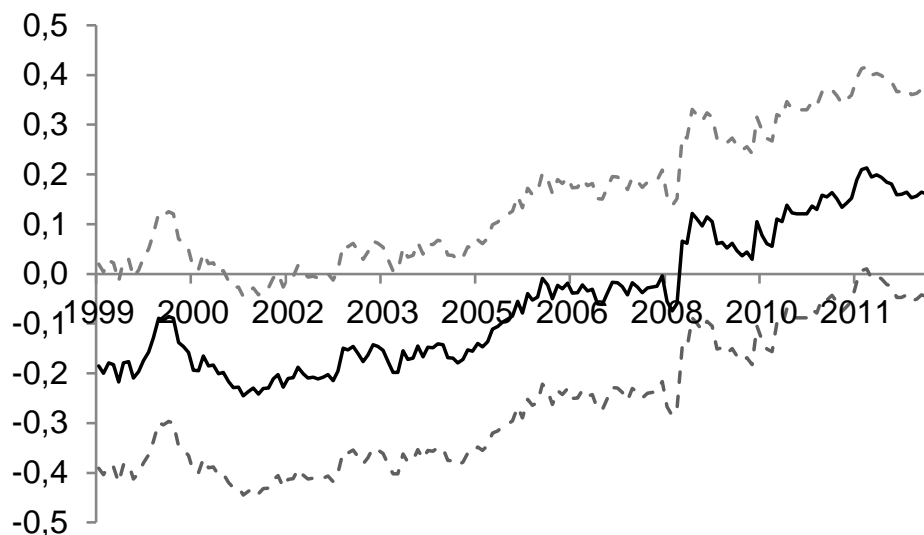
Figure 1: The correlation between equity and commodity returns in years 1991-2012.

Figure 2 depicts the shift of the efficient frontier because of inclusion of the commodities based on raw historical data 1991-2012.

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[4] The tangency portfolios are characterised in this case by the maximum attainable Sharpe ratios.
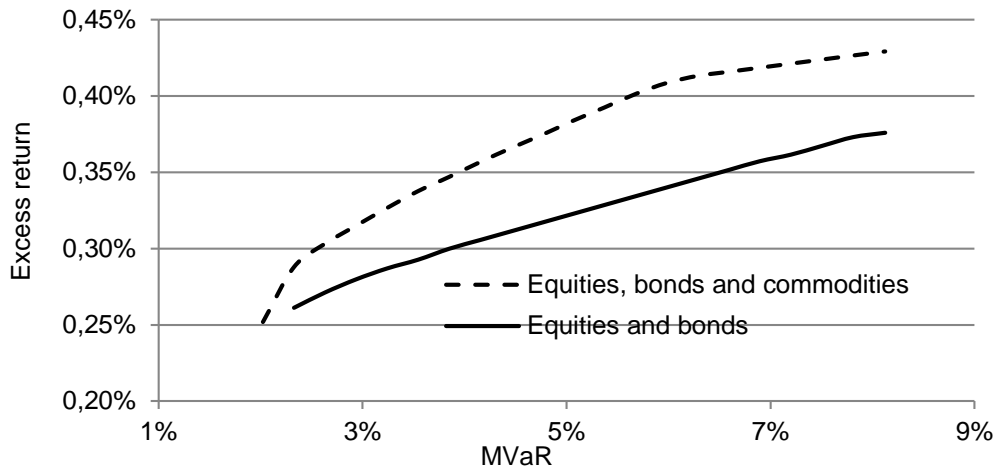
Figure 2: Commodity investments and the shift of the efficient frontier: the years 1991-2012.

The efficient frontiers are "pushed" upward and leftward after inclusion of the commodities both in the mean-variance approach and in the mean-*MVar* approach. This effect is even stronger in the pre-financialization period (Figure 3). If we look at the years 1991-2004, the expansion is actually more visible.
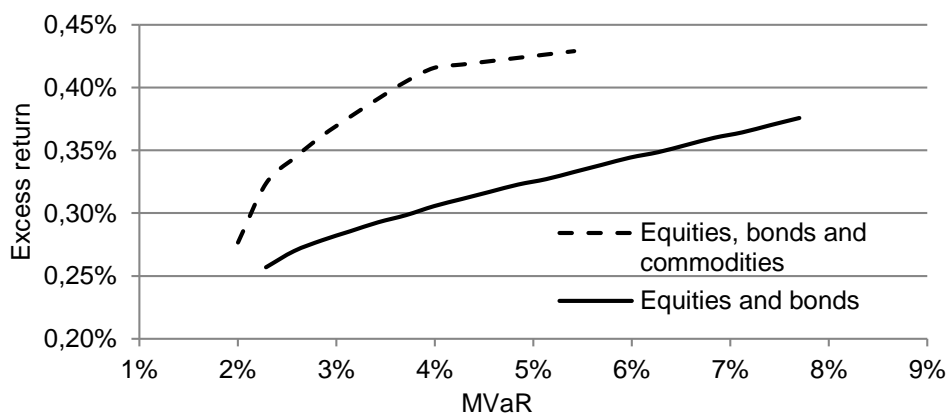
Figure 3: Commodity investments and the shift of the efficient frontier: the years 1991-2004.

However, this conclusion does not entirely hold true after accounting for the impact of financialization. As one can see in the Figure 4, the commodities offer not much better better investment opportunities. The frontier is shifted only a little.
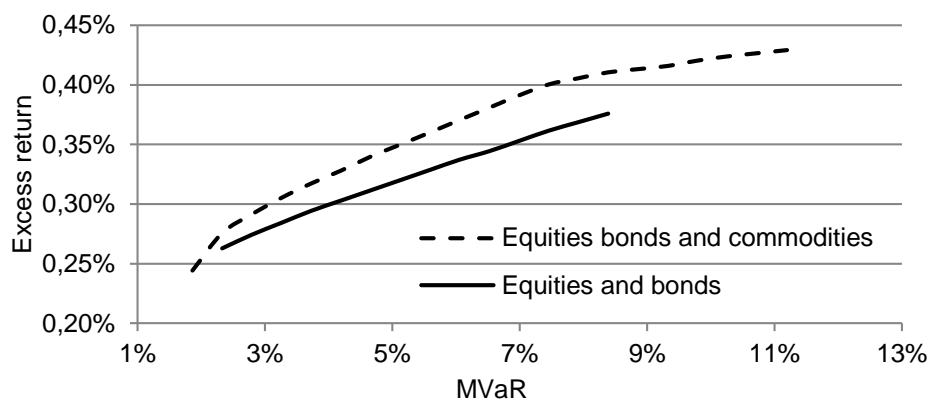
Figure 4: Commodity investments and the shift of the efficient frontier: the years 2005-2012.

Table 1 presents the results of mean variance spanning test analysis using the regression approach described in the previous section.

Table 1: The mean-variance spanning test: the OLS approach.

	1991-2012	1991-2004	2005-2012
intercept	0,005	0,005	0,007
	(1,722)*	(1,973)**	(1,11)
stocks	-0,351	-0,116	0,202
	(-1,604)	(-1,821)*	(1,525)
bonds	0,005	0,112	-1,192
	(0,074)	(0,548)	(-2,608)***
N	252	156	96
adj. R^2	0,002	0,011	0,067
F-test	1,292	1,876	4,426

The symbols *, **, and *** denote the statistical significance at the 10%, 5% and 1% levels.

The results generally confirm, what can be concluded from the mean-variance approach graphical analysis. Before accounting for the impact of the financialization, the intercept was positive and statistically significant at 5% level. It even remains so, when we look at the entire analysed period. However, after accounting for the changes, the intercept is still positive, but not statistically significant at any reasonable level. In other word, the benefits of the commodity futures in the traditional stock-bond portfolio cannot be still confirmed.

The observations above are confirmed by the results of the Monte Carlo analysis. The Table 2 presents the results of the Monte Carlo simulations for the sample.

Table 2: P-values in the Monte Carlo approach.

	1991-2012	1991-2004	2005-2012
p-value	7,40%	4,00%	22,20%

The distributions of Sharpe ratios increases indicate, that in both approaches (variance and *MVaR*) the maximum attainable Sharpe ratio is significantly increased. Only 7,4% in case of draws the Sharp ratio do not go up. The situation changes when I split the sample into the two subsamples. Although the benefits in portfolio optimization are strongly emphasized in the pre-2005 period (4%), this is definitely not true after taking account the impact of financialization. As we can see, in 22,2% of MVaR draws, the investor opportunity set is not improved. Summing up, it seems, that after taking into account the impact of financialization, one cannot firmly state, that in the risk-return framework it still make sense to invest some share of a stock-bond portfolio in commodities.

6 CONSLUSIONS AND AREAS FOR FURTHER RESEARCH

In this paper I focus on the benefits of passive commodity investments in the context of financialization. The recent financial literature indicated that financialization could have impacted the conditions of passive commodity investments. Many areas of the influence were identified, for example a bubble behaviour, increased correlations and distortions of the term

curve. One of the key fields of impact could be the increase of correlations between commodities and equities.

The increase of the correlation comes not without an impact on the question whether some part of an investment portfolio should be allocated to the commodities. The mean-variance spanning tests show that what was true 10 or 20 years ago, may not bet true right now. Because of the soaring correlations, the inclusion of the commodity futures in the traditional stock-bond portfolio appears to be no longer reasonable. In other words, due to the process of commodity markets' financialization, the benefits of commodity investments in the portfolio context may not be valid anymore.

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Enterprise in Turbulent Environment

INVESTIGATING THE EFFECT OF TRAINING ON EMPLOYEES' COMMITMENT: AN EMPIRICAL STUDY OF A DISCOUNT HOUSE IN NIGERIA

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ABSTRACT
There has been a turn around and the take up of training as one of the key factors in improving company competitiveness. Evidence derived from research showed that there is now a broad agreement amongst commentators that skills training improve employees' commitment to the organisation. Training from a company's perspective adds to human capital and also a means of securing workplace commitment. The theoretical proposition therefore is that training will get employees more committed to the organisation. Organisational commitment when combined with job related behavioural commitment will lead to organisational performance. In order to achieve a high level of performance, organisations now require highly motivated and committed workers. This paper explored the relationship between training and employees' commitment to the organisation. The organisation on which the research was conducted is a Discount House in Lagos, South West Nigeria. The total of 150 completely filled questionnaires was utilised in this study. A regression analysis was conducted on the data collected. The study revealed that the training increases employee's commitment to the organisation.

Keywords: *Organisational Commitment, Employees' Performance, High, Performance Work Practices, Human Resource Management.*

1 INTRODUCTION
The role of human resource management in enhancing organisational performance has attracted so much research attention, although a widely accepted definition of HRM does not exist, Storey (2001) defined HRM as a distinctive approach to employment management which seeks to achieve competitive advantage through the strategic deployment of highly committed and capable workforce. The general theory about human resource management has been centred round issues like quality, commitment and performance. Quality according to Storey (2001) can be achieved by training employees in required skills. Training is central to the development of work system that aims to increase the contribution of the employees to the production process (Brown et al., 1994 and Keep, 1991). New work practices involve workers becoming more skilled, pro-active and committed (MacDuffie and Kochan, 1995). For this to be achieved, both new and existing employees will need to be the trained. Santos and Stuart's (2003) in their studies on the benefit of training for organisations, assumed a direct connection between training strategy, hierarchy of performance, learning, behavioural change and performance influence.

Training and development is one of the modern management approaches in HRM. Emerging literatures have shown that the investment in human capital such as training is positively

related to organisational performance. That is, training is expected to reduce turnover, and increase employee's commitment, which will result in longer employment duration. According to Keep (1989), training is a 'vital component' in organisational process of cultural change, a behavioural device that can be used to secure workforce commitment and to realise the potential of employees. For instant, Keep (1989) identified training and development investment as key determinants of organisational performance and economic growth. Conventional wisdom also suggests that investment in training and development are associated with a range of individual and organisational benefit. The clear assumption is that the more the training given to employees, the better (Santos and Stuart, 2003).

Training has been a subject of debate with various functions and definitions given to it. To some training is the ability of an organisation to develop skills and knowledge to do present and future job (Guest 1997) and to others it is an important employee motivator (Barret & O'Connell 2001). Different literatures have suggested that the development of a firm's human capital can provide a sustainable source of competitive advantage for the firm (Olson and Schwab, 2004).

However, training from a company's perspective adds to human capital and also a means of securing workplace commitment. Although the bottom line for most training and development activities is to improve organisational performance, studies have shown that most organisations devote little attention to the evaluation of training effectiveness. Keep *et al.*, (2002) argue that investing in training constitutes a powerful signalling device to reassure employees that they are valued by their employers, which in turn enhances their commitments to the organisation.

Employees' Commitment
There is no general agreement as to what can increase an employee's commitment to the organisation. Most of the conceptualization of commitment used in most of the American studies reflects more of managerialist and unitarist outlook (Guest 1997). Other labels such as high commitment (Guest et al., 1993), lean production (MacDuffie and Kochan, 1995), security employee involvement (Guest et al.*,* 2000) have been given, even though most of them have focused on effective work management. Commitment according to Jaw and Liu (2004) is not only a human relation concept but also involves generating human energy and activating human mind. Without commitment, the implementation of new ideas and initiatives will be compromised (Ramus and Steger 2000 cited in Jaw and Liu 2004). Human resource system can therefore facilitate the development or organisational competencies through eliciting employees' commitment to the firm (Arthur, 1994). That is, organisations that have a fit with business strategy, structure and practices and policy will perform better. Walton (1995) prescribed "commitment" as a distinctive strategy for HRM whose positive effect will be felt.

Organisational commitment is a psychological strength of an individual's attachment to organisation. Arthur (1994) reported a positive impact of using high commitment human resource practices in managing firms' productivity and retention. Real commitment fosters a high level of individual learning, whereby the individual puts the organisation's need in front of their own. This could also enhance cooperative team work to facilitate transfer of individual learning (Argyris, 1998). Committed individuals align and mobilise themselves in actions directed at attaining organisational objectives, and they also share organisational values. Jaw and Liu (2004) said that organisational learning is aimed at ensuring that the

organisation has competent employees with skills required to perform well. A learning organisation makes use of best HRM approach so as to achieve positive learning attitudes, empowerment, encouraging commitment, comprehensive training and performance emphasis. Firms that aspire to be learning organisations teach their employees how to learn, share information and also reward them for doing so. Most academic research on human resource management practices suggested that employees' commitment will increase organisational effectiveness by creating a condition whereby employees become highly motivated, committed and involved in the organisational activities aimed at achieving organisational goals (Arthur, 1994).

Employees' Training Explored

Identifying why employers are failing to train according to Keep and Rainbird (2000) is an attempt to find the solution to the problem. Amongst the explanation given were the market failure, lack of information and inadequate individual resources (Lloyd 2002). Other commentators have argued that the training failure is more systematic and a reflection of Nigerian' economy. Even though the lack of training in Nigerian workplaces has sometimes been blamed on the lack of interest amongst workers, this in recent years does not hold water anymore. Rather, employers are blamed for not training their employees because they are trying everything possible to reduce running cost. Although various reports have been given on the positive impact of training on organisational commitment, Guest *et al.,* (2000) argued that for the effect of training to be felt, its values must lie in the part it can play in the integrated HRM strategy, especially when there has been so much investment in high quality and flexibility of the workforce.

Objective for the Study

The study investigated the relationship between training and commitment in Discount House in Nigeria. This paper therefore looks at training as a single HRM practice in a Discount House and its effect on employees' commitment to the organisation, with an expectation that establishments that train their workers will perform better than organisations that do not. Specifically, the main objective of the study is to:
To determine the effect of training on employees' commitment to the organisation.

Given the position of the existing literature on the relationship between training and commitment, the following hypothesis is developed

Null Hypothesis: *Training does not increase employees' commitment to the organisation.*

Alternative Hypothesis*: Training does increase employees' commitment to the organisation.*

2 METHODOLOGY

A total of 150 respondents, which represents eighty five percent of the total population in the Discount House, returned the questionnaire distributed. The respondents consist of 100 (66.7%) male employees and 50 (33.3%) female employees. The purposive sampling technique was used to select the organisation. The hypothesis tested in this paper is based on the comprehensive debate of the effects of high commitment work practices on organisational performance.

The Model of Analysis:
The model of analysis will be based on regression analysis, where
$Y = b_o + b_i(T) + b_{ii}(T_i) + b_{iii}(T_{ii})\dots\dots$

Where (Y) is the dependent variable (commitment)
(T..Tii) are the independent variables
(b..bii) are the coefficient which can also be the slope, (bo) is the intercept or the constant upon which the independent variables are based on.

The research model and equation will be as follows
Commitment = Constant + Level of Training……equation (1a)

The variable *"commitment"* was used to measure all the responses to the question *'I am committed to this organisation'*? The responses to the question were broken down into those that strongly agree, agree, neither agree or disagree, disagree, strongly disagree. *"Training"* was further broken down into different number of days that employees were trained. The levels of training were *Less than two days training* for those who had received training for 1 to 2 days, *Less than five days training* for those that have received training for 2 to 4 days, *Less than ten days training* for those that had training for 5 to 10 days and finally, *Ten or more days training* is for those who had received more than 10 days training. A regression analysis using Statistical Package for the Social Sciences (SPSS) was conducted on these variables.

Results
The results show that training is positively correlated with employees' commitment to the organisation. The Null hypothesis that *Training does not increase employees' commitment to the organisation* stated in the previous section has been rejected and the Alternative Hypothesis that *Training does increase employees' commitment to the organisation* has been accepted. The result of analysis is illustrated in the Table 2 below.

Table 1: An Overview of the Respondents

Descriptive	(N=150)	Per cent (%)
Gender		
Female	(N=100)	66.7%
Male	(N=50)	33.3%
Age		
21-30	(N=15)	10.0%
31-40	(N=125)	83.3%
41-50	(N=10)	6.7%
Marital Status		
Single	(N=25)	16.7%
Married	(N=115)	76.7%
Widowed	(N=5)	3.3%
Divorced/Separate	(N=150)	3.3%
Academic Qualification		
HND, B.Sc., B.A.	(N=65)	43.3%
MBA, M.Sc., M.A.	(N=85)	56.7%

Work Experience		
Less than a year	(N=10)	6.7%
1-5 years	(N=123)	82.0%
6-10 years	(N=8)	5.3%
11-15 years	(N=9)	6.0%
Status of Respondent		
Management Staff	(N=25)	16.7%
Senior Staff	(N=30)	20.0%
Junior Staff	(N=95)	63.3%

Table 2: The Relationship between Training and Employees' Commitment

Equation: Y(employees' commitment_ = function * bi (Training)
Number of observations = 150

Variables	Coef	Std. Err.	Z	P>/z/
Less than 2 days training	.155911	.0201247	8.80	0.000***
Less than 5 days training	.253376	.0275708	12.42	0.000***
Less than 10 days training	.314738	.0282066	13.56	0.000***
Less than 10 days training	.351898	.0292490	14.46	0.000***

*** indicates that the coefficient is statistically significant at the 10% level.

The table above shows that the employees that The different levels of training such as the less 2, less 5, less 10, less 10 and more than 10 days training all had a standard error showing (.0201247, .0275708, .0282066, .029249), coefficients (.155011, .2533276, .3147038, .351898, respectively) and (Z = 8.8, 12.42, 13.56, 14.46) respectively and all are significant at 1%. The results showed that the size of coefficients is increasing as the level of training increases. These results suggest that the higher numbers of days training given to employees, the more committed they will be to the organisation. The positive sign indicates the direction of the relationship. That is, the more training given, the more committed an employee will be to the organisation.

Discussion
The statistical analyses have shown that the more training given, the higher the level of employees' commitment to the organisation. The study supports the existing literature that training is not only viable means of improving employees' knowledge and skill, but also a means of achieving higher employees' commitment to the organisation. This is similar to the study conducted by Porter and Tripoli (1997) that training signals commitment from the organisation to the employees, which will result in employees reciprocating such behaviour by demonstrating a stronger affective organisational commitment, which is quite productive and can affect performance. Although the direction of causality cannot be truly established, the results showed that training will increase employees' commitment to the organisation. By examining the relationship between training and commitment, this paper suggests that, by adopting and increasing employees' training will not only be beneficial to employees, but also to the organisation as a whole in the sense that it will give an organisation a competitive edge over others. It is suggested that training should be implemented as part of the larger organisational development strategies aimed at getting a committed workforce. This is because employees interpret training as an indicative of commitment from the organisation to them, and which they reciprocate according by being committed to the organisation.

Implications
The implications of this present study can explained in terms of the contribution it can make to the present knowledge of the relationship between HRM practices and organisational outcomes. Based on the findings, this paper suggests that by adopting and increasing employees' training will not only be beneficial to employees, but also to the organisation as a whole in the sense that it will give an organisation a competitive edge over others in terms of performance. That is training will not only improve the technical and non- technical skills of the employees, but it can be used to get employees committed to the organisation. The effect of training in this situation is positive and beneficial to the financial service organisation. The employers at large should therefore invest more in training and increase the amount of training given to their employees so as to get them to perform better. To human resource management practitioners, employee training should be integrated into the HRM practises aimed at getting a committed workforce and also practices aimed at increasing organisational performance (Huselid 1996).

More awareness needs to be created so as get the general public educated on the bottom line and overall effect of training on employees' commitment to the organisation. For those organisations that train most of their employees, they are advised to keep up with the good act, and for those that have not, are strongly advised to make more conscious effort to change their management approaches to those aimed at getting a committed work force.

Limitations of the Study
This research looked at training from the perspective of the employees. This is a one-sided approach that has ignored the cost-effect of training on the organisation. Training in this current study has been suggested to be beneficial to both employees and employers, without laying much emphasis on the fact that training can increase the operational cost of running an organisation which can reduce the gross profit for those establishments that are large and train most of their employees. Furthermore, there might be the risk of losing most efficient and better-trained employees to other organisations that are ready to offer them more pay.

3 CONCLUSIONS
The main purpose of this paper is to investigate the effect of training on employees' commitment to the organisation. The empirical evidence suggest that the more training given to employees, the more committed they will be to the organisation. Further research is enquired so as to explore the relationship between training and other organisational performance measures, such as employees' performance, organisational performance, quality and productivity so as to be able to present more reliable explanations for the relationship between training and commitment.

Finally, since there are different human resource management practices aimed at getting workforce commitment, there is the need to focus on the efficiency and the adoption of other practices such as employees' involvement, consultation, share ownership and direct communication on employees' commitment and the overall effect they can have on the organisation.

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INFLUENCE OF ACCOUNT PLANNING ON CAMPAIGN EFFECTIVENESS IN CROATIAN MARKETING AGENCIES

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ABSTRACT
To set up effective marketing communications the whole range of activities is carried out stemming from different departments of full service marketing agency. Although a full service marketing agency structure are similarly designed taking into account an internal communication with the agency's services, there are differences in specific business functions whose activities are believed to add value to the agency's clients. The study wants to present how just a business account planning function adds a value to the agency's clients in terms of setting up an effective marketing communications. Thereby a creation of a marketing campaign stems from specific activities that Account Planners undertaken in conjunction with Account Managers and creative's in the marketing agency. Croatian marketing agencies partially supplement specific activities from the Account Planner job opus, but still much less taking into account the examples of foreign practices. However marketing experts believe a large number of functions that account planning contributes to a better marketing communication in a small percentage develop actions that achieve the same.

Keywords: *account planning, marketing agencies, marketing campaign, marketing communication*

1 INTRODUCTION
Development of marketing campaigns in advertising agencies depends on the specific steps aimed at effectively transferring marketing communications to end consumers in order to meet the overall objectives of the client. The marketing agencies in the UK and the U.S. developed account planning function which soon became an integral part of the full service agency structure. For this purpose, account planners work becomes an important link whose activities significantly affect the effectiveness of marketing communications. Thus, the paper wanted to examine the relationship between effective marketing communications with the existence of account planning function, and direct benefits of account planning for the purposes of creating an effective marketing strategy. The paper is therefore to investigate which marketing activities in Croatian advertising agencies form the backbone of operations arising from the account planning function. The authors wanted to investigate all activities used by marketing specialists who are in correlation with account planning function as well as to explore a possibility of developing business functions of account planning in Croatian marketing agencies.

2 RESEARCH METHODOLOGY

2.1. Subject of research

Marketing agencies in Croatia provide various marketing services related to promotional activities of products or services for agency clients. Accordingly, marketing communication should be strategically oriented at the marketing communication tools whose message should be visible to the targeted group of people. Marketing agencies in addition to the established marketing services such as client, media or creative services can have more specialized departments whose services are centralized marketing services and thus provide all services in one place. Therefore, this paper wants to examine which key departments are involved in the implementation of marketing campaigns and how effective they are, considering the objectives of marketing campaigns. Thereby it will be explored a connection between efficient marketing communication with the existence of account planning function in purpose of creating an effective marketing strategy.

2.2. Aims of the research

Paper analyzes in which way the function of account planning, as well as the related jobs, might affect the greater effectiveness of marketing communications. It also wants to examine whether marketing agencies employ Account Planners and which related activities are used in order to implement a marketing campaign. Since the success of the marketing campaign might depend on several parameters, the paper examines which activities are most commonly implemented and which activities should improve successful marketing communication among consumers. In addition, the analysis will show how marketing specialist are using information from the market in purpose to get an information about target group of consumers.

2.3. The research questions

In this paper the following research questions are raised:
1. Is there a correlation between effective marketing campaigns and the existence of *account planning* business function?
2. Are there any direct benefits from the *account planning* function in advertising agencies?
3. Can the *account planning* function be taken as for precondition of a successful marketing campaign?
4. What are the direct benefits of account *planning* for marketing strategy effectiveness?
5. Is there a difference between the existing ways of defining a marketing strategy and the way that represents an *account planning* function?

2.4. Research methods

In order to achieve the objectives as well as the answers to research questions, the authors used a quantitative research method. Analysis of the concept of Account Planning in Croatian marketing agency is conditioned on successful international practice, and therefore will be used a literature related to the practice of Account Planning in foreign advertising agencies for the purposes of clarification of research questions. The survey comprises the relevant employees of advertising agencies with long experience that include marketing activities associated with the account planning. First of all, these are the directors of eminent Croatian marketing agencies, Client Service Directors, Account Managers, Media Directors, Creative directors and PR Managers who, on the basis of knowledge on marketing strategy, should give relevant answers related to the implementation of marketing campaigns in agencies where they are employed.

3 THEORETICAL CONCEPT OF ACCOUNT PLANNING IN ADVERTISING AGENCIES

3.1. Occurrence of function Account Planning in advertising agency

The first formal departments of account planning function were created in the famous British advertising agencies, at the end of the 60s of the last century. These are marketing agency from London, J. Walter Thompson (JWT) and Boasse Massimi Pollit (BMP) which approximately at the same time formed account planning function and thereby set a foundation of development of marketing communications (Zambardino and Goodfellow, 2003). Account planning philosophy is becoming increasingly recognized in the competitive British agency, and by the end of 1980 new marketing function adopts most other full service agency (Habberstad, 2003).

Marketing agencies in the U.S. also started with the development of account planning function (Hackley, 2013). Habberstad (2003) states that the function of account planning soon found on U.S. territory, since proved to be extremely effective in the UK and therefore marketing agencies in the U.S. wanted to be just as successful. The agency Chiat/Day was first who has introduced account planning function in the United States. Jay Chiat, the owner of the agency was a big fan of advertising in the UK and he considered that greater success in the British agency was credited from account planning function.

It seems that the account planning function outside the marketing industry was less known, even after 30 years (Baskin, 2003). The reasons for its obscure may be that the account planning is more observed as external support for marketing management, and therefore was absent in academic interest. However it should not be left out just how account planning to advertising agencies provides a multiple millions in marketing industry (Crosier and Picton, 2003). Deep knowledge of the needs and habits of the consumer becomes the basis of setting up a communication strategy that can contribute to a long-term relationship between the companies that sells the product (agencies clients) to a certain customer. Advertisers nowadays require communication that should not only be cost-effective, but also needs to be effective and thereby exclude the possibility of the slightest error in planning marketing communications.

3.2. The role of account planning in developing marketing campaigns

Account planning function in advertising agencies is a central element of the system of formal planning marketing campaigns for the clients (Grant, Gilmore and Crosier, 2003). Accordingly to the name, account planning under normal conditions it would be related to the strategic role within the account team and the broader on philosophy of developing marketing campaigns (Hackly, 2003). The role of account planning in advertising agencies today is much more complex and thereby expanded, considering the role of its early beginnings, more than 30 years. The role of account planning function derived from advertising agencies as a result of the increasing influence of consumers, thereby indicating the need to seek ways that can make effective marketing communication, due to the fast changing trends (Osler, 2003). However, the role of account planning still remains an enigma. Hackey (2003) for research needs on the roles of account planner interviewed many Account Planners who stand out: *although the account planning is well known and accepted, very little attention relates to planning*. It should be taken into account how even after a 30 years there have been concerns what are the activities associated with the account planning.

A good account planner should have a special interest in people whose passion in research should be so deep that they can examine consumer views of the world the same as their internal feelings. Except that they should also possess skills of good research data, they should govern certain marketing tools and should possess strategic and visionary mind to be able to present the solutions that they have acquired, since vital knowledge about the consumer should be utilized when planning marketing communications. Their originality in thinking and the application of the solutions in marketing agency should be of paramount importance. Original thinking affects the perception of the brand in the eyes of consumers as the art of turning a problem in the original marketing message makes the main mission of Account Planner.

3.3. The process of implementation of marketing campaigns through function account planning

The process of implementing a marketing campaign depends on several parameters. With regard to the activity of the company which is engaged as an agency's client, as well as the messages they want to transfer to end customers, tangible results will depend on the type of customer as well as on the Account Planner (Grant, Gilmore and Crosier, 2003). Account planning is a hybrid function that primarily benefits the research arising from the observation of consumers in order to take them into account in the process of strategy implementation for a particular marketing campaign (Kerr, 2005).

The implementation process should primarily contribute to the examination of the problems that come from the client, since the information provided by the client, account planners should transform into a unique marketing message. Since planning is the process which on many ways uses real data, thus is maximum rationalized, if we taken in concern that when proposing a marketing communication should be cautious. Caution is needed primarily because well-defined marketing mix should be relevant to the product / brand, taking in to an account that in terms of marketing agency has no negligible impact (Hegarty, 2003).

In the process of implementing a marketing campaign a document that summarizes the information that need to help to create a marketing campaign or told in marketing language, the *creative brief* has a great importance. Therefore *creative brief* should provide a clear concept of everything that can be relevant to a creative department since creative's needs to provide a quality artwork.

3.4. Account planning in structure of marketing agency

Like many service industries and marketing branch is becoming more fragmented, less bureaucratically structured. Marketing agencies operates in highly complex environments which are linked in several ways. On one side they are connected internally or between agency employees and externally with various partners, including the media, research houses and other suppliers in the field of marketing (Grant, McLeod and Shaw, 2012). Modern marketing departments can be organized in many different ways. In advertising agencies operates functional specialists who are responsible to the managing director. Advantages of functional marketing organization are primary related to simplicity of the management (Kotler and Keller, 2008).

The organizational structure will largely depend on the management team within the agency, and may depend on the size of the agency. It should be take into consideration about tasks and responsibilities within the client service department, which is linked to the account planning

team (Kempeners and Hart, H. 1999). According to the experienced account planners in the U.S. position of the account planning function is not always strictly defined.

4 ANALYSIS AND INTERPRETATION OF RESEARCH

For the purposes of this paper a one-time survey was conducted during December 2013 and January 2014 on a sample of 30 employees of advertising agencies in different positions and research has been focused on familiarity with the account planning and the existence of account planning in the agencies, not just as a separate function in the agency but the existence of a range of activities that are related to the function of account planning.

In a study participated employees mostly from full service agencies (80%), followed by 10% from the creative agency, 3.3% of PR agencies, and 6.7% of respondents are employed full service agency but specialized in digital media.

Also, most respondents work in office as an Account Managers (36.7%), followed by Client Service Directors (23.3%), and followed by media accounts (10%) PR managers (6.7%), Creative Directors (3, 3%) and other positions.

Respondents were asked directly whether they have a function of account planning in their agency, and 30% of respondents stated that this position exists in their agencies, and another 3.3% are planning to introduce this position anytime soon. Other respondents do not have this position within their agencies or they don't know what this person would do in their agency, while 6.7% answered that for this function have never even heard of. To the question where the function was created, the majority of respondents (37%) mentioned the UK, 20% U.S. while other respondents mentioned various agencies, other countries, or responded how they don't know where the account planning occurred.

Respondents were asked which way they follow cultural and social trends of consumers, their attitudes, behavior and perception, and the agencies of the 80% of respondents follow the trends of consumers, either through an existing function of the agency responsible for monitoring trends (50% of respondents) either through the outsources service agency specializing in market research.
The remaining 20% of respondents in their agencies do not measure on a regular basis of cultural and social trends of consumers and their attitudes and perceptions.

Looking at measuring the efficacy of campaigns, 53% of respondents this doesn't work independently. Or measurement performs at the client's request and additional budget (40%) or never conducted measuring of the effectiveness of campaigns (13%).

In order to check whether the agency implemented activities of account planning regardless of whether the agency has a person employed in operational planning or specific activities arranged by other functions, respondents were asked to mark all of the activities carried out in their agency.

Enterprise in Turbulent Environment
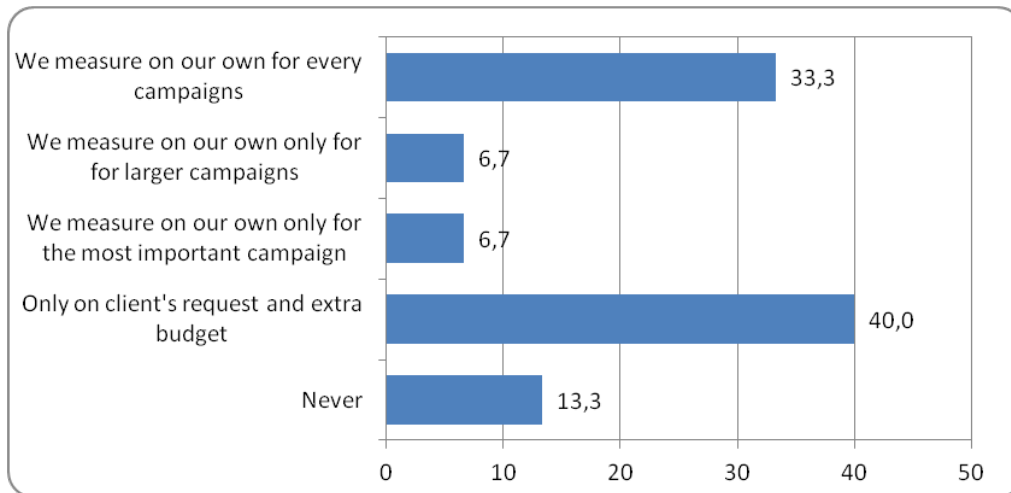
*Chart 1: Measuring the effectiveness of marketing communications
(Authors research)*

Market research (development, management and analysis of research), communication with colleagues such as creative's and Account Managers in the process of developing marketing campaigns, and presenting ideas and conclusions to the clients and agency's colleagues implements 80% of respondents in their agencies, while the agencies of 80 and more % of respondents. These are also significant characteristics of account planning. The only important feature characteristic of account planning that is not so represented in the agencies, and it mentions only 30% of respondents, was organization of focus groups and individual interviews.
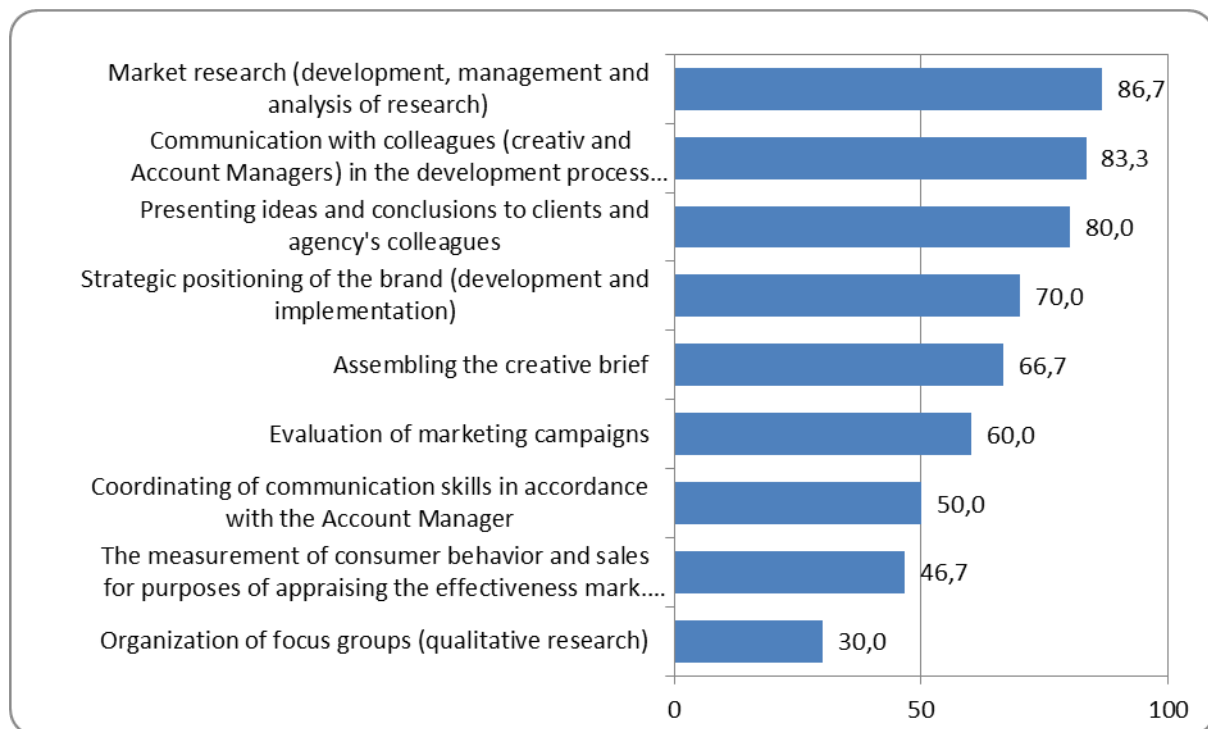
*Chart 2: Activities carried out as a basis for developing effective marketing
campaigns in the agency (Authors research)*

Enterprise in Turbulent Environment

Also, respondents were asked to rate 14 statements with school grades from 1 to 5 where 1 mean strongly disagree and 5 means strongly agree. Claiming the highest grade was "A deep understanding of consumers was crucial when planning marketing communication", and was evaluated with a high score of 4.5. T-test shows that between those claims and other claims there is a statistically significant difference.

Statement	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval				
				Lower	Upper			
AP raises the price of marketing service	-1,53571	1,29048	,24388	-2,03611	-1,03532	-6,297	27	,000
AP adds value to advertisers	-,35714	,78004	,14741	-,65961	-,05467	-2,423	27	,022
AP function can help in fulfillment of the goals of advertising	-,28571	,59982	,11336	-,51830	-,05313	-2,521	27	,018
AP integrates different elements of marketing communication and knows consumers in 'soul' and the most contributing marketing communication.	-1,03704	,97985	,18857	-1,42465	-,64942	-5,499	26	,000
Good marketing communication.. does not depend on the existence of the AP	1,35714	1,22366	,23125	,88266	1,83163	5,869	27	,000
AP on effective way reaches to the final consumer, and allows advertisers targeted communication.	,82143	,72283	,13660	,54114	1,10171	6,013	27	,000
AP represents mainstream	1,35714	,98936	,18697	,97351	1,74078	7,259	27	,000
The function of the AP can provide better marketing communication	,64286	,73102	,13815	,35940	,92632	4,653	27	,000
AP is integrator of different elements of marketing communication.	,78571	,91721	,17334	,43006	1,14137	4,533	27	,000
AP is responsible for obtaining the relevant data on consumer behavior	,78571	,99469	,18798	,40001	1,17142	4,180	27	,000
Putting consumers to the centre of marketing communication is crucial for effectiveness of the marketing campaign	,32143	,66964	,12655	,06177	,58109	2,540	27	,017
Branding should be in the hands of people whose focus is directed on consumers	,62963	,96668	,18604	,24722	1,01204	3,384	26	,002
The function of the AP can influence on better performance of marketing communication.	,48148	,80242	,15443	,16406	,79891	3,118	26	,004

Table 1 View t-test between the claims of "deep understanding of consumers was crucial when planning marketing communications" and other claims (Authors' research)

Respondents also expressed their folding with average grade of 4 or more and with claims: "Taking into account the effectiveness of marketing campaigns is crucial for the client, Account planning function can assist advertisers in fulfillment of the goals of advertising", "Putting consumers at the center of the marketing communications is essential to the

effectiveness of the marketing campaign"," Account planning adds value to advertisers" and "Function account planning can affect on better performance of marketing communications". And among other claims (especially among those with high-rated and low-grade) statistically a significant difference was found, but only the best rated claim is significantly different from all the others. Chart 3. shows the mean scores of all claims and shows how account planning activities are considered important, although the agency may not have employed person in a specific position.
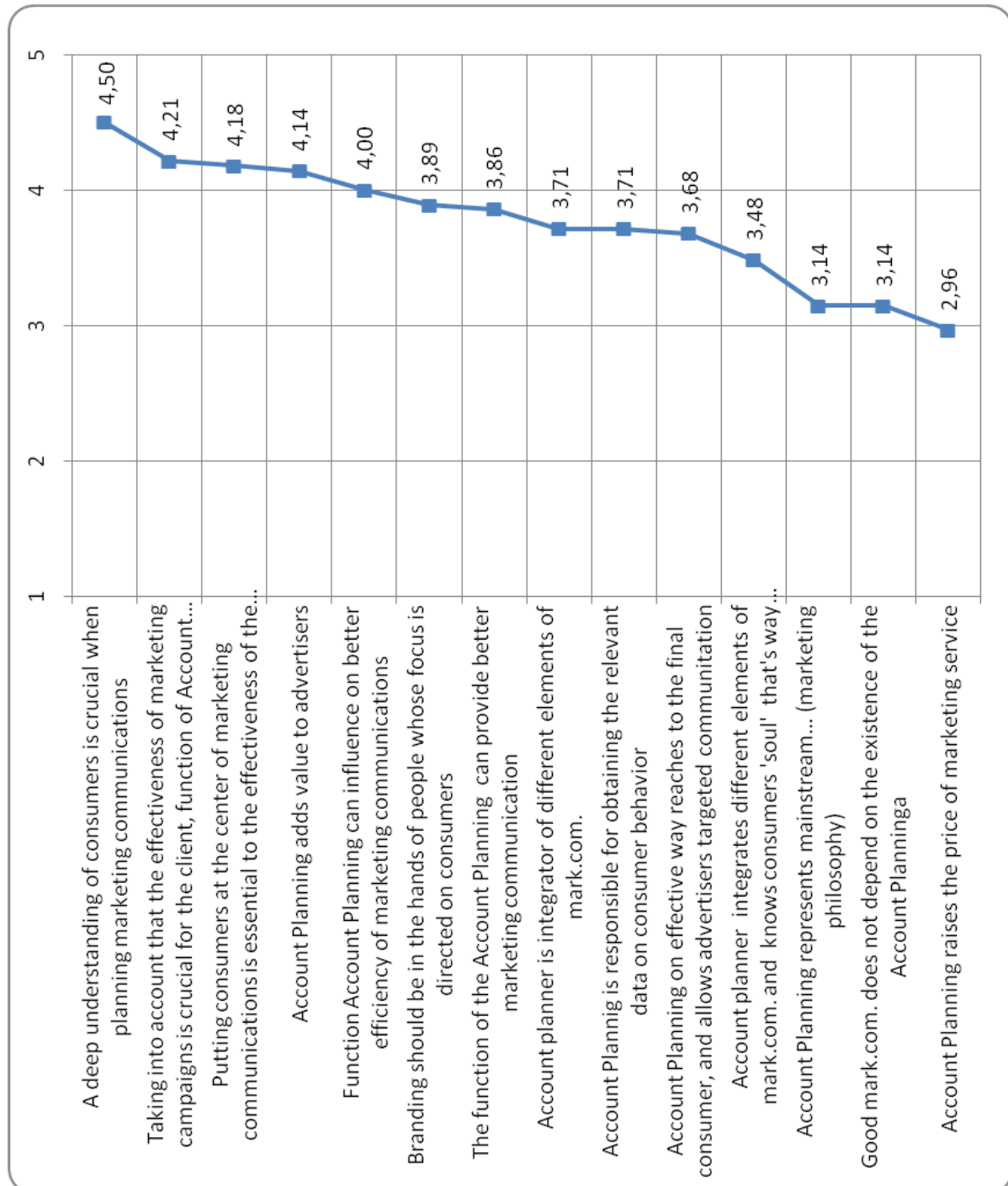

Chart 2 The level of agreement with statements about the importance of Account Planning
(Authors' research)

For the end the research respondents were asked whether there is a person responsible for specific tasks in the agency. The largest number of respondents (over 70%) in their agencies have a person responsible for the selection of marketing channels for the purpose of integrated marketing communications, and the person who creates media plans, and slightly more than half of the respondents have a person in the agency who works closely with the Account Manager for the purposes of an effective marketing communication when setting up marketing campaigns. Less than 30% of respondents have a person in the agency that moderates the focus groups, analyzes data's and makes recommendations and conducts quantitative and qualitative research, while only 13% have a person whose concern is to attract the attention of consumers. The answers given are shown in chart 4.

*Chart 3: The existence of one or more persons responsible for the following activities
(Authors' research)*
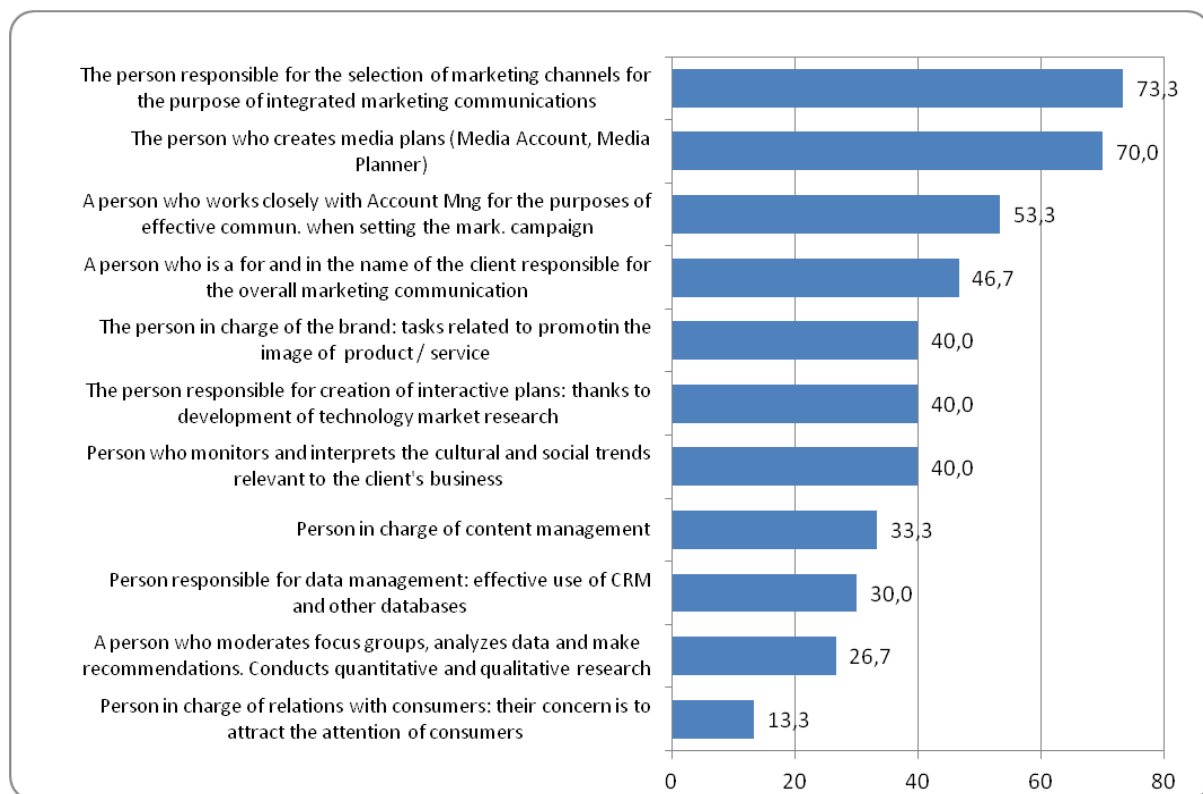
It is evident although agencies spend most activities of account planning as a basis for developing effective marketing campaigns in the agency, only by 53% of respondents there is a person responsible for an activity of account planning, who works closely with the Account Manager for the purposes of effective marketing communication when setting up marketing campaigns, while for other activities account planning there is no agency employee who would be directly responsible for these activities, but these activities are implemented "ad hoc" - when you need them.

5 CONSLUSION

This paper attempted to analyze how the functions of account planning as well as the activities that are covered by the function may affect the greater effectiveness of marketing communications. For this purpose, a survey was conducted on a sample of 30 employees of advertising agencies in different positions with the fact that the study was focused on the

major determinants of account planning considered main activities from the list of duties from account planning. In the survey were mainly involved employees of the full service marketing agency, of which most of them were employed in a position of Account Manager.

Since small percentage of the marketing agencies possesses a function of account planning, a negligible percentage of them planning to introduce the account planning function, here is to conclude that account planning mainly is not a part of the organizational structure and the question is when agencies will start to consider to introduce a function as a part of a full service marketing agency. While marketing specialist in large part sums positive assertions about the benefits that account planning can contribute in planning marketing communications, only 3.3% of them are planning to introduce the function in to the agency. This very low percentage testifies that Croatians agencies do not employ Account Planners, while many of them didn't even hear of the function. While 80% of respondents follow the trends of consumers and more than a half measure the effectiveness of marketing communications, it is to conclude that there is a tendency for serious consideration of the benefits that account planning can provide to agency's clients.

A large number of marketing experts believe that a deep understanding of consumers is crucial when planning a marketing campaign, but very few actually carried out activities that may help to understand aconsumer behavior, including the benefits obtained through qualitative research in the form of the focus groups.

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DESIGN OF ACCOUNTING CURRICULUM: THE CASE OF ESTONIA

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ABSTRACT

The process of globalization sets new requirements for the professional qualification of accountants and auditors. In the business world globalized investment market demands consistent high quality financial information across borders; investors are looking for a global accounting profession to provide it. There is more pressure on accounting professionals to expand and enhance their knowledge, skills, and abilities beyond what they are currently likely to possess. Providers of accounting education must take into account the changed world and create contemporary curricula.

In Estonia the change from a command to a market economy has inevitably influenced not only the accounting framework but also the entire system of accounting education. It is clear that without a design of accounting curricula it is practically impossible to fulfill requirements of nowadays high quality financial information. Tallinn University of Technology (TUT) holds on the advanced level of accounting education the leading position in Estonia. The accounting curriculum (on the graduate level as well as undergraduate level) is the most popular among all curricula at the Tallinn School of Economics and Business Administration of TUT. It is a joint system, which consists of undergraduate and graduate degree programs. Small sub specializations: for example in financial accounting, managerial cost accounting, taxation and auditing become evident while interpreting the graduate and undergraduate programs as one united system.

The paper explains a new model of accounting curriculum developed at TUT as well as its educational philosophy and principles of designing. It also describes conditions required for development and continuous improvement of competitive curriculum.

Keywords: *Accounting curriculum, Accounting education, Estonia*

1 INTRODUCTION

Estonia is a small country in the Baltic region of Northern Europe. The territory of Estonia covers 45,227 km² and the population was 1,286,479 in 01.01.2013 (referenced by e-stat). In the context of accounting, Estonia is one of the least-known states in Europe. The Estonian accounting regulation has only a relatively brief history compared to those of some other European countries. In 1918–1940, it was possible to learn accounting in several trade schools all over Estonia. In 1920, the Law Faculty of Tartu University established the Institute (Department) of Commercial Studies. In 1936, the Accounting Department was established at Tartu University. It has to be noted that in spite of several learning possibilities the quality of the education was quite poor. It can be explained by the fact that there were no good teaching materials and Estonian speaking academics. After incorporating Estonia into the USSR in 1940, and in fact after World War II, the Soviet system of bookkeeping was in use. From 1945 until 1990 the Soviet influence on accounting development (including accounting education development) had been total because Estonia was a part of the former Soviet Union. Under the Soviet period all Estonian institutions of higher education had been conducting the accounting curricula on the basis of a single curriculum designed in Moscow. After declaring the restoration of the independence of the Republic of Estonia in 1990, it

became possible to begin the reform of accounting and join the system of accounting of well-developed market-oriented countries.

Each Estonian institution of higher education was given freedom in designing and adopting its own curricula in any field of studies. A variety of programs and courses exist with even greater variations in quality. Due to the absence of official curricula and textbooks, the initiative for the development of these programs has been foremost with individual instructors and institutions.

2 TEN STEPS OF DEVELOPMENT OF ACCOUNTING CURRICULUM AT TALLINN UNIVERSITY OF TECHNOLOGY

Curriculum building is very similar to building a new product. For institutions of higher education, a curriculum is like a product for industrial companies. The following steps must be covered (Nelson, Bailey and Nelson, 1998): study of potential markets; evaluation of raw materials; evaluate resources; study of competition; develop strategy (select your niche); state a mission; design a product; design a production process; implement change and monitor outcomes. Strategic planning is a tool which can help ensure that the change process will be effective. This concept has often been used in curriculum planning. On the basis of the model presented by Hofer and Schendel (1978) the current paper analyzes the current situation in Estonia.

2.1. Study of Potential Market

For creating a new product the potential market must be researched. The rapid development of a large number of micro, small and medium-size enterprises, joint ventures, and the privatization of large state enterprises created an increasing demand for well-educated, highly skilled accountants and auditors. In Estonia there are over 200,000 business entities and governmental units (referenced by e-äriregister) which must follow the Estonian Accounting Act. The auditing firms need new specialists. So the current analysis in Estonia shows that the situation is good because a lot of highly skilled accountants and auditors are needed.

2.2. Evaluation of Raw Materials

To be effective for creating a new product the quality of raw materials must be taken into account. The "raw materials" for the curriculum are students. In this area, each institution must carefully consider the demographics of its student body. There are many factors that must be taken into account: the demographic situation in country, the age distribution, mobility, location, and the number transferring to and from other institutions, work experience, commitments outside work, family commitments, and language skills.

The analysis shows that during the 1990s, the demographic situation in Estonia deteriorated. Estonia suffered a decline in its population of about 200,000, caused by a low birth rate (especially during the first half of the decade), and by emigration. The low birth rate influences the possible number of students. In the period between 1991 and 2000, live births registered in Estonia fell from 19,300 to 13,000 per year. Only in 1999 and in 2000 the number of live births has risen slightly, for the first time in eleven years (Demographic, 2012). Despite some limited encouragement in these trends, and an accompanying decline in the number of deaths, the population of Estonia is continuously decreasing. It creates economic problems and raises fundamental questions about the overall sustainability of a distinct Estonian society.

The age analysis must also be taken into account. In 1991, those aged 19 years and under, represented 29 per cent of the Estonian population, and those aged over 60 represented 17 per cent. By the year 2000, the corresponding figures were 25 and 20 per cent, respectively. As the average age of the overall population increases, so does that of working population. This results in a continuous decline in the proportion of the overall population that is still actively at work. This tendency is a big threat for curricula because the possible number of students is decreasing. In 2013, the population of Estonian people aged 15–24 years represented 11.9% and aged 25–54 years 41.3% from total population (Table 1).

Table 1: Age Structure in 2013

Age	Percentage
0–14 years	15.4%
15–24 years	11.9%
25–54 years	41.3%
55–64 years	13.1%
65 and over	18.2%

The current situation shows that more than one third of the population is living in Tallinn (over 436,000). This is a good sign for the curriculum because Tallinn University of Technology (TUT) is located in Tallinn.

All the mentioned characteristics are connected with general resources but there are some requirements set up by the university. A precondition for entry into the master's studies is the bachelor's degree awarded upon graduation from an accredited program, or higher education received through diploma studies or applied higher education. The suitable candidates are selected pursuant to the competition requirements established for the candidates. These requirements affect the quality of our "raw material" in a positive way (we receive the best students).

2.3. Evaluation of Resources

In a strategic analysis one's own inside resources must be evaluated. The strengths and weaknesses should be evaluated. The following questions could arise: is our teaching staff able to be in line with today's requirements (to teach new subjects)? Has our teaching staff enough knowledge? Do we have the critical mass to establish the curriculum? At what level are the language skills of our teaching staff?

The analysis conducted by the Accounting Department of TUT shows that the situation has deeply changed during last ten years. The average age of the teaching staff was 49 years in 2003 and it is 44 years in 2013. In 2003 the youngest lecturer was 32 years old, and in 2013 it is 28 years. In May 2011 the first doctoral dissertation was defended in the field of managerial accounting and in May 2012 in financial accounting. But still there is a lot to do. The situation in Estonia is not the best. The profession of a university lecturer is not highly valued.

2.4. Study of Competition

The nature of competition, market share, and how the institution of higher education reacts to competitive strategies have a significant influence on curricula and other strategic decisions. In Estonia accounting education is conducted at universities, colleges, vocational schools and specialized schools. Accounting as a part of general business education is taught at most Estonian institutions of higher education, which give business education, but there are very few university level educational institutions where accounting specialty has been established.

A competitive advantage exists when the firm is able to deliver the same benefits as competitors but at a lower cost (cost advantage), or deliver benefits that exceed those of competing products (differentiation advantage). Thus, a competitive advantage enables the firm to create superior value for its customers and superior profits for itself.

Table 2: Comparison of content of Accounting related curricula on graduate level in 2013 (ECTS credits)

Institution	EULS	EA	TUT
Curriculum	**120**	**120**	**120**
Accounting related courses			
Advanced Course in Financial Accounting	**3.5**	**7.5**	6
Special Accounting Course	**3**		
Accounting Theory			5
Group Accounting	**3**		**5**
Accounting for Nonbusiness Organizations	**3**		**5**
International Accounting			5
Accounting Information Systems	3	4.5	3
Financial Reporting and Analysis	**5**		**6**
Managerial Accounting	**3.5**	2.25	
Strategic Managerial Accounting and Cost Management			**4**
Cost Accounting		2.25	
Auditing	**4**		**5**
Internal Audit			**5**
Controlling	4		
Taxation		4.5	
International Taxation			5
Finance and Accounting Communication			**3**
Social and Environmental Accounting			3
Ethics for Accountants			2
Accounting related courses (compulsory + elective**)**	**25**+7	**7.5**+13.5	**38**+24
The number of accounting related courses (compulsory + elective)	**7**+2	**3**+4	**8**+6
Practical Training (Internship)	**3**	**2**	1
Master Degree Course Workshop	**3**	**2**	**3**
Graduation Thesis	**30**	**25**	**30**
Total number of ECTS	**68**	**50**	**96**

Cost and differentiation advantages are known as positional advantages since they describe the firm's position in the industry as a leader in either cost or differentiation. That is true for

institutions of higher education too but the authors of the current paper are of the opinion that in this case the differentiation is more important to receive a competitive advantage. This is realized by different (better than the competitors have) curricula.

The next step in the study of competition is to study and compare the competing accounting programs: their advantages and disadvantages. There are only three institutions of higher education where the accounting related curriculum has been created for the master's level. These institutions are Estonian University of Life Sciences or EULS (Eesti Maaülikool, 2013), Euroacademy or EA (Euroakadeemia, 2013) and TUT (Tallinna Tehnikaülikool, 2013). In Table 2 above the content of the master's level accounting curricula is shown.

The figures outlined in bold denote compulsory subjects. For comparison purposes some subjects are modified. For example, the EULS has a subject Advanced Topics in Financial and Managerial Accounting with 7 credits but in Table 2 it is presented by two subjects: Advanced Course in Financial Accounting (with 3.5 credits) and Managerial Accounting (with 3.5 credits). The EA has a subject Managerial and Cost Accounting with 4.5 credits but in Table 2 it is presented by two subjects: Managerial Accounting (with 2.25 credits) and Cost Accounting (with 2.25 credits).

It must be marked that the EULS curriculum includes 9 subjects – 7 obligatory and 2 elective. The total number of credits related to accounting courses is 37. It must be emphasized that at EULS the accounting and finance curriculum is available only in the form of distance learning. The studied are organized once per month in the weekends and the amount of contact hours is 25% from regular contact hours.

The EA curriculum includes 7 subjects – 3 obligatory and 4 elective. The total number of credits related to accounting courses is 21. It must be marked that the specialization is quite weak and it is possible to graduate without graduation thesis, by taking an exam.

TUT has the most advanced curriculum. It includes 14 courses from which 8 are obligatory and 6 are elective. The total number of credits related to accounting courses is 62.

2.5. Strategy Development

In his various books (Porter, 1980; 1985; 1990; 1998) professor Michael Porter has developed three generic strategies that, he argues, can be used singly or in combination to create a defendable position and to outperform competitors, whether they are within an industry or across nations. Porter states that the strategies are *generic* because they are applicable to a large variety of situations and contexts. According to Porter these strategies are (1) overall cost leadership; (2) differentiation; and (3) focus on a particular market niche. The generic strategies provide direction for organizations in designing incentive systems, control procedures, and organizational arrangements. The second generic strategy, differentiation, attempts to make an organization unique in a dimension that is valued by the customer – it means being different than every other organization. Differentiating the product or service, requires an organization to create something about its product or service that is perceived as unique throughout the industry. It involves making organization's products or services different from and more attractive those of its competitors. How to do this depends on the exact nature of industry and of the products and services themselves, but will typically involve features, functionality, durability and support as well as brand image that customers value. It is necessary to emphasize that the qualification of TUT Accounting Department's

teaching staff is the highest in Estonia. This has enabled to build up the unique accounting curriculum with deep specialization.

The third generic strategy, the focus strategy, concentrates efforts on a narrow segment of the market. It answers to the question – what knowledge or expertise can you use or develop to add value for your customers that is not available to broad market competitors? Under a focus strategy, an organization focuses its efforts on one particular segment of the market and aims to become well known for providing products/services for that segment. They form a competitive advantage by catering for the specific needs and wants of their niche market. The Accounting Department of TUT has concentrated efforts on master level curriculum.

Porter specifically warns against trying to "hedge your bets" by following more than one strategy. Somewhat different from Porter the authors of this paper, based on their own experience in building up an accounting curriculum conclude that differentiation and focusing sometimes can be combined very successfully.

To create a new curriculum it is necessary to follow all previous steps: study potential markets, evaluate student body, evaluate the faculty staff and other recourses as well as study competition. The main question is: Is this a good product, is this unusual or unique? By examining the current situation in Estonia on the basis of students' research papers and bachelors' thesis the authors of this paper are of opinion that the knowledge about competitors is sufficient. Estonia is a small country where all resources are known. That is why Tallinn School of Economics and Business Administration (TSEBA) of TUT has developed its strategy through differentiation and unique segment of the market.

2.6. State the Mission
A formalized mission statement is essential in the planning process. The mission for TSEBA is to have the best accounting curriculum in the country. It should be emphasized that the Department of Accounting of TUT is the only department in Estonian institutions of higher education who has declared that its graduates must be able to work abroad.

2.7. Design of Product
After the fulfillment of steps 5 and 6 the product must be designed. At TUT the accounting specialization represents a sub-curriculum of the Business Administration curriculum at the undergraduate level and one of the curricula at the master's level. Together they form a "3+2" (undergraduate + graduate) Accounting curriculum which in total consists of 25 accounting related courses. The undergraduate part of the Accounting curriculum includes six courses (Introduction to Financial Accounting, Management Accounting, Taxation, Foreign Language for Special Purposes, Internship I and Research Paper) which are obligatory for all business students. In addition, these students who specialize in Accounting must take three compulsory courses (Intermediate Financial Accounting I, Intermediate Financial Accounting II and Cost Accounting) and they have an opportunity to choose Cost Accounting as elective course.

The authors of this paper agree with the position of the American Accounting Association's Accounting Education Change Commission (AECC, 1990) who in its *Objectives of Education for Accountants* has declared that "specialized accounting education should be offered primarily at the post-baccalaureate level and via continuing education". This vision has been shared by Sundem, Williams and Chironna (1990): "The main change in specialized accounting education is to move it almost entirely to the post baccalaureate level and to

Enterprise in Turbulent Environment

continuing education programs. The increased emphasis on breadth and the need to spend time in accounting courses developing basic skills will leave little time for specialization at the underground level".

The accounting curriculum includes six categories of subjects – general studies; basic studies; core studies; special studies; free choice courses; practice (internship) and graduation thesis.

The Figure 1 shows the conceptual model of the accounting curriculum at TUT. At the master's level students must score 120 credits. Every student admitted to a graduate degree program in accounting is required to enroll for all general subjects (total of 10 credits), basic subjects (14 credits), core studies (20 credits), special studies (42 credits) and free choice courses (4 credits). In total, it is possible to receive 58 credits by taking accounting courses; the master's thesis gives additional 30 credits. It means that 88 credits out of 120 ECTS or 73% are related to accounting.
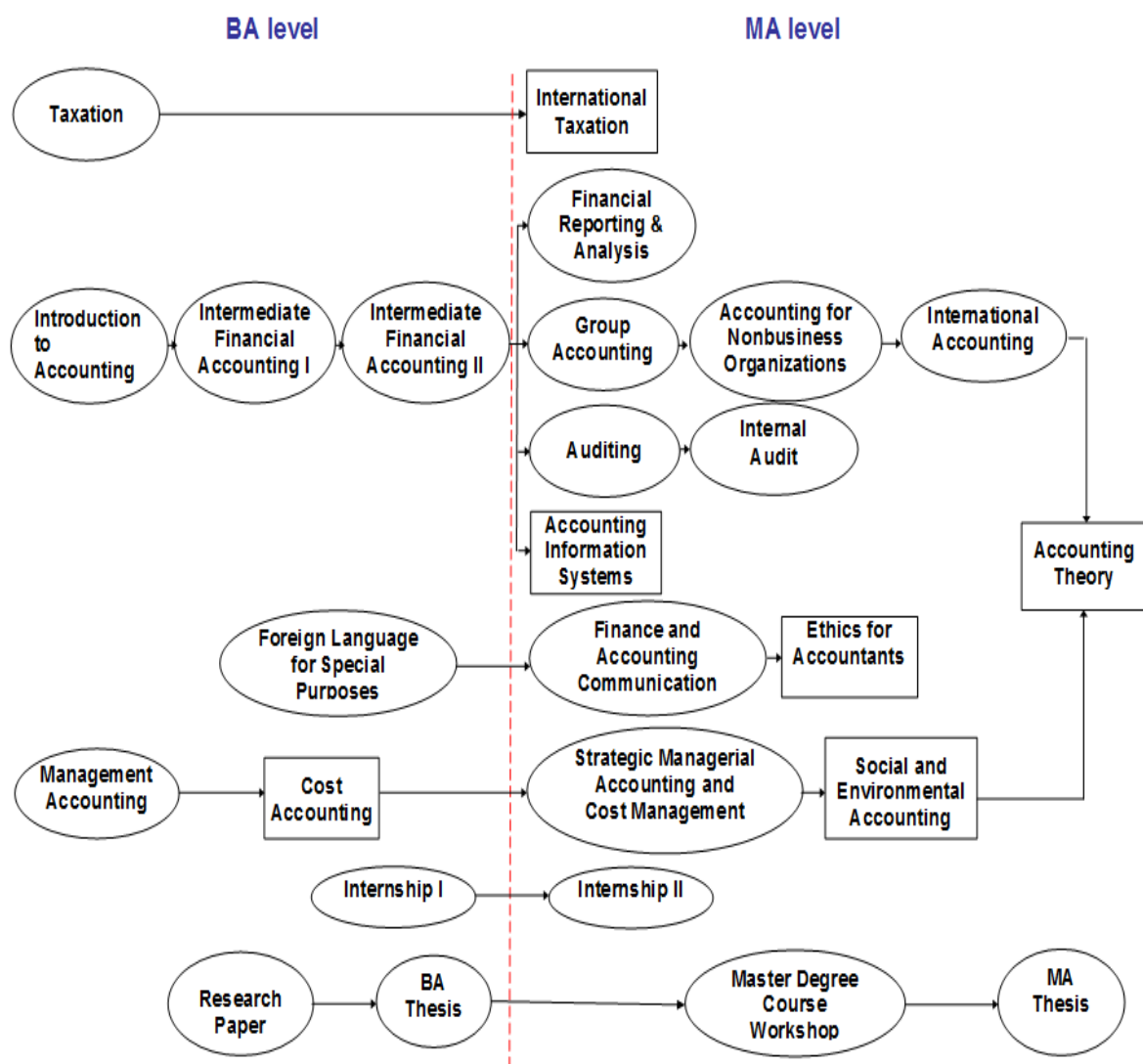
Figure 1: Conceptual Model of Accounting Curriculum at TUT

2.8. Designing of Production Process

It should be mentioned that it is possible to find some "small specializations" within TUT Accounting curriculum. For example, Financial Accounting, Management Cost Accounting, Taxation and Auditing (Table 3). It is clear while interpreting the graduate and undergraduate curricula as one united system. It results from the fact that the curriculum is based on the following matrix model as shown in Table 3.

Table 3: Matrix Model for Accounting Subjects

Level	Modules/subjects			
	Financial Accounting	**Management Cost Accounting**	**Taxation**	**Auditing**
Basic	Introduction to Financial Accounting	Management Accounting	Taxation	Auditing
Intermediate	Intermediate Financial Accounting I Intermediate Financial Accounting II	Cost Accounting		Internal Audit
Advanced	Group Accounting Accounting for Nonbusiness Organizations International Accounting	Strategic Managerial Accounting and Cost Management Social and Environmental Accounting	International Taxation	
Theory	Accounting Theory	Accounting Theory		

2.9. Implement Change

The new master's program with a deep accounting specialization started at TUT in 2005 and the first students graduated in 2007. The authors of this paper have monitored the outcomes and analyzed the results. The analysis shows that the students who have entered the master's program from higher education institutions other than TUT sometimes have not the necessary knowledge. For example, in some Estonian institutions of higher education such course as Intermediate Financial Accounting is missing at the undergraduate level. For that reason a new elective course named Advanced Topics in Financial Accounting has been included as an elective in the accounting curriculum at TUT. In addition one compulsory course (Finance and Accounting Communication) and two elective courses (Social and Environmental Accounting and Ethics for Accountants) have been included in fall 2009.

The curriculum development is a continuous process. From fall 2011, the Accounting curriculum on master level has two sub-curricula: Accounting and Auditing. In the Auditing sub-curriculum Auditing course has been split into two compulsory courses: Introduction to Auditing and Auditing of Financial Statements. In addition this sub-curriculum includes one new compulsory course (Governmental Auditing) and one new elective course (Fraud Examination and Forensic Accounting).

2.10. Monitor Outcomes

The last step in development of a new product is to implement an information system to provide feedback on 1) whether the strategic plans are being properly implemented as planned and 2) whether the strategy is yielding the intended results.

The popularity of Finance and Accounting curriculum is the highest at TSEBA. This opinion is supported by admission numbers in Table 4 and rate of competition in Table 5.

Table 4: Admission Numbers

Specialization	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13
Economics	25 (16)*	24 (16)	28 (16)	29 (16)	29 (16)	24 (16)	18 (16)	20 (16)
Finance and Accounting	66 (13)	68 (11)	82 (10)	81 (10)	98 (10)	90 (10)	95 (15)	81 (15)
Management and Marketing	54 (12)	51 (11)	56 (9)	58 (9)	68 (9)	67 (9)	49 (9)	69 (9)

number in brackets indicates the number of state-financed student places from the total number of admissions.

Table 5: Rate of Competition to Student Places Formed on the Basis of State-Financed Education

Specialization	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13
Economics	2.5	1.63	1.4	2.56	5.75	6.63	5.13	4.25
Finance and Accounting	5.77	5.82	9	9.9	21.4	20.08	19.1	17.6
Management and Marketing	5.25	3.45	7.4	6.89	19.5	19.11	16.22	17.5

from 2009 the candidates have had a possibility to submit two applications on state-funded places.

The accounting sub-curricula (on graduate level as well as on undergraduate level) are the most popular among all (sub)curricula at TSEBA. In 2008 the Accounting curriculum was declared by the international experts to be the best at TSEBA.

3 CONCLUSIONS

The comparison of the contents of Accounting curricula at the graduate level at the Estonian institutions of higher education shows how different the structure and content of curricula can be inside of a small country. The freedom to design and adopt its own curricula gives an opportunity to be the best provider of accounting education in Estonia. At the same time due to the absence of official curricula as well as sufficient number of high-qualified instructors and textbooks in the Estonian language, the quality of accounting education in Estonia can vary.

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VITAL FUNCTION OF GOVERNANCE WHICH HAS DECISIVE ROLE IN DEVELOPMENT AND SURVIVAL OF ORGANIZATION

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ABSTRACT
In recent research of organizations is discovered that organizations are outcome of co-evolution of genetics, memetics and monetics, and that this code of co-evolution is defined by three vital functions of strategic management:

- *functions of conception of purpose,*
- *functions of conception of organization, and*
- *functions of foresight and future orientation.*

This paper presents the first two functions by several model of organization which include comprehensive environment, missions, core competencies, structures, behaviours and governance with the dynamic relations between them.

Keywords: strategic management, co-evolution, new function, conception of organization

1 INTRODUCTION

Human organizations are living organism with very high level of complexity. Basic components of any organization are human being, which is the outcome of *genetic evolution*. Existence of any organization requires transmitting ideas and thought between members of organization, in other word, existence of any organization requires information flows between people. Transmission of ideas and thought between human beings are outcome of *memetic evolution*. Survival (existence) and development of any organization is possible if the organization creates value for its environment. Value creation is also outcome of an evolution, and this is the *monetic evolution*. Outcome of these evolutions is a co-evolution, therefore organizations are outcome of genetic, memetic and monetic co-evolution.

As organizations are complex organisms, it is useful to introduce new terminology and ideas which are appropriate to organisms. In the process of description of structure we meet complex systems, subsystems and units, which are also organisms, so these units are considered as cells (cells of government, cells of development and cells of survival) cells are also organisms which posses all properties of any organisms.

In the research of complex organization, systems approach and new subjects of complexity theory have been applied, which resulted in several systems' models of organization. The model, which is presented in this paper (Figure 1) is a model of functions and carriers of these functions. Essence of behavior of any complex organism reflects their functions and the way these functions are integrated into the whole behavior of organism.

Figure 1 presents a *comprehensive model of organization* which is capable to survive and develop in the turbulent changing environment. Achieving this level of capabilities requires four stages:

- In the first stage, organization starts with one cell of survival, by which, if it is successful, it is able to survive certain periodic of time.

- In the second stage, beside the cell of survival a cell of development is formed, by which new cells of survival can be created.
- In the third stage, organization consists of a certain number of cells of survival and cells of development with an integrated government.
- In the fourth stage strategic governance is developed which enables that the whole organization function as a biological system in which cells are created, exist certain time and disappear, but the whole organization survives and develops.
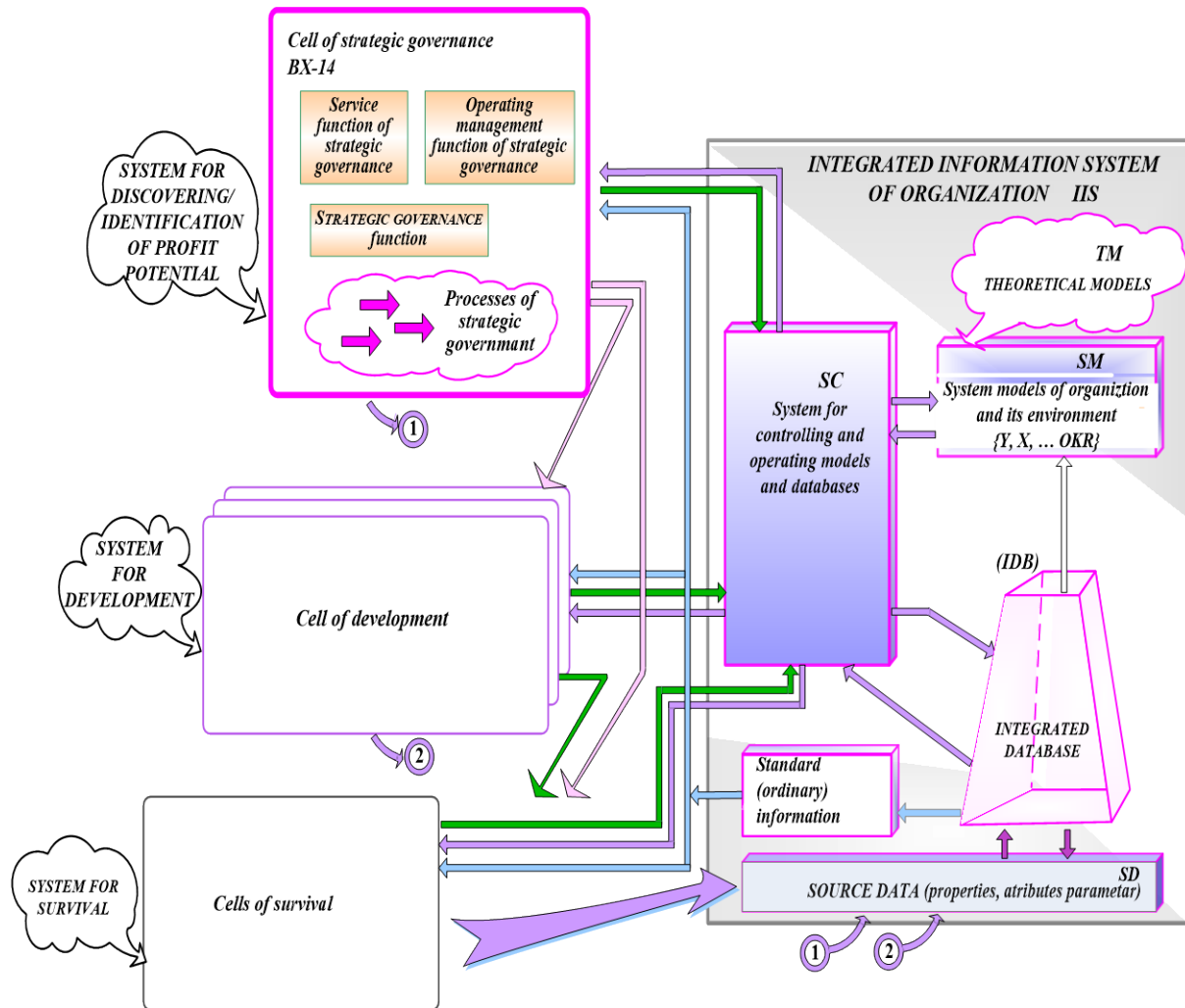
Figure 1: Comprehensive model of organization

In each stage of development organizations have certain structures and functions, with appropriate governance. It is important to emphasize that any cell of organization consists of function of objective (or purpose), function of services and function of governance. These functions are related to one another in a way to create an integrated behavior of a cell.

Model in the figure 1 consists of four systems: system for survival, system for development, system of strategic governance and integrated information system. The first two systems are presented as a "black box", the others with their principal functions. In the paper the objective of interest is the system of strategic governance – system for discovering and identification of profit potential.

2 RESULTS OF"STRATEGIC GOVERNANCE" RESEARCH

System of strategic governance as a component of organization is also an organism, which in first place integrates organization into functional whole under turbulent changing environment. At the same time it is oriented toward future, searching, discovering and identifying chances for lasting survival and development, by discovering and identifying problems of society, which solutions have certain profit potential. While doing all this, it is necessary that strategic governance take care about itself and the whole organization and implement new generated knowledge created by the whole society.

According to the results of research (1. and 4.) strategic governance of organization may have the following function:

- ***Function of conception of purpose,***
- ***Function of conception of organization creation,***
- Function of foresighting and future orientation,
- Function of harmony creation in organization,
- Function of mastering development of organization,
- Function of mastering survival of organization,
- Function of extraordinary circumstances,
- Function of mastering competencies.

This paper presents two related functions of "strategic governance":

- Functions of conceptions of purpose,
- Function of concept of organization.

According to the recent research (1. and 4.) essential function of every human organization is to solve certain problems of human society. By these solutions, organization creates value for the society, which is ready for appropriate compensations. It is vital for every organization to identify value potentials, which are hidden in solutions of each problem of society. This is necessary for the organization to determine their purpose, by giving answers to the following questions:

- Which problems of society the organization solves at the present?
- Which problems of society will the organization solve in the future?
- Which problems of society should the organization solve now and in the future?

Answers to the preceding questions should be made in respect to the environment and the capabilities of organization. This requires existence of specific strategic governance function by which CONCEPTION OF PURPOSES can be created and developed.

After determining the purpose of organization, the system by which these purposes can be achieved is created. First step in creation the required system is determining the CONCEPTION OF ORGANIZATION. This conception include: clear and real objectives, then required functions, structures and governance of organization.

3 FUNCTIONS OF "CONCEPTION OF PURPSES OF ORGANIZATION" – K_P

Governances of organization meet two kinds of questions: "What to do?" and "How to do it?". So far the governances have been concentrated on "know how" because they have been aware that they know the answer to the "know what". Now it is not rare to see organizations, which were STARS recently, that they stagnate, have more and more unsolved problems, and go into crises. What are the roots of the crises, when they do everything good, but there are no results? The roots are in assumptions, on which the organizations were created, which are not valid anymore.

Enterprise in Turbulent Environment

Everything has changed since the creation of organization and neither the "conception of purpose" nor "conception of organization" are valid anymore.

The "functions of conception of purposes of organization" has the most crucial role in strategic governance of organization. Success of the whole organization in great deal depends in the purposes which the organization is trying to achieve. Well determined purposes lead the organization to prosperity, the wrong established to disasters. This function performs complex research process, applying systems approach and theory of complexity, which is inevitable, because the object of research is the human society.

The research starts with premises:

- Human society is a living organism, which has various and changing problems of survival and development.
- Essential function of any organization is to solve certain problems of society.
- Successful solution of problems of society is appropriately compensated.

The research process has cyclic structure, and each cycle has several phases. In the first phase the field of observation is selected, then the symptoms of malfunctions of society is registered. This is followed by complex systems analysis by which problems of society are identified and precisely formulated. These problems of society can be classified into problems of survival, problems of development, and into several group of specific problems. Different kind of problems required different approaches and methods of solutions.

Next, the criteria for the first selection of problems are formulated and implemented on the set of identified problems. Then for each selected problems methods of solutions are estimated. This is necessary for quantifying the value potentials which are hidden in each single solution of problems. Finally the problems are selected for governance decisions.
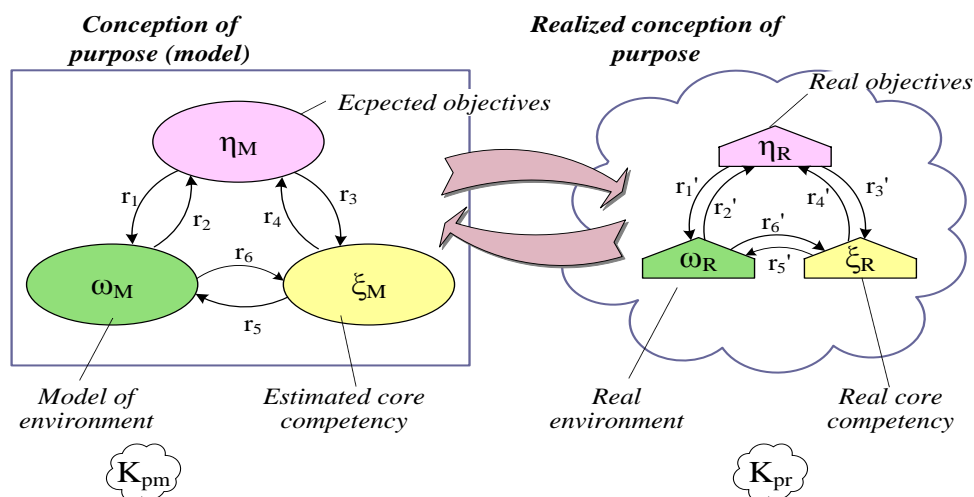

Figure 2: Comprehensive model of "Conception of purpose"

Above of this research process is the "conception of purpose" - K_P which is presented by Figure 2.

Conception of purpose is an organic unit of organization. It consists of:
- **objectives** of organization (η)
- **environment** of organization (ω)
- **core competencies** of organization (ξ)

$$\mathbf{K_P} = (\eta, \omega, \xi)$$

First the model of conception of purpose is created, which the organization strives to achieve, but what the organization is achieve is the realized conception of purpose, which may differ significantly from the model.

Objectives of the organization (η) contain answers to the three basic questions:
- Which problems of society the organization solves at the present
- Which problems of society will the organization solve in the future?
- Which problems of society should the organization solve now and in the future?

Answers to these questions contain:
- set of problems which the organization strives to solve effectively and efficiently,
- set of possible solutions of problems,
- value for the environment,
- potential benefit to the environment.

Environment of organization (ω) is the human society, which is observed, studied, and researched. During this study, it is very productive to create systems models of environment, by which the behavior of the whole environment can be simulated and problems of society can be identified not only in the present, but as well as in the future. (1. and 4.)

Core competencies of organization (ξ) are special unique knowledge and skills, which are necessary for accomplishment of objectives of organization. Core competencies are capabilities for creating extraordinary value by solving certain problems of society. These capabilities appear by synthesis of knowledge, skills, and technology in creation value for the society. Competencies become core competencies, when they are unique, exceptional, and exceed competencies of other organizations. In the conception of purpose, there are estimated and real competencies.

In short, in the conception of purpose, the value potential of environment is identified, in the objective, the selected value potential is selected, and finally, the necessary core competencies are defined.

When we observe modern world, we can see that almost everything is becoming faster. In such turbulent change, the conception of purpose of organization is becoming shorter. Therefore, organizations should recreate the conception of purpose in shorter and shorter period of time. In many cases, the organizations bury their head into the sand, and pretend that nothing is happening. Then, when the changes are obvious, they try to patch things up, but without results. Only after, they start to think about of new conception of purpose.

For the success of organization, clear promising conception of purpose ($\mathbf{K_P}$) are not enough. It is vital to create an adequate conception of organization ($\mathbf{K_O}$).

4 FUNCTION OF "CONCEPTION OF ORGANIZATION" - K_O

It is important to emphasize that "conception of purpose" is concerned with "know what?", while "conception of organization" tries to get answers to "know how?" and to a number of questions concerning behavior, composition and governance of organization.

Conception of organization is a qualitative, comprehensive characteristic of organization, which includes behavior, composition, and governance of organization. Each conception of organization, which is in the mind of its members (employer/employee) has certain capabilities for solution of some problems of society. Every conception of organization has its own life cycle (which include: incubation, arisal, development, slowing down, stagnation, decline and disappearance).

Each organization is a unique whole, there are no two identical organizations, but organizations are similar, because they are created on the knowledge and experience of the time of their being. We can identify these similarities in their composition, behavior and the ways of governance.

In each period of time there are several competing conception of organization, but only a few dominate, which are the most effective and efficient in human problems solutions. Dominant conceptions of organization are driver for society's development. They not only apply existing knowledge and experiences, but they also have capabilities to create new knowledge by research and innovation.

As all composition of organization have their own life cycle, in different time, different conceptions of organization dominate. Among the new conceptions of organization only those have chances to dominate which have capacity to apply the available potential o human societies development in the greatest extent.

Figure 3 illustrates the life cycle of a conception of organization, and Figure 4 illustrates the relation of two kinds of potentials: potential of society's development and potential of conception of organization in a different period of time.
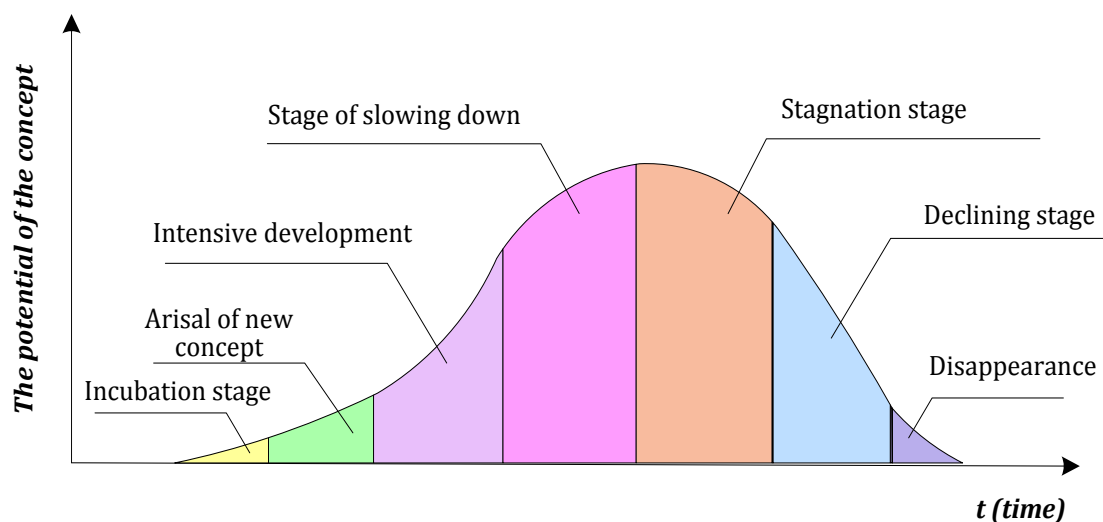
Figure 3: Life cycle of the conception of organization

Enterprise in Turbulent Environment
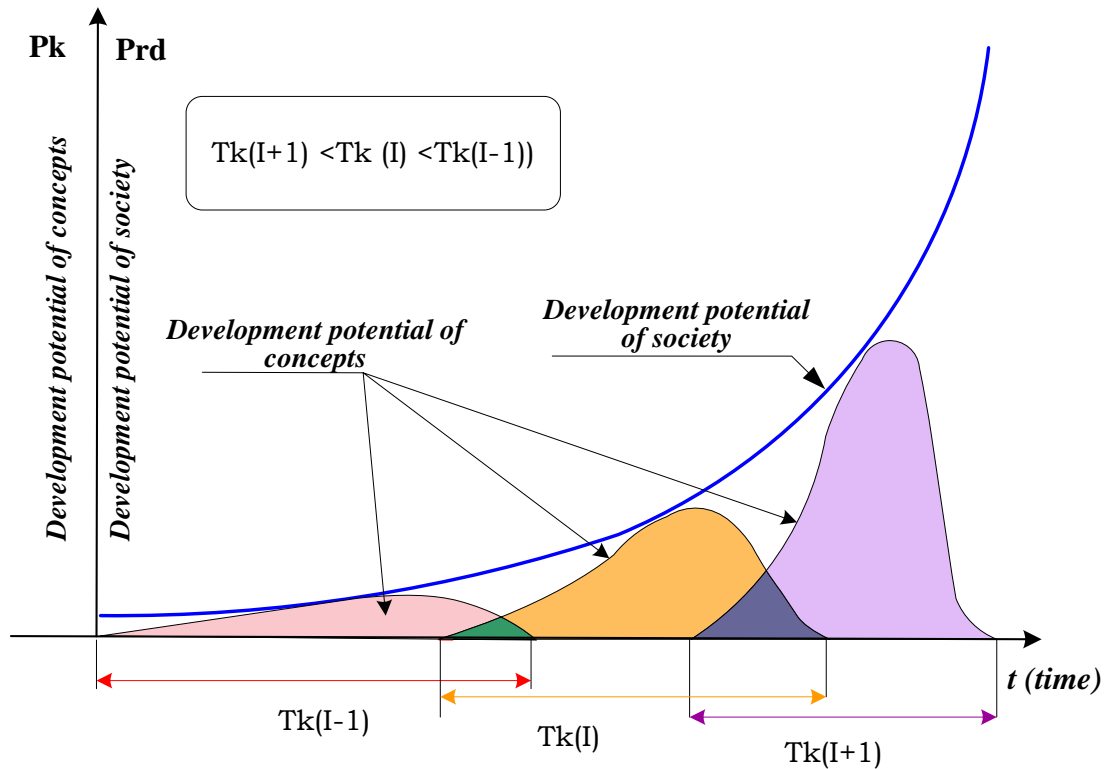
Figure 4: Development potential of society and development potentials of organizations

Conception of organization K_O is defined by its ***behavior (B), composition (C), and governance (G)***. *Behavior of organization* is realized by: functions, processes, activities, algorithms and operations, which are in complex dynamic relations. *Composition of organization* includes everything which belongs to the organization, from the whole to the parts, and static and dynamic relation between them. *Governance of organization* at the same time unites behaviors and composition of organization into an organic whole, by which the organization is able to realize the three principles of cybernetics, that are vital for success of any complex system.

- *Composition of organization: C*
- *Behavior of organization: B*
- *Governance of organization: G*
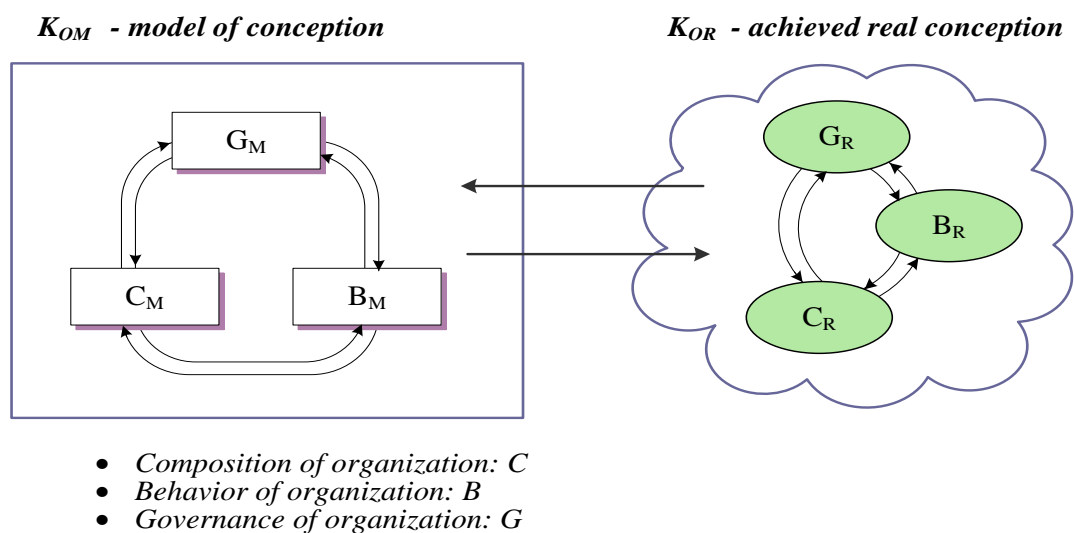
Figure 5: Comprehensive model of "Conception of organization"

Comprehensive model of "conception of organization" is presented by Figure 5. In the model there are *model of conception: (K_{OM})* and *achieved conception (K_{OR})*

Behavior of organization B=(B_M, B_R), as a global and comprehensive trait, characteristic of organization, it comprises everything what was happening in the past, what is happening at the present, and what will be happening in the future. Behavior is realized by functions of organization, which can be: survival, development, and governance function in general. In each of the mentioned functions, we can identify: basic functions, service functions, and governance function. Every function consists of certain number of processes. These processes can be divide into a great number of activities. Models of activities can be presented by algorithms, which are abstract model of these processes.

Any behavior can be realized if there are carriers (performers) of these behaviors. *Composition of organization* appears as a carrier of behavior. At the highest level, the whole behavior is realized by the integrated system, the functions are carried out by systems, processes by subsystems and activities by elements of the whole system.

Governance of organization requires a specific structure in which at the global level two systems appear: the governance system (G_s) and the object of governance (O_g). Comprehensive model of governance of organization is presented by Figure 6.
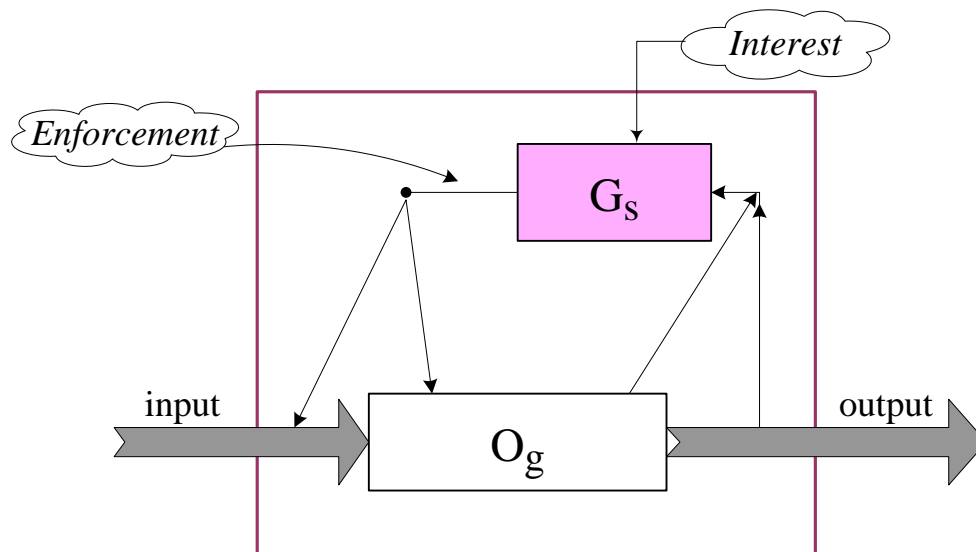
Figure 6: Comprehensive model of governance of organization

Essence of any governance is **enforcement**, which the government system (G_s) applies to the object of governance (O_g) in order, that the object of governance behaves according to the **interest** of government system (usually), or to the interest of the whole organization (rarely). So governance of organization is determined by enforcement and interest. Enforcement is applied in two phases, first, while the object of governance is created, and in second, when it operates.

In the first phase, when the object of governance is created enforcement is achieved by:
- Selection of elements with particular properties
- Creation of system with varied and various behavior

- Design of algorithms with special traits
- Design of system with certain composition

In the second phase, when the object of research operates, enforcement is carried out by:

- Activation and holding up operations
- Variation of inputs (qualitatively and quantitatively)
- Selecting the parameters of behavior
- Changing the algorithms of behavior
- Restructuring the composition of the system

Interests appear in several levels. At the basic level we can identify survival (existence) and development, at the higher levels the interests can be rational and irrational. At the higher levels interests are:

- longer and easier survival,
- adaptation to the requirement of environment,
- changing the condition of environment.

Model of the "conception of organization" which is presented by Figure 5, with more details is presented by **Figure 1** and Figure 7.

When governance of organization creates "conception of organization" K_O, begins with "conception of purpose of organization" K_P, which is a process which has cycle structure in which: environment (ω), objectives (η), and core competencies (ξ) of organization are identified and defined: $K_P = (\eta, \omega, \xi)$. Then starting from objectives (η), the behavior of the organization (B) is designed and then the carriers of behavior are ordered in composition (C) of organization. After that, the relations between behavior (B) and composition are optimized. Finally, the government of the organization (G) is created and optimized.
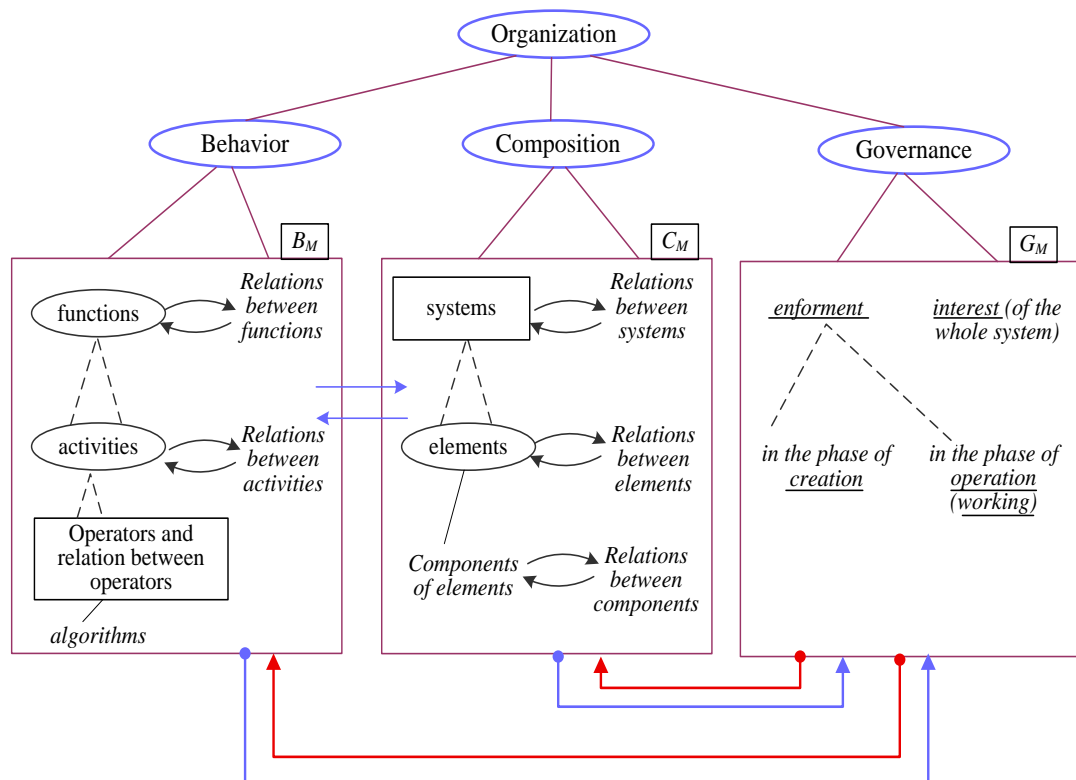

Figure 7: Model of the "Conception of organization" K_{om}

In turbulent environment, it is necessary to evaluate conception of purpose and conception of organization from time to time for long run prosperity of organization. Presented models K_P and K_O with the help of IT are powerful instruments for decision making at any level of organization.

5 CONCLUSION

This paper presents some results of the recent research of organization, in which is discovered that organizations are outcome of co-evolution of genetics, memetics and monetics. The code of co-evolution is defined by three vital functions of strategic governance:

- function of conception of purpose,
- function of conception of organization and
- function of foresight and future orientation.

This paper presents the first two functions by several comprehensive models.

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INTERNAL MARKETING AS MOTIVATION TOOL OF EMPLOYEES IN CROATIAN COMPANIES

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ABSTRACT
The research on internal marketing as a motivational tool in Croatian companies is based on the assumption that the internal market in Croatia is often underestimated and that the tools which the internal market would achieve added value for the company with are not used. By putting focus on the employees, companies would have more motivated, satisfied and educated staff, dedicated to achieving company's business objectives, as well as promoting the product portfolio and maintaining a stimulating working atmosphere.
The goal of this paper is to provide proofs that investing in the motivation of employees is one of the most important factors in successful business development, bringing in and retaining customers and increasing competitive advantage. The discipline of internal marketing is relatively new and has not yet been scientifically thoroughly investigated. The paper hence provides a detailed theoretical analysis of internal marketing from available internet databases. In addition, a concept of motivating employees is also presented.
A research has been undertaken by means of in-depth interviewing on the usage and familiarity with the term internal marketing in Croatia. Eminent Croatian marketing experts with years of experience in working for medium and larger companies were interviewed in the undertaken study. The results indicate to what extent marketing experts are familiar with the concept of internal marketing . It is assumed that the results will demonstrate that, in most cases, the upper management has not yet recognised the concept as an important factor of success on the market.
There are a lot of possibilities for the development of internal marketing in Croatia, taking into consideration that it does not require investments as large as those related to external marketing. Furthermore, the corresponding expenses are not affected by changes in the market, and the results can be significantly bigger. It is proposed that good relations with the upper management for the development of internal marketing are established and, values which encourage activities of internal marketing are promoted. A thorough research of internal marketing is also advocated as well as detailed planning aimed at implementing and evaluating internal marketing concept in the company.

Key words: internal marketing, motivational tool, Croatian companies

1 INTRODUCTION

Marketing has developed into a discipline consisted of many sub disciplines, tools and rules and it is crucial in forming business strategies of companies. Given the speed of development and competition, success can depend on smallest details. Therefore, motivated employees who are prepared to go the extra mile for its company are becoming a capital that makes the difference between companies that are successful in long and short term.

The purpose of this paper is to study the concept of internal marketing in Croatian companies. Using internal marketing, companies can motivate stakeholders to be more efficient, while enjoying their work place in the process. Highly motivated and loyal employees can become the ambassadors of brands, ultimately promoting the products or services of the company. Concerning Croatian companies, the study and implementation of this concept will create a large gap as companies which implement the concept sooner will have more time to get acquainted with its benefits. Therefore, the authors aim to analyze and interpret the opinions of marketing experts on the current state of internal marketing in companies, as well as their guidelines for its development.

2 INTERNAL MARKETING

The concept of internal marketing was introduced in 1980s, but is still rarely applied in practice as there is not a single unified concept of what exactly is internal marketing, what it is supposed to do, how and by who (Ahmed and Rafiq, 2000, p. 450). Kimura (2011, pp. 77-79) finds that internal marketing is becoming indespensable to companies and defines it as "communication or a series of processes for collaboration among company's functions carried out so that the organization may achieve their mid- to long term goals." American Marketing Associaton defines it as "Marketing to employees of an organization to ensure that they are effectively carrying out desired programs and policies." Sommer (2005, p. 7) states that internal marketing implies all marketing activites targeted to internal users (employees) and organisation in general, with a goal of motivating employees and improving organisational climate within the organisation. Ballantyne (2000, p. 44) finds it as a strategy for developing connections between employees throughout the internal organisation. It is created by a combination of autonomy of employees and sharing know-how within the organisation. Internal marketing begins with the idea that employees are the first market of every company and that they should be educated and informed on the mission and vision of the company, benefits of products and services of the company, as well as expectations of customers on the external market (Bašić, 2008, p. 6). According to Došen (2000, p. 19), it focuses on implementing philosophy and practice of marketing on the internal market in order to hire and retain best individuals and to motivate all employees to go work in the best possible way. The same author refers to a cycle of satisfaction with internal marketing created by Bovee and Thill (1992, p. 708), as displayed on chart 1.
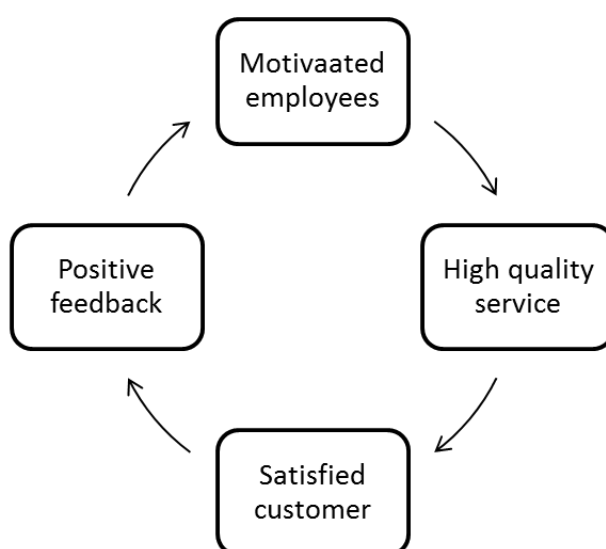

Chart 1: Cycle of satisfaction (Bovee, Thill, 1992, p. 708)

Therefore, the high quality of service satisfies the customers which give positive feedback to the employees, thus motivating them to continue providing the high quality service. Companies can recognize the discontent of users and influence the increase in quality of provided services. This chart is supported by the Meta model which finds that quality of service affects the satisfaction of customers and employees. Using word-of-mouth, satisfied users can affect the sales. The model points out the importance of employee satisfaction, its achievement through internal marketing, education of employees and corporate management.

Concerning motivation of employees, Bašić (2008, p. 15) finds that by studying various theories of internal marketing, motivation and satisfaction of employees are often highlighted. Following this claim, five main elements of internal marketing are identified (Ahmed and Rafiq, 2000, pp. 453-454). These are:
1. Employee motivation and satisfaction
2. Customer orientation and customer satisfaction
3. Inter-functional co-ordination and integration
4. Marketing-like approach to the above
5. Implementation of specific corporate or functional strategies

The same authors find that the best theory of internal marketing, as a synthesis of the previous, is provided by Gronroos (1994, p. 13). It states that "the internal market of employees is best motivated for service mindedness and customer oriented performance by an active, marketing-like approach, where a variety of activites are used internally in an active, marketinglike and coorinated way".

Various authors (Sommer, 2005, pp. 7-8, Ahmed, Rafiq, 1995, pp. 46-48, Bell, Menguc, Stefani, 2004, p. 114, Varey, 1995, pp. 43-45) find that the influence of internal marketing is most visible in service companies as the human factor is very important while providing services. Therefore, most models of internal marketing are studied for that kind of companies with the elaboration that the employees trasfer their motivation and satisfaction directly to the customers, thus becoming market-oriented, which is the organisational culture that is most efficient as a foundation for a business's competitive advantage strategy (Nerver and Slater, 1990, p. 34). The final result is the achievement of business goals. Researches (Morgan, Vorhies nad Mason, 2009, p. 916; Kumar, Jones, Venkatesan and Leone, 2011, p. 28) have proven that market orientation has a positive effect on ROI.

2.1. Implementation of internal marketing

There are many models and implications concerning the implementation of internal marketing in organizations. It is important to note that process of planning internal marketing does not differ a lot from planning external marketing activities. Also, techniques, models, politics and practices are similar, but adapted for creating marketing activites for the internal market (Bašić, 2008, pp. 6-14) One of the main differences is that, unline external market, it is completely under the influence of the company (Buble, et al., 2005, pp. 9). According to Ballantyne (2000, p. 50), internal marketing can be made on a transactional (monologue, knowledge circulation) or a relational level (dialogue, knowledge discovery). The suggested course of action is the relational level. Bašić (2008, p. 28) finds that it is necessary to create a dialogue so internal marketing can have an efficient role in achieving strategic goals of the company.

Ahmed and Rafiq (1995, pp. 35-41) have developed a multidimensional model of internal marketing which has three phases, is based on the existing literature concerning service

marketing and uses marketing mix. In the first phase, external opportunities and possibilites within the organisation are researched. The second phase defines the direction based on various possibilites (tools, barriers) for achieving the goal of the company. In the third phase, alternatives are implemented while taking into account the internal marketing mix (process, price, promotion, place), which is similar to the 4Ps of external marketing mix. The authors find that multifunctional teams should be used for creation and implementation of internal marketing.

Bašić (2008, pp. 63-65) finds that the following elements must be defined for the succesful implementation of internal marketing mix: analysis of the company, suggestions for each element of marketing mix, suggestions for implemetation while communicating with employees on effects of internal marketing, implementation with constant monitoring and improving processes through evaluation. Without clearly defined elements of internal marketing mix, it is not possible to develop or implement it. Also, authors find that the managerial style must support internal marketing, the whole company must practice it, it has to be led by a top-down approach and be in sync with the curent life stage of the organisation (Varey and Lewis, 1998, p. 936).

Varey and Lewis (1998, p. 938) point out that it cannot be treated as an approach for one specialist as it is a combination of various approaches (HR, strategic management, TQM, corporate communications, macro-marketing, employee relations). They especially find that linking internal marketing to HR departments is not correct as it is too narow thinking, not taking into consideration all stakeholders within the organization, thus making it a completely different approach. At the conclusion of this work, suggestions for implementation will be provided.

The barrier that can slow down or terminate internal marketing is the human factor as it is the most sensitive when introducing changes. Most employees will not accept changes so it is very important to create a detailed analysis of the state the company is in. Research has shown that lack of skills and knowledge, financial means and understanding of internal marketing are the most often reasons why internal marketing fails (Bašić, 2008, pp. 93-94). During implementation, there are four different types of exchange which must be specially taken into account by planners of internal marketing (Došen and Prebežac, 2000, pp. 21-23). They are:
1. Company – employees – Employees want to be well informed to be motivated. Lack of communication can cause noise in the communication channel, thus, reducing motivation. Motivated employes will offer solutions to prolems and be content with their job.
2. Management – departments – Departments want to be more involved in the decision process, and management must communicate more to know how departments work.
3. Between departments – Connecting employees can increase the speed of work and improve quality. Personal connections are important and departments should know what the other employees exactly do in a company.
4. Departments – employees – Open communication and support of the manager can increase mutual assistance between employees and their motivation.

As previously noted, one element of the internal marketing mix is promotion. The tools used for promotion can be the same as the ones used in external marketing, such as: internal PR, internal advertising, internal promotion, internal stimulation or HR programe which supports internal marketing. Some of the more specific tools are personal contact, e-mail for internal

notifications, internal papers, web site or internal advertments (Bašić, 2008, pp. 61-63). Selection of communication media is crucial as it depends on the nature and the purpose of the message, and can be a good indicator on the relations between management and employees. Impersonal communication has less value to the employees, but it is useful for communicating detailed and leghtly messages. Using intranet, telephone or e-mail is considered more intimate, with personal communication (face-to-face) having the largest value. It is also important to note that it is not possible to have both communication types at the same time. With good planning and prediction, the selection of media can be maximized (Davis, 2001, pp. 124-126).

3 MOTIVATION OF EMPLOYEES

Motivation has many definitions. In context of organizational psychology, it is defined as intrapersonal processes which affect the level, direction and duration of effort invested at work (Miljković and Rijavec, 2008, p. 56). Motivation is also defined as the inner force that drives individuals to accomplish personal and organizational goals (Lindner, 1998, p. 2). It is not posible to motivate an individual, rather, a situation in which individuals respond to be motivated because they choose to can be created (Rabey, 2001, p. 26), which is a goal of internal marketing. In turn, motivated employees have a better degree of job satisfaction, are prone to stay in the company, are more dedicated (Eby, Freeman, Rush and Lance, 1999, p. 465), complete tasks better (Klein, 1999, p. 886), have more satisfied customers, better financial results (Lings and Greenley, 2009, p. 42) and ultimately contribute to quality.

Various authors and researchers find internal marketing, employee motivation, market orientation and success of external marketing connected (Gummesson, 1987, pp. 25-28; Kelley, 1992, pp. 472-474; Martin, Martin and Grbac, 1998, 494-498). According to Lindner (1998, p. 2), there are five major approaches which have led to understanding of motivation. Maslow's need-hierarchy theory, Herzberg's two-factor theory, Vroom's expectancy theory, Adams' equity theory, and Skinner's reinforcement theory. They are shortly described below.

According to Maslow's need-hierarchy theory, there are five levels of needs which are hierarchically organized (physiological, safety, social, ego, and self- actualizing). When the needs at lower levels are met, the needs of higher levels appear. For example, if safety needs are not met, social or ego needs will not appear as much (Miljković and Rijavec, 2008, pp. 59). This theory is used for its simplicity, although some research deny it (Lindner, 1998, p. 5). Herberg's two-factor theory categorized motivation into two factors: motivators (intrinsic factors such as achivement and recognition, produce job satisfaction) and hygiene factors (extrinsic factors such as pay and job security, produce job dissatisfaction) (Miljković and Rijavec, 2008, pp. 61-62). It is claimed that the theory is formed under the assumption that, besides a minimal threshold, money does not motivate people (Basset-Jones and Lloyd, 2005, p. 932).

Vroom's theory is based on the belief that employee effort will lead to performance and performance will lead to rewards, whereas Rewards may be either positive or negative. The more positive the reward the more likely the employee will be highly motivated. Conversely, the more negative the reward the less likely the employee will be motivated (Lindner, 1998, p. 3). Adam's equity theory states that employees strive for equity between themselves and other workers. Equity is achieved when the ratio of employee outcomes over inputs is equal to other employee outcomes over inputs (Huseman, Hatfield and Miles, 1987, p. 222). Skinner's reinforcement theory states that employees' behaviors that lead to positive outcomes will be

repeated and behaviors that lead to negative outcomes will not be repeated, which is an implication for managers to positevely reinforce employee behaviors that lead to positive outcomes (Lindner, 1998, p. 3).

4 STUDY – METHODOLOGY AND FINDINGS

The following hypothesis are set in this paper:

H1: Most marketing departments of Croatian companies do not implement internal marketing, but invest most resources to external marketing.

H2: Most high positioned marketing experts in Croatian companies are familiar with the concept of internal marketing and have elementary knowlege about it, but do not find it as an efficient tool of improving employee motivation.

In order to collect data for the purpose of this study, in-depth face to face interviews with eleven marketing experts working in medium and large companies were conducted in 2013. Interviews were conducted using a structured guide containing seventeen descriptive questions (qualitative research) and a poll of ten questions (quantitative research).

Interviewed marketing experts are empoyees of companies working in different branches (telecomunications, manufacturing industry, service industry, technology, media company, insurance company, educational institution and banking institution), among the highest positioned employees in their companies (members of board of directors or close to it) and have titles of directors, marketing managers or brand managers. They all have at average 10 years of work experience (17 max, 5 min), at least three years of working experience in the current company (some worked only in one company) and great knowledge of the market. Therefore, they are experts in the field of marketing and ideal for the study of internal marketing.

The examinees were asked to discuss their previous experiences, personal knowledge and recommendations for internal marketing, strategy of the company they work in and the perceived use of internal marketing in Croatian companies. It is important to note that the data from this research cannot be considered relevant due to the small number of examinees, and should be considered indicative as they can indicate behaviour.

As for the findings, eleven marketing experts have often came across the concept of internal maketing, especially in companies owned by international corporations. The concept is used in Croatian companies, but usually without detailed strategies and plans with clear goals. The experts find that, in general, familiarity with the concept is low and it is often poorly implemented, if it is implemented at all. They find that companies are not even aware that they are conducting internal marketing activities, even though they are working with the tools for it. International corporations, however, deeply analyse and implement strategies in detail. Public companies use internal marketing to a lesser extent.

Regarding management approach to motivating employees, top-down approach is usually applied. There is no unique way to motivate employees, but money is considered to be an irreplaceable motivator. Experts find that internal marketing is in some way included in the business strategy of almost every company (including their own), but almost all conclude that it is not enough as boards of directors mostly do not understand the importance and effects of

internal marketing. Because of this, most companies do not allocate resoures for strategic and structured activites of internal marketing, except companies that are allready applying a strategy that yields results. Board of directors in these companies is willing to invest more in internal marketing. The conclusion is that it is crucial to present the importance and effects of internal marketing to the board of directors. Only then will internal marketing be included in the business strategy of the company with a dedicated budget.

Concerning the way of organizing departments which deal with internal marketing, experiences of experts vary from individual departments for internal marketing, marketing department that only implement strategies and companies in which HR undertakes internal marketing actions ata small scale. All experts agree that a structured and detailed approach is necessary for the success of internal marketing. Most suggest that connecting HR and marketing departments is important for internal marketing as it provides a multidisciplinary point of view and synergy of departments. Some find that HR should create the strategy, but not implement it without marketing knowledge. If possible, experts suggest creating a special department which would deal exclusively with internal marketing. The important conclusion is that experts have different opinions and is therefore difficult to create a single model of internal marketing, but all experts find that marketing departments must be included for maximum efficency of internal marketing.

All examinees are very well aquanted with marketing, as well as internal marketing tools. They have been used in companies, which indicates that familiarity with the tools exists and that they are used in most companies. Experts suggest that it's useful to use modern technology as it is fast and efficient, but element of human contact must be mandatory in planning. Tools they find most interesting to achieve goals are prize games, events, newsletters, magazines and social networks.

The conclusion of the research is that most interviewed experts are not satisfied with the current state of recognition of internal marketing by boards of directors of companies which is a factor that is slowing down efficient implementation of the concept. Experts find internal marketing as a very efficient tool in increasing employee motivation which leads to better business results. This suggests that this discipline will continue to grow and senior management will be educated to recognize its importance in the future. Marketing experts have also pointed out many suggestions based on their experience and education. All data was taken into consideration for the final chapter outlining the possibilites for developing internal marketing.

5 SUGGESTIONS FOR DEVELOPING internal marketing in Croatia

Croatian companies should implement a systematic approach to internal marketing in order to increase employee motivation and achieve competitive advantage. Internal marketing is, much like traditional marketing, succeptable to changes by every client. Therefore, the suggestions pointed out in this chapter are given in general and for almost every company.

For implementation of internal marketing, it is necessary to follow a course of activities. Kardum (2009, pp. 105-106) created a model of internal marketing which is the basis of suggestions in this paper. The model displays a continuous process which begins with the analysis of the internal market and ends with the evaluation and corrections. It assumes that concept of internal marketing is accepted by board of directors of the company. Approach to planning internal marketing is similar to external marketing, with constant emphasis on

research,implementation ad evaluation. As there is often a lack of support for internal marketing in Croatian companies, the values of organization which allow internal marketing are primary.

5.1. Values of the organization

Understanding that internal marketing suports achievement of all strategic goals of the company and including it into the business strategy is crucial for its efective implementation and efficiency. As previously noted, senior management must be educated on its benefits and tools to be aware of its full potential, therefore, a top-down approach must be applied. Experts agree that it is the way to achieve long term success of internal marketing, rather then using a series of unplanned tactical tools. Only then can senior managers instruct the creation of analysis of the internal market, which is a prerequisite for a detailed strategic plan. It is crucial that internal marketing follows business goals and is in their service, taking into account the target audience.

Educating the senior management can be done directly by presenting clear plans to the senior management, or indirectly, by creating a smaller internal marketing projects and measuring their efficency to emphasise importance and effects of a systematic approach. Some of the values that the organization should accept and encourage are:
- Every individual counts
- Transparency in communication
- Orientation on the customer

5.2. Research

The research of internal market should be similar to external market research, with a goal of recognizing employee needs. According to Kardum (2009, pp. 105-110), research of the internal market should be made continuously so that the experts who are creating the strategy can spot and define problems in the internal environment, as well as plan activities to remove or reduce defined problems. The systematic approach to research should include:
- Defining the problem
- Setting goals of the research
- Planning the research
- Conducting research
- Analysis of the data and presenting

Holtz (2008, p. 221-222) finds that internal market research should be done in three steps – focus groups, interviews with senior managers and polls. Kardum (2009, p. 108) also claims that focus groups are a good way of conducting research. Traditional methods such as polls should be avoided as empoyees have fear that the given information may be used against them.

5.3. Strategy and model

After the research, senior management should include the previously stated values as strategic goals and include the data from the research in creating a comprehensie strategy. In this stage, it is most important that strategic goals are well set. Representatives of marketing, HR or communications departments should help with the creation of the strategy, as well as all the other managers as the goals must be adjusted to all or most target audiences.

Budgeting is very important and should be agreed at an early stage. It is difficult to measure direct sales effect of the internal marketing strategies as it is derived in the long term. It is

recommended that projects have fixed budgets as actions concerning internal marketing are cheaper and easier to predict than external marketing.

The strategy itself is a guide to implementing tools which will be in the service of achieving goals. Constant evaluations are crucial as senior management must follow the implementation of the strategy. It is also important that the strategy has a clear model of implementation, created at its very begining, and transparent. One of these models is suggested:

- Dedicated team for internal marketing
- Combination of departments (HR, Marketing, Communications)

5.4. Planning

Previously set strategic goals are achieved using projects which should be extensively and precisely planned. It is suggested that several long term projects are created (eg. educations, development of communications) accompanied with a few smaller project per month (eg. teambuilding, prize game), depending on the work load. It is specially suggested that smaller projects are connected with long term ones to achieve goals most efficiently.

The plans should be very precise and adapted to the target audiences using different tools (not one communication for the whole company). The selected tools should communicate focused and clear. If possible, messages should be communicated personally. Other tools that should be used are intranet, prize games, events, newsletters, magazines and social networks. Whatever the tools selected, they should encourage dialogue so that the creation of new knowledge can be induced. Structuring the processes will help in achieving plans. Creativity in using tools is crucial to their success, therefore, their preparation can be outsourced to creative or marketing agencies.

5.5. Implementation

The purpose of this phase is realization of previously set plans. One leader should coordinate all activities and define what his team does and at what deadlines. Implementation requires cooperation in all levels in the organizational structure, especially departments which cooperate (board of directors, management, employees). With good implementation that takes care of details, previously devised plans will yield results. Kardum (2009, pp. 116-117) finds that before implementation it is necessary to:

- Ensure support of management
- Motivate, involve, inform all employee levels
- Define responsibilities for implementation
- Organize system for receiving feedback during implementation
- Organize system in which every employee get feedback on the efficiency of implemented activities

5.6. Evaluation

Except for control of implementation, evaluation is important for collecting data for the next cycle of planning, as well as presenting results to management. Evaluation must define and find sources of deviations from goals, as well as define activities to achieve goals. It should be done as often as possible by internal marketing team members. The best course of action is to collect data for every goal, which is why a dedicated internal marketing team would prove useful.

If the goals are not met, corrective activities should be undertaken. Evaluation and activities should begine as soon as possible, even while plans are implemented. Various maket research tools can be used in conducting evaluation (qualitative and quantitative), such as polls, focus groups or formal and informal conversations. Data should be collected in a single information system.

With the end of the evaluation, new cycle of internal marketing begins with a research that will influence revising the strategy and creation of new plans of internal marketing. If values of the organization are disrupted, process can begin from the beginning to revise the values, too.

6 CONCLUSION

To provide concrete and useful advices for implementing internal marketing in Croatian companies, a theoretical background of internal marketing and motivation was conducted, combined with a research on the state of internal marketing in Croatian companies by marketing experts from Croatian companies.

The first hypothesis was proven, meaning that most marketing departments of Croatian companies are not implementing internal marketing, with most resources being redirected. According to marketing experts, this is the correct way, but they believe that with transferring some resources to internal marketing, very important effects on motivation of employees can be made. This will, in turn, create better business results. The second hypothesis was not completely proven as marketing experts actually do find internal as an marketing effective tool in improving employee motivation. They have knowledge of the concept, thus proving the first part of the hypothesis.

The conclusion of this paper is that internal marketing is an interesting marketing discipline not generally used by Croatian companies. Implementation requires a systematic approach, but an affordable one, which can have a positive effect on motivation of the internal market and, in turn, business results.

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THE LINK BETWEEN MANAGERIAL DISCRETION AND FIRMS' GROWTH STRATEGY

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ABSTRACT
Dynamic business environment drives firms towards practicing different growth strategies in order to successfully position themselves on the market. Growth strategies are concerned with increasing the size and viability of the business over time with the final aim of building and sustaining their competitive market position. This paper points out that in order to increase personal compensations; managers sometimes evaluate firms' growth not considering its profitableness. Managers can perform unrelated takeovers in order to increase their own compensations. Mentioned managerial reasons for diversification are based on the existence of certain imperfections in corporate governance, namely the mechanisms by which stockholders control corporations and their managers. If stockholders could assess those takeovers that would increase profits, and those that wouldn`t, and focus management only on those takeovers that increase stockholder value, the possibility of acquisitions managed by managers would disappear (Besanko et.al., 2007:175). Hambrick and Finkelstein (1987) introduced and elaborated the concept of managerial discretion. In prior studies it has been suggested that greater managerial discretion enables managers to shape firms more significantly, and moreover increases the influence of managerial characteristics on organizational outcomes (Finkelstein & Hambrick). Managerial discretion refers to the ability of executives to affect key organizational outcomes (Hambrick & Finkelstein, 1987). From the perspective of agency theory, high managerial discretion allows managers to work for personal benefits rather than for those of shareholders. While contingency theory points out that executive in diversified firms ask for more compensation than that in non-diversified firms as their more complicated environment, executives adopt some strategies such as mergers and acquisitions (M&A) and diversification in order to increase their compensation. Therefore, this paper, based on prior literature, gives the explanation to the relationship between perceived managerial discretion and TMT motives for firms' growth.

Key words: *managerial discretion, firms' growth strategy, top management team, mergers and acquisitions*

1 INTRODUCTION

Dynamic business environment of 21st century forces the firms to use diverse growth strategies in order to successfully position themselves on the market. Growth strategy is part of the corporate strategy which emphasizes corporation as a whole and provides answers regarding business scope of the corporation and recourse allocation (Tipurić, 2005). Growth strategies are concerned with increasing the size and viability of the business over time. A successful growth strategy will allow firms to increase its customer base, market segments, geographical scope, and/or product lines, which should lead to revenue growth. Permanent growth enables them to build and sustain their competitive market position. In planning growth strategies, managers should be concerned with three key issues: (1) where do we allocate resources within our business in order to achieve growth, (2) what changes in business scope do we see as compatible with growth and overall strategic decision, and (3) how do we time our growth moves compared to competitors (Harrison and St. John, 2008)?

Modern business world is cognizant with three ways of implementing growth strategies including: internal or organic growth, growth through mergers and acquisitions, and growth through strategic alliances. Company pursues internal growth by relying on its resources, and also through increase of products and services sold on existing markets, independent development of new products and penetration to new markets (Tipurić, 2005). Considering the fact that internal growth represents the slowest way to grow and considering that entrepreneurs cannot accomplish planned growth only by relying on its own resources, companies often expand business through mergers and acquisitions or through strategic alliances (Tipurić and Markulin, 2002).

This paper also points out that in order to increase personal compensations; managers sometimes evaluate firms' growth not considering its profitableness. Hambrick and Finkelstein (1987) introduced and elaborated the concept of managerial discretion. They defined managerial discretion as executives' latitude of action and argued that the latitude is formed during the multiple process of a repeated game about their rational action between the executives and the stakeholders of the firm. Managerial action is determined by three sets of factors: the task environment, the internal structure of organization and the manager himself or herself.

From the perspective of agency theory, high managerial discretion allows managers to work for personal benefits rather than for those of shareholders. According to Hambrick and Finkelstein's opinion, to what degree an executive can affect the organizational behavior and performance, are depended on particular environment, and the organizational performance is the function of environment and executives' behavior. Different organizational environment or executive will lead to different organizational performance.

Managerial discretion has been discussed by both economics and management scholars with each examining the topic from different perspectives (Shen & Cho, 2005). In the economics literature the concept of managerial discretion is described as managerial freedom in pursuing personal objectives rather than maximizing firm performance (Jensen & Meckling, 1976; Williamson, 1963). On the other hand, in the management literature managerial discretion is defined as the latitude of options available to top managers in making strategic choices (Hambrick & Finkelstein, 1987). Strategic scholars put up contingency theory, as they mentioned, executives in diversified firms ask for more compensation than that in non-diversified firms as their more complicated environment, executives adopt some strategies such as mergers and acquisitions (M&A) and diversification in order to increase their compensation. Reviewing from the conclusions above we confirmed that, there is a common view behind the factors such as ownership structure, degree of supervision, diversification and enterprise' scale, which is such factors determined the difference of managerial discretion. Higher managerial discretion means higher marginal product, higher risk and also means that executives' higher compensation.

But the amount of discretion managers have to pursue their own goals is arguably a function of the firm's profitability. In a competitive industry no surplus exists for managers to overpay themselves, while a monopolist has room to pursue both the easy life, as John Hicks once suggested, *and* a well paid one (Peterson, 1965; Palmer, 1973).

2. GROWTH STRATEGY IMPLEMENTATION

For corporate strategy, there are three possible ways of implementation: internal growth, which includes growth of the company from solely their own resources, mergers and acquisitions, which are a way of growth companies through merging or joining of independent businesses , and strategic alliances as strategic connections of businesses in which independent enterprises, that retain an independent strategy at the company level, are working together to achieve certain strategic projects, sharing and combining resources (Coulter, 2002). All three versions are complementary and not exclusive.

Mergers and acquisitions are preferred if the risk to develop their own core competences is somewhat bigger, if faster expansion is needed, if the availability of resources is not complete, but is still high enough, and if between companies - potential partners, there is a similarity, but not identity, with moderate changes in the environment. In contrast to that, strategic alliances are ideal in situations of high risk of self development, the needs of rapid expansion, relatively low or negative availability of own resources, complementarities among firms in the alliance and the large and rapid changes in the environment (Tipurić, 2005).

Mergers and acquisitions are ways of achieving development goals by purchasing or merger with another entity (Sudarsanam, 2005).

A merger is a legal transaction in which two or more companies combine operations through the stock exchange and create a third entity, the new, joint venture, during which independent companies cease to exist. Mergers takes place mainly between companies that are similar in size and usually it is acceptable to all interested parties (Filipović, 2012).

Acquisition is a complete takeover of a company by another company. By taking over a company takes control of another company that becomes an integral part. From the standpoint of a business combination, an acquisition is focused on the purchase of a company, or part of a company or the subordination of certain companies by acquiring a majority stake in its ownership (Orsag and Gulin, 1996). Acquisitions are mainly take place between companies of different sizes. Sometimes the acquired company retains its own name while operating within a new group; it in fact loses strategic autonomy, pursuing a strategy that the acquired company has set (Filipović, Podrug and Cingula, 2011).

Despite the increasing popularity of mergers and acquisitions, it has been reported that, more than two-thirds of large merger deals fail to create value for shareholders. Ravenshaft and Scherer (1989) found that profitability of target companies, on average declines after an acquisition. The propensity for mergers and acquisitions' failure to meet anticipated goals is corroborated by Erez-Rein et al. (2004) and Carleton (1997) who noted that the rate of M&A failure range from 55 to 70 percent (Lodorfos and Boateng, 2006).

Mergers and acquisitions process should be seen as a series of largely independent events, culminating in the transfer of ownership from the seller to the buyer rather than just an independent event (Agwin, 2007). In theory, thinking of a process as discrete events facilitates the communication and understanding of numerous activities required to complete the transaction. Thinking of M&As in the context of transaction-tested process, while not ensuring success, increases the probability of meeting or exceeding expectations (DePhampilis, 2010).

Advantages of mergers and acquisitions are the speed of achieving results, its expanding competencies, its expanding capacity, product differentiation, and others (Filipović, Podrug and Bujanović, 2011). Their disadvantages are the need of large cash resources or access the sources of financing (thus high risk), complex processes of harmonization of corporate culture, the problem of unwanted downloads and other parts of the company, etc. (Sudarsanam, 2005).

3. TMT MOTIVES FOR FIRMS' GROWTH

The relationship between managerial behaviour and firm performance, i.e., firms' growth, has long been a critical issue in management research. In the previous literature researchers have found that the impact of managerial actions on firm performance depends on several managerial factors, among which managerial discretion is the most commonly cited. Managerial discretion refers to the ability of executives to affect key organizational outcomes (Hambrick & Finkelstein, 1987). Because the influence of managers on organizational outcomes differs according to their level of decision making authority, the subject of managerial discretion has led to important theoretical explanations of several phenomena of interest to scholars researching organizations and strategies, such as chief executive officer (CEO) compensation (Finkelstein & Boyd, 1998; Magnan & St-Onge, 1997), executive profiles (Haleblian & Finkelstein, 1993), and management team tenure (Finkelstein & Hambrick, 1990). In prior studies it has been suggested that greater managerial discretion enables managers to shape organizations more significantly, and moreover increases the influence of managerial characteristics on organizational outcomes (Finkelstein & Hambrick, 1990).

Since the managerial discretion hypotheses argued that managers diverted some of the profits of the firm to the pursuit of their own interests, and that these interests were often closely tied to the size of the firm, the early studies of compensation tended to test whether profits or sales were more closely correlated with compensation. Studies have shown that top management fees do not depend primarily on business results of the firm, but may also depend on size of the firm, usually measured by sale (Barney and Hesterly, 2006: 234). Thus encourages managers who want to increase their income to ensure firm growth. One of the easiest ways to achieve growth is by diversification, which is usually unrelated, through merger and acquisition. With large acquisitions firms may grow continually in a short period of time, and thereby provide higher revenues to top management. Top management only needs to take care of economic profit, i.e., that profit level is not so low that the firm becomes a potential target for a hostile takeover, or to encourage owners to make change of management.

In recent years, the influence of firm size on managerial compensations became less important, while in the same time compensations of senior management are becoming more associated with firm performance. Especially, the use of stock options and other forms of deferred compensations highlights firm growth as the most important interest to managers.

Therefore, the desire for higher compensations and managerial risk reduction are two basic managerial motives for firm diversification (Combs and Skill, 2003). In other words, top managers may opt for a diversified firm with the aim of diversifying their own job risk as long as profitability does not suffer.

However, diversification provides additional benefits for managers, the ones that owners don't have. Research results have shown that diversification and firm size are much related,

and if firm size increases, compensations of management will increase also (Gray and Cannella, 1997). Furthermore, large firms are considered to be more complex, and therefore more difficult to manage, which leads us to significant compensations to managers. Higher levels of diversification can increase complexity of firm, as well as managerial compensations for managing diversified firm. Corporate governance mechanisms, such as the board of directors, supervisory board or market for corporate control can limit management in overextend diversification.

But sometimes the above mentioned mechanisms are not strong enough, allowing managers to diversify firm to the point where even the average returns can`t be achieved (Janney, 2002). Loss of adequate internal mechanisms can result in lower relative success of a firm, and a possible threat of takeover. Despite the fact that takeovers can increase efficiency by changing ineffective top management, managers can avoid takeovers by using various defensive tactics (e.g., poison-pill or golden parachute). Therefore, the threat of takeover may restrict managers, but can`t completely control motives of managers for diversification (Duane Ireland, Hoskisson and Hitt, 2009).

Jensen indicates that managers simply enjoy leading large firms, because corporate growth entails social eminence, public reputation and influence, and political power of top managers Jensen, 1989). Stockholders want firm growth only if such growth leads to increased profit. Therefore, *Jensen* also indicates that managers evaluate firm growth, regardless of whether it is profitable or not.

Diversification can create value also in the case when the managers are able to identify firms undervalued in the stock market. There is often scepticism towards such a reason for diversification, especially if target firm operates in the field unrelated to activities of an acquirer. There is a possibility that market value of targeted firm is incorrect and that other investors have not yet realized this fact. Also, the mere announcement of takeover draws attention, often leading to other potential acquirers bidding for targeted firm. Biddings as such, are not rare, and serve to reduce the potential takeover gains for the acquirer. Probably the biggest problem is perception of how winning bidders, in auctions and similar sale arrangements, usually overpay targeted firm value, unless diversified firm owns much more information about targeted firm than other bidders (Besanko, Dranove, Shanley and Schaefer, 2007: 173).

Managers can perform unrelated takeovers in order to increase their own compensations. The fact that large firms CEOs generate higher compensations does not imply itself that increase of firm size leads to the increase of their own revenues (Werin and Wijkander, 1992). *Avery et. al.* found no difference in wages growth between CEOs who performed takeovers and those whose businesses naturally grew. On the other hand, *Bliss and Rosen* conclude that executive directors of banks who made acquisitions had a big increase of their own compensations (Bliss and Rosen, 2001).

Amihud and *Lev* assume that managers perform unrelated takeovers to protect themselves from the risk (Amihud and Lev, 1981). They observe that stockholders are not inclined to change top management, except in case of bad business of the firm. In order to reduce the risk of job loss, managers must reduce the risk of bad business. One way to achieve this is through unrelated acquisitions. They showed how firms run by management participate in more conglomerate acquisitions than firms run by the owners. Although such acquisitions reduce

risk of job loss for top management, they don`t always bring benefits for stockholders. These stockholders can reduce their own financial risk by managing their portfolio of investments (for example by investing in mutual funds) (Besanko et.al., 2007:175).

Mentioned managerial reasons for diversification are based on the existence of certain imperfections in corporate governance, namely the mechanisms by which stockholders control corporations and their managers. If stockholders could assess those takeovers that would increase profits, and those that wouldn`t, and focus management only on those takeovers that increase stockholder value, the possibility of acquisitions managed by managers would disappear (Besanko et.al., 2007:175). However, stockholders most often have a hard time detecting acquisitions that will increase profits, because they don't possess such information, nor are they skilled enough to make such conclusions. Furthermore, it is difficult to change management decisions, even if stockholders disagree with them. Formally, supervisory board is responsible for monitoring management in order to ensure that management actions increase stockholder value.

Market for corporate control is a mechanism of corporate governance. Its fundamental assumption is as follows: market price of the stocks adequately reflects the effectiveness of management (Manne, 1965). Model of market for corporate control assumes that managers have the right to manage a firm as long as its market value can`t be significantly improved by the alternative group of managers with an alternative business strategy (Tipurić, 2008: 299).

Manne lies out that market for corporate control represents an important limitation for managers' actions (Besanko, et.al. 2007: 177). Managers who perform takeovers that don`t meet interests of stockholders will find stock prices of their companies falling for two reasons. First, if managers overpay diversified acquisition, value of their firm will be reduced by the same overpaid amount. Second, if the Stock Exchange expects that a firm will overpay additional takeovers in the future, the market value of firm stocks will fall today in anticipation of these events. This inequality between actual and potential stock price of firm presents an opportunity for some other entity (individual, other firm or specialized investment bank) to execute takeover. A potential acquirer can gain control of the respective firm by simply buying the firm stocks on the market. With sufficiently large package of stocks, acquirer may vote its own slate of directors and appoint managers who will work on increasing stockholders value. With the purchase of shares at the actual price and later introducing changes that will return shares to the potential value, acquirer can gain some earnings.

Observation of the market for corporate control as the market in which alternative groups of managers are competing for the rights to manage corporate resources represents a shift from traditional understanding of the mechanism. According to traditional understanding suppliers of financial resources and active stockholders (alone or in coalition) "buy" control of corporation and hire and dismiss management in order to achieve better use of resources.

Inefficient business of management will be reflected in capital market by reducing the value of stocks. Thus market for corporate control represents a constant threat to management as a mechanism of disciplining their behaviour. Finally, an active and liquid capital market represents assumption of efficient functioning of market for corporate control.

4 CONCLUSION

A serious dilemma for firms has always been how much discretion should be granted to their managers so that they have sufficient decision-making latitude to respond to market changes. At the same time, managers are also under appropriate monitoring while they are seeking competitive advantages for the company so that they do not make decisions that may harm shareholders' interests. In this paper we investigated the concept of perceived managerial discretion, which has been long neglected by academics, and proposed that the fit between perceived managerial discretion and market competition would significantly impact on firms' growth strategy. Based on prior literature, we have tried to explain the relationship between perceived managerial discretion and TMT motives for firms' growth.

For companies involved in highly competitive industries, competitive advantage lies in being able to respond quickly to the environment. This capability requires top managers to allocate company resources rapidly to introduce competitive products into highly dynamic markets. Additionally, managers should be capable of quickly reinventing products and services in response to competitors. Managers must also be able to make correct decisions rapidly based on incomplete information in order to promote long-term firm development. Under these conditions, granting managers greater discretion and making sure they are well aware that this can help them utilize fully the resources at their disposal to make correct decisions that affect long-term firm development. This situation also provides managers with strong motivation to work hard toward the goal of realizing their ambitions.

Conversely, when competition in the industry is weak, the competitive pressure on the companies and managers is generally low. Under such circumstances, high perceived managerial discretion might lead to self- exaggeration through abuse of power – for example, the private use of company resources. Managers may use this discretion for personal gain, negatively impacting on the firm's long-term performance. In this situation, firms should strengthen control over managerial discretion, to ensure that top managers work hard to realize company goals. By ensuring managers perceive the managerial discretion available to them accurately; firms are more likely to achieve better business performance.

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KNOWLEDGE MANAGEMENT - CHANCE TO DEVELOP COMPETITIVE ADVANTAGE IN DYNAMIC ENVIRONMENT

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ABSTRACT:
Dynamic environment in which we live is best defined as a time of rapid, dramatic, complex and unpredictable changes, and since the change is inevitable and continuously occur, it is clear that it is necessary to turn to the strategy by which we will be able to achieve a competitive advantage and that is knowledge management. Viewed in terms of technology, economics, politics, and taking into account the social and global factors, the changes are faster , and they influence the reshaping of the established theories of economics and management . It is the concept of knowledge management is crucial in creating a competitive advantage in the new economy and management. Managers need to have a greater sense of the invisible and intangible assets of people featured in the minds and experiences of employees. Without these assets, companies are unequipped vision and they don't have ability to predict the future. Twenty-first century is the century of knowledge, and those who the most use knowledge, will become leaders in their fields. Let's ask ourselves, is Francis Bacon, a long time ago saying that knowledge is power, actually thought of the present age and the knowledge economy? What is the real value of intellectual capital and the collective knowledge of the organization, is the central topic of this study.

Keywords: *business strategy, change, collective knowledge, intellectual capital, knowledge, knowledge management.*

1 TERM AND CHARACTER OF KNOWLEDGE

Knowledge is primarily a category that is seen as the totality of accepted and accumulated information, values, condition - knowledge. Knowledge is your social status acquired long ago. At the same time you do not need to refer to the treatment of knowledge in certain social formations - the relationship to knowledge has always been raised on a pedestal society. While happened to the relationship to knowledge in some periods was always the same, etc. Knowledge is not enough respected, it is, in large, the relationship consequential.

It must be recognized that the increased awareness of knowledge, its function, importance, and necessity, as a global concept grew only in the last three decades. Science becomes aware that in some areas of practice suggests that some options had been exhausted. Therefore the world and turning to knowledge, finally realizing and recognize that it is only possible as a resource factor which gives power to optimize existing conditions. Although awareness and attitude towards knowledge, its necessity and function is everywhere raised to the required level, the fact that a significant factor that indicates the movement forward, the constant efforts of developed countries in this direction. Thus, at the beginning of XXI century promotes knowledge as the only resource to which the global competence to classify participants, associates and competitors. If at the end of last century, information technology was a hit (of course using knowledge), today knowledge is slowly but surely taking over the

pedestal, or doing the same thing that informatics did to industrial society. (Sveiby, 2001) Knowledge is important because it unites the policies, goals, practice creating a coherent whole. It is also important because the world ensure continuity of achieving, accumulating experiences. It provides information on the effectiveness of business and fulfilling its objectives in accordance with the capabilities of the environment. It also provides important information about the processes and results as well as the effect of business. Knowledge provides security: indicates what is right and what needs to be corrected, what we can safely ignore and what we ignore. It provides information on how people practice and coordinate resources and claims. Also, it provides us with information on consumers and competition, the obstacles and the composition of the business. Thus, it articulates information about business rules, imposed by people or nature, expressed explicitly or implicitly understood, capable and outgoing, unity of common sense, culture and / or collective wisdom, and all this together and mutually orchestrate business. Knowledge is to harmonize existing information symphonies pushing businesses forward, helping achieve the goals of the smallest to the crown of success, but it sometimes creates inconvenience. (Mitra & Gupta, 2006). There are two types of knowledge: explicit knowledge that can be expressed in a formal language and exchanged between individuals, and can be used by anyone who is available, and the implicit knowledge that is a personal knowledge. It is personal and it is expressed through individual experience and skills individuals. It includes skills and intangible factors of creativity, innovation, personal beliefs, perspectives and values.

Plato: *"Knowledge is justified true belief, the sum of what we know - the truth, principles and information, particularly information that develop the skills and attitudes to effectively performing the job duties and tasks . "*

2. ESSENCE OF THE CONCEPT OF KNOWLEDGE MANAGEMENT

Knowledge management is a newly emerging interdisciplinary business concept in their focus has organizational knowledge. It is rooted in many disciplines including business, economics, psychology and management information systems. In today issue of the companies knowledge management ultimatum it's necessary to achieve competitive advantage. Knowledge management involves people, technology and processes as interrelated and overlapping parts.
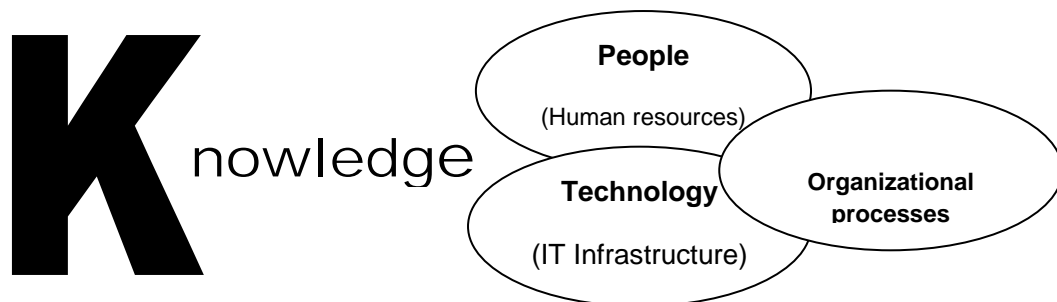
Figure 1. The overlap of human, organizational, and technological factors of knowledge management (Dimovski, 2010)

Any definition of knowledge management consists of several integrated components:
- Using the available knowledge from external sources
- Installation and storing knowledge in business processes, products and services
- Knowledge Representation in databases and documents
- Promote an increase in knowledge through organizational culture and employee motivation

- The transfer and use of knowledge throughout the organization
- Assessment of benefits obtained by applying knowledge and its incorporation into the basis of an organization

Unfortunately, there is no universal definition of knowledge management as and there is no agreement on what knowledge management contains. For this reason it is best to knowledge management viewed in the broader context. In short, knowledge management is the process through which organizations generate value of their intellectual assets based on knowledge. Most often, generating above-mentioned property implies the sharing of knowledge among employees, departments and even with other companies if it is in the best interest of the results and practices. It is important to note that the definition of knowledge management does not say anything about technology. Technology facilitates the implementation of knowledge management, but by itself does not constitute knowledge management. (Arthur,1994)

2.1. What makes intellectual property or knowledge-based?

Not of all informations are valid since the company depends on the information to qualify as intellectual property or property based on knowledge. Generally, intellectual property and knowledge-based can be classified into two categories: *explicit* and *tacit* knowledge. Explicit knowledge is contained in all that could be documented, archived and codified, often with the help of information technology. Much more difficult to understand is the concept of tacit knowledge or the knowledge contained in the minds of employees. The challenge is inextricably linked to tacit knowledge, is to identify, develop, share, and manage this knowledge.

2.2. What are the benefits of the company can be expected from knowledge management ?

Some of the benefits of knowledge management are visible at a glance, while others are very difficult to define. That the company received as much as possible the benefits of knowledge management, knowledge must be made available to everyone, and mutual sharing of knowledge must be the basis for cooperation. Effective program management skills to help companies to do one of the following:

- Accelerating innovation by encouraging the free flow of ideas
- To improve customer service
- Keeping the attention of employees by recognizing the value of their knowledge and their rewarding
- Improving all activities and operations and reduce their costs by eliminating unnecessary procedures

Knowledge management is the process of adoption and use of the collective experience of the organization anywhere in the business process - on paper, in documents, databases (explicit knowledge - explicit, visible knowledge) or in the minds of employees (so-called tacit knowledge - silently, invisibly knowledge). About 95 % of the information there are as so tacit knowledge. This is actually a driving force for innovation - the only competitive advantage that supports the company in an unpredictable business environment. The purpose of business is to use modern technology so that knowledge is stored, distributed and spread across the organization by connecting employees with documented knowledge, and all through the complex system of knowledge management.

Enterprise in Turbulent Environment

The goal of modern organizations is that all business processes as a process of knowledge. This includes the creation of knowledge, its dissemination, upgrade and application throughout the organization. Modern organizations are looking for ways to create additional value through the identification, implementation and use of knowledge in a unique way, a process that is part science, part art and part luck. Organizations and managers they need to strive for the creation of more explicit knowledge, which is by nature collective. Such knowledge has been introduced into the operation cannot be fixed in a way that an individual may leave an organization. Explicit knowledge is contained in the data bank, information, and knowledge of an organization is between 10-20 %, and applying the concept of knowledge management this part may be doubled.

As a strategic view of knowledge management, which considers the union between technology and human factors as a basis for survival in the changing environment emphasizes the definition of Dr. Y. Mahotr by which knowledge management is defined as follows: *"Knowledge management includes the most important critical issues of organizational adaptation, survival and competence in the face of ever-growing and rapid changes in the business environment. In essence, knowledge management embodies organizational processes that tend synergy and combination of data and information that increases the capacity of information technologies , and create and innovate potential human resources ."* This is the concept of the collective knowledge of an organization whose ultimate goal is the efficient application of knowledge to situations in which decisions are made. It is particularly important to note that this knowledge should be available with really little work and effort, and it can be applied. The concept of knowledge management represents, therefore, " the ability to be a relatively short time, there is information that will enable everyone in the organization to make the best decision, whether it is on market conditions, product, service, process, planned activities of competitors or other information important to the success of the company. (Sydanmaanlakka, 2002)

The need for unity is specified based on the difference between "old business world" and "the new business world." Accordingly, old business world is characterized by predictable environment with emphasis on predictability and optimal efficiency. This is the world of competence based on information and knowledge as a strategic issue and a control system that seeks to "best practice".

In contrast, the new business world is characterized by a high level of unpredictability of the future. The benefits of information control system and best practices may no longer be sufficient to allow the long-term competence of the organization. This is the world of "re - everything" (all of reorganization), which is assumed to overcome the usual and accepted way of doing so.

In a way, the question of knowledge management is a matter of survival in the new business world, the world of competition and competition, the world causing a duel traditional ways of solving problems in which the focus is finding the right answers, but to ask the right questions. What has worked before yesterday, you might, but might not work tomorrow. The essence is not "do the right thing" but "do things the right way" (doing things right), so that the basis of competitiveness becomes the basis of stiffness and lack of responsiveness in the future.

The importance and status of organizational knowledge management programs is best illustrated by the research of KPMG Consulting in July and August in 1999. was conducted among company directors, heads and directors of marketing and responsible for the management of knowledge in 423 organizations with annual revenue of more than U.S. 347 million, where the subjects were asked to specify the level of their program management skills. Studies have shown that 38% of respondents felt that their organization has a program management knowledge that is already in operation, 30 % of respondents said that their organization is currently in the process of implementing knowledge management programs, while 13 % of respondents said they consider the need for program management knowledge. Only 1% of respondents believe that it is unnecessary program management skills, and 15 % did not have any program addressed the needs of its introduction.

Key findings of the survey KPMG Consulting in 2002 and 2003 was conducted among 500 top organizations in the UK, France, Germany and the Netherlands on the implementation of the concept of knowledge management in practice shows that 80 % of respondents considered knowledge as a strategic priority, 78 % of respondents believe that the missing business opportunities because of failure to have available knowledge and surveyed companies estimate that, on average, 6 % of revenue, a percentage of annual revenue or budget, suffers from the failure of adoption of existing knowledge.(O'Sullivan, 2008)

3 PREJUDICE AND PRINCIPLES OF AN INTRODUCTION OF KNOWLEDGE MANAGEMENT IN AN ORGANIZATION

There are authors who aware of the problems that arise when implementing knowledge management program, whose solution is stored in the organizational culture of the company, recognize dangerous and outdated beliefs that hinder the application of the concept of knowledge management. On the other hand, there are also suggested the establishment of certain organizational principles that would facilitate the menu of this concept. Thus, the literature states the following aggravating circumstances (beliefs and convictions), the implementation of knowledge management in organizational culture.

Organizations are machines. This belief becomes visible every time the organization as separate parts, functions and roles are expected automatic achieved pre-set objectives and results. In this regard, the sixth and men are viewed as machines, "reprogram" the new practices and technologies as they are robots, and they are expected to do exactly what they say. Any non-compliance such treatment is criticized as "resistance to change".

Only material things are real. The largest part of the error is the result of attempts to invisible (such as knowledge, confidence, connection) broaden the material form.

Only numbers are real. Only when something quantify (the index of the results, statistical data, etc.) Can adequately describe what is happening.

You can control only what is measurable. If something is impossible to express measure or number, that you should not pay attention.

Technology is always the best solution. A growing number of problems that are being solved using technology. In fact, the emphasis on technology, further complicating the problem. In fact, it's noticed that the numerically presented information entered into the computer is not

able to describe the complexity of the experience of the individual who is behind this information.

The stated beliefs are manifested in the implementation of knowledge management programs. Trying to manage something - knowledge flows - which are invisible, are difficult to quantify, and resulting in connections and relationships, not statistics. Next, we turn to technology should solve our problem and we focus on the construction of the databases and advanced information systems. Do you like this can solve the problem of effective implementation of program management skills in an organizational culture?

On the other hand, the literature cited and solutions of this problem, principles whose observance should facilitate the implementation of knowledge management:

Man creates knowledge. In order to succeed in the implementation of knowledge management must stop thinking of the man as a machine. Instead, it is necessary to pay attention to man's needs and potential. Attention should be redirected to an organizational culture that supports people, fosters mutual relations and giving people time to think and react. When we talk about "values" and "intellectual capital", first we have to think not on knowledge, but on people.

It is natural for people to create and share knowledge. Many things are forgotten when it comes to human motivation. People want their lives make sense to contribute to others, to learn, to be together, to participate in decisions that affect them. An organizational culture in which individuals work to enable them to all of the above and thus fulfill individuals with positive energy that will result in new knowledge, innovation and teamwork. The nature of man should be viewed as a gift, not a problem.

Each individual worker knowledge (knowledge worker). If we assume that each individual creates knowledge, then the organization takes responsibility for that support each of their employees, not just a selected group of individuals, because you never know who is going to take the required decisions that need to be organized.

People choose to share their knowledge. There are numerous applications of knowledge management that fail because individuals do not share their knowledge. Individuals will share their knowledge if they feel belonging to the organization, believe in their leaders who support them, are encouraged to participate in decision making, continuous learning and evaluate themselves and their colleagues. To share the knowledge to be successful it is necessary that individuals within the organizational culture:
- understand and evaluate the objectives and strategy;
- understand how their work contributes to adding value along the way towards a common goal;
- feel the respect and trust;
- good knowledge of and care for their colleagues and
- evaluate trust in their leaders.

Knowledge management is not a technology. KM problems cannot be solved solely technology, which has so far been emphasized repeatedly. Neither technological solution is not a solution if it does not respect and ignore the human dimension.

Knowledge is working in a chaotic process that requires time. As much as we needed it, the internal indications of knowledge, innovation and ideas, never created by an established order or arrangement. Always bear in sudden unplanned process which takes time.

4 STRATEGIES OF KNOWLEDGE MANAGEMENT

The strategy involves designed knowledge management linked to business strategy operational. This complementary results are in products and services that achieve competitiveness in the market. Featured are two knowledge management strategies. *Generics* (modification of knowledge from one form to another), and *general* (how to achieve competitive advantage by using knowledge). Share knowledge to explicit and implicit knowledge is the basis for the formulation of generic knowledge management strategy. It is a basic and important separation of knowledge as a basis for other categorizations. Featured are four generic knowledge management strategy. Although they can exist independently, in practice, perform their combination, with the aim to provide a holistic approach to knowledge management. *Socialization* (as a strategy) involves the transfer of tacit knowledge. It's such a transfer that refers to the imitation of operating procedures and work processes in the performance of tasks related to routine operations. For efficient transfer of knowledge entity that adopts a knowledge should be physically Contact Information with an entity that emits implicit knowledge (there are possibilities for transfer via telecommunication).

Externalization as the process of transition of implicit into explicit knowledge, the codification of tacit knowledge by means of a continuous medium that has a standardized physical form. With this method of converting implicit to explicit knowledge organization is protected from loss of accumulated tacit knowledge of earlier periods and kept it for the future. This procedure provides the use of knowledge, and at the same time it reduces the time needed to practice the past again in the future and reduce the costs for re- transfer of implicit knowledge explicit. The *strategy of combination* of process transitions explicit knowledge into explicit knowledge, which means that existing explicit knowledge updating. Already codified knowledge (using a medium) as a subject of interest in combination with a new idea resulting in the creation of new knowledge. This knowledge in the future again may be the subject of a new upgrade or transfer of implicit knowledge. *Internalization* is a modification in the implicit knowledge explicit. In fact already codified knowledge derives its practical application and in addition, on the basis of specific rules, and verification experience. There are classifications (criticized them for favoring large organizations) that have developed a general knowledge management strategies by large corporations.(Vlahovic, 2008) At the same time states that failure to present the development of knowledge management in practice, the concepts developed to support knowledge management in smaller organizations than what is provided generic knowledge management strategy. That consulting firm McKinsey & Company identifies five strategies:

Development and transfer of the best practice, as the strategy is focused on identifying best practices and its spread across dispersed network locations. The idea of this strategy is not new, but only in the concept of knowledge management derives its theoretical basis.

The strategy of creating new industries from the existing knowledge, is the identification of organizational knowledge, in order to be utilized in a new and different way.

The strategy of shaping corporate strategy around knowledge, refers to a review of current environmental conditions and strategic options as a basis for the formulation of corporate

strategy. Corporate strategy defines the need for knowledge organization in line with strategic priorities. This provides a constant overlaying of knowledge.

The strategy of generating and commercializing innovation is focused on strengthening competitive position. It is realized by increasing the number of technological innovations, in order to shorten the time required for new product development and its commercialization. The greatest application in the organizations that have products with a life cycle very short. Also applicable in cases where the customer needs to constantly change, and which has a very large intensity of competition. Successfully used with the manufacturer Toyota.

The strategy of creating standard release of their own knowledge. Experiences show that its broadest applicability in the software industry. And Net browser Netscape faced with the problem of reducing market share. At the time when the public is given free access to source a number of users immediately increased. Netscape has increased its market share and brand image and even got feedback from users, which is turned into useful knowledge. So did Microsoft for its main product - Windows when allowed access to source code, although it is limited only to their partners who have signed contracts with him. The essence of the strategy is the same as in the previous example. (Dimovski, 2010)

5. WHY INTRODUCE THE CONCEPT OF KNOWLEDGE MANAGEMENT?

Practice has shown that the concept of knowledge management has numbered used. Knowledge Experts have tried to quantify the contribution of management knowledge expressed through operating result, but a more valid yet found. The conclusion is that management contributes to the more efficient solution, reducing problems, reduce costs, increase creativity and innovation, reputation of the company, better positioned employees, proactive approach people and whole organizations. Special contribution to the achievement of additional competitive advantage based on knowledge. In this sense, knowledge organizations can provide:
- creativity and innovation by encouraging the free expression of ideas,
- improve service and customer satisfaction,
- Increase revenue through better marketing of products and services on the market,
- Employee satisfaction and increased motivation with reduced fluctuations,
- change in management style,
- reduce costs by eliminating redundancy or unwanted processes.(Dimovski, 2010)

6 CONCLUSION
Era of knowledge does not start already occurred. We cannot wait to what comes to us, so as to make the perpetrators of one's program or project, or start their own proactive approach to knowledge. Discipline (KM) is still in the transition phase from the foundation to the development phase, but it is not an obstacle to his successful application in their daily business. It may be noted that some companies successfully manage knowledge, even if not precisely expressed the view that they want to manage knowledge. Knowledge management leads to improved communication and enrich cooperation between people. Awareness of the need for knowledge and the two foregoing factors indicate greater trust and respect between the people who depend on each other through the processes, functions and departments of which they are members. All this is reflected in the improvement of the skills of workers, level tasks, processes, functions and overall organization. The perspective of knowledge management in the observation of this concept precisely in the light of the critical issues of

adaptation of the organization and its survival under conditions of discontinuous change in the environment, and to find the unity of information technology, on the one hand, and the creative and innovative capacity of human beings, on the other hand. The concept of knowledge management is one of the main ways in which the challenges and dangers of modern and unpredictable business environment, convert the chance of a successful modern business organization and on this basis to build competitive advantage. So behind the concept of knowledge management is the concept of knowledge management with other concepts that make up the new management paradigm in the center of which are certainly people as the most important component (in addition to IT, HRM , culture, leadership, other processes, controls, etc.). (Mašić, 2003.)

The result is to increase productivity and better decision making. All this is done and can be done by intuition and skills that workers and management organizations possess. But all of this is based on a strategy of knowledge and harmonization among people and can repeatedly increase the score to achieve. ***The choice is improvisation, or real strategy oriented towards the future.***

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AGE OF HYPER, MICRO AND NANOTARGETING

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ABSTRACT
Rise of social media and social networks bring many questions and tasks to marketing and Public Relations. Traditional mass communication model (one-to-many) in last decade rapidly transformed into personal communication model (one-to-one) through new methods of customer targeting (micro-targeting, hyper-targeting and nano-targeting) which map target audiences on totally different ways. Research results in last three years (Jovanovic, Fastbridge and Brankovic) show that most of customers younger than 40 years embrace an idea of personalization and multiple choices of media contents which they demand, as well as growing amount of time they spent in pseudo communities. What expected as is spoiled, conformist consumer who is hard to find and who don`t like random ads. This paper consider methods and tools marketing and PR use to target consumers of new media, from psychographic, interests, emotions, values, cultural differences to software programs such as crawlers and spiders.

Keywords: advertising, hyper-targeting, marketing, micro-targeting, nano-targeting, PR

1 INTRODUCTION

"Audience Targeting is Dead! Long Live Hyper-Targeting!"[1] is just one of headlines in American press that provoked intense debate among marketers last year. Simultaneously, terms micro-targeting, hyper-targeting and nano-targeting became armor of debate. These trends are consequences of an older one-media personalization, taking place in last decade as personalization of media contents. While marketers talked about Generation X, Millennials and Baby Boomers media world brought to them a special kind of audience-Spoiled[2] (named by Tyler Loechner). Spoiled have no respect for generation or geography borders, demanding everything now. They communicate through social networks, change TV with YouTube, they *like*, *share*, *download* and *upload* with ultimate request for instantaneousness. Only real-time media can satisfy conformists unable to watch TV for hours or read papers enough to spot an ad. Instead, they prefer digest versions of media contents with no ads at all. According to research results in last two years process of media content personalization is irreversible. Market recognized easier way to advertize and sell so we can expect trends to become standards.

Communication in 21st century puts marketers in difficult dilemma: interpersonal or mass communication? Despite the fact that, economically speaking, mass media seems to be an ideal channel for dissemination of advertizing messages, ongoing studies show that communication in small groups or one-to-one model can far more efficiently influence consumer behavior, including shopping preferences. In order to decide what mix of interpersonal and mass communication use to integrate individual and functional component of new advertising, marketing experts are forced to choose between smaller, tightly controlled communities or larger, unsteady associations; between size of target audience and level of control over it. Turning process vice versa, from mass to interpersonal communication (and it

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[1]Source: http://beforeitsnews.com/science-and-technology/2012/01/audience-targeting-is-dead-long-live-hyper-targeting-1579291.html
2 Source: http://www.mediapost.com/publications/article/197229/the-spoiled-generation.html?print

looks like return to pre-media time) we turn back to basics of social and market control. Alternative public opinion consist of digitalized individuals gathered around ideas, contents, themes, social networks and they must be targeted with new methods beyond classical demography (territory, race, nation, religion, sex etc.). Cost-benefit for corporative communications can be predicted only with analysis of their personality and concrete ways of using social media.

2 TOWARD PERSONALIZATION

Question that announces future transformation of marketing is related to audience attitude toward personalized media and media ability to adjust to individual tastes. Instead of traditional media content and fixed programs, new media turning to *a la cart* program. According to this author research, consumers in Serbia are not used to this kind of conformism yet, but they are willing to embrace an idea to be free of unwonted contents and waiting for contents they prefer. The most enthusiastic for changes are younger categories of media users (up to 25 years) - 96% of them think that personalized media are future of mass communication. Group 26-35 have also high level of expectations (92,86%) from personalized media, and even half of Internet skeptics (46+) considered Internet as a future of personalizing.

Most respondents agree that Internet enable personalization of information. Seems like mediologists were wrong saying that Internet will bring any information to every consumer. On the contrary, information will reach only those who search for her. For others, information won`t exist, no matter how available it is.

Personalization of media is unstoppable process because it seems impossible that once conquered minimal threshold of personalization can turn back to one-to-many model. Idea of minimal input with maximum output is tempting both for public and media. To American Internet newspaper *DailyMe*[3] personalization of content bring over 100 000 visitors and 25 000 registered user profiles in first month. Users spent more than 45 minutes on website daily, which is excellent result for an Internet news site.

Research (Jovanovic, 2010) showed that:
- Man and woman differently consume Internet media: men mostly search for daily newspaper sites and specialize e-magazines on automobilism, IT and mobile technique, while women prefer e-magazines with medicine, travel and fashion related content;
- Over 37% respondents older than 25 visit news sites regularly, mostly the same every day;
- Respondents in all four groups daily search for shopping websites, mostly starting with ads and then search for details and prices of products and services, as well as forums and chat of other users;
- 64% search by name of product, not by manufacturer website and if visit websites doing that from side pages, not from main page;
- 59% of respondents don`t believe in ads and official information about product and search for alternative sources (such as testimonials of users, user ratings etc.).

Internet media users we can roughly divide in three groups (according to their interests): *surfers, communicators* and *seekers*, and all of them are easy to target with new tools. Key

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[3] Source: http://dailyme.com/

word for *surfers* is unconnected - they *surf* the Net following key words instead websites, searching mostly for games, music and video contents. They can be easily tracked by *spider* programs. *Communicators* have profiles on more than three social networks and participate in forums and chat, sharing audio and video content (often they share ads they like) and that's why they are perfect for viral marketing. *Seekers* moving through Internet by targeted certain themes, mostly for education and business and they can be tracked by related search.

Advertising in Serbia is far behind technical segment of process. While we still discus about consequences of Internet use on mass media and marketing, much more complicated question came from mobile gadgets and wireless connections. For 53% respondents Internet is overcome and because they are 15-35 years old we can expect transition of advertising on smart mobile phones and tablets. Second direction we have to think about is *smart TV*, product of convergence between Internet and TV technology which enable users to surf the Net and peak contents without ads.

Now it is obvious that new forms of media imposing new kind of advertising, before all new way of targeting audience. Adopting different forms of participative behavior is crucial in Internet economy. Increasing number of connections through blogs, forums and collaborative campaigns can increase company power on virtual market. That`s why marketing managers have to question their basic ideas about communication, organization and role of consumers in information process in order to stay primary information source for buyers. Effective ways to integrate participative marketing/advertising in new media forms are simple and all related to connection:

- Continued connection and constant update of information for consumers (alive, fast extension of communication in cyberspace).
- Networking of content, SEO[4] and software to react on users moving through Net.
- Interactive connections to support marketing tools and organize consumers as activists in social responsible brand campaigns, research and data base creating.

Most marketing agencies and companies have policies, practice and traditions which discourage connection. Participatory advertising suggest that public seek for more intimate relations with companies, marketing managers and stories they tell through advertising campaigns. On strategic level, companies have to decide between size of audience and quality of her participation.

Current worth of advertising lies in information and ideas. As we face informatics explosion, need for flexibility and rapid market changes, corporative advertising models need complete makeover. Internal changes and transformation from pyramidal into network structures are some of consequences of the process. Rest of process implies collaboration between institutions, as well as adoption of someone else's successful practice. In case of participatory and personalized advertising it means stronger relations between companies and public both directly (broadcasting) and indirectly (using virtual communities as generators of content). Such radical change can`t happened fast because it is terra incognita for most corporations as well as investors and stakeholders unwilling to invest in uncertain experiments which demand special trainings for employees, expensive equipment and stimulation for marketers to interact with target audience.

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[4] SEO – Search Engine Optimization

Public demands tighter relations with storytellers. As virtual community grows, grows market value of company also. For example, blogs are an excellent way to bridge the communication gap between companies and public. Connection with target audience is necessary measure of autonomy for marketing managers who have to develop sense for ethics and conscience, more livid stories and closer relation with consumers beyond traditional communication. At last, public can develop certain loyalty only to sincere and communicative marketing managers.

Companies also face the dilemma in which part of advertising production participants should be included and how. To turn consumers into innovators, marketers should provide some kind of free tool (software) for more effective collaboration. Such programs include writing, editing, audio, video and photography, download, upload and sharing options for contents. Least, but most important step for marketers is voluntarily giving up control over produced content. Advertisers often considered themselves owners of stories they create, *pack* and sell. For traditional marketing that`s it. For new, personalized and participative marketing channels, story is just the beginning of turbulent journey consist of sharing, discussion, comments, rate, like or dislike. New advertising is just an initiator of communication. Internet community adopts story (we can call it ad), reshape it, re-create with new ideas and information. This is essential because if information didn`t went through such filter, it means that no one was interested for it.

3 EFFECTS OF HYPER-TARGETING

Communication technologies can be essentially divided into physical, code and content related. Situation with their users is far more complicated because they have to be seen through numerous elements of different psychology/behavioral profiles: cognitive styles, personality, cognitive capabilities, knowledge, moods etc. In classical targeting these individual nuances are sacrificed for quantity, while new tendencies demand from advertisers to respect key but different characteristics of consumers: individual differences in processes of perception, elements and factors inherent to information technologies which produce individual psychological effects based on perception and information processing and influence buying behavior. Behavioral consequences of consumer based targeting are most obvious in case of persuasion, emotional branding or brand awareness. Prediction of consumer behavior in real time is complex, especially if it's impossible to monitor directly everyday market behavior (buying, social life, moving in real world, facial expressions and nonverbal communication). Attempt to target Internet users with mix of subjective methods (questionnaires and interviews) and objective measurements (behavior observations) didn`t give satisfying results in practice.

Online targeting need sensors which detects variety of background signals. The simple systems of Internet browsers follow movement of IP address and online shopping in attempt to define user buying preferences. Efficiency of such systems is questionable because they do not include affective part of consumer personality and his social interactions on Internet. For that reason targeting theory in last decade split two ways: to psychological customization and user profiling based on interests, data and ways of network interactions. Psychological customization can be applied on different aspects of HCI (*Human-computer Interaction*) such as augmentation systems and information contexts, notification systems, affective computing, collaborative filtering, context and tasks, computer mediated interaction systems, message systems and contextual sensitive services. On technical level psychological customization is new form of middleware software between applications, services, data managing systems and data bases. It provides interface to create desirable psychological effects and experiences for

individual users and groups (content management, consumer relations and psychological customization). Main goal is to establish logical connections in user behavior, for example, to define individual differences in cognitive processes such as: attention, capacity of working memory, intelligence, mobility and lingual abilities which can effect positive emotions, persuasion, social behavior etc. Logically, the best field to applied psychological customization is persuasive technique because it is based on effort to change consumer behavior, motivation and attitudes. Despite skepticism of practice, empirical data shows that psychological customization makes about 10% of hyper-targeting effects.

Effectiveness of psychological customization in persuasion is complex question. Subliminal messages, well-known symbols, messages based on biological needs (shelter, food and sex), maximization of message credibility, creation of desirable product image and strong emotional content are persuasive methods based on psychological customization mostly used in advertising. Psychological customization is applicable even in technical aspects of message dissemination: mobile devices, interface design, audio output (music, audio effects).

Next advertising field depending on hyper-targeting is emotional branding and brand awareness. Positive emotions towards brands need to be stimulated with pleasant sensations which make buying process easier. System of recommendations is also based on consumer psychology profile and shopping preferences gathered by hyper-targeting. Recommendations model starts from text to audio, from audio to animation, from animation to interface.

4 HYPERTARGETING TOOLS

Despite different techniques, hyper-targeting consists of standard elements: web site, user, ads and personalization tools. Targeting techniques differs in ways of marking target and communicator and gathering data (in some of them user willingly participate and for some he didn`t even heard). Basic targeting method is gathering following information: IP addresses, timing, ISP, web browsing history, key words typed in browsers, demographic data, social networks profiles with personal interests, favorite contents, even financial and health information.

Advertising mode	Hyper-targeting
Social networks/Online communities	Managing communities, targeting specific consumer groups, non-advertising, neo-tribalism, click-activism
Advertising	Psychographic targeting Contextual targeting *Online* mapping Video targeting through multiple platforms Targeting through multimedia Optimization of online campaigns Targeting audience through user generated contents and social networks websites Targeting audience through specialized networks

Figure 1: Modality of hyper-targeting

4.1. Network hyper-targeting tools

Personal hyper-targeting developed from content targeting software created for browsers data gathering. *Crawler, Spider* and *Bot* are computer programs which can find millions of web

pages, stored them in different bases and update every change. *Crawlers* follows hypertext links and marked them for further search. Best of *Crawlers* use algorithms to recognize important web pages, find duplicated pages on *mirror* servers and potential changes on HTTP protocols to make data gathering as efficient as it is possible[5]. Beside key words and terms for browsers, recently advertisers start using them for SEO strategy. By key words typed in browsers and searched content analysis programs select target groups of advertisers and audiences.

Googlebot is software Google use to gather information from billions of web pages. According to analysis of *robots.txt* files on *BotSeer*[6] this is most used and popular *spider* program. *Google Webmaster Tools* is application for gathering specific information. Once connected to certain web page *GWT* adjust geographical targeting and tempo of data gathering as well as key words statistics which helps advertisers to create and disseminate advertising materials to specific group of users. *Google Analytics* isn`t *crawler* by purpose, but can be use to gather valuable information about the most common keywords in user search on different websites, region and cities most site visitors came from (and by which Internet providers), timing of search etc. Both applications offer, besides website analytics, data for SEO strategy with different parameters: video, text, mobile connections etc.

Other popular *spider* programs works by same principle. Among them are *Yahoo! Slurp*, *Bingbot* use by Microsoft for his *MSN* portal, *libwww-perl* (*Library for WWW in Perl*) and *Ask Jeeves/Teoma*. Among independent programs, which can be installed and use for any site the best is *Screaming Frog SEO Spider Tool,* small free program that analyzed website from *SEO* perspective - catching webpage elements and classified them by type of content, enabling user to filter data according to common *SEO* characteristics. Program constantly gathers all noun *SEO* elements such as URL, name of page, meta-descriptions etc.

4.2. Catching bots as SEO strategy

For advertisers, efficient way to optimize website is to install *plug-ins* for *Wordpress* which can catch bots and record their activities. One of such *plug-ins* is *SEO Crawlytics* who can catch and categorized every activity of *crawlers* on website. Result looks like this:
A bot has visited your site!
GoogleBot googlebot http://goodlifekit.com/2012/05/29/maj-adr-najbolje-obuena/ 2013-03-31 66.249.78.204
A bot has visited your site!
BingBot   bingbot   http://goodlifekit.com/2013/03/26/dodela-oskara-iduce-godine-u-martu/ 2013-03-31 157.56.93.212
A bot has visited your site!
BingBot   bingbot   http://goodlifekit.com/2013/03/23/preporucujemo-drustveno-nekorektno/ 2013-03-31 157.55.35.32
A bot has visited your site!
GoogleBot   googlebot   http://goodlifekit.com/2012/06/22/bioskopski-junk-food-pretnja-za-drustvo/ 2013-03-31 66.249.78.197

This information helps advertisers to create attractive contents and to increase number of visitors.

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[5] http://oak.cs.ucla.edu/~cho/research/crawl.html
[6] http://web.archive.org/web/20100708103413/http://botseer.ist.psu.edu/namelog.jsp?s=0&1=1

4.3. Facebook and spider programs

In February 2013, *Facebook* announced new partnership with four companies who gathering lucrative behavioral information from transactions by loyalty cards, mailing lists to Internet search history data. These companies are:

- *Acxiom* – gathering all sorts of information, including services of financial companies, court data and federal government documents.
- *Datalogix* – company claims to be in possession of information about shopping preferences of over 100 million Americans, even in categories of luxury jewelry, medicine and university scholarships.
- *Epsilon* – company that gathering data from retail.
- *BlueKai* – company who creates *cookies* to track interest for brands on Internet.

Announcing new partnership, *Facebook* officials point out that new way of gathering data will help companies to create more efficient advertising and easily reach target audience for their products/services.

Do not forget that *Facebook* ad revenue was well over $3 billion in 2012, and it generated that by supplying personal user data to advertisers[7]. According to *Facebook Statistics*, one of four advertisers in the western world is on this social network because one billion users are already there[8].

So, why is *Facebook* so powerful in hyper-targeting?

One of primary reasons why *Facebook* has been as successful as advertising medium is because *Facebook*, more than any other website, has billions of users willingly offering up information on their personal tastes, interests, and demographic under the guise of networking and connecting socially with friends and family. People create profiles to propagate their self-image online. In so doing, they openly share valuable information about their interests, passions, hobbies, work, and even their current location. *Facebook* has seen outrageous success tapping into this vast wealth of information. Advertisers on *Facebook* have access to data compiled across all users to target advertisements directly to customers. Many companies have found a particular advertising advantage on *Facebook*, largely due to the social networking giant's method of gathering extremely high quality data on users across a wide variety of variables.

Currently no other advertising modality has had as much success getting their users to provide such massive volumes of personal information. In fact, many businesses have found they are able to carry a dialogue with their customers, using Facebook as a medium who allows advertisers to specifically target individuals by the various characteristics and interests they claim on their profiles. For instance, if advertiser sells cars, he can easily advertise directly to all *Facebook* users who list cars as one of their interests or hobbies. Further, advertisers target ads based on other variables such as age, sex, or a number of other demographic identifiers. Customer can be separated by location, whether state, city, or zip code. Can be divide by relationship status and interest, and education level. And perhaps most importantly, nearly every user on *Facebook* publishes a list of their hobbies and interests, such as running, cooking, or reading.

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[7] Also, if someone has large number of friends on *Facebook* or followers on *Twitter* now can easily sell them to advertisers. Cost for friend in US is around 9$, and in Serbia only 0,50 Euro.
[8] Source: https://www.facebook.com/business/power-of-advertising

Advertisers can use *Facebook's* wealth of consumer data to not only hand-pick the types of people who see and consume their ads, but also to better design their marketing messages for a more effective call to action. Numerous tools currently exist to analyze *Facebook's* user data to help target specific individuals with the best possible message.

Clicking a "like" button gives advertisers a list of users who are likely to buy a similar product. There are 50 million "likes" on *Facebook* every day. This social network is also able to monitor conversations to gather comments and insights from customers talking about brands. There is also image recognition software able to recognized brands on pictures user posted on their profiles. Tagged persons on analyzed pictures soon received ads for recognized products. Recently, *Facebook* started experimenting with monitoring conversations in real-time.

5 CONCLUSION

Ongoing revolution in targeting brings many possibilities for better capitalization of web, meaningful segmentation of target audience/individuals and opens new communication channel for users and advertisers, useful both for distribution and communication. But, new Promised Land is still challenging in several segments – user's privacy questions, developing meaningful cost-benefit model (so many users aren`t guarantee for increase sell), maximization of web potentials as branding tool, as well as huge amount of gathered unusable (ballast) data. In next few years we will be witness of great changing in corporate and market communications, consolidation of theory and practice of digital advertising, more focus on consumers as participants and moving toward targeting by video contents.

Targeting technologies will be used not only to sell, but to establishing dialog with consumers and long-term relationship marketing. Anyway, targeting became more sophisticated, but after initial excitement some questions still stands unanswered:

- Did interaction of consumers and advertisers on Internet (especially social networks) really influence shopping preferences?
- Can online brand campaign, without other forms of promotion, really increase brand value?
- More of 80% of Internet users don`t want to be tracked. How they will react on privacy violation?
- How different targeting techniques (demographic, behavioral and psychographic) influence same consumers, or we need it all in comprehensive campaign?
- Question of sincere brand loyalty?
- Question of methods in mobile targeting?
- Is there bright future for banners as the most common way of digital advertising?
- Can we expect legal war of Internet users and their sellers?

So far, there is non relayable empiric research on this topics.

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CORPORATE SOCIAL RESPONSIBILITY FOR PUBLIC HEALTH – A NEW FIELD FOR BUSINESSES TO DEMONSTRATE THE COMPETITIVENESS

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ABSTRACT

According the modern understanding of corporate social responsibility (CSR), a brand does not depend only on the quality, price and variety of products, but also on development in the context of relationships with employees, community and the natural environment. Businesses increasingly incorporate social issues into their strategies so that they reflect their actual business goals. For a long time, the concept of corporate social responsibility in Serbia was narrowed to money donations. In recent years, however, it becomes an inspiring, challenging and strategic development path of companies. Recent years, businesses in this region are increasingly involved in solving problems relating to public health that has worsened after decades of social instability, wars and the economic downturn. Serbia has set high standards of healthcare services provision for the population. On the other side, the government is fighting for the sustainability of the health system that is increasingly difficult to finance from the state budget and funds. Promotion of healthy lifestyles and arising of awareness showed good results in Serbia, especially when the innovative CSR initiatives have been undertaken in partnership with government and civil society. In the last decade, the variety of CSR activities was performed in Serbia. Companies were supporting "consciousness raising" programs, education and continuing medical education of health workers; campaigns for promotion healthy lifestyles; the development of corporate philanthropy, etc. Professionals in the private sector think increasingly about these problems when they plan strategies of corporate social responsibility for their companies. They take in account that their impact on health improvements can have a positive impact on their employees' morale and strengthen ties with customers. Additionally, investments in prevention and health promotion in the community, businesses can enhance their reputation and corporate brand among key stakeholders.

Keywords: *Corporate social responsibility, public health, community, healthcare, company.*

1 INTRODUCTION

Companies must earn in order to survive in the market. At the same time, they are under the constant supervision of stakeholders (citizens, media, potential investors, associations and insurance companies). They require of companies develop production in an ethical manner (Dahlsrud, 2006, pp. 1–13) and to do business with the realization of economic, social and human rights, including the right to a healthy environment (Dahlsrud, 2006, pp. 1–13). Managements of such companies contribute to economic growth. They improve the lives of their employees, their families, communities and society as a whole. They recognize that a well-planned and coordinated strategy of corporate social responsibility (CSR) could contribute to a better quality of life and healthier environment. At the same time, they can strengthen the customers' trust and maintain the profitability.

The business sector has for decades supported charitable and civic activities, including investments in community health. In the second half of the 19th century, Andrew Carnegie, known as the "Baron of Steel", built a village for housing for his workers and had introduced the eight-hour day before the law passed. In that way, he earned a reputation of an "enlightened industrialist". Mid-thirties of the twentieth century, before the establishment of

the United Nations (UN) and the World Health Organization (WHO), the Rockefeller Foundation have worked as an unofficial world Directorate of Public Health (www.en.wikipedia.org). It was using its vast philanthropic resources to combat the disease (www.en.wikipedia.org). The well-known example of this foundation is its support in salvation the epidemic of yellow fever in Colombia and hookworm infection epidemic in Thailand. Four decades later, major international companies have started to invest in social causes in order to improve public relations and crisis management. However, these investments usually were neither strategic nor focused on real social change.

## 2 CONNECTIONS BETWEEN BUSINESS AND COMMUNITY HEALTH

Sustainability of health systems concerns governments in many developing countries due to low levels of technological development and insufficient budgetary allocations for health. In spite that, public healthcare institutions face with increased expectations for better and faster services, more medications and innovative medical technologies (Karanovic, 2012, p. 91). These expectations, along with the population redistribution and better-informed patients, require continued investment in healthcare facilities. The deterioration of the economic situation that reduces the capacity of the state to invest in healthcare will not lead to a reduction in requests for capital projects in the health sector. This situation provides an opportunity for private health care institutions, insurers, pharmaceutical and medical equipment manufacturers and other suppliers to participate in supporting the community health and making the opportunities realize both business and social interest.

Decisions that affect people's health greatly depend on health policy and the organization of health care. Local policies and businesses that operate in these communities also influence their citizens health. The state contributes to the improvement of population health by investing in the health system and public health institutions. Thus, it directly contributes to clinical outcomes and establishment of general social goals, such as improvement the quality of health services, reduction of waiting lists, higher customer and employees satisfaction, etc. (*Figure 1*). Indirectly, it contributes to the local economy and these investments can be considered as long-term capital investments into the local economy.

Contemporary business world recognizes that CSR can be an efficient way to contribute to the ongoing social changes. CSR can help producing long-term improvements through investment in the community health and social benefits. The managements of "good companies" care of their enterprises as of communities that create tangible values and operate with a common goal. Employees, as members of such a communities, have clear responsibilities and certain rights. Their best interest is treating each other as partners and sharing the responsibility both for the business and their local communities.

Great communication between employees (citizens) and decision-makers (managers) is of a high importance for the successful development of CSR strategies. The employees, as individuals, can have a high impact in changing the character of the social environment of their companies. The synergy of good relationships, ensuring health and safety in the workplace and the community, can create a foundation for business success (www.coursehero.com). Therefore, the dialogue with employees and community members is one of solutions for the success of the strategy of corporate benefits.
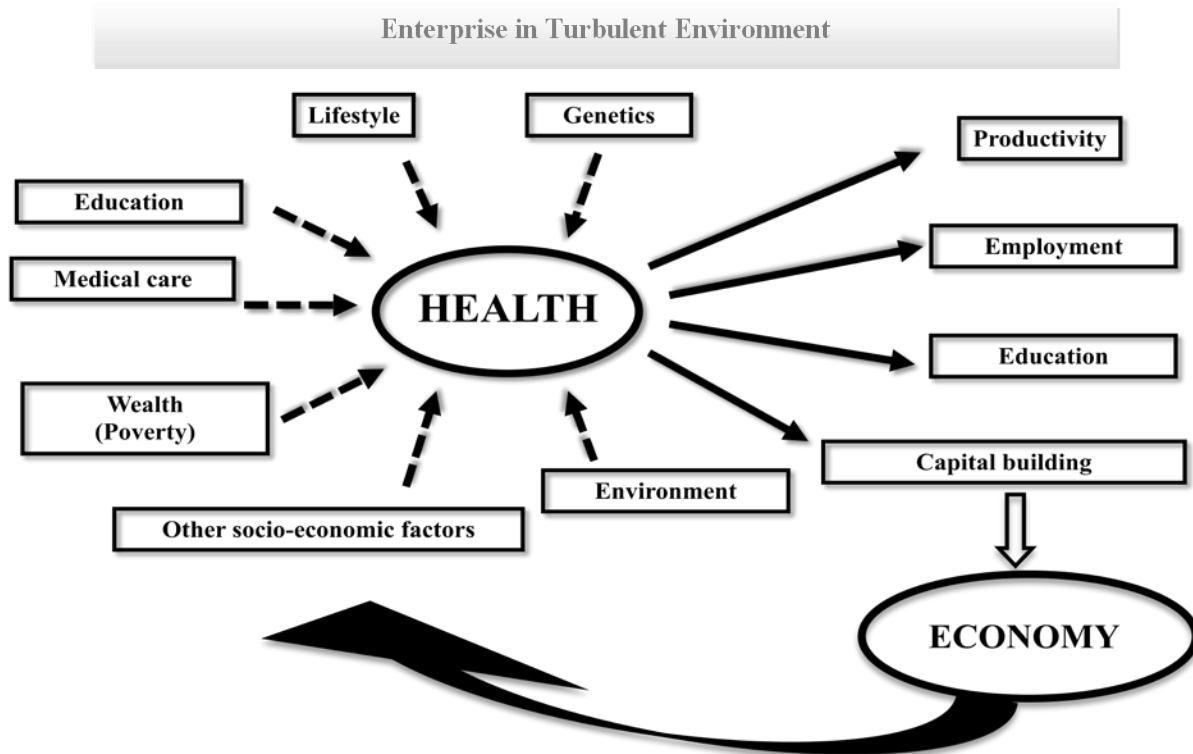
Figure 1: Relations between health and business (McKee et al., LSHTM)

Companies can influence health improvement in two ways – directly, by taking care of their employees' health and indirectly, by supporting the health in communities in which they make their profit. Companies operating in such a responsible way become corporate citizens. Similarly, to classical citizens, corporate citizens have a variety of personal interests. They instinctively look to tie their personal interests (to make a profit) to the general welfare. They make efforts to reconcile the strategy of making a profit and the general good of society. Companies find ways to direct their resources towards socially engaged initiatives. Partnerships between businesses and healthcare facilities can be a good volunteer and strategic alliance of the private and public sector that can increase the capacity of each organization. It can help them to achieve a general purpose or goal, by sharing risks, resources, responsibilities and interests.

Building partnership for the health between business and health care institutions has many challenges. These areas have different cultural and professional goals, communication and management structures. All these differences make difficult and complex the building of mutual trust and commitment to working together. From the business point of view, the greatest weakness of the public sector business is deadlines within budget.

Another challenge for healthcare organizations and business is to find a common base of cooperation with a flexible approach that will produce innovative and mutually beneficial solutions. Health and medical manufacturing sector can achieve a synergistic effect through CSR, which leads to the improved health status of local communities' residents.

Partnerships with companies could help healthcare institutions to expand their healthcare projects not only through health care facilities, but also through initiatives at a workplace or elsewhere in the community, where people of the community can be directly reached. It is especially important for implementation of prevention programs, screening for malignant diseases that can be performed through timely targeted examinations, for family planning programs, reproductive health programs, etc. In turn, improve the employees' health can have

a positive impact on the private sector by increasing productivity, due to lower absenteeism and higher employee morale. Investments in prevention and health promotion in the community, businesses can enhance their reputation and corporate brand among key stakeholders.

3 SOCIALLY RESPONSIBLE INVESTMENT IN COMMUNITY HEALTH

The conditions of a healthcare system and general health policy, local policy and businesses that operate in the community greatly affect community health. When invest in health care facility or health promotion, a corporation gives a direct contribution to prevention of disease, diagnosis, treatment, clinical results, health management establishment and, in general – reaching the social goals. Depending on investment in the healthcare, the results may be manifested as the healthcare services quality improvement, reduction of waiting lists or higher customer and health workers satisfaction. Indirectly, the company, thereby "win over" public opinion, develop or strengthen its brand and contributes to the local economy. On the other side, when invests in the public health system and its institutions, a state contributes to the improvement of the community health and thereby indirectly contributes to the local economy. Therefore, this investment can be considered a capital investment.

Recently, during business promotional events and in media, managers increasingly mention the names of their companies together with the CSR concept. These Activities of CSR to improving the community health are not directed only to healthcare facilities but to conducting various activities, such as:
1. Joint participation in campaigns for the public benefits (i.e. supporting programs "consciousness raising");
2. Supporting education and continuing medical education of health workers;
3. Supporting education for the introduction of new health technologies;
4. Supporting initiatives at the local level (i.e. campaigns for promotion healthy lifestyles, supporting mass sporting events, supporting human rights in health care promotional activities)
5. The development of corporate philanthropy:
   – Projects in the field of diagnosis and examination (i.e. purchase of medical equipment);
   – Helping healthcare organizations in the provision of health care in rural and remote areas (i.e. "mobile clinics" and mobile pharmacies)
   – Provision of grants and technical assistance (items and equipment: computer equipment, furniture, printing, publication, seminar costs, etc.)
   – Provision of space, equipment and vehicles (providing seminar rooms, buses for participants transport, etc.)
   – Provision of services in the form of professional knowledge and skills (legal services, members training, etc.)
   – Provision of the time in media for public health promotion (TV, radio, Internet, print media) etc.
6. The cooperation that aims to adapt products and services for people with disabilities and other vulnerable groups;
7. Direct payments (funds);
8. Support health institutions to equip citizens for some skills (first aid, preparation for natural disasters, etc.).

Pharmaceutical industry and industry of medical equipment clearly stand out as a leader in the

field of CSR activities in the area of healthcare (AmCham Serbia, 2009). One of the reasons is its close business relationship with many members of society, healthcare facilities and private practice. Another reason might be that a way of making a profit in the corporate health sector is linked with people's lives. It affects the resolution of their health problems more than other businesses. Business interests of the pharmaceutical sector and medical device industries often overlap or coincide with social interests. These industries are under constant public "anticorruption control".

Therefore, one should be very cautious when corporate social responsibility in this part of the business community related to health care institutions and health professionals. Promotion and other interactions between pharmaceutical companies and physicians, if not tightly regulated, can make the unethical behavior (Mohanti, 2013). Studies have shown that these interactions sometimes lead to irrational prescribing drugs (Wazana, 2000, p. 283), or increase prices of drugs with little or almost no benefit to health. Prescribing unnecessary drugs, in order to maximize profits can be the leading health threat to patients (Kassirer, 2005). Socially responsible initiatives in the pharmaceutical industry could be based on issues that are important to health care (Riordan, 2010), such as:
- Improvement of population health;
- Safe use of medicines;
- Clinical trials of new drugs;
- Studies of marketing, which should be taken when drugs come to market;
- Medication improvement;
- Contribution and support of health care policy improvement through joint initiatives with the public sector and organizations of a civil society;
- Support of medical associations, patient organizations and health professionals.

Management of health care facilities, medical equipment manufacturers and pharmaceutical companies, actively analyze the healthcare needs in their community. They make efforts to ensure these needs through strategic planning programs and services. In that way, they should take part of responsibility for social and economic development. On the other side, a good systematic way for responsible business in this area can be achieved through the development of good CSR strategy.

Developing and implementation a comprehensive CSR strategy takes time, dedication, skilled people and financial resources. It requires the commitment the staff in managerial positions, but also of all employees in the department. To be truly effective, the strategy of corporate social responsibility has become a "corporate DNA" that permeates all aspects of business – from Employment to branding, from production to sales.

Corporate social responsibility could be essential for the long-term prosperity of the company as it provides the ability to show the human face of business, vital to society as a whole, particularly for the communities in which companies operate. CSR refers to how businesses align their values and behavior with the expectations and needs of stakeholders (Karanovic, 2012) – not only with clients and investors, but also with employees, suppliers, community, special interest groups and society as a whole.

In addition to fulfilling social obligations, companies that make product for the health sector can improve access to capital, improve their brand, increase sales, improve employees' knowledge, improve risk management and reduce costs through effective CSR programs.

Better implementation of health related goals and innovative solutions to global challenges could be reached in partnership with all stakeholders. This way of thinking and action helps companies to build not only economic but also health prosperity.

Rare is the companies that want to invest long-term in the community. The prospects for sustaining partnerships for health will be greater if these initiatives relate to the key business objectives of companies. Successful partnerships achieved through CSR can help to raise awareness of influential corporate leaders on health issues, which further can significantly help health ministries and health institutions in building public support for health programs.

Partnership between the corporate and civil society is not necessarily the active participation of the government. However, the active cooperation of the Ministry of Health or local government is essential in facilitating links with community infrastructure and health care institutions. Regardless of whether the government is a full partner in the initiatives of CSR, or its role is formal or informal, the government should be well informed about the initiative. In that way, government can provide favorable conditions for the future success of such activities. The government has resources that may be used in activities such as funding, staffing, expertise and infrastructure. In countries where health system reform is ongoing, partnerships through CSR can be one of the strategic options for the implementation of the action plan.

4 CONCLUSION

Healthy population is the base of all activities in the community. That is the reason why modern managers are increasingly linking their business with the community health, as one of the most important issues of the society. By creating better and closer connection and making partnerships with the local governments and civil organizations, contemporary businesses help the healthcare sector to preserve and improve the health of community residents. Corporate health sector has a special responsibility in the planning and implementation of programs of corporate social responsibility. To make a successful program of corporate social responsibility, companies should focus on the health needs of the community, environment, workplace and markets. Companies operating in this field can innovate existing and develop new products and services, access to emerging markets to engage more diverse and talented workforce and thus reduce the risk of their business. Key factors of planning CSR in the corporate health sector include responsible management, responsible procurement, environmental efficiency, responsible stewardship of the environment, labor standards, employee and community relations, social equity and respect for human rights. It is necessary to ensure transparency of these activities, especially in public procurement and risk management skills improvement. These areas are often identified as a significant critical success factor in the management of the health system and its institutions. It is also essential for progress of companies because it allows showing the human face of business and establishing an important link with the society, the environment and the community in which the business operates.

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CURRENT SITUATION AND FUTURE PERSPECTIVES OF CORPORATE SOCIAL RESPONSIBILITY REPORTING IN ESTONIA

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ABSTRACT
This paper focuses on Corporate Social Responsibility (CSR) reporting, which is gaining popularity around the world and in recent years has become mandatory in several countries for companies across various industries. This paper summarizes the results of research carried out to analyze the current CSR reporting situation in Estonia and provides an outlook on its future development in the country. The study also discusses important benefits and significant obstacles of CSR reporting based on a survey of selected Estonian companies and its key drivers on the national level. The paper argues that the concept of CSR accounting and reporting has found its place in Estonia. It is recognized and has been implemented by a number of Estonian companies, although the reporting practice does not have a very long history in the country. The research findings clearly indicate that the main principles of CSR concept are familiar to the surveyed Estonian companies, and have been integrated into their everyday business activities. CSR activities are usually reported either on companies' websites or as disclosures in financial reports. Standalone CSR reports are not very common, as many companies cannot clearly identify their benefits. Time constraints and the lack of qualified specialists are the main reasons for not issuing standalone CSR reports, in addition to the difficulty in measuring the impact of CSR activities. The paper also argues that despite the fact that Estonian companies have taken some successful steps towards integrating CSR reporting, this type of reporting should get more support and positive publicity from the state, mass media, various public and private institutions and organizations and the general public.

Keywords: *Corporate Social Responsibility, CSR reporting, Estonia, stakeholders, standalone CSR report*

1 INTRODUCTION AND REVIEW OF LITERATURE

In recent years *Corporate Social Responsibility reporting* (hereinafter referred to as *CSR reporting*) has become a matter of great importance and urgency around the world. An increasing number of companies are bringing *CSR* policies into their everyday business as an integral part of their sustainable business strategy. The frequent call for transparency from various stakeholders has prompted many companies to provide disclosures about their social and environmental performances. In a globalized economy, *CSR* is often advanced as a unique strategy of European businesses to gain and sustain competitive advantages. Companies need to align *CSR* with their operations in a way that allows them to operate in a cost-efficient and competitive manner in order to secure their position in the face of global competition. The positive impact of *CSR* is particularly evident with regards to human resources, risk and reputation management and innovation. (Martinuzzi, Gisch-Boie and Wiman, 2010).

In many countries this trend is also supported by various governmental and non-governmental initiatives. In 2011 the European Commission published a compendium of public CSR policies in the EU which gives an overview of public policies on *CSR* in the 27 EU Member

States and the European Union (Knopf et al., 2011). The European Commission (Directorate-General for Employment and Social Affairs) supports the United Nations Development Programme in a project called "Accelerating *CSR* in New Europe", which will encourage the measuring and monitoring of *CSR* performance in Bulgaria, Hungary, Lithuania, Poland and Slovakia. The European Commission also co-finances national multi-stakeholder platforms for the development of *CSR* in four countries: Croatia, Estonia, the Former Yugoslav Republic of Macedonia and Slovakia (European Alliance for Corporate Social Responsibility). In 2011 the European Commission pledged to "present a legislative proposal on the transparency of the social and environmental information provided by companies in all sectors" (SEC, 2011). Many companies believe that the use of *CSR* reporting will enhance their business performance through achieving a reputation as socially responsible and trustworthy organization.

In November 2010 the European Commission launched an online public consultation to gather views on disclosures of non-financial information by enterprises, such as social aspects, environmental information, human rights and sustainable development. A total of 259 responses were received (EU, 2011). The geographical breakdown of the respondents showed that most responses came from France, Denmark, the United Kingdom, Germany and Spain. However, no views came from Estonia. The results of the survey demonstrated that legal requirements on disclosure of non-financial information differ significantly across the EU Member States, with many respondents describing the current regime applicable in their countries as poor or very poor. A large majority of respondents showed support for the concept of integrated reporting, sharing of best parties, better guidance and need for the motivation for companies to report on non-financial issues (EU, 2011). In the authors' opinion it is extremely important that the respondents generally considered that there would be value in non-financial reporting based on principles such as those established by Global Reporting Initiative, ISO 26000, EU Global Compact, etc. (EU, 2011). These results indicate that the development of *CSR* reporting remains a matter of high importance in many European countries.

A survey of Ernst and Young published in 2013 points out that sustainability efforts are now well-integrated into the corporate fabric of a growing number of large and midsized companies. Yet the effectiveness of such efforts may be limited by internal systems that don't allow companies to effectively measure, track and optimize their sustainability impacts or to understand and manage the risks of insufficient action. To do these tasks will require new levels of engagement by the top senior executives and more sophisticated methods of sustainability reporting and assurance (2013). The authors agree with the results of this survey that the reporting companies often find it difficult to decide upon which particular matters to report, and how the reports will be constructed. The authors also believe that Estonian companies face a similar problem: they have no clear understanding of the benefits of *CSR* reporting. In this context, the main purpose of the survey that was conducted was to establish the current state of affairs and project an outlook for the future development of *CSR* reporting in Estonia, to identify conditions and factors required by companies to implement CSR reporting in Estonia, and to ascertain key challenges and the main benefits of *CSR* reporting for Estonian companies.

2 CONCEPT AND DEFINITION OF CORPORATE SOCIAL RESPONSIBILITY
The concept of Corporate Social Responsibility (*CSR*) began in the 1920s; however, due to the Great Depression and World War II, it failed to become a serious topic amongst business

leaders until the 1950s. In 1953, Howard Bowen made the first significant scholarly contribution in *CSR* by publishing the book, *The Social Responsibilities of the Businessman*. This book is argued to mark the beginnings of the modern period of literature on this subject. Here he proposed the *CSR* definition as "the obligations of business to pursue those policies, to make those decisions or to follow those lines of action which are desirable in terms of the objectives and values of our society." (Bowen, 1953). Over the subsequent decades, *CSR* definitions, practices and adoption of CSR expanded immensely. Into common use the term "Corporate Social Responsibility" came in the late 1960s and early 1970s after many multinational corporations formed the term "stakeholder", meaning those on whom an organization's activities have an impact. During years this term has seen many definitions and reviews. Milton Friedman has stated in his article (Friedman, 1970) .that "there is only one responsibility of business, namely to use its resources and engage in activities designed to increase its profits." 26 years later, M. Pava and J. Krausz (1996) in their studies argued that "firms which are perceived as having met some social responsibility criteria, either outperform or perform as well as other firms which are not (necessarily) socially responsible". Even prior to that, in 1979, Archie Carroll developed the corporate social performance (*CSP*) model whereby *CSR*, social issues and corporate social responsiveness were considered the leading philosophy for corporations to behave in a socially responsible manner. He provided his four-part definition of *CSR*, on which he later elaborated: "In my view, *CSR* involves the conduct of a business so that it is economically profitable, law abiding, ethical and socially supportive. To be socially responsible then means that profitability and obedience to the law are the foremost conditions for discussing the firm's ethic and the extent to which it supports the society in which it exists with contributions of money, time and talent. Thus, *CSR* is composed of four parts: economic, legal, ethical and voluntary or philanthropic." (Carroll, 1999). This definition is quite broad and does not specifically emphasize social or environmental performance. In our opinion *CSR* can be described as a company's strategy by which it voluntary takes into consideration environmental and social impacts of its performance, which is embedded in its everyday business activity and cooperation with stakeholders. This review is also governed by the above definition.

3 METHODOLOGY OF RESEARCH

This paper is based on the research conducted by one of the contributing authors, in the form of a survey conducted as part of a Master's thesis. A questionnaire on *CSR* reporting was constructed and sent to selected Estonian companies, asking them to provide feedback within the period of 03/15/2013–04/15/2013. The authors asked that the questionnaire be handled by the manager, who was either in charge of *CSR* reporting or dealt with this issue and produced *CSR* reports. The selected companies were either included in the Corporate Responsibility Index (CR Index) once or more than once and/or were listed in the Tallinn Stock Exchange. This selection was made since, in the authors' opinion, these companies would either be aware of the *CSR* concept or would currently practice *CSR* reporting.

The questionnaire included 12 multiple-choice and 3 "yes/no/other" questions regarding *CSR* reporting. In case of the multiple-choice questions, the respondents could choose either one or several options, or provide their own reply with an explanation. In the beginning of the questionnaire the following definitions of *CSR*, *CSR* reporting and *CSR* report were presented:

- *CSR* can be described as part of the company strategy that is implemented into everyday business activities and cooperation with stakeholders by which the company voluntarily takes into consideration environmental and social impacts of its performance.

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- *CSR* reporting means reporting the company's activities in the area of corporate and social responsibility to its stakeholders.
- *CSR* report (also Triple Bottom Line or sustainability report) is a report compiled on a voluntary basis with a purpose of informing various stakeholders of the company's activity in the area of corporate and social responsibility.

A total of 49 companies responded with some questionnaires answered by members of the board, managing directors, financial managers or marketing managers. Other respondents included accountants, personnel managers, sales managers, shareholders, and others.

The multiple-choice questions of the questionnaire were:
1. To what extent does your company implement main principles of *CSR*?
2. Which means of communication do you use to keep your stakeholders informed about the company's *CSR* activities and results?
3. Do you reflect *CSR* activities and results in any form of reporting?
4. Does your company use any sustainability reporting standards (e.g. GRI or Global Reporting Initiative, AA1000 or AccountAbility 1000)?
5. Are your company's *CSR* activities subject to audit?
6. What are the main reasons for not issuing standalone *CSR* reports in your company?
7. Under which circumstances would you start issuing standalone *CSR* reports?
8. When is your company likely to start issuing standalone *CSR* reports?
9. In your opinion, who should be responsible for putting together a *CSR* report?
10. What are the main benefits of *CSR* reporting to your company?
11. In your opinion, on which level should *CSR* reporting be promoted in Estonia?
12. In your opinion, what would be the main drivers for Estonian companies to implement *CSR* reporting?

The "yes/no/other" questions of the questionnaire were:
1. Does your company use any performance indicators to measure *CSR* activity?
2. Does the size of a company matter in the decision to implement *CSR* reporting?
3. Do you believe that a standalone *CSR* report would be beneficial for your company?

4 THE SURVEY
Figure 1 shows the answers to the first question, demonstrating that 35% of the respondents implement main principles of *CSR* into their everyday company policy, and for 41% of participating companies these principles are even embedded into their business strategies.
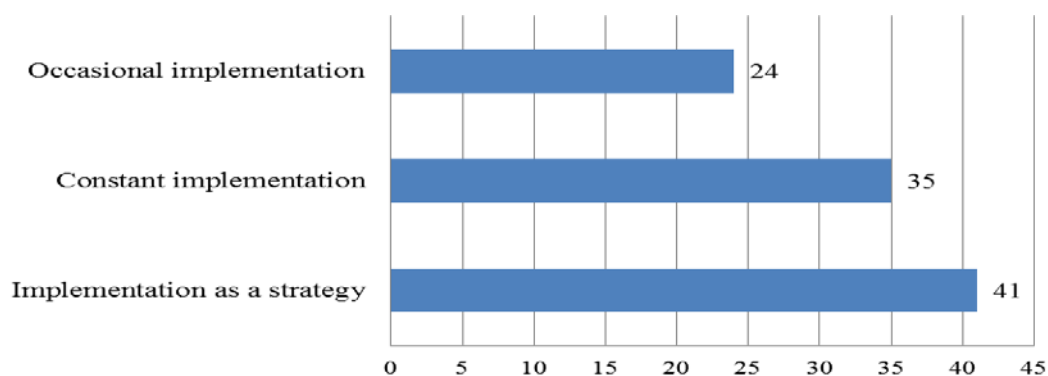

Figure 1: Implementation of CSR principles by the participating companies (%)

These results clearly indicate that the Estonian companies surveyed are quite familiar with the main principles of *CSR* and implement them in their everyday business practice. In the authors' opinion, this may be explained by the actions of the EU on promoting *CSR* reporting, which has been duly noted in Estonia.

The answers to the question 2 are presented in Figure 2 (companies could choose several options), and are considered of very high importance by the authors, since in recent years the Internet has become one of the most accessible and well-known sources of information.
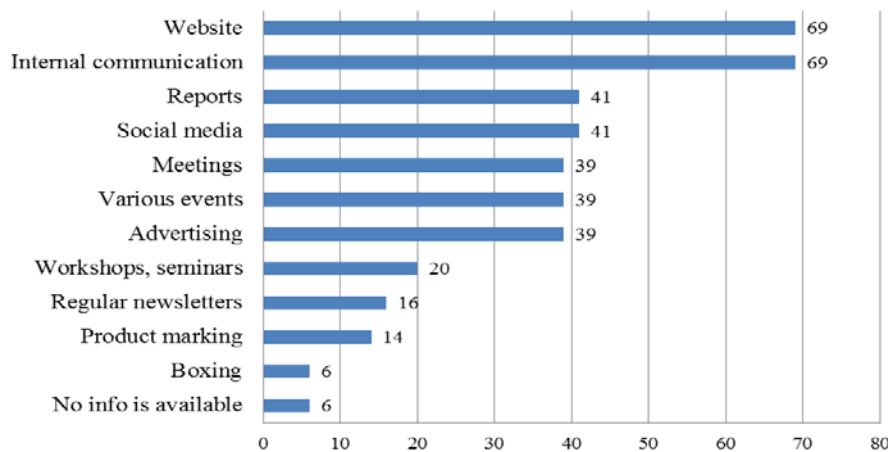
Figure 2: Distribution of information about CSR activities to stakeholders (%)

The results confirm the authors' assumption that the Internet and internal communication methods are the most widely used means of communicating information about companies' activities concerning *CSR* (69% of surveyed companies on both options). Therefore, the authors suggest that with regard to keeping stakeholders informed about the most recent developments in the company, the Internet will be the most-used communication source in the list of priorities.

It is also important to note that another popular way of keeping stakeholders updated about *CSR* is via direct contacts, such as meetings and various events (39% of surveyed companies on both options), making these contacts to be two-way processes, as companies can obtain valuable comments and feedback and provide necessary clarifications whenever required. It indicates great progress that 12% of the surveyed companies are already using *CSR* reports for keeping stakeholders informed about their social and environmental performance and 41% use different kind of reports to inform the stakeholders about *CSR*. From the surveyed companies only 3 (or 6%) currently provide no *CSR* related information to their stakeholders. This is a very low number, confirming the popularity of *CSR* concept for involving stakeholders in companies' everyday activities.

Table 1 illustrates the answers to the third question (companies could choose several options). It's shows that 31% of participating companies do not include information on *CSR* activities in their reports. This response may be partly explained by the fact that these companies prefer to disclose such information in some other ways (website, advertising, meetings with stakeholders etc.). Nevertheless, it seems that issuing standalone reports related to *CSR* activities is becoming more common in Estonia, with 12% of surveyed companies already publishing standalone *CSR* reports, 14% and 4% issuing environmental and social standalone

reports, respectively. However, many companies still prefer to include *CSR* information as a disclosure in the annual reports, as demonstrated in Table 1.

Table 1: Reporting of CSR activities by participating companies

Statement	No. of companies	% of companies
Information not reflected in reporting	15	31
Information on both social and environmental activity is shown in annual report	12	24
Information is not disclosed locally, but on the level of foreign parent company	11	22
By means of a standalone environmental report	7	14
Information on social activity reflected in annual report	7	14
By means of a standalone *CSR* report	6	12
Information on environmental activity is disclosed in annual report	5	10
By means of a standalone social report	2	4

The answers to the fourth question revealed that only 4% of the respondent companies report in accordance with the GRI. Parent companies of those 4% also use GRI; 2% of the participating companies claimed to use Responsible Care, ESAD II, Ethical and Business Principles of the European Association of Chemical Distributors (FECC), while *CSR* reporting of all the remaining companies is not based on any standard or guidance.

Table 2: Main reasons for not issuing standalone CSR reports

Statement	No. of companies	% of companies
Don't see any reason	13	27
Results of *CSR* activity are difficult to measure	13	27
Benefits of *CSR* activity are difficult to measure	8	16
It is enough if the parent company issues the report	8	16
Stakeholders have not shown an interest	7	14
Reflecting this topic in annual report is good enough for now	7	14
It is expensive	6	12
This report is already issued at our company	6	12
It is too complicated	3	6
Not enough information on putting this together	2	4
The benefits of *CSR* are not sufficient	2	4
Planning to implement	2	4
Have not thought about implementing	1	2
We are a social enterprise. This means that responsible behavior is our mission and already encoded into our activities	1	2
We are active in CSR area, but have not had time for systematic reporting	1	2
This topic is new, executing needs more consideration and learning from best practices	1	2

In the authors' opinion, these results are quite logical given that GRI or AA1000 training is not available in Estonia. Therefore companies find it complicated to follow these standards in full.

Regarding the fifth question, it is worth mentioning that 57% of the participating companies indicated that *CSR* related activities are not audited. This may be due to high auditing fees and the fact that currently *CSR* audit is rarely required by external stakeholders.

The question 6 was intended to identify reasons why companies do not issue standalone *CSR* reports (companies could choose several options). The facts presented in Table 2 clearly point out that the two main reasons for not issuing standalone *CSR* reports are that companies do not see any need for such reports and there are also difficulties in measuring and reporting the results of *CSR* activities.

The reasons stating that companies found it difficult to evaluate benefits of standalone reports, as well as found little or no interest from the stakeholders, were also worth attention. In addition, 14% of companies said that information provided in the annual report is quite sufficient and therefore no standalone reporting is necessary. Only 2 companies out of the 49 surveyed were considering standalone reporting, and only 1 company had never given it any thought.

The question 7 was only asked of those not issuing standalone *CSR* reports with a purpose of finding out what would it take for these companies to engage in standalone *CSR* reporting. The results are presented in Table 3 (companies could choose several options).

Table 3: Key drivers of issuing standalone CSR report

Statement	No. of companies	% of companies
If this became mandatory	12	24
Under pressure from stakeholders	12	24
Only voluntarily	12	24
If there was more information available	8	16
If there were instructions available in Estonian	6	12
We already issue such reports	6	12
If initiated by the parent company	3	6
Under influence of other companies that do it	3	6
We plan to start soon	2	4
Since our main activity cannot happen outside of social context, this is reflected in all our reporting. There is no point in a standalone report	1	2
I do not believe that reporting *per se* is necessary. What is important is that these principles work as a basis of everyday activity	1	2

It becomes obvious from examining the results presented in Table 3 that one of the key factors driving companies to issue standalone *CSR* reports would be pressure from the stakeholders. However, it is noteworthy that in response to this question the authors have received interesting and somewhat controversial results: 24% of the surveyed companies

would start issuing standalone *CSR* reports only if it were mandatory, while another 24% would do it only on a voluntary basis but are not doing so at the moment, citing lack of time and qualified personnel as a reason. It seems that companies are not enthusiastic about *CSR* reporting and have no common opinion on whether such reporting should be voluntary, obligatory or influenced by stakeholders.

The authors also wanted to investigate possible timeframes for the companies to start issuing standalone *CSR* reports (question 8). Companies were allowed to select only one option. 47% of the surveyed companies said they had planned to start standalone *CSR* reporting in the following 5 years; 12% were already doing so, and 24% were not planning to start. These figures prompt the authors to conclude that standalone *CSR* reports are a familiar tool for most companies; however, the majority of companies have not yet prepared to issue standalone *CSR* reports due to a variety of reasons. Another interesting finding (question 9) concerned the person who the companies considered to be responsible for producing *CSR* reports. In this case the respondents were allowed to select only one option. The results show that in most companies (61%) it is believed that it should be the responsibility of someone who has an appropriate qualification. A lower number of respondents assigned this responsibility to the management or accountant (18% and 8% respectively); 8% of the participating companies selected this task to be a part of teamwork, and 4% thought that this matter should be handled by a data collection specialist. Based on these results, the authors believe that employees should be given an opportunity to gain knowledge and skills required for *CSR* reporting.

With regard to benefits provided to companies by *CSR* reporting (question 10), the following responses are summarized in Table 4 (companies could choose several options).

Table 4: Main benefits provided to companies by CSR reporting

Statement	No. of companies	% of companies
Increase in employees' motivation and loyalty as well as higher productivity	20	41
Improved image and market position	17	35
Greater awareness of the company's name and brand	15	31
There are no directly visible or measurable benefits	15	31
Risk reduction	12	24
Competitive advantage	10	20
Decrease in costs	9	18
We do not have *CSR* reporting	14	8
Increase of customer loyalty	3	6
Improvement of financial results	2	4
So far it has only caused us trouble, not benefit	1	2

According to the results presented in Table 4, the main benefits of *CSR* reporting, in the respondents' opinion, are employees' motivation resulting in an increase in their productivity, improved reputation and market position as well as broader brand awareness. It is important to note that 31% of the participating companies stated that they could not see any direct benefits. In the authors' opinion, this is a very important indicator, which refers to the fact that

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many companies still view *CSR* as a popular tool required by the modern business environment which does not bring, however, benefits to the reporting company.

The question 11 was added to the survey in order to establish who should encourage and promote *CSR* reporting in Estonia (companies could choose several options). According to the results presented in Table 5, most respondents (78% of the surveyed companies) unanimously stated that *CSR* reporting should be an initiative of each particular company on a completely voluntary basis, with only 31% suggesting that the public sector should promote *CSR* reporting. It seems that companies are willing to start *CSR* reporting themselves, but only when they find it necessary and useful.

Table 5: Who should encourage CSR reporting in Estonia?

Statement	No. of companies	% of companies
A free will of every organization	38	78
Should be promoted by public sector	15	31
Should be promoted by private sector	8	16
Should be promoted by not-for-profit and voluntary organizations	8	16
Should be promoted on the international level	6	12
Should be promoted by EU organizations	3	6
Should be promoted on all levels	1	2

Question 12 was raised to establish the main factors which will force implementation of *CSR* reporting. The results are shown in Table 6 (companies could choose several options). In response to this question, most companies named reporting benefits, the positive example of other companies and pressure from the society as the sources of influence. In other words, in order to make the *CSR* reporting popular and widely used, there should be a common practice of such reporting, obvious benefits as well as social requirement and appreciation.

Table 6: Main drivers of implementation of CSR reporting in Estonia

Statement	No. of companies	% of companies
Benefits of reporting	30	61
Good practice of other companies	29	59
Pressure from the society	21	43
Increasing competition	15	31
Pressure from the state	7	14
Pressure from foreign companies	5	10
Pressure from EU (organizations, legal framework, etc.)	4	8

Summarized answers to "yes/no/other" questions of the survey are presented in Table 7.

Table 7: Summary of the responses to the "yes/no/other" questions (percentage)

Statement	Yes	No	Other
Are any performance indicators used in your company to measure *CSR* activity?	33	65	2
Does the size of a company matter in the decision to implement *CSR* reporting?	37	61	2
Do you believe that a standalone *CSR* report would be (or is) beneficial for your company?	45	41	14

Clearly, most surveyed companies in Estonia do not use any KPI's (Key Performance Indicators) in *CSR* reporting, and they do not consider the size of the company to be a factor in making a decision whether to start *CSR* reporting. It is also worth noting that only 45% consider that *CSR* standalone report may be useful to them.

5 CONCLUSIONS

The research findings clearly indicate that the main principles of *CSR* concept are familiar to the surveyed Estonian companies, and have been integrated into their everyday business activities. The Internet is the most popular mean used by the companies to keep their stakeholders informed about *CSR* performance. However, many companies do not disclose *CSR* information in their reports or, if they do, make such disclosures in their annual reports. It is evident that standalone *CSR* reporting is still not widely used in Estonia, as many companies do not see any obvious advantages in doing so, while they also find it difficult to measure the benefits of such reporting. In addition, there is no clear opinion on what would force companies to start issuing standalone *CSR* reports, as an equal number of participating companies has chosen stakeholders' pressure, legal requirements and the voluntary decisions of the companies. It seems that many surveyed companies are not very excited: to some extent they are cautious about entering into a new type of reporting and cannot yet clearly formulate under which circumstances it would become an attractive and widely accepted practice. It is also noteworthy that in spite of the aforementioned reasons, many companies are still planning to start *CSR* reporting in the near future. When it comes to the regulation of *CSR* reporting on a national level, companies prefer it rather to be a voluntary matter, mainly driven by related benefits, social requirement and the positive examples of other reporting companies. These findings prompt the authors to draw the following conclusions. *CSR* reporting has found its place in Estonia – it is recognized and implemented by several surveyed Estonian companies – although the reporting practice does not have a very long history in the country. *CSR* activities are mainly reported either on the website or as disclosures in annual reports. Standalone *CSR* reports are not commonly used as many companies cannot clearly identify their benefits. Lack of time and qualified specialists are also factors which, along with the difficulty in measuring the impact of *CSR* activities, prevent companies from issuing standalone *CSR* reports. GRI can be of great assistance to most companies in Estonia, but the guidance itself seems complicated to many users and therefore calls for additional training, which is hard to obtain in Estonia at the moment. Other companies' good practice in *CSR* reporting could influence those who are considering it; it can also be promoted by means of special seminars, workshops and interactive cooperation among organizations. The authors also note that many successful steps towards *CSR* reporting and standalone *CSR* reporting have already been taken. In the authors' opinion, these kinds of examples should gain support from the state, society, mass media, and various public and private institutions.

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ENTERPRISE RISK MANAGEMENT — PRIORITY OF EXPORT-ORIENTED FIRM IN EMERGING ECONOMY

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ABSTRACT

Purpose — This paper seeks to review the literature on enterprise risk management (ERM) of export-oriented entrepreneurial firms in emerging economy. Given the importance of Enterprise risk management for entrepreneurship, the purpose of this paper is to determine how far this line of research has progressed and what areas are still pending study.

Design/methodology/approach — The paper has a three-part structure. First, the paper describes the published works. Second, it examines the topics dealt with in the literature. Third, the review identifies the limitations of the literature and outlines future lines of research for this field.

Findings — Most papers that deal with ERM and entrepreneurship together are empirical. The underlying premise of enterprise risk management is that every entity exists to provide value for its stakeholders Enterprise risk management enables management to effectively deal with uncertainty and associated risk and opportunity, enhancing the capacity to build value.

Originality/value — The paper helps scholars orient their research in Enterprise risk management of export-oriented entrepreneurial firms in emerging economy by providing them with a better understanding of the direction in which the field is going and what gaps remain.

Keywords: *emerging economy, enterprise risk management, export-oriented firm, risk, risk management*

1 INTRODUCTION

In recently competitive business environment, business entities are faced with increasing uncertainties as they strive to create value. Similarly, in the quake of the current global economic crisis, businesses in a bid to stay competitive have taken several crucial measures. Some businesses have cut-down on the number of staff tremendously to save cost in a bid to survive, some shut-down offices, branches, divisions, or plants within their business enterprise due to drastic reduction in the demand for their products/services, and the going „burst" of several businesses due to the inability to repay their debt. These have led managers and investors in recent times to pay more attention to managing the risks inherent and emerging in their businesses. It is therefore of great importance for businesses to take advantage of making appropriate strategic-decisions on uncertain outcomes, as at worse it would cut-down losses due to disaster and at best, improve profitability in cases of opportunities. *"Uncertainties present both risks and opportunities, with potential to erode or enhance value."* (COSO, 2004) The sources of uncertainties with adverse effects/outcomes are described as due to the volatility/complexity/heterogeneity of risk; the impact of external events, the response to external events/developments, and the behaviour of employees is as well crucial.

2 METHODOLOGY

In short exegetical view what follows, therefore, endeavors to show the phenomenology of risk and risk management in the business of export-oriented enterprises in emerging markets. Epistemological status of the phenomenon of risk management is not always entirely clear: once it is understood as a chronological description of the phases in risk management, used as heuristic tool for understanding public policies, and sometimes as a normative guide to the

rationalization of the risk management process. Multidimensional discourses that seek *floating signifiers* such as freedom or equality fulfill specific features, in theory, are totally autonomous. They do not arise from the economy nor do they have any other pre-discursive "essence" of the running, but their categories are "sediment" in the social order, and in this way the social and political actors make outward and given. Despite sedimentation discursive practices and possible strong hegemony of a discourse, complete discursive "articulation" is not possible, so the social order fundamentally contingent and the eternal threat of demolition. (Mouffe, 2005) Ideas of understanding as the main task of the social sciences in more radical form are representative of the phenomenological approach of Alfred Schutz. According to Schutz, social scientists need to identify the meaning according to which one acts: *"As long as we find the explanation of one's motives, we did not understand what he is doing, much less why he does it, but not why it works here and now".* (Schutz, 1997) It should be noted, *"The relationship between the understanding of the whole and understanding the specifics of the circular insofar as it is a function of another".* (Westphal, 2004) With the hermeneutic circle can be singled out four ideas from which to develop the methodological notes for a hermeneutic approach in the social sciences. These ideas are (1) the historicity of understanding, (2) dialogical nature of understanding, (3) productivity understanding and (4) the critical role of understanding. (Prasad, 2002) Due to the fact that ERM is not considered an absolute paradigm for interpreting the risk management process, rather than a single research program that can explain some of its parts or moments and that can coexist with other research programs, require a brief discussion of frequent attempts to use the term discourse determined.

It is clear that there is a limit to social structures, at least in the fact that there is a physical world with its laws. At least in terms of the individual spatially and temporally limited discourse analysis, it is true for some stable social practices and institutions, which is not easy to change the discourse, such as the basic institutions of a certain business risks management system of export-oriented enterprises in emerging markets.

2.1. Underlying discourse of Enterprise Risk Management
The fundamentally premise of risk management implies the existence of any entity for the purpose of creating value for its stakeholders. All entities face uncertainty and the challenge for management is to determine how much uncertainty to accept as it strives to grow stakeholder value. Uncertainty presents both risk and opportunity, with the potential to erode or enhance value. It should point to focus on achieving the goals of sustainable growth and increased shareholder value, in particular through levers: (1) revenue growth, i.e., selling more; and (2) productivity, i.e., spending less; and (3) risk management, i.e., lever that affects firm performance. Firms need to figure out how to measure risk management and hold managers accountable for it, just as they do with revenue growth and productivity. (Kaplan, 2008) A decade ago, the term enterprise risk management ("ERM") was still unknown, but in recent years it has received increasing interest and attention. The term "ERM" is similar or synonymous with concepts such as corporate risk management, integrated risk management, holistic risk management, strategic risk management, enterprise-wide risk management. All of these risk management concepts, however, have a comprehensive holistic view of risks and the view that risk management can be value creating, in common. (CAS, 2003) *"Enterprise risk management is a process, effected by the entity's board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within the risk appetite, to provide reasonable assurance regarding the*

achievement of entity objectives." (COSO, 2004) ERM is an integrated risk management process to identify and assess risks of all types that affect firm value by implementing a firm-wide strategy to manage those risks (Meulbroek, 2002). In the context of the evolution of ERM should emphasize the following phases: (1) Traditional risk management (TRM) has typically focused on the containment of financial and hazardous risks where exposures were hedged with the use of financial instruments and purchase of insurance contracts. (2) Business risk management also considers operational risks within an integrative framework. (3) Enterprise risk management, as final stage of evolution, now considers all risks from a more integrated holistic perspective, including strategic risks.

In order to throw the light on the modern approach to risk, it should be noted that risk can be seen as partner of opportunity (Schumpeter, 1942). This simple finding was rather unappreciated in the past, when the role of risk management had a narrow view and attitudes about risk being hazardous or threatening were in existence (DeLoach, 2000). One by one, people realized that risk can turn into valuable opportunities if managers have the confidence that they understand the risks and have the capabilities to manage them. The attitude shift towards risk- and opportunity management evolved over time and with practice, when companies became more familiar and capable of the risks they face. The risk managers develop confidence in the organization's abilities, which leads them to seek out opportunities to exploit the risks of competitors by keeping their own exposure at the same level. Over decades, risk information has become more accessible, which in turn resulted in new markets for risk trade and available information about the cost of risks. For that same reason, it is now easier for companies to better evaluate risk and return trade-offs and see that the costs of transfer in some cases outweigh its benefits. This shift of attitude to acknowledge potential opportunities behind some risks also helped to push traditional risk management forward.

Recall one of the major premise, "risk is a reality of doing business," especially in the export business. Regardless of whether large or small, public or private, domestic or international, export-oriented companies today operate in a risk-filled world. In many cases, risk is necessary for long-term operational success; however, failure to control risk effectively can often lead to just the opposite, including damaged reputation, loss of profits, disruption in productivity or, in severe cases, the end of the entity altogether. Although other priorities in running a exporting business may have trumped risk management in the past, the planning and implementation of a formal program to better identify and oversee risk is of particular importance today. That is, in the current economic downturn, risk can emerge from both expected and unexpected channels relative to the past. In order to weather this economic storm, organizations must respond proactively, taking the proper steps to ensure they are assessing, prioritizing and managing all risks — both old and new — in a strategic and consistent way. Enterprise risk management (ERM) is the leading approach to managing and optimizing risks, enabling a export-oriented company to determine how much uncertainty and risk are acceptable to an organization in emerging economy. With a company-wide scope, ERM serves as a strategic analysis of risk throughout an organization, cutting across business units and departments, and considering end-to-end processes. In adopting an ERM approach, companies gain the ability to align their risk appetite and tolerance with business strategy by identifying events that could have an adverse effect on their organizations and then developing an action plan to manage them.

Furthermore, by applying ERM in conjunction with other operational elements in the current business environment, export-oriented companies can also accomplish many of their governance-related tasks. Specifically, ERM can help that type of organizations:

- Identify strategic risk opportunities that, if undertaken, can facilitate achieving organizational goals.
- Provide senior management with   the most up-to-date information regarding risk that may be used in the decision-making process.
- Use the Sarbanes-Oxley compliance process to assist in identifying key financial risks (SOX, 2002).
- Establish co-dependency between the ERM initiative and considerations for Securities and Exchange Commission (SEC) reporting disclosures and other laws and regulations.
- Align annual performance goals with risk identification and management.
- Encourage   and reward upstream reporting of business-risk opportunities and challenges.

Holistic point of view, explanation may very well be the incentive that businesses (management) need to implement the ERM process towards realizing, with reasonable assurance, their strategic objects.

With the advance of technology, communication and transportation has improved tremendously, thereby pushing forward the development of international business. In the age of globalization, the line between "foreign" and "domestic" investing has become increasingly blurry. However, investing in foreign markets takes on additional risk, as well as opportunities, compared with what investors normally face when investing at home.

2.2. Phenomenology of risk in emerging economies

Markets, by itself, does not necessarily lead to economic efficiency even when the task of a country to absorb new technologies, to close the "gap in knowledge", which is a central feature of the development. However, it should be noted that the validated and economic theories based on imperfect information and incomplete markets risk, which predicted that the free flow of short-term capital – a key feature of the policy of market fundamentalism - will not create growth, but instability. The intent of a comprehensive understanding of the market and the market economy it is necessary to recall the construction of its structure:

- *Perfect awareness*, *competition and market risks* — Markets lead or do not lead to economic efficiency "as an invisible hand." (Smith, 2005)
- *Externalities* (*such as pollution*) — Proceedings of an individual have impacts on others for which they are not compensated. At defined ideal conditions under which the A. Smith was right, and further identified numerous cases of market failure where he was wrong. (Arrow and Debreu, 1959)
- *Imperfect and/or asymmetric information* — Where some individuals know something that others do not know. Addition to the list of situations in which market failures lead to inefficiencies. (Stiglitz, 2002)
- *The triple convergence* — Analysis of Arrow and Debreu assumed that the technology does not change, or at least that it does not affect the actions of market participants. However, technological changes are at the center of development – technology will literally transform every aspect of business life and society. (Friedman, 2005)

The term 'emerging markets' is generally used to describe the group of low-to-middle-income countries pursuing substantial political and economic reform and a more complete integration into the global economy. There is no precise accepted definition, although the search for one

can make for useful and thought-provoking reading. The following characteristics are commonly associated with these markets:

- Low-to-middle-income on World Bank income per head benchmark;
- Recent or relatively recent economic liberalization, reduction in the state's role in the economy, privatization of previously state-owned companies, removal of foreign exchange controls and obstacles to foreign investment;
- Recent liberalization of the political system and a move towards greater participation in the political process;
- Scale and dynamics of change.

At least for the near future, these can all be considered as emerging markets.

Addition, emerging markets are best suited for long-term investors willing to ride out market volatility. While past performance is no guarantee of future performance, the long-term track record of emerging markets suggests patience is rewarded. There are a number of specific risks to consider when investing in emerging markets. Governance — the catch-all term that covers accounting, auditing, financial and other standards — may be weak in some jurisdictions. Investments may be affected by foreign exchange controls, tax and other regulatory changes. In extreme cases, political unrest or war can also affect markets. One risk associated with emerging markets is that information flow is not perfect and the securities of companies can be mispriced. This is why investment solutions such as exchange-traded funds — which must invest in every company listed on an index — can be higher risk and more volatile in the emerging market area than actively managed investment solutions like mutual funds. With our approach to active management, we minimize risk by choosing to invest only in well-managed and good quality emerging market companies that add value to your portfolio.

3 FINDINGS

The 2013 Risk Management survey (Aon Risk Solutions, 2013) carried-out by the Aon Corporation presents its findings in four key components; Top ten risks, Overall risk preparedness, Business losses related to risk, and key business topics/functions. And the top ten risks are published as follows: (1) Economic slowdown/slow recovery; (2) Regulatory/legislative changes; (3) Increasing competition; (4) Damage to reputation/brand; (5) Failure to attract or retain top talent; (6) Failure to innovate/meet customer needs; (7) Business interruption; (8) Commodity price risk; (9) Cash flow/liquidity risk and (10) Political risk/uncertainties.

The recession has forced businesses to place more focus on the management of risks relating to all aspects of their businesses. Such management is broadly defined as "Enterprise Risk Management" ERM, which describes the set of activities that businesses undertake to deal with all the diverse risks that face it in a holistic/strategic/integrated method. These risks include financial, strategic, operational, hazardous, and compliance risks, spanning through the organization. Many of such risks have significant impact on the profitability, effectiveness, and reputation of business enterprises. Recently, there are several checkpoints that have considerably driven the need for enterprise risk management, which today is referred to as drivers of ERM, including greater transparency (*Corporate Governance*), financial disclosures with more strict reporting and control requirement, security and technology issues, business continuity and disaster preparedness, focus from rating agencies, regulatory compliance (*laws and regulations*) and globalization in a continuously competitive environment.

Enterprise risk management in export-oriented enterprise, especially in emerging economy enables management to effectively deal with uncertainty and associated risk and opportunity, enhancing the capacity to build value. Value is maximized when management sets strategy and objectives to strike an optimal balance between growth and return goals and related risks, and efficiently and effectively deploys resources in pursuit of the entity's objectives. Enterprise risk management encompasses:

- *Aligning risk appetite and strategy* — Management considers the entity's risk appetite in evaluating strategic alternatives, setting related objectives, and developing mechanisms to manage related risks.
- *Enhancing risk response decisions* — Enterprise risk management provides the rigor to identify and select among alternative risk responses – risk avoidance, reduction, sharing, and acceptance.
- *Reducing operational surprises and losses* — Entities gain enhanced capability to identify potential events and establish responses, reducing surprises and associated costs or losses.
- *Identifying and managing multiple and cross-enterprise risks* — Every enterprise faces a myriad of risks affecting different parts of the organization, and enterprise risk management facilitates effective response to the interrelated impacts, and integrated responses to multiple risks.
- *Seizing opportunities* — By considering a full range of potential events, management is positioned to identify and proactively realize opportunities.
- *Improving deployment of capital* — Obtaining robust risk information allows management to effectively assess overall capital needs and enhance capital allocation.

These capabilities inherent in enterprise risk management help management achieve the entity's performance and profitability targets and prevent loss of resources. Enterprise risk management helps ensure effective reporting and compliance with laws and regulations, and helps avoid damage to the entity's reputation and associated consequences. In sum, enterprise risk management helps an entity get to where it wants to go and avoid pitfalls and surprises along the way.

The fact that in the framework of the internationalization of business export-oriented enterprise faces a number of risks, particularly in emerging economies encourages us to proposal which consists in applying the principles relating to risk management. These established principles would include the following (Kaplan, 2008):

- *Always think in terms of risk*. For every decision, decision makers must think about the risks involved.
- *Have a risk committee*. Firm must decide that risk management should be a separate, independent board committee and this committee should work in concert with a risk council and risk managers in each company business unit.
- *Focus on the business unit*. Almost all types of nonfinancial risk, such as intellectual property risk or talent risk, are best handled within business units.
- *Project risk*. Beyond risks at the business unit level, risks should be thought of for each project, as projects are the key unit of work.
- *Establish risk parameters*. While risks are managed at the business unit and project level, it is necessary for a higher-level formulation of general risk parameters.
- *Measure the management of risk*. As with other aspects of performance, it is necessary to devise measures for risk management and to hold managers accountable for risk

management by embedding the measures of risk management into the firm's performance management system.

- *Have the discipline to manage risk in all situations*. It should be kept in mind that risk management is best judged by whether it is taken seriously during boom times.

In addition, the successful management of a business system should focus on being careful and assessing risk during times of crisis. Warn, only the best companies consciously manage risk during good times. In accordance with the basic intent, long-term sustainable growth of export-oriented enterprises in emerging economies, and therefore, because this risks are related to growth, the company should manage risk by setting limits on the expansion and concentration of revenue sources.

4 CONSLUSION

Because ERM is still new, it can be tempting to oversell it, overpromising results. That would only ensure that its integration in a company doesn't work. Ultimately, ERM is not a panacea but rather a methodology that lends itself to the management of the likelihood of risks emerging. As company managements customize the process and learn from their experiences how it works best, they can enhance the process by which ERM enables the recognition of emerged risks and determine the most effective ways to control them in the exporting business, especially on emerging markets. Looking to the next step of ERM's evolution—both as an analytic tool and as a corporate risk assessment framework—several questions come up. On the analytic side, should ERM be the structure that frames the rest of the analysis, or should ERM continue to be its own analytic silo?

Regardless of market's experience in the preceding period of economic crisis, large-scale, yet is firmly grounded opinion that ERM will be crucial for the future of corporate financial health, with a focus on export-oriented enterprises especially in emerging markets. In the coming period, we expect to examine what strategies corporations are continuing to create as a result of export-oriented enterprise ERM exams. ERM should allow you to see the cost of pursuing risk, and it's giving us a more robust and prospective understanding of exporting business, of risks that need to be mitigated, of risk tolerances, and of the benefits of diversification. It is right to expect that the ERM at its best allows sharply reduce the possibility that export-oriented companies will have outsize losses. It also tries to maximize revenue given the associated level of risk. Tangible benefits of ERM analysis is that it provides us with a more consistent framework to assess not just a rating but also how effectively export-oriented enterprise strategy can strategically mitigate their risks in emerging markets.

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A CONCEPT OF GLOBAL ENVIRONMENTAL AND SOCIAL RESPONSIBILITY FRAMEWORK

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ABSTRACT
On their path towards sustainable future organizations have to behave in socially responsible manner. Organizations are more frequently ranked on basis of their environmental stewardship. Business partners and consumers want to know what is inside an organization. The transparency of business practices implies that for many organizations Corporate Social Responsibility is not more a luxury but a requirement.
Although there are quite a few good practices around the world, what are real effects CSR has achieved so far? Since CSR activities are based on voluntary approach, environmental externalities although observable to stakeholders, often cannot be verified. Therefore, the concern about CSR is that instead of large number of initiatives there should be a comprehensive framework which would at the same time cover issues such as national standards, management systems, performance standards and reporting, codes of conduct etc. Corporations usually implement separate components or join certain initiatives thus often forgetting for example about transparent monitoring practices.
This paper aims to present contemporary practices of corporate environmental responsibility as one of key aspects of corporate social responsibility, and analyse needs for creating a generally accepted CSR framework.

Keywords: Corporate Social Responsibility, environment, regulations

1 INTRODUCTION

Environmental protection has traditionally been viewed as an "issue of public interest" and external to private life. Governments have assumed primary responsibility for assuring environmental management and have focused on creating and preserving safe environment. Private sector has been directed to adopt environmentally sound behavior through regulations, sanctions and occasionally, incentives. It is the public sector that generally bears the responsibility for mitigation of environmental damage in case of environmental problems. By many, such an unrestricted private sector role has been considered as "environmental problem".

The roles of sectors have however changed thus private sector having become an active partner in environmental protection. Governments and corporations are now realizing that environmental protection and economic growth are not necessarily in conflict.

Since the publishing of the Report of the Bruntland Commission, officially known as the World Commission on Environment and Development, in 1987 (WCED, 1987), management and business experts have been dealing with the question of how and why corporations should incorporate environmental concerns into their development strategies. Many corporations nowadays are accepting their responsibility towards the environment. Corporate regulation policy has shifted its course during the last couple of decades.

CSR, once viewed exclusively from the philanthropic standpoint, has become an important managerial component and a special area of research. CSR is, among other issues, connected to means by which an organization manages its adverse effects to society and the environment. It is also related to connections between the organization and its stakeholders. During the past two decades several initiatives have emerged so that all kind of tools and references could have been developed for organizations that were looking for guidelines on how to work in the field of CSR. Management systems, third party certifications, performance indicators and rules of reporting are just some of the tools used by the organizations in the CSR field.

Although there are a significant number of good practices around the world, what would be real effects the CSR has achieved so far? Since CSR activities are based on a voluntary approach, environmental externalities are observable to stakeholders, but often not verifiable. Generally, the concern about CSR is that, instead of large number of initiatives, there is no comprehensive frame that would cover at the same time issues such as: national standards, management systems, codes of conduct, performance standards, performance reporting etc. Companies usually implement separate components, or join selected initiatives, often forgetting for example about transparent monitoring mechanisms.

2 CONCEPT OF SOCIAL RESPONSIBILITY

Although the concept has been developing since the early 1970s, there is no single, commonly accepted definition of "Corporate Social Responsibility" (CSR). The term of CSR is used to describe access to business activity that systematically, clearly, transparently and voluntarily combines principles of social justice and responsibility towards the environment.

The European Union defines CSR as „*… the concept that an enterprise is accountable for its impact on all relevant stakeholders. It is the continuing commitment by business to behave fairly and responsibly and contribute to economic development while improving the quality of life of the work force and their families as well as of the local community and society at large…*"(COM, 2001, p. 6). There is consensus that the CSR:

- Is an integral part of the business activity, which has influence on every part of an organization and its decisions;
- Requires obedience of the laws and standards on human rights;
- Is task for leadership that has to be embedded into the organizational strategy and the management;
- Must be systemically implemented and judged as continuous improvement process.

ISO 26000 defines corporate social responsibility as: „*responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behavior that contributes to sustainable development, including health and the welfare of society; takes into account the expectations of stakeholders; is in compliance with applicable law and consistent with international norms of behavior; and is integrated throughout the organization and practiced in its relationships.*" (ISO, p. 3)

In order to meet these definitional expectations most governments incorporate minimum standards into their legislation while the private sector generally prefers the flexibility of self-designed voluntary standards (UNCTAD, 1999, p. 349). However, properly designed legal environmental standards could trigger innovations that lower the final cost of a product or increase its value. Such innovations would allow companies to use a range of inputs more productively, from raw materials to energy, thus offsetting the cost of diminishing

environmental impact. Therefore, to create regulations that will satisfy all stakeholders would require interactive communications and consultations among them.

Thinking and policy on corporate regulation have been in flux during recent decades. Whereas the neoliberal discourse of the 1980s emphasized deregulation and corporate rights, the corporate social responsibility (CSR) agenda of the 1990s stressed corporate self-regulation and voluntary initiatives involving, for example, codes of conduct, improvements in occupational health and safety, environmental management systems, social and environmental reporting, support for community projects and philanthropy. As the limits of self-regulation became apparent, and as the regulatory capacity or willingness of developing country governments, international bodies and trade unions continued to decline, alternative regulatory approaches have emerged. These have focused on co-regulation, in which a combination of government, multilateral, civil society and business interests engage in public-private partnerships (PPPs) and multistakeholder initiatives (MSIs) associated with standard setting, reporting, monitoring, auditing and certification schemes (such as ISO 14001) (UNRISD, 2004). More recently there have been increasing calls for corporate accountability and a renewed interest in international regulation of transnational corporations.

How effective are these different approaches? Many corporate and industrial codes proved equally weak in terms of their contents and implementation capacities. Shortcomings were also noted with some types of certification schemes, such as ISO 14001, the design of which was heavily influenced by industry interests. While many companies in certain regions of the world have acquired ISO 14001 certification, there is no guarantee that this actually reduces negative environmental impacts. This is because ISO 14001 certification does not assess whether a company has improved its environmental impact; rather it is granted to companies that have put in place certain elements of an environmental management system, regardless of their impacts. Although, despite selfregulatory initiatives, MSIs tried to incorporate mechanisms which would secure implementation of the agreed principles and standards, there is no guarantee that participation in such initiatives focused on management systems would significantly improve social and environmental performances.

Other schemes involving independent monitoring, such as forest certification associated with the Forest Stewardship Council (FSC) had proved more effective. This certification system was developed in response to the failure of industry attempts at "self-regulation". FSC system is not an alternative to government regulation although when established, it was seen as a stopgap measure to partially compensate for weak legislation. UNDP BIH successfully implemented a project of certification of Public Enterprise "Forests of Republika Srpska" in 2007.

Over 300 CSR codes, principles, performance and management standards developed by governments, private sector associations or individual companies create confusion among private sector organizations, governments or customers. Nevertheless, closer cooperation between different initiatives, which would take into account specific aspects of the implementation of CSR agenda: what needs to be done (standards, codes etc.), in which way to be done (management and assurance standards) and how to measure progress (reporting) on a global scale may lead to globally accepted CSR framework. As foundation for such there could serve one multi-stakeholder initiative (MSI) - Global Reporting Initiative (GRI), which promotes economic, social and environmental sustainability. GRI framework for reporting on economic, social and environmental progress of an organization has been widely accepted. It

has been designated for use by organizations of different size, sector or location and it has general as well as specific sectorial content agreed by wide array of stakeholders worldwide. Environmental sustainability dimension concerns influence by one organization upon live and non-live natural systems including ecosystems, soil, air and water. Environmental indicators cover input performances (materials, energy, water etc.) and outputs such as emissions, effluents and waste. Furthermore, they cover performance related to biodiversity, conformance to environmental protection codes and other relevant information such as the cost of protecting the environment and effects by products or services of an organization.

Rise of CSR and its mainstream in the business community have reached its peak. As voluntary movement, CSR would definitely remain within limited scope because profit generation shall remain ultimate goal for majority of corporations.

3 CSR DRIVERS AND DEVELOPING COUNTRIES
Since the Brundtland Report was published, corporate managers and management experts have been grappling with the question of how and why corporations should incorporate environmental concerns into their own strategic decision making. And they have been assuming a positive role in furthering the cause of environmental protection, as opposed to being seen as an environmental problem. Many companies nowadays have accepted their responsibility to do no harm to the environment. The Environment Strategy of the World Bank also indicates that the private sector has become a decisive factor in influencing environmental performance and long-term environmental sustainability.

Many citizens, environmental organizations and leading companies define corporate environmental responsibility as the duty to cover the environmental implications of the company's operations, products and facilities; eliminate waste and emissions; maximize the efficiency and productivity of its resources; and minimize practices that might adversely affect the usage of natural resources by future generations. In the growing global economy, where the information technologies' revolution shines light on business practices around the world, companies are more and more frequently ranked based on their attitude towards the environment. Business partners and customers want to know what is inside a company. They want to do business with companies they can trust and believe. This transparency of business practices means that for many companies, corporate social responsibility is no longer a luxury but a requirement. However, the challenge is to create a commonly respected CSR framework, which would allow on detailed assessment of business practices.

Basically, CSR drivers are the mix of incentives and risks directed at companies to improve standards. These drivers are market-based, usually beginning when a firm anticipates or responds to a risk associated with the social, labor or environmental impact of a specific business practice.

Some literature suggests that "drivers" of CSR and corporate environmental responsibility in developing countries are usually significantly different than those in rich, industrialized countries (UNRISD, 2000). Pressure by civil society and trade unions, consumers' activism and public awareness are less relevant in the developing world. Instead, corporate responsibility agenda is mostly driven from the "outside" or from the "above". In certain sectors, mother companies of TNCs under different pressure from NGO sector or consumers in domicile countries, are introducing guidelines and new standards to their branch offices or suppliers. In developing countries different local institutions have emerged in order to

promote corporate social responsibility and they often maintain close relationship with corporate sector. While these connections may enable access and influence path for higher corporate management, they also can promote diluted version of corporate responsibility that leaves minor essential change in corporate practice.

There are concerns that CSR agenda is mostly defined by interests and stakeholders from the "North" and that it did not succeed in dealing with key development issues to stakeholders from the "South". CSR costs should not additionally burden already fragile companies in the developing countries, which are suppliers or competitors to TNCs. These costs should be shared or mostly born by TNCs and consumers from the "North". In contrary, corporate responsibility becomes protectionist tool for discrimination of companies from "South". Finally, many developing countries have other priorities such as establishing basic rule of law institutions, civil sector organizations including trade unions etc. Only when such institutions exist, progress could be made in the field of corporate responsibility.

One of the major CSR drivers in SMEs in developing countries is mentorship and training by large transnational supplying companies in gaining knowledge and skills in areas such as quality and environmental management. As an example, we would state recent ISO 14001 and OHSAS certification of "CIMOS d.o.o." enterprise in Srebrenica with help of mother "CIMOS" corporation, which strengthened its production line through guaranteed supply of products compliant with relevant standards.

Many businesses have discovered that CSR often had positive impact on profit. Among all topics related to CSR, initiatives for environmental protection have so far produced the most of measurable data which connect proactive businesses with positive financial results. Business for Social Responsibility, for example, states that investing in CSR promotes product differentiation at the product and company levels. Some businesses now produce goods and services with characteristics signaling the consumers that the business is concerned about certain social and environmental issues. The International Finance Corporation in its "Developing Value" Report (IFC, 2002), reaches the conclusion based on the evidence from 176 companies, that many emerging market businesses have been involved in areas such as social development or environmental improvements, and have achieved cost savings, revenue growth and other business benefits. A significant output of this study is the business case matrix given in Table 1. In doing so, they have established a socially responsible corporate image and have secured access to markets. Businesses have also found achieved savings in input costs, waste disposal costs, labor costs, reduced costs of compliance with regulations, and other real but more intangible benefits such as attracting quality investors. Firms also benefit from realizing greater cooperation from their communities, and from building political capital that has been useful when community decisions may affect the enterprise.

The business case matrix (Table 1) relates key aspects of sustainability to a set of recognized business factors – demonstrating graphically where a viable business case exists. Sustainability is itself a continuous process - from small activities that bring quick returns to incorporation in strategies that bring long-term competitive advantage.

Table 1: Business Case Matrix (Source: IFC, 2002)

The business case matrix		Sustainability factors						
		Governance and engagement		Environmental focus		Socio-economic development		
		Governance and management	Stakeholder engagement	Environmental process improvement	Environmental products and services	Local economic growth	Community development	Human resource management
Business success factors	Revenue growth and market access							
	Cost savings and productivity							
	Access to capital							
	Risk management and license to operate							
	Human capital							
	Brand value and reputation							

No evidence of a business case	Some evidence of a business case	Strong evidence of a business case

Reduction in energy and raw material consumption and limiting emissions and waste from production processes are key contributions that a business can make to tackle the environmental challenges. Good practices of leading companies make a solid foundation for behavioral changes of others. Furthermore, many TNCs are adopting environmental protection policies which extend throughout their supply chains in forms of requests towards suppliers to adhere to certifications such as ISO 14001, SA 8000, FSC etc.

4 SOME OF THE VEHICLES FOR INTRODUCING CSR

4.1. Governments

Governments have a strong interest in promoting CSR initiatives as a complement to their environmental and social programs which serve long term national interests. In accordance with the Green Paper which promotes the European framework for CSR, „Public policy also has a key role in encouraging a greater sense of corporate social responsibility and in establishing a framework to ensure that businesses integrate environmental and social considerations into their activities." The authorities often prefer voluntary approach because they see their interest in achieving improved environmental management in a less conflictive manner, at less cost and with more impact on job creation, while improving the national image, competitive positions in respect to trade, and ultimately making economic and social gains. There is no, however, a unique and widely accepted template for political CSR framework – a strategic approach that would encompass wide array of CSR political instruments.

The literature on CSR suggests four stages for introducing CSR by governments, as shown on Figure 1. (World Bank, 2006)
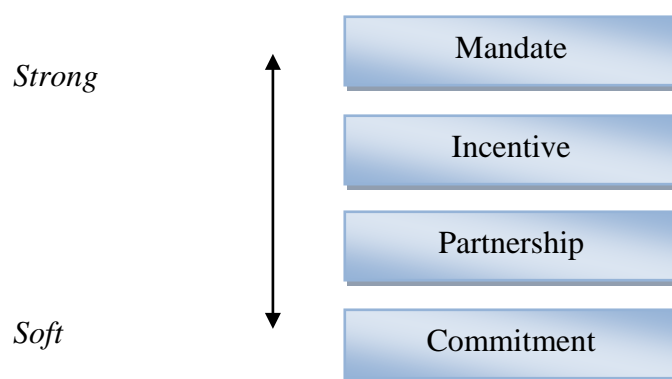
Figure 1: Government role in promoting CSR
(Source: World Bank, 2006)

Experience from many developing countries teaches us that in order to involve private sector in socially responsible practice, government should start with setting rules and standards (mandating) across different sectors so that the companies must fulfill some basic requirements in their business. Governments in the region have done most work on the mandating stage.

4.2. Organizational level

The implementation of CSR initiatives usually differs from company to company or even sector, depending on a number of factors, such as size and culture. Manufacturing based companies are confronted by a wide range of environmental challenges, while retail or service sector companies face these to a lesser extent. Although some companies address environmental issues one facility or department at a time, companies are increasingly integrating the environment into all parts of their operations.

5 TRANSNATIONAL CORPORATE SOCIAL RESPONSIBILITY AND SUSTAINABLE DEVELOPMENT

Transnational corporations are main drivers of the globalization trends. As such, they can be considered responsible for success or failure of the sustainable development, by which we consider continuous economic development not harmful to the environment or labor through inadequate work standards. As an initiative, CSR has been considered as possible remedy for globalization illnesses that stand in a way of sustainable development and reflect in unequal division of wealth, environmental degradation and unfair labor treatment.

CSR promoters often consider this concept as pragmatic and innovative way for private sector to contribute to development. While some perceive CSR initiatives as alternatives to government measures, the others see them as supplemental to government measures. Main argument for CSR supplemental to government measures is based on fact that public sector lies on laws and legal sanctions for law enforcement whereas CSR lies on series of market based drivers.

If CSR is to make a more significant contribution to development, its proponents face two major challenges. First, there needs to be a better integration of voluntary approaches and law or government regulation, rather than the present situation where voluntary initiatives are often seen as an alternative to legal instruments. Second, the CSR agenda needs to become more "south-centered".

The Implementation Plan, published after the World Summit on Sustainable Development in 2002, goes beyond voluntary approaches. It binds signatory governments to actively promote corporate responsibility including full development and effective implementation of intergovernmental agreements and measures, international initiatives and public-private partnerships and adequate national regulation measures.

Regulating corporate behavior is not a new concept to UN conventions through which many countries have started drafting a unique regulatory framework for corporate behavior related to certain issues. As an example, there is the Basel Convention on Control of Transboundary Movements of Hazardous Wastes and Their Disposal. Before this Convention, during the 1980s and 1990s, industrialized countries' corporations exported their hazardous wastes to developing countries, sometimes illegally, sometimes legally and sometimes through its illegal intermediaries. National legislations and enhanced public awareness have created difficulties for corporations dealing with waste management through so called "cost externalization" in their domicile countries. The solution was to export waste to developing countries where concern for environment and public health was significantly lower. Basel Convention contributed to significant reduction in these activities and as a result the sectors which produced toxic waste had to change its practice in order to remain sustainable.

At best, experience related to impacts left upon environment by businesses in developing countries is mixed. There are numerous examples of corporate wrongdoings in exploiting natural resources, decomposition and negative impacts upon the environment, including incidents of inflicting injustice, which compromise developmental potential of local communities. Such influence comes from business operations of local such as foreign companies. In the context of direct foreign investments, in academic circles there was frequently prevailing discussion on "polluters' heaven", main argument being the fact that investors give advantage to investing in countries with fewer costs of adjusting to environmental protection regulation. Developing states in their efforts to become more

competitive in attracting foreign investments frequently set the environmental protection standards bellow the efficient level or do not implement them thus attracting more foreign investments and increasing level of pollution.

While the arguments on "polluters' heaven" can only be partially proven if not for anything but for lack of evidence, such a concept initiated academic debates on games between private sector and environment regulations in transition and development countries. It is not only behavior of international business being debated in terms of operational locations but also the interaction with governments of host countries with an aim of softening the environmental standards. Following the emerging of the concept of sustainable development during 1980s, the attention shifted towards multifaceted role of the international business community in the context of development, which deepened the subject of analysis of corporate behavior in the same context.

Taking into account corporate and regulatory dimensions, a question can be raised on how CSR in context of Bosnia and Herzegovina, Serbia or another country in the region should look like. Definitely, companies conducting business in developing countries or emerging economies are facing a series of challenges which fundamentally differ from those in the developed world.

Contrary to the aforesaid, regulations in the developed world are stricter. Companies are bind by laws to preserve the environment, human rights etc. unfortunately, these regulations are obligatory only for companies originating or operating in those countries and not for their activities abroad. Operational context of transnational corporations is extremely complex. Operations and commercial relations include several different countries, branch offices and suppliers. Such a complexity makes it difficult for governments and public to oversee and follow up on the transnational business activities.

There are opinions that while there is no need for making government regulations stricter in the developed countries, it is definitely the case in transitional or developing countries. On one hand, the governments in the latter countries with help of international institutions can set up regulatory framework of the law required minimum while on the other hand the international community can consider creation of common international regulatory framework in order to regulate global activities of transnational companies. Such an approach would help overcome low sanctioning capacity in the developing countries.

6 CONCLUSION

The time has come to consolidate CSR through one UN convention, which shall focus on two topics: green economy in the context of sustainable development and poverty reduction in institutional settings of sustainable development. There are numerous initiatives together with wide engagement of stakeholders, which jointly point at such a solution. The convention would adjust different aspects of social responsibility. These aspects would be based on consensus in the field already embedded in major references, including those with the authority such as ISO 26000 standards, OECD Guidelines for Transitional Corporations (OECD, 2011), UN Global Impact, ILO Tripartite Declaration on Principles for International Companies UN Human Rights Framework.

OECD convention from 1997 on combating bribery of foreign public officials (OECD, 2011), makes a good example in which way to go. In order to move forward with a comprehensive

CSR framework, collective efforts are needed. Developed countries should change their laws so that their corporations are made responsible for their impacts on environment elsewhere in the world. Next significant step would be strengthening the existing OECD and EU guidelines so that they become binding regulations instead of current voluntary code of conduct. The most difficult aspect would be negotiating and adopting concrete standards in areas such as management systems, assurance standards, performance standards and reporting standards, which would in line with national regulations and international laws make a comprehensive CSR framework.

European Commission CSR Strategy 2011-2014 (European Commission, 2011) already sets more requests before European companies and their business practice. This document requires from all European companies to contribute to one of the aforementioned frameworks by 2014. It also states that the European Commission would oversee the companies with over 1000 employees.

Voluntary CSR movement has already developed these issues into a comprehensive field of management. Courses on sustainable business and CSR are taught at many universities including scholarships being awarded for research in this field. Many organizations now have CSR departments. Such accumulated knowledge reflects different programmes such as OECD guidelines, ISO 26000 standard, GRI, Global Impact etc., which would form initial position for negotiations on the contents of the Convention.

In essence, the society knows what to expect from the transnational corporations and CSR is now a highly consolidated area. Therefore, it is about time to incorporate all this into an adequate institutional framework.

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FUNCTION OF THE ORGANIZATION'S MANAGEMENT
HUMAN RESOURCES MANAGEMENT

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ABSTRACT

Human resource management is a main function of managing the organization. In its most common interpretation, they were limited the management of people in the labor process to achieve the objectives set by the organization.
The essence of human resource management is usually sought by comparing it with management.
Management of human resources.-HRM- is characterized as an activity of the heads of the appropriate levels of people management in employment. Upon its completion, they benefit from consultation and the expertise, but the responsibilities remain with them.
Human resources management requires polyvalent, widespread knowledge of managers who are dealing with this.
They need to know not is only the object of management - employees in the labor process, but also have a thorough knowledge of developing and implementing the business strategy of the organization in the state, trends and relationships in the currency, equity, commodity, investment, currency and the labor market, on the status and trends in internal and external social environment, the problems of economics, organization and management of labor, planning and financial activities the organization of economic, labor and social legislation, etc.
Modern management of human resources.is seen as problem from a higher organizational level, and therefore - in function of the senior management level of the organization.

Keywords: *Management, labor, organization, relationships, Human resources*

1 INTRODUCTION

Any organization achieve their goals use various shaped resources. They are usually grouped into three main groups:

- raw materials, blanks, fuel and energy;
- buildings, machinery, equipment, tools, appliances, vehicles and equipment;
- human resources - managers and employees.

Human resources are people in the organization with professional qualifications and personal qualities that make it possible to achieve its business objectives.

General characterizing resources organization is that they have to meet its needs, and their delivery requires certain costs. This means that each organization based on the market will seek to:

- to provide the most appropriate resources at prices acceptable to it;
- make full use of the material and human resources to achieve its objectives with the lowest cost of funds or what is still the same with the available resources to achieve optimal results.

General that characterizes the buildings, machinery, equipment, tools and equipment, vehicles, furniture and human resources is that because of their repeated participation in manufacturing process their operation is associated with additional cost. This of material resources are operating costs, maintenance, and on going overhaul and modernization. Human resources costs are costs for training, qualifications and training, health services for social and health insurance, establishing a health and safety working conditions and more. This means

that in the assessment of the costs required to make of these resources, the employer faces market challenges, will always consider not only the cost of delivery, but and subsequent intrinsic costs that they required in accordance with its own specificity.

Given all that, from an economic point of view, human resources, people involved in the organization did not differ of its material and physical resources. As in the delivery and in their using the employer to a positive financial result shall be governed purely economic grounds and motivinie about what resources will incur a cost. HR, however, differ materially from restriction of material resources in production.

HR, however, differ materially from Restriction of material resources in production.

To become human resources to acquire ability to use a certain quality and the amount of labor for each individual state, family and employer make and make long-term investments. They being realized in the first 40-50 years of the human life cycle. With technological progress, investment in human resources is constantly increasing. It actually belongs to the people within the organization relatively the most expensive resources it.

Human resource factor multipliers all other factors that develop and improve production and increase its effectiveness. Their quality and how they realize their potential and abilities in production process depends on the competitiveness of organization, financial performance its business.

Unlike the material resources of the organization, which are programmed by their reator, especially in contrast to the machinery, apparatus, equipment and vehicles, which is „encoded" the ability to react in the same way the same commands, the behavior of people in the production process in general depends commands his head, the effects referred to it, but determined primarily by its specific interests of its priority objectives of the peculiarities of his character from his abilities, attitudes, personality characteristics, culture, expectations and more.

After the organization react differently to same commands and effects. Their behavior in the production lot often differ from the expectations of the employer, which means that he constantly has to study and on this basis to submit the appropriate changes to their commands and effects, addressed to the workers, employees and groups within the organization.

Individuals in the organization function as human resources together in groups. They inevitably enter into definite interpersonal relationships with each other, participate in existing formal and informal groups in an organization. The nature of these relationships usually brings significant adjustments in the behavior of managers and employees, „bent" in it compared with the behavior that is expected of messages and management of impacts administration.

Unlike the material and human resources are beings who have their physical, spiritual and social needs and to associate in trade organizations to protect their interests deriving from these needs. The creation of these organizations is governed by the Constitution and the labor laws of the country. They are legal means to protect economic and social interests of employees. However they significantly affect the behavior of their members in the organization and outside of it, in many cases, make them less tractable in terms of behavior

what the employer expects of them. To this must be added the fact that Unlike the material factors of production, hiring managers, workers and employees, as living human beings have a sense of spravedlivost and obey unconditionally this feeling. Fair, as perceived by people in the labor process, decisions have a positive impact on their behavior in terms the economic interests of the organization, making them reluctant to pursue its objectives. Conversely, as unfair salaried personnel decision that directly or indirectly affect them in many cases can make human resources a major obstacle to achieve the objectives. Therefore, human resources are also resources such as other resources organization.

Together, however, they have enough specific characteristics to require their specific treatment: the employer and its administration. Treatment of human resources account of their characteristics can make them a boon for the organization and neglect - a curse.

Reality of human resources management Human resources management is a core function of managing the organization. In its most common interpretation, they were limited the management of people in the labor process to achieve the objectives set by the organization.

Common understanding of human resource management is gone. Some authors attribute preference of common definitions, other elements of the management of human resources, and a third - of the principles on the basis of which it is carried out.

To the group of common definitions of human resources can be allocated understand it as:
- part of the management, which deals with working people and their relationships in the organization,
- business of providing and coordinating human Resources,
- function of all managers in the organization and labor to professionals on staff whose job it is specializing in the provision, maintenance and development of human resources in organization,
- professional function that is performed by staff managers the responsibility of each manager to manage people at work,
- developing, implementing and evaluating Policy, methods, procedures and programs that affect people in the organization.
- To the group of definitions that focus on the elements of the management of human resources can be allocated understanding it as:
  - strategic approach to recruiting, motivating, developing and directing people in the organization, which should provide an effective contribution for employees achieving the objectives of the organization and help her to fulfill its social obligations,
  - business of providing and coordinating human Resources,
  - activity in the first place creates opportunities workers and organizations agree (align) the objectives and nature labor relations and secondly provides the basis for implementation of this agreement, specialized function of management, covering:
    - Formulate and propose policies and strategies in the area of staff the organization;
    - Advising and guiding managers organization for implementing appropriate policies and strategies on the staff;
    - Providing appropriate services organization tapping, selecting, motivating and developing staff at all levels;

- advising managers in the organization when changes in size, structure and qualification staff.
- the process of achieving organizational objectives through recruitment, retention, development, appropriate use and release of human resources.
- activity covering the planning of human resources needs, the provision of staff for the organization, evaluating and rewarding employment behavior of employees, improvement of workers and the production environment establishing and maintaining effective working relationships.
- planning, organizing, directing and controlling the procurement, development, remuneration, integration, maintenance and release of human resources to achieve certain individual, organizational and social objectives.
- activities to attract, develop, motivate and maintain a workforce that is characterized by a high level of performance in the organization.

To the group of definitions that attach preference on the basis of the principles on which control is exercised human resources can be allocated understanding it as:

approach to managing people, based on four leading postulata:

- Employees of the organization are the most important asset, their effective management is the key to its success;
- success of the organization can be achieved only if the policy of labor stems from its strategic plans;
- corporate culture and values, the climate in the organization and management behavior resulting from this culture have a great influence on achieving excellence;
- success of the organization involves integration or need all that employed in it, participate and work with knowledge of general purpose.

Approach to human resources that characterized by the following basic principles:

- employed in the labor process is an investment which, if managed and developed effectively provide long-term benefits to the organization by increasing productivity;
- Developing policies, programs and practices in order to meet the material and spiritual needs of employees;
- Purposeful formation of the working environment in which employees are encouraged to develop and maximum use of their abilities;
- implementation of such programs and practices human resources to balance the needs and ensure the objectives of both the organization and individual employees; ctivity, which is characterized by three conventional formulations.

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BENCHMARK FOR EFFICIENT MAN
SUCCESSFUL MANAGEMENT

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ABSTRACT

Modern tensions and visions for the the effective organizations (private and public companies in the sector of industry and services, organizations and institutions of public administration, etc.). Pressing problems of human resource management.
Human resources in science management is an interdisciplinary field that aims to serve primarily the philosophy of management. Old worn out, and ineffective approach to managing human resources were a tendency to attain stability of production, control over people, strict observance of rules and procedures, creation of hierarchical structures in managing staff, planning and evaluation of production performance.
Material one side is oriented towards efficiency, knowledge and skills of the manager in this area and on the other side, takes the focus structuring the study material for human resources in countries with developed market economy.
To survive and to survive, to be able competitors, organizations need to provide our associates for their space initiatives and opportunities to define professional success in the context of their vital projects.

Keywords: *creation, control, effective organizations.*

1 INTRODUCTION

Different concepts for building modern forms of organization Labour are pierced by the ideas of group dynamics and sociometrics directions that spread management in 40-50 „years of 20 century". According to them, the establishment of effective functioning social groups suggests to address emerging between individuals and the group as a whole „Field of tension". This is only possible by the establishment of interpersonal relationships that overcome the alienation between the individual and the social environment within which it realizes its potential. Individual individual is seen not only as workers but also as a social being, which seeks and finds fulfillment in the work process.

Unlike traditional forms of work, such is modern characterized by increased attention to the social needs of members working groups. Each member of the group is actively involved in the formation, organization and management of the labor process. It combines multiple executive functions, organizational and managerial. Increased demands on modern work organization are tied to changes in the educational qualification level of participants in groups and need to implement more flexible organization of work. Adequate form of organization of Labour group. It covers a number of different individuals with diverse skills experience, suitability for the job. „Each group has a unique characteristic that distinguishes it from Others" (9, p. 150). The working group can be defined as „what quantity people,
1. Communicate with each other,
2. Psychological differ from else
3. Perceived as a group".

These three conditions are boundary group that differs from any of numerous people. Group and its members have a common goal. It defines the ways in which this goal will be

accomplished. In every organization, there are many groups that interact each other and realize various connections. Working groups have been the subject of study and Hautornskite research conducted during the period 1924-1936, the Professor Elton Mayo. During such experiments have been reported:

- personal and social contacts that arise spontaneously in workers;
- formal and informal groups;
- relations between the groups;
- the roles of group members, etc.

After completing Hautornskiya experiment, the establishment of associated with formal and informal organization. „The main conclusion from Research is the key role played by social factors in human behavior in the workplace".

In organizations established by management groups are formal. They exist at various hierarchical units, starting with the top and ending with the lower. The job of leaders is associated with activities execution of tasks and those aimed at members of groups and increase job satisfaction. Under his management powers related to government, the head is the formal head of group. „Achieving success in the management of the Group as at the presence of a number of skills that go beyond those powers, for example, development of interaction between members of the group. Using the best of each member of the group leader can create a climate of tolerance and to subordinate personal goals and interests of the members of the objectives and interests of the organization".

Another form of pooling of employees in the organization are „Informal groups". They create it independently of the established organizational structure. Most employees who are members of one or more groups gather and discuss issues related to their common work. In these discussions highlights one or more of the informal leaders enjoying respect and maintenance of the group members. Relations in informal groups do not depend on authority, power or functions performed by individual employees. They are motivated primarily by the desire of group members to communicate and exchange information. Informal group meets psychological and social needs, which are not related to the embodiment of assignment. Informal leader can act as an arbitrator or counselor members in carrying out the tasks and compliance with labor discipline. To achieve the objectives of the organization, it may be used in situations, allowing expression of the opinion of the informal group. „The creation and functioning of informal groups can be used to reduce monotony and the unattractiveness of jobs". Accession to the groups of people is determined by the appearance of the following symptoms:

First, people may have common needs for food security respect, independence, creativity and change.

Second, individuals can form groups because of their common interests. Members of a department can create a research group because interest in the same field of knowledge.

Third, the groups may be formed, for individuals having common goals and intentions. The board of directors of a company is built to help generate profit for the same.

Fourth, the physical proximity between individuals can provoke them to form a group. For example, workers at the same construction site often come together in a social group.

Fifth, groups are formed due to cultural identity. Migrants often form social and professional groups in the country where they reside. They orient work in organizations dominated many workers from their country or culture similar to theirs.

Group performance Efficiency associated with the activities of the groups can be defined taking into account the following aspects:

- The achievement of organizational goals. What is the effectiveness of fulfillment of the tasks set by the management of the group? The results related to the implementation of organizational goals can be reflected in profit organization, increasing market share, reducing the time to implement the objectives, enhance the image organization to the public.
- Achieving personal satisfaction of team members. Realization of personal goals is measured if individual individual to perform a certain role expectations and gain status in the group.
- The task of a good leader is to support the achievement of the two types of objectives: organizational and personal. Possible differences between these objectives. On this basis McGregor focuses on the differences between effective and ineffective groups: (Table 1.)
- Modern team building comes along with the evolution of techniques for such interdisciplinary management and modern organizational forms such as template design and organizational structures.

Table 1 Differences between effective and ineffective groups

EFFECTIVE GRUP	INEEFEKTIVNI GROUPS
1. The atmosphere is serene and peaceful. 2. There is a discussion involving all group members. 3. The task is clear, and the members are determined to implement it. 4. Members listen to each other. 5. Not avoid conflicts and discussed and resolved constructively. 6. Most solutions are obtained with consensus. 7. Ideas are expressed freely and outdoors. 8. Leadership is not always identified with the head, but distributed, when it is necessary. 9. The group explored their own progress and behavior.	1. The atmosphere is dull and tense. 2. The discussion is led by one or two members of the group. 3. Lacks an explicit task. 4. Members of the Group are hearing. 5. Conflicts or ignored, or grow. 6. Decisions are taken by certain persons. 7. Personal tensions remain hidden under the threat and fear of criticism. 8. Leadership is entirely in the hands of Head. 9. Groups avoid discussions their own behavior.

Cohesiveness of the members of the degree of matching opinions, estimates and positions on subjects or issues most important therefor.

<u>Collective responsibility.</u> The reason for the formation of the teams is the problem that must be permit and which is not within the reach of formal groups in organizations. Management

prefers to form a team to solve it. It include specialists from within the organization or people from outside the organization and professionals. Particularly difficult, but responsible is the question of selecting the people who will be selected for the team. Extremely high requirements the candidates in terms of skills, knowledge, creativity, responsibility, initiative, discipline, commitment and a high degree of motivation. Depending on the goals set before the teams can define The following types of teams:

- Advisory (Council „round table');
- production (manufacturing, repair, aircraft, processing various kinds of information);
- project (research, planning, engineering, target);
- active (sports, entertainment, expeditions, negotiating, surgical, military);
- international (cross-border, international organizations, UN, EU, World Bank, etc..).

In creating effective teams, managers must be consideration a variety of factors that we will look at the analysis of the team as social system. Presented in Figure coordinate team variable input and transforms them into outputs corresponding to its purposes. The input of the system is used to convert the structure to actions of the team in executing the desired objectives. Individual and situational factors influence the ways of structuring and development team.

Structure of the team. Characteristics. Size: According to Ralph Davis ideal team should consist of 3-9 people. Distributing roles among team members Dr Meredith Belbin defines 9 people. Other researchers on the team organization adopted for the optimal number of 5 persons. Diversity about the size of the team is obvious. But in our opinion, the number of individuals will depend on the nature of the task that will decide the team timing and difficulty of implementation. If there is a small team (2-3 people), its members are concerned about personal responsibility, which is person. On the other hand, with increasing team communication between its members is difficult and becoming more difficult to reach agreement, related to the realization of the objectives. Practice has shown that with increasing

The team is considered the antithesis of the group, as it most often unites people organizational and structural basis. Group members have conflicting purposes and usually concentrate on personal needs. Work on the tasks and trials are often distrust the results and motives of his colleagues. A distinctive feature of the team is the common goal adopted by its members shared ambitions for success in an atmosphere of trust, open and honest relationships and respect the opinions of others. It is possible that the team can be defined as a social community of a certain number of individuals in terms of their role and status. These individuals share sets of values and norms that inspire their behavior for all relating to the life of the team, ie:

1. Team members must be united by a common purpose.
2. Structure of roles and status should indicate their occupational differentiation.
3. Team members are subject to the accepted norms of behavior (collectivist self-determination).
4. The team is considered the antithesis of the group, as it most often unites people organizational and structural basis.
5. Group members have conflicting purposes and usually concentrate on personal needs. Work on the tasks and trials are often distrust the results and motives of his colleagues. A distinctive feature of the team is the common goal adopted by its members shared ambitions for success in an atmosphere of trust, open and honest relationships and respect the opinions of others. It is possible that the team can be defined as a social community of a certain number of individuals in terms of their role

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„K. Kirkov is known for their ability to select people. For him the important thing is to be constructive set to be helpful, it is ready to work for others. He points out: The word is respect for others people, self-discipline and self-sacrifice, a willingness to work in teams and good communication skills. This applies to any organization but especially for large enterprises. I want people on my team to be dynamic. Have the ambition to be self-initiative, to be critical and be competent. And perhaps most importantly, to be young at heart, ie love your work. Age is not important, important is the philosophy and attitudes toward life" (7, p. 10). Norms and patterns of interaction. Belonging to a team allows the individual to know himself, to get a sense of their own identity, security, be entitled as a member of a social unit to exercise significant influence in its surroundings. The team sets its standards or norms of behavior. Once created, they become binding on the members of the team. Compliance or compliance therewith ensure cohesiveness among team members. Norms structural features of the team facilitate its work and play as a regulator of behavior in the team itself. They are developed under the influence of company policy, style management rules and requirements of the organization. The point here is not to create rules as common name, and those who create core values of team members. With the development of the team they will undergo transformation, which is not fatal to him, but would encourage members to identification with the values and goals of the organization. Roles of team members. Distribution of roles among members The team is a priority of the manager. If each team member received a role that it fits both the character and his skills, he could feel his contribution to the common goal. Team roles are of two types: functional and collective. Dr. Belbin emphasizes the difference between them (2, C.22). Functional roles are limited to those described in the job harakteristiki.Te are based (skills, capabilities, experience) on which makes the selection of team members. Collective roles are related to the contribution of Members and interaction with the rest part of the team when working as part of a team. They are determined by individuality of each member and the adoption of the same collective role in each team, whether it's board of directors, strategic, production or teaching team. Distribution of roles in the team as a way of behavior can be performed in the following three areas: (Table 2)

Table 2: Roles in team

1. Roles oriented achieving the objective (s) .	• Initiator (innovator ; • Informant; • Researcher of resources; • Coordinator; • Entrepreneur; • Artist .
2. Roles oriented maintaining good relationships.	• Maintaining harmony; • Supportive discussion; • Supporting compromises; • Maintain efficiency .
3. Roles identifying own interests.	• Blocking; • Dominant; • Seeking recognition; • Isolated.

Enterprise in Turbulent Environment

In various stages of implementation of a given problem are obtained various rolls and they can vary in accordance with the step of resolving His.

Balance of team roles is not so important for a team that carry out long-term project. But if the team is working constantly changing environment - products, markets, prices and the need for quick decisions, then living important is the presence of various team skills represented by the above roles.

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REASONS OF INDIVIDUAL RESISTANCE TO ORGANIZATIONAL CHANGES IN CROATIAN ENTERPRISES

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ABSTRACT
Research and practice showed that 67-80 % of all the attempts to implement change fail while in 20% of all cases only one third of the expected outcomes were achieved. Most initiatives to implement organizational changes did not achieve desired outcomes; they were late, unclearly and poor communicated, not focused on target or exceeded planned budget. Organizational changes interweave, overlap and blend. Although organizational changes are driven by various forces and motives, and managed by different managers and departments, aforementioned obstacles are mostly influenced by different reasons of individual resistance to change.
The aim of this paper was to examine how managers can deal with employees' resistance to change. The working hypothesis was that changes can be successfully implemented if management is familiar with the most typical reasons of employees' resistance. The primary online survey was conducted, just before the accession of Croatia to the European Union. The sample of fifty (N=50) Croatian managers from 25 industries took part in it. The findings of this research indicated that the power of habit for routine way of work, techniques and procedures, among others, is the most important reason of individual resistance to changes in Croatian enterprises. We concluded that prerequisites for successful change implementation are good preparation for implementation, high level of consent of all employees to accept change, and change managers' high level of professionalism and competence.

Key words: change management, Croatian enterprises, organizational change, reasons of individual resistance

1 INTRODUCTION

In new economy numerous trends put pressure on enterprises and face them with environmental demands to acquire new competences. Current transitional challenges shed a new light on change management. In such circumstances, the key corporate focus is not on *what* to change, but *how* and *how fast*. By most estimates, really successful organizational changes occur less than 20 percent of the time (Herold, Fedor, 2008, p. x). That dismal statistic represents a tremendous cost to companies in money, resources and time. Failed change efforts take a human toll as well, leaving employees discouraged, distrustful and reluctant to engage in the next round of changes.

The most commonly cited reason for these failures is resistance (Maurer, 1996, p. 1). Introducing change into an organization usually raises resistance from those who have the most to lose because of the envisaged change. For many, substantial change spells out a loss

of job, early retirement, a change of career or responsibility, or, just plain misery (Proctor, Doukakis, 2003, p. 269). Barriers to effecting change reflect such things as a lack of adequate resources, commitment and motivation, resistance to change, procedural obstacles, perceived risk associated with implementation, political undercurrents, lack of cooperation in the organization and others. The fear of the resistance against change has to be replaced by efforts to master the power of change in the organization which wants to achieve a competitive advantage. Organizational changes often fail to evaluate its employees as the main factor of present and future success, i.e. the human aspect of changes has been ignored. Therefore, the only possible way to accomplish new conditions in the organization is to make individuals modify their own working processes, attitudes and behavior.

This paper was structured in five major chapters. The first chapter briefly introduced the topic under investigation and presented the paper structure. The second chapter elaborated the literature review of the relevant concepts/constructs and was broken into two subheadings. The third chapter reflected the research methods to test the hypothesis. The fourth chapter presents the research findings. The fifth chapter summarizes key points of the paper.

2. LITERATURE REVIEW

The purpose of this paper was to examine how managers can deal with employees' resistance. Change management is now an imperative competence in business policy. Simultaneously with the introduction of new business values, we should expect resistance of employees who, in the absence of proper and systematic change management, can block and deform any such initiative at the very beginning. As a result, this chapter was designed to present three main themes. The first theme identified the challenges and opportunities of the organizational changes (i.e., economic, social and environmental). The second theme elaborated main reasons and consequences of the employees' resistance to change. Fear of the unknown, lack of information, threats to status, fear of failure and lack of perceived benefits are examples of such sources. The third theme explored how to manage organizational changes and achieve sustainable competitive advantage.

2.1. Challenges and opportunities of the organizational changes

Current transitional challenges (economic and social) shed a completely new light on the aspect of leading an enterprise and managing change. In such circumstances, managers need to know how to implement changes quickly, effectively and economically. The key corporate focus is not on *what* to change, but *how* and *how fast* (Horvat, Perkov, 2013, p. 20). The people's role and sphere of influence in implementing the change process are the most important to overcome individual barriers. Each change takes place only through employees' activities. The employees are stressed when they are confronted with expectations that are too big, when their activities are being closely monitored (micromanagement) and when their responsibilities are changing. All these are reasons why organizations and employees do not tend to change but put up resistance to all such initiatives.

The reasons of resistance to the change initiatives can be divided into two groups:
1. *The reasons of organizational nature*
2. *The reasons of individual nature*

The first group of reasons derives from organizational tradition and culture, management system and a range of other factors. The resistance can occur due to structural and group inertia, threat to the established expertise, the established power, the established resource

allocations, and due to the limited attention to changes (Robbins, 1995, p.281). Enterprises are conservative by nature, are extremely resistant and actively resist the change. The key to effecting change is to involve people in the process early, to consult with them and to get them to take ownership of the new ideas that are to be introduced for themselves. To sustain a programme of change it is essential to understand the culture of the organisation in which new ideas are to be introduced. New ideas that run counter to the traditional values of an organization are the ones that are most difficult to introduce. Organizational culture is the pattern of common values and norms that distinguishes it from all others (Kotter, 1997, pp.166-7).

The other group of reasons is manifested by individual uncertainty, discontent and fear of loss of status. The results of the survey with 575 participants from 65 countries published in Prosci Benchmarking Report, indicate that five most important reasons of employee resistance were: 1. Lack of awareness; 2. Impact on current job role; 3. Organization's past failures with change; 4. Lack of visible support and commitment from managers; 5. Job loss (Creasey, Hiatt, 2009, p.60-61).

Dealing mostly with operative aspects of change, the management usually neglects the most important one - the human aspect of change. In most cases employees do not know what to expect from the change, what it will mean to them, and what it will bring or take away from their colleagues. The biggest difficulties for the management occur if resistance is hidden and deferred. It is much harder to spot such types of resistance, i.e. to implement activities in order to reduce their harmful consequences. They can be manifested through a reduction or loss of loyalty to the enterprise, lack of interest and reduced motivation to work, an increase in big mistakes and oversights at work or increased absenteeism. Based on empirical research and experience, it can be stated that in order to reduce the individual's resistance, we must meet these four criteria:

1. Direction, goal or desired outcome of change must be defined as precisely as possible
2. Two-way communication must be established vertically, horizontally, and along certain hierarchical levels
3. People have to understand that preserving the current situation will be more painful than the effort to achieve the desired results in a modified way
4. To bridge the gap between the present and expected future, we must devise the systems of strategy, implementation and measurement of effects of the change

2.2. Main reasons and consequences of the employees' resistance to change
The first reason why employees resist is because they simply do not understand what the management talk about. They need to know corporate vision and how executive managers plan to get there. Should they see distress and danger, people will generally behave reactively. Instead of taking action they will withdraw into themselves and keep waiting.

Second, job security and threat to expertise are likely to represent resistance to the change because it threatens their feelings of safety. Therefore, open and honest two-way communications targeted towards specific groups are the most effective communication method which increases the employee buy-in and ownership of the change. Communication involves individuals sharing meaning. It provides the means of creating and implementation behavioral changes both within and without an organization.

Third, management has to point out to employees the potential hazards and pitfalls of not accepting the initiative for change.Among other things, what will happen with operations of the enterprise. All employees who see a clear link between the purpose and expected effects of the operational change will be motivated for the change. While the focus on psychological and organizational dynamics plays a primary role in launching organizational change, it is also important to examine the innovation behind leadership's decision that change is necessary.

Fourth, the key performance indicators (KPIs), as the objectives being pursued, must be in the focus as well. It is just the performance that makes the purpose of the change realistic and inspiring. As it is more important to know where we are heading than to get there quickly, the management have to manage simultaneously (not separately) the contents of both performance and change. What is measured, goes the old saying, it is done (Perkov, Genzić, Perkov, 2011, p. 6). If a person is involved in the strategy of implementation process, it is important for him or her to understand why the change is being made. The shift in the fundamental attitudes of the employed towards the values of authority, property and liability results in the strength of employees who will accept the change as long as they are actively and directly involved in the process. Their attitude towards the change will be positive and proactive. Empowerment to act is a motivating factor for getting people to be committed to what they do. Empowerment is about training, communication, recognition and motivation. It involves the acceptance of responsibility by employees for their own actions and allows them to make mistakes without fear of reprisal. It is about trust and accountability (Proctor, Doukakis, 2004, p. 273).

The task of reducing the employees' resistance is highly important. Thus, modern managers have to communicate and teach the employees to be open to changes on all levels within the organization, as well as to accept the need for the transition.

2.3. Managing organizational changes to achieve sustainable competitive advantage
People actually do not resist change, but rather the intention to be changed (Senge et al., 2003, p. 10). Yet, the point of change management is just changing the modes of operation and behavior in order to accomplish the organizational goals that were set. Despite this paradigm, the unsuccessful outcomes of most initiatives for change derive from inadequate management of the human side, or from failure of overcoming resistance at certain hierarchical levels (Perkov, Balaško, Vlahović, 2013, p.79). Organizations may face the situation when managers do know *what* is to be changed, but they do not know *how* to do it effectively.

Why do so many change initiatives fail? Basically, there are two reasons, and they are simply different sides of the same medal. On one side is a misplaced belief in the power of the cognitive – the ability to persuade by rational thought. On the other side are psychological barriers. They are the unavoidable human defenses, whose purpose is to combat disruption head–on, and are launched whenever someone or something alters the status quo for an individual or an organization. Leadership, generally places too much emphasis on the cognitive and the rational when it should be focusing on the psychological, i.e. on people and what motivates them enough to change their behavior – moving out of their comfort zones and adopting the new behavioral strategies required to drive the critical change initiative (Brenner, 2008, p.132).

Communication is the sperahead of ensuring that successful change can take place. It helps to overcome ambiguity and uncertainty and provides information and power to those who are the subject of change. It enables them to have control over their destiny, to understand why change is necessary and provides the suppressant to fear. Through open communication channels people can express their doubts about the effectiveness of propoesd changes and can understand the necessity for new ideas. Relying on an attempt to implement ideas only from the top is likely to meet with difficulties. Grassroots change is the only way to ensure that process becomes firmly embedded. It is natural for people to resist change and by anticipating, identifying and welcoming resistance, we convert resistance into a perceived need for change. Personal consulting experience gained in a number of demanding projects in the economy, indicate that the human side of change management can be divided into three phases (Figure 1).

| Phase 1 | **PREPARING FOR AN INTRODUCTION OF CHANGE** |

To establish the strategy and plan for change process

Team building for the implementation

To provide resources and support of change sponsors

| Phase 2 | **MANAGING THE PROCESS OF CHANGE** |
To start action and implement the change of business policy

A two-way interactive communication

To obtain and analyse feedback

| Phase 3 | **REINFORCING THE CHANGE** |

To identify weak points and manage resistance

To implement corrective actions and celebrate success

Figure 1. Stages in managing the human side of change (*author's own research*)

Good preparation for managing the human side of change makes half the work! In **the first phase** the management must, as precisely as possible, develop the strategy, define the objective, the method of implementation and measurement models. The management should build a team, recruit followers, communicate the need among the associates, provide resources, the support of the change sponsor, and the necessary time.

An expertly designed change management's plan is a prime driver of concrete action. The change is the antithesis of the favourite maxim: *If it is not broken, do not fix it!* Therefore,

the second stage must be approached as a planned activity for achieving objectives which are divided into two groups (Robbins, 1995, p. 276):

1. Objectives to improve the organization's ability to adapt to changes in the environment.
2. Objectives to change the behavior of employees.

The action entails a joint effort between the holder of changes and the target group in establishing a new condition. In that sense there is no more powerful way to initiate significant changes than the one in which the management get the people together and start the dialogue. The real change starts with a simple act, when people start talking of what concerns them. At that point, it is not the managers' monologue that is beneficial, but rather it is putting honest questions to people. Persuading employees to view new ideas in a favourable light when they are not readily disposed to do so essentially involves influencing and changing attitudes. So, it first is necessary to convince employees that they need to be dissatisfied with the status quo.

The purpose of communication is to move people from one position to another. The initiator or change agent communicates his messages to the target group with the aim of taking specific action. The success of the communication model considerably depends on whether the messages on the types, dimensions and repercussions of the changes have reached the people involved in the desired time, and how people were affected. Employees want to know exactly why they should contribute to the realization of the change. The management's clarification in the style *If we do not do it, we will not be profitable!,* will not be welcomed within the company, as it is general and unconvincing. There are a number of other options to achieve profitability. Why just this type of change? Why now? Why just us? These will be only some of the questions from the employees affected by changes (change targets). While encouraging employees to accept the change is not a quick or one-time event, on the other hand the implementation should not be delayed indefinitely. The introduction of major changes such as job cuts and job losses must not possibly be a too slow process. If the implementation of the change is constantly associated with uncertainty and threat to safety of employees, the less likely will it be successful. It is better to cut deeply and quickly, rather than slowly and callously over a long period.

Changing an organization is almost exclusively about changing a human system and that generally means risk. Systems, almost by definition, suffer from inertia – the enemy of change. The more static the organization is, the less risk it is typically willing to take. Organizational inertia, in the end, is almost always a function of the management culture and, ultimately, of the top leadership's orientation to change and risk.

The slowness and lack of determination, for example, were indicative of the management during the three-year restructuring of a large Croatian economic organization. Over 9 million dollars were spent on cutting costs, dealing with employee redundancy, severance and consultants. The result was devastating: reduced profits, inflexibility of the organization structure and unmotivated people! The analysis of feedback at the end of the second phase, enables data synthesis and active involvement of employees in resolving problems.

The third phase of the human side of change management consists of detecting and eliminating deviations as well as resistance. Since the situation after the change is stressful and unknown to employees, almost no one is willing to change the *safe present for an uncertain future.* Moreover, it is not possible to change the plan from top to bottom in such a

coherent and detailed manner, so that all aspects take place precisely in the way their initiators envisaged. It is therefore necessary to establish *in continuo* monitoring, event tracking and timely identification of opportunities for flexible adjustment of the style and manner of implementation of the change. All positive examples of the adoption of new working practices and reduction of resistance should eventually be recognized by the executive management, in the various forms of compensations, incentive programs of subtle motivation and joint celebrations.

3 RESEARCH METHODS AND SAMPLE ANALYSIS

The main working hypothesis of this paper was that changes can be successfully implemented if management is familiar with the most typical reasons of employees' resistance to change. In this chapter, the research method and design, population, sample, and instruments were described. This study used the quantitative research methods to examine reasons why employees resist organizational changes. The researchers of this study served as instruments for collecting data. The data was derived from two sources: the survey with workshop participants (January to May, 2013) and the online survey with executive and middle level managers (June 2013, just before the accession of Croatia to the European Union).

The study population of this paper is comprised of executive and middle level managers from different industries in Croatia (i.e., production and service sectors). These managers were responsible for change management in their organizations. The study sample for the primary survey contained 25 executive managers and 25 middle level managers. While in the service sector (banking, hotel trade, health care, people and property insurance, telecommunications, certification and car-repair) there were 20 study participants (40%), in the production sector (food, drinks and water, clothing, pharmaceuticals, rubber, footwear, paints and lubricants) there were 15 study participants (30%). In addition, in the trading sectors (retail, wholesale, distribution, sales of cars and spare parts) there were 10 study participants (20%). Finally, in the public sector (municipal, post office, sports facilities, education, and business associations) there were 5 study participants (10%).

4 FINDINGS

This chapter was designed to present the study results and evaluate findings in a way to test the stated hypothesis. It contains two major sections. The first section reported the study results as it pertains to reasons of individual resistance to change. The second section presented the results from the online survey.

4.1. Results from the workshop survey

By analysing several hundred questionnaires and exercises with the participants of our seminar workshops about change management (January to May, 2013), we have concluded there are ten different reasons of individual resistance (in the order of importance):

1. *Power of habit* for routine way of work, techniques and procedures.
2. *Fear of the unknown and the uncertainty* (what has been known and certain is replaced by the ambiguity and uncertainty of change; people want to feel secure and have some kind of control during the course of change).
3. *Danger of possible social* (work environment, the relationship between the superior and the subordinate) and *economic losses* (salary, incentives, benefits, bonus, work place). They can be caused by cost cutting, computerization, modernization, moving to another business unit, or inexpert assessment of the organization's management.

4. *Unclear reason for change*; in fact, to those affected by the change it is often unknown why the change is necessary.
5. *Threat of a decrease or a loss of influence, power, benefits and control* (individuals' or groups' authorities and competence might be minimized or cancelled).
6. *Feeling of injustice or damage*, which is due to the implementation of change, in the eyes of an individual, done to him personally and/or to his colleagues, i.e. to work processes in the organization.
7. *Requirements for additional professional training, education and learning*, which individuals often perceive as a barrier impossible to overcome.
8. *Previous success* (if people were successful in the past, they tend to have more difficulty in accepting changes).
9. *Feeling of belonging* to an existing organization culture and work team.
10. *Level of confidence* encouraged by tradition, standards and competitive spirit within the organization.

Understanding these reasons will not only establish employee's responsibility to resistance, but management's as well. Management must recognize this resistance by understanding the underlying reasons.

4.2. Results of the survey with executive and middle level managers
Croatian managers participating in the survey evaluated the sources of individual resistance to unsuccessful change. They had to choose only three of the above described reasons, according to the following levels of importance and number of points; the first reason, in the opinion of each respondent, *was most important one* (10 points), the second one was *very important reason* (7 points) and the third one only was *significant reason* of resistance (5 points).
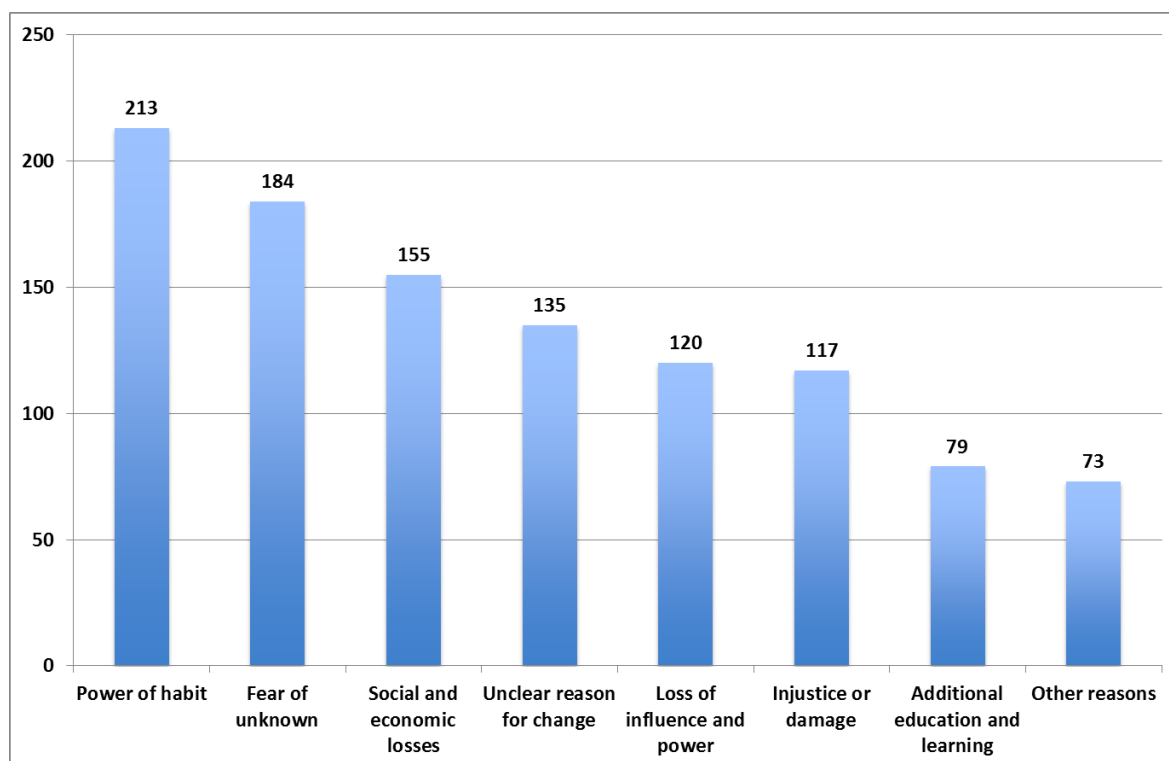

Figure 2. The most important reasons of individual resistance to changes in Croatian enterprises (*author's own research*)

From Figure 2 showing the results of the research it follows that the *power of habit* (213 points or 19.8%), *fear of the unknown* (184 points or 17.1%) and the *possible social and economic losses* (155 points or 14.4%) are the most important reasons of resistance to initiatives for changes in the current Croatian economic conditions. These three reasons account for 51.30%. The fourth source of resistance is ignorance of *the reasons of introducing the changes* (135 points). The *loss of power and influence is* in the fifth place, *injustice or harm* in the sixth place, and requirements for *additional training and learning* in the seventh place. Due to poor representativeness, the other three reasons *previous success*, a sense of *belonging* and *loss of self esteem,* are listed under Other. They together make only 6.8%, with a total of 73 points.

Due to prejudice, feeling of comfort, routine habits and various other motives, employees demonstrate greater or smaller resistance to change. Employees must buy into the change and understand the reasoning behind it. Without that understanding it becomes quite difficult for people to accept changes. Changes mean fear, ambiguity and uncertainty. The resistance will further boost possible negative experiences from previous processes, or the fear of repeated failure and unnecessary loss of energy. Therefore, the change agents need to build a positive attitude of the employees in order to overcome the barriers. Nothing is changing if there is no personal transformation! If the business change is more comprising, the employees' resistance will be stronger and last longer. In order to reduce the resistance, our research findings draw attention of the local leaders and managers to the most common barriers. Knowing the genesis of resistance can make it easier and faster to manage. We suggest two main focus areas for managing employee resistance in Croatian enterprises:
1. Awareness of *why* the change is needed
2. *How* the change would directly impact employees

The managers need to effectively communicate *what* and *why* must happen and discuss the implementation process with employees. Corporate leaders need to create an awareness of problems that exist and make people recognize that there is a need for change *(why)* and a need to adopt the idea (*what*) that is being put forward. A great deal of employee resentment develops when management mandates the specifics of a change, without facing and dealing with the human pain of the implementation. Therefore, management need to effectively communicate and discuss the implementation process with the employees (*how*).

Team leaders have to create an opportunity for their team to discuss a specific change. This can be created in forums, employee meetings, interactive e-mail and employee newsletters. People need to have the opportunity to express their concerns, issues or questions about the change. If the management doesn't allow for that, people will become frustrated and resist the change even more (Adubato, 2003, p.1). It can be well understood that Croatian managers need to establish a positive relationship of employees, in order to overcome barriers and obstacles. Gravity and the force of resistance are directly dependent on the complexity and radicalism of changes, and emotional drivers.

Some examples of the critical success factors, includes trust, motivation, commitment, character, self–discipline and patience. One does not have to be a behavioral strategist to realize that an executive's lack of attention to the role these psychological responses play will negatively affect his or her ability to grab the hearts and minds of the organization's leaders and workforce. Instead, the executive is confronted by all the psychological barriers that arise when a human system is challenged and senses a loss of equilibrium. This is even more likely to occur in companies with a static corporate culture, where psychologically based obstacles

lurk just below the surface. They include common human traits like apprehension, impatience and egocentricity, all of which occur when people are faced with any change process no matter how "logically" valid is the call to action (Brenner, 2008, p. 132).

New behavior, codes or procedures which want to be introduced, need to be reflected in everything that is done. Therefore, employees need to be acknowledged, encouraged, rewarded and publicly praised. They want to understand their role in the change processes. Shareholders want as higher, faster and safer return of investment as possible, and customers dictate type of product or service, added value, period and place of delivery, and price. In the focus of management should be employees' productivity, loyalty and satisfaction. People are the biggest prize, crucial factor of present and future success and the heart of action in an organization (Horvat, Perkov and Trojak, 2012, p. 20).

5 CONCLUSION

Organizations must recognize that the key to survival is the ability to change and adapt as it is necessary to meet a dynamic and changing environment. Studies estimate that up to two thirds of all change initiatives fail. That dismal statistic represents a tremendous cost to enterprises in money, resources and time. The most commonly cited reason for these failures is resistance. Whenever individuals do not clearly understand the purpose, mechanics, or potential consequences of a change, they are likely to resist it. Failure is closely associated with psychological, mental and emotional obstacles in humans. Failed change efforts take a human toll as well, leaving employees discouraged, distrustful and reluctant to engage in the next round of changes. The assumption that we can now and again extort a positive reaction from our employees is a big misconception that accelerates a negative outcome. Organizational change does not take place as a linear process in several steps. It rather becomes chaotic and complicated job.The failure of most initiatives stems from inadequate access to the human side of change, or inefficient resistance management at certain hierarchical levels.

From a recent study conducted among fifty Croatian managers, it follows that *the power of habit*, *fear of the unknown* and the possible *social and economic losses* are the most common reasons of individual resistance to change in Croatian enterprises. These reasons result in the resistance of people in more than half of the initiatives for changes. The fourth most important source of individual resistance is *ignorance of the reasons for change introduction.* Croatian managers need to establish a positive relationship and communication towards employees, in order to overcome barriers and force of resistance. We can conclude that prerequisites for successful change process are good preparation, equable willingness of all employees to accept change, and change managers' high level of professionalism and competence.

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MANAGERIAL ACCOUNTING IN FUNCTION OF BUSINESS DECISION-MAKING IN EDUCATIONAL INSTITUTIONS

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ABSTRACT
Business decision-making is an area of interest for management at all levels in business and public sectors alike. Public sector's managers are required to develop multidisciplinary approach to managerial activities in order to accommodate management standardization process in public sector's institutions. Beyond knowledge of basic managerial principless, managers must possess informations related to financial aspect of functioning in public sector's institutions. Within this task, budgetary accounting and both areas of its realization have essential role. The existence of two areas in budgetary accounting realization requires universal approach to financial reporting and analysis for the needs of different users of financial statements' informations. External financial statements are focused to datas obliged through legal and professional regulative of budgetary accounting, but for their further analytic explanation is necessary to compose and work out auxiliary, internaly conceptualized statements. The statements of financial budgetary accounting provide synthetised informations and global approach to datas on business activities of educational institutions as budgetary users. On the other hand, the statements of managerial budgetary accounting offer a detailed picture and analytic developed survey of educational institution's business, allowing overview of all economic aspects which are not displayed in official financial statements. The bond between business decision-making and financial accounting is present in everyday economic life. Yet, the bond between managerial accounting and business decision-making is especially vivid, when management have to make adequate business decisions based on disposable datas and informations. Managerial accounting application in function of decision-making in educational institutions is narrowly related to applied basis of budgetary accounting. The best effects are provided through implementation of accrual basis of budgetary accounting. In this paper are gradualy described fundamental characteristics of budgetary accounting realization area and fundamental characteristics of managerial accounting. Special attention is dedicated to business decision-making and relationship between business decision-making elements and managerial accounting, whose ultimate goal is enlarged quality of financial statements in function of better decision-making in educational institutions.

Keywords: business decision-making, manageral accounting, educational institutions, budgetary accounting, external financial statements, internal financial statements, budgetary accounting basis

1 INTRODUCTION

Informations can be numerical and non-numerical within one business entity. Accounting informations are numerical and directly related with enterprise's goals, including the goals of educational institutions. Accounting informations are presented through two basic accounting areas, i.e. through financial and managerial accounting. It is possible, through these two realization areas of accounting, to overview fundamental sources of informations necessary for various needs of external and internal users on economic indicators in educational institutions.

Business decision-making is important segment of educational institutions' management and for qualitative decision-making is essential to develop an adequate information system. Without data on all aspects of business in educational institutions is impossible to overview single problems or define alternative solutions. Because of this is developed a system of managerial accounting or management oriented accounting. Managerial accounting has been developed to overcome the gap between management's informations necessity and information possibilities of financial accounting.

Business decision-making process, as well as procedures of alternative business decision-making are only one among segments of managerial accounting. The composition of financial plans and tenders plan are important element of managerial accounting in educational institutions. The philosophy and applying methodology of managerial accounting have provided fundamental direction lines for adequate business decision-making, as well as overviewing of ways and results in realization of educational activities.

In this paper the authors point out on the basic features of budgetary accounting realization areas, fundamental characteristics of managerial accounting application and managerial accounting possibilities in domain of business decision-making.

2 THE REALIZATION AREAS OF BUDGETARY ACCOUNTING

Budgetary accounting is consisted of accounting theory and accounting practice of business events comprising among users of budgetary resources. Essentially and logicaly, budgetary accounting is similar to other modes of business events accounting, but with certain specific features originated from activities of budgetary institutions. Accounting function as unique accounting system is realized through two basic realization areas:

- financial accounting, and
- managerial accounting.

„*Financial accounting notes occured business activities for enterprise or institution as a whole, originated from business relationship of enterprise with external environment and business activities within enterprise, having both global and summarized character*" (Gajic, 2007, p. 7).

Necessity for development of two realization areas of budgetary accounting germinate from the fact that accounting informations, as basic source of informations for various needs of external and internal users about basic indicators of educational institutions' business, are the product of different activities, methods, processes and procedures. The systematization of informations is graphically presented as follows.

Accounting informations have valuable character and are directly related to enterprise's goals, as well as the goals of educational institutions. But, one must have in mind that real life of educational institutions is a combination of: factors and effects of working process (costs and results as elements of economic efficiency, incomes and donations, expenses and expenditures and working results as elements of rentability), and cash inflows, outlays and financial situation (as elements of liquidity).

Enterprise in Turbulent Environment
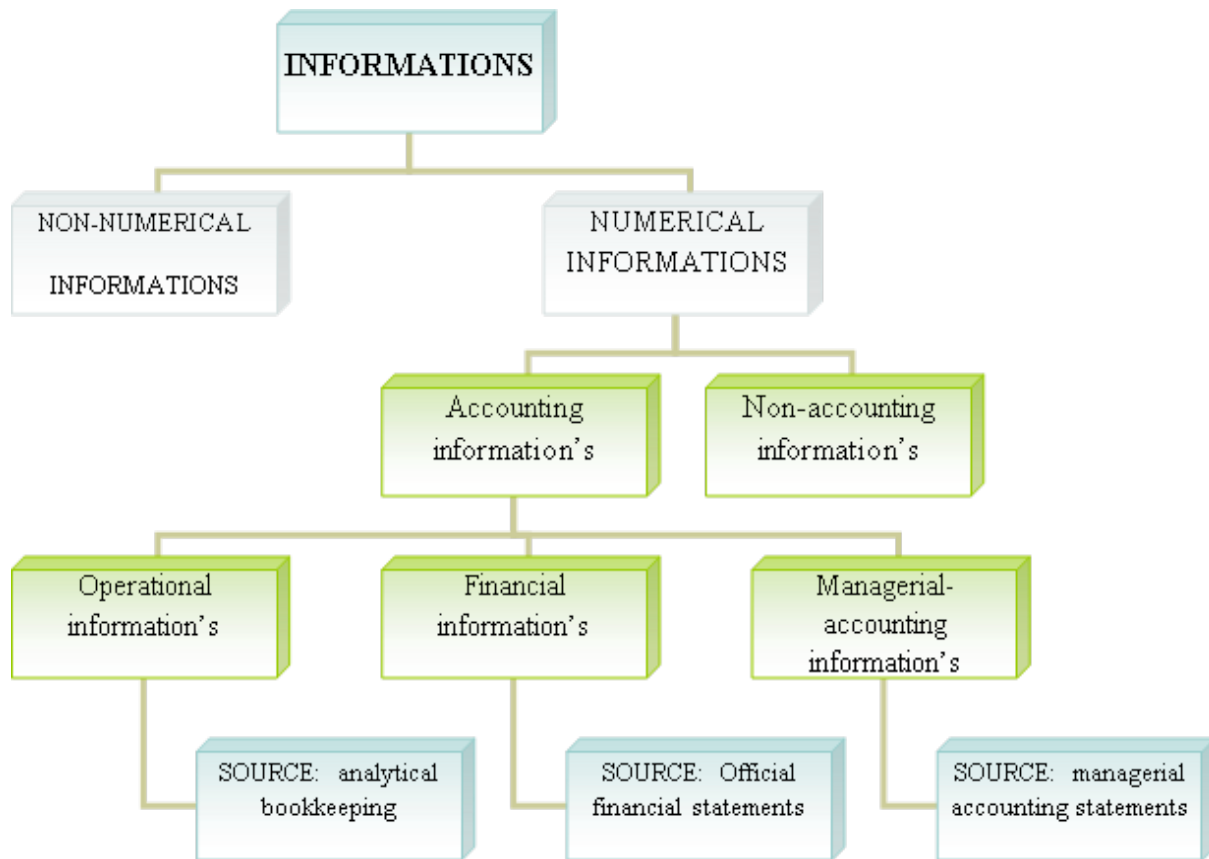
Figure 1: The Systematization of Accounting Information's
(Source: Stevanovic and Malinic, 2003, p. 26)

The aforesaid elements are subject of overall accounting collecting, classifying and comprising, as well as preparing, submitting and interpreting of informations through various shapes and contents of financial statements.

Financial budgetary accounting overviews financial position and business success of educational institutions through periodic assessment of their situation and success in front of direct users of budgetary resources (the Ministries) and other sources of financing in different governmental levels. Therefore, the ultimate product of financial budgetary accounting – offical financial statements - provides informations of historical character, regarding utilization degree of budgetary and other resources dedicated to realization of activities which are payed from budget.

The second basic area of budgetary accounting realization is managerial accounting, which includes:
- „using, adaption and interpretation of financial accounting data for the needs of information support to the management in performing managerial activities;
- costs and results accrual (costs accrual with price calculation, working accrual), as seen as an embryo from where managerial accounting has developed;
- accounting planning (budgeting) and accounting control of planned values achievement, as accounting information's answer to necessities of management's systematic managerial control,

- accounting cost-benefit analysis in function of individual business decision-making. (Stevanovic and Malinic, 2010, p 30).

The areas of realization present the totality of accounting function with its particularities and differences, shown as follows:

Table 1: The fundamental differences between financial and managerial accounting
(Source: Saponja-Dmitrovic, Petkovic and Jaksic, 2009, p. 19).

Financial Accounting	**Managerial Accounting**
exactness of informations	velocity
uniformity	free choice
assignment: external users	assignment: internal users
normative accounting regulative	not obligatory
defined composing time: once a year	composing time as circumstances require: once a month or shorter periods of time
reporting object is business in total	reporting objects are organizational parts of business subject
formalized content of financial statements	non-formalized content of financial statement
obligatory founded on documentary basis and historical events	founded on data and statements of financial accounting, as well as evaluations
founded on summarized data	founded on analytical data
informations allow surveying of achieved business effects, financial result, financial position etc.	informations are in function of planning, decision-making and control of business.

Therefore, realization through two areas of budgetary accounting allows us to state that accounting informations are created to satisfy the needs of both, external and internal users of informations. The source of all accounting informations is financial accounting, while managerial accounting presents additional building and work out of existing informations, all in order to overview and analyze the circumstances, and is directed to ensure the information basis for business decision-making.

3 THE BASIC CHARACTERISTICS OF MANAGERIAL ACCOUNTING

Managerial accounting has developed relatively late comparing to financial accounting (late 1950s), in great corporations of the United States of America, as information support to business decision-making. Managerial accounting has wide application in highly developed countries. Width and depth of costs accrual data allow composition of different statements, that are necessary for management, such as: situation, success, business decision-making, in one word accomplishment of fundamental managerial activities. Financial and managerial accounting are intertwined, as is graphically showen in following way.

In the area of budgetary accounting, during last twenty years, are defined certain directions of development, whose aims were to contribute the quality of overall activities attendance and qualitative financial reporting in budgetary organizations. It is, therefore, necessary to emphasize a special approach to budgetary accounting, so-called New public Management (Sevic, 2002, p. 53).
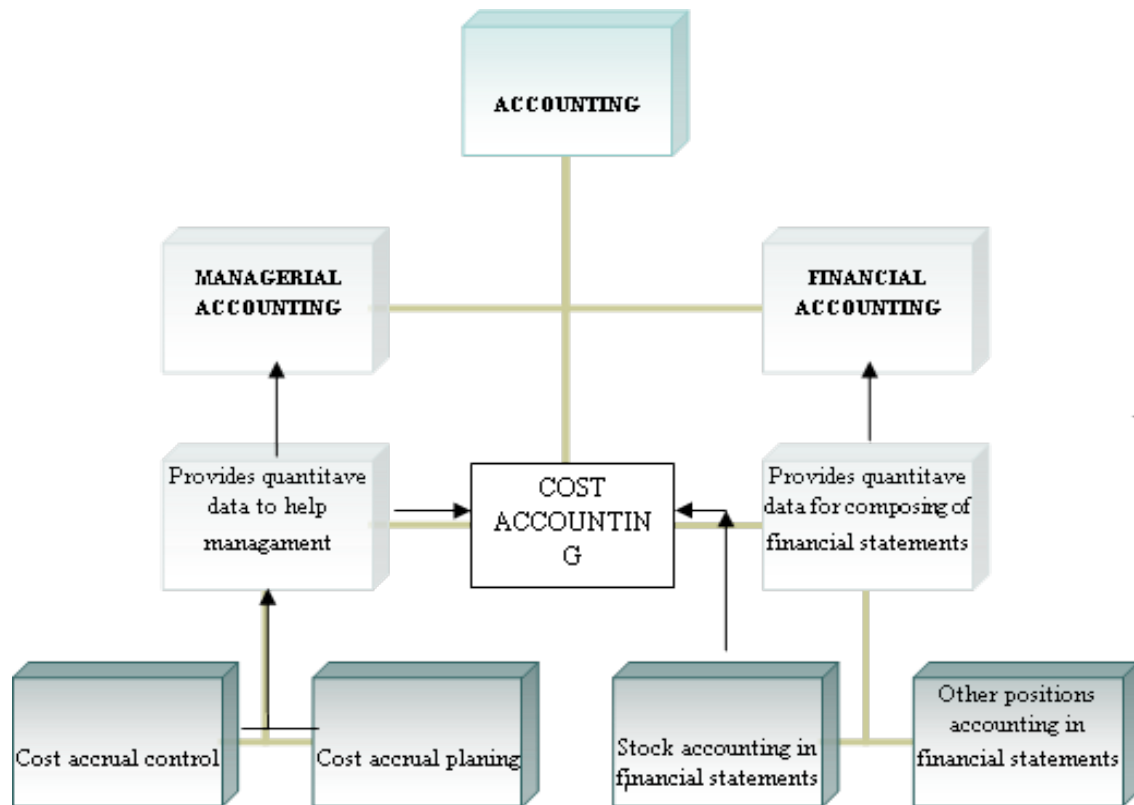
Enterprise in Turbulent Environment

Figure 2: Interdependence between financial and managerial accounting
(Source: Gajic, 2007, p. 8)

This concept of public sector's management is common appellation for series of reforms in public sector, which are guided in the most countries of the OECD, developing countries and countries in transition. „The basic characteristics of New public management, according to the OECD are:

- tendency toward results and increasing value of money;
- decrease of authority and increase of flexibility;
- responsibility and control;
- orientation toward clients and services;
- strenghten capacity for strategical and political progress in implementation of competition and other market elements (Collection of works The Eighth Consultation of Professional Budgetary Accountants, 2011, p. 43).

The main goal of reform's implementation based on New public management is decrease of public expenses and its part in the GDP. Essentially, reform leads to reduction in number of government's employees (from 20 to 28.6%), as well as to partial privatization in public sector. (Separović-Perko, 2002, p. 41-43).

Except the concept of New public management, there are some other approaches to development of budgetary accounting, such as (Jovanovic, 2009, p. 5-26):

- good public government;
- fiscal sustainability;
- financial statements comparability – issues of the IPSAS standards.

Good public management requires considerable changes in funcioning of all segments of society and not just in public sector. For realization of good public management is essential to implement various measures in direction of management's orientation to think about efficiency and effectivity of budgetary resources spending. Good public management is consisted of:

- transparency through open process of decision-making and reporting about achieved results of budgetary policy;
- consequential responsibility for decision-makers' deeds or misdeeds;
- flexible reaction to disturbances in domestic and international economy;
- orientation to the future;
- rule of law and struggle against corruption.

Fiscal sustainability is expressed through analysis of four indicators:

- solventness (momentary obligations fulfilment);
- economic growth;
- tax burden stability;
- government's rightness in obligations fulfilment (reduction of indebtedness).

The implementation issues of the IPSAS standards are reflection of public sector's development. The experiences of various countries that have accepted the IPSAS standards in their practice of financial reporting in public sector confirm that, for its full implementation, is necessary to achieve certain degree in public sector's development and budgetary resources usage. Therefore, application of the standards is narrowly connected with public sector's reform through introduction of the principles of New public management, as well as through introduction of the principles of managerial accounting in public sector's financial reporting. (Gajic and Rakic, 2012, p. 39).

4 BUSINESS DECISION-MAKING AND MANAGERIAL ACCOUNTING IN EDACATIONAL INSTITUTIONS

In reference to the sources of financing, educational institutions work independently and selfgovernantly, as separate legal entities, demanding more developed system of management. Managerial accounting, through its philosophy and applying methodology, allows conditions for business decision-making, as well as overviewing the ways and quality of educational activities' realization.

Budgetary accounting reporting for internal needs is part of managerial accounting. Managerial accounting answers the question on importance and possibilities of budgetary accounting reporting for internal needs through:

- **financial statements analysis based on informations from complete bookkeeping** (situation on the analythical, subanalythical and subsubanalythical accounts), which is foundation for composition of statements on activities of budgetary resources' users. The basic problem of this analysis is the fact that schooling year is not identical with budgetary year, which makes more difficult adequte analysis of spending of budgetary and other resources during schooling year, what is the very subject of interest for budgetary institutions management.
- **costs and results accrual in budgetary accounting**, which could be done using various criteria, and is consisted of:
  - costs accrual by natural types (personal expenses, using of commodities and services, amortization, credit's paying off, social insurance expenses and other expenses) answers the question on *how much is spent*.

- costs accrual by costs locations (for example, costs locations are management, administration, educational department, auxilliary and technical departmants) answers the question on *where the costs are made.*
- costs bearer's accrual answers the question on *interrelationship between costs and results* (for example, as result in education could be the number of pupils or students who successfuly finished their schooling; number of registered pupils or students in new schooling year, which will allow overrunning the gap between budgetary and schooling year; number od extraordinary pupils and students; non-teaching activities etc).
- short-term analytical results accrual answers the question on *how big, in which organizational part and for what services or group of services* are made incomes, expenses, benefits and losses (i.e. suffict and deficit) in short periods of time (usually for month or three months at most).

Managerial accounting concept of „decision-making accounting" is best understood through overviewing of managerial process, which includes following steps:

Table 2: Managerial process
(Gowthorpe, 2009, p. 11)

Step	*Description of management function*	*Description of management informations' necessity*
Define business aims	Primary managerial functions are: - define organization's aims - direct organization's activities in order to achieve these aims	Informations on markets, competition, availability of financial resources for projects
Estimate alternatives and make decisions	Choose between available directions of activities	Adequate, relevant and trustworthy informations for making of rational choice
Plan	After defining of applying procedures, developing of plans for actions' accomplishment	Evaluations and plans for alocation of resources
Control of activities	Control of activities in order to assure fulfilment of plans	Short-term statements on performed business control
Results attendance	Estimate the level of plan's accomplishment and business aims' achieve-ment	Statement on performances and their comparison with evaluations and plans. Explanation of disagreements between planned and real expenses.
Redefine aims when nece-ssary	Based on achieved results, correct long-term, medium-term and short-term plans when necessary	Correct plans and budget in due time and efficiently

Business decision-making process, as well as procedures of alternative business decision-making are only one segment of managerial accounting. The composition of financial plans and tenders plan are important elements of managerial accounting in educational institutions. Methodology for composition of financial plans and tenders plan is based on legal regulative, as well as principless of management and business finances. There are clearly overviewed fundamental elements of financial plans through sources of financing, including public supplying plans. Financial plan define the resources for financing of educational institution.

When financial plan is adopted, follows the adoption of public supplying plan, which must have appropriate shape in accordance with legal and internal regulative.

The basic features of managerial accounting for the needs of business decision-making in educational institutions are:
- providing informations for construction of prices for services in educational institutions;
- providing informations for alternative business decision-making;
- providing informations for planning and control;
- flexible planning and control;
- planning and control of divisional achievements, and
- motivating aspects of accounting planning and control. (Stevanovic and Malinic, 2008, p. 36).

5 CONCLUSION

Managerial accounting and its feasibility for business decision-making require multidisciplinary approach to necessary knowledge of management in educational institutions. Managerial approach means complete understanding of various aspects of working activities in educational institutions, such as: education, normative regulation, finance and accounting, psychological and pedagogic aspect, human resources management and managerial approach to all other aspects of activities in educational institutions. Internal reporting gives insight into using of all available resources dedicated to normal functioning of educational institutions. Budgetary accounting and its reporting mechanisms provide many different statements for internal purposes and, through extending documentary power of financial reporting in budgetary accounting, impact on quality of business decision-making. Business decision-making allowes, through various steps – from overviewing of the problem, through alternative solutions, to choosing of optimal solution – functioning of educational institutions in different working conditions. The progress of managerial accounting has strong influence on development of applied principless in business decision-making. The performing of reforms (New public management, reform of government etc.) is essential in educational institutions. There is obvious causal-consequental interrelationship between managerial accounting principless and business decision-making principless, as well as connection between budgetary accounting basis and these principless. The fulfilment of these conditions is first step in further general application of internal financial reporting and managerial accounting for the needs of educational institutions' management, through system of business decision-making and creation of adequate business decisions.

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USING SIMULATION TO IMPROVE HOSPITAL RESOURCE MANAGEMENT

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ABSTRACT

Emergency Department is a primary health care unit of hospitals, and usually one of the main entrances to the hospital and a key part of the health care system. Increasing demand for emergency care, overcrowding and limited resources are phenomena that cause much delay for patients in ED. In other hand, because the philosophy of creating ED, patient shouldn't stay too long in ED. Long waiting time led to congestion and disturbance in ED process. This study seeks to reduce patient's waiting time and length of stay in ED. By noticing simulation result increasing 3 beds and 1 GP that cause17.4% improvement in bed utilization and 35.1% in GP utilization, and improve average waiting time for visiting GP and average waiting time for hospitalization 82% and 86 % respectively and 8 % decrease length of stay is the best scenario.

Keywords: Emergency Department,Length of stay, resource allocation, simulation

1 INTRODUCTION

Healthcare system is one of services with rapid growth in both developed and developing countries. The first aim of this system is to improve the quality of services and health of people in their daily life. Patients are the main focus of health care system can they be considered as customers with different expectations in this complex systems (Faezipour & Ferreira, 2013). In recent years, changing pattern of disease, progression in medical knowledge and technology, public awareness of modern medical facilities along with increasing the elderly population cause more demand for medical services. This increased demand has led to more pressure on the health care budget. So, trying to prevent the rising costs of healthcare by better using of scarce resources is a major challenge for manager (Ferreira, Gomes, & Yasin, 2011).

Emergency Department is a primary health care unit in hospital and it is usually one of the main entrances to the hospital system. Due to the sensitivity and importance of its work it has special attention among other parts of hospital such that how to provide services in this segment can represent the overall status of hospital services. Properly and correct and timely function in ED can save many lives of patients. This requires good understanding and scrutiny of the current situation in this sector. In many cases, lack of resources such as beds, GPs and nurses in the care process prevent timely and suitable services and reducing health care quality and increase potential medical errors, long waiting times and patient's length of stay

that all of them have unpleasant consequences for patients and also higher costs and unintended consequences for many service providers. Hence, achieving a better balance between supply and demand can improve service quality and bring satisfaction for patients in the emergency department (Xu, Wong, & Chin, 2013). In past years the result show that conventional models for higher quality of service and solving these problems in healthcare system have been failed. Thus, authorities are seeking to creative and scientific methods (Ferreira, Gomes, & Yasin, 2011). In this regard, many organizations in attempt to overcome this varied challenge are using simulation as an aid for planning and allocation of resources (Alkaabi, El Halim, & Mahmoud, 2006).

2 LITERATURE REVIEW

Resource allocation is one the oldest areas of operations research in healthcare (Brailsford & Vissers, 2011). Because of the importance and specific conditions of healthcare there is a lot of effort for budgeting and resource allocation to maximize the use of scarce resources. For example, (Ahmad, Abdul Ghani, Abdulbasah Kamil, Mat Tahar, & Howe Teo, 2012) in their paper present a computer simulation model to assess use of resource utilization in the emergency department of a public hospital in Malaysia. By using this model administrators can monitor the patient flow in ED and find possible areas for improvement and do the best resource allocation. (Weng, Cheng, Ting Kwong, Wang, & Chang, 2011) state that the purpose of their research was to find an optimal allocation of resources in the emergency department through simulation. They use Simul8 and the result show that overall performance in ED can increase 8% by allocating new human resources. (Cochran & Broyles, 2010) propose making strategic decisions for future capacity based on patient safety (rather than congestion measures) in their study. (Ng, et al., 2010) in their study compare priorities and the differences between resource utilization in four-level of Taiwan triage and five-level of Canadian triage and acuity scale among patients. The results of this study show that hospitalization rates, length of stay and medical resource consumption is different between the two systems, and Canada triage acts better in predicting patient acuity and resource utilization. (Berge Holm & Dahl, 2010) notice to increase 45% in patient's volume and its significant impact on patient flow in the emergency department and highlight this question to hospital managers "What is the lowest number of additional resources that would be needed in the ED, due to the patient volume increase, which would not compromise the patient flow?". They use discrete event simulation to answer this question. The results of this study show that increasing nurses from eight to nine and increased physician from eight to twelve is enough to meet the needs of the hospital's emergency department. (Ahmed & Alkhamis, 2009) by using simulation-optimization present a decision support tool for performance in an emergency department of a public hospital in Kuwait. The main purpose of this study is to evaluate the effect of different levels of staffing in service efficiency. This technique uses for determining the optimum number of doctors, nurses and lab technicians that need to maximize patient throughout and reduce patient's waiting time in system with budget constraints. (Withanachchi, Uchida, Nanayakkara, Samaranayake, & Okitsu, 2007) analyze the effect of resource allocation in public hospitals which are under the central health ministry. In this model it is supposed that hospital administrator and other agents looking for maximum quality (compared with profit). Mortality rate among patients was chosen as an indicator of quality and impact of resource allocation on this index are studied. Finding show that utilization of human resources due to insufficient funds (for example, medical equipment, etc.) is suboptimal and should be improved. (Khandekar, Mari, & Wang, 2007) focused on ED by using simulation in order to reducing patient's waiting time and increasing throughout. The findings were considered to facilitate the design care processes of a new hospital.

3 RESEARCH METHODOLOGY

3.1. System description

The hospital emergency department is open 24 hours a day in three morning, afternoon and night shifts. Medical services per shift are provided by 2 GPs, 1 specialist and 8 nurses and on call specialists.

Patients arrive by an ambulance or with their feet. Then, based on Emergency Severity Index are classified into five levels in triage stage. After visiting doctor they go on other care steps such as examination, injection, ECG and etc. At the end patients will exit from ED to continue their care in other parts of hospital or go to home.

3.2. Key performance indicators selection

After visiting and interviewing by ED manager three main key performance have identified that include resource utilization (%), average patient's waiting time (Min) and average total patient's length of stay (Min) in ED.

3.3. Data Collection

Data were collected by going directly to ED and using triage database and also tracing patients in different time intervals. In some cases that direct and random sampling wasn't possible, ED s daily and monthly data was used. All distributions were validated by using Kolmogorov Smirnov goodness of fit test with a 5% significance level *(Table1)*.

Table 1: Service time distributions at each stage of the process

Input Parameter	Mean time for service	Variance	K-S Test	P-value	Distribution
Triage	1.23	0.42	1.2	0.08	Weibull
Reception	1.64	0.99	0.97	0.30	Possion
Visit	3.90	1.6	0.61	0.84	Possion
Injection	4.40	1.65	0.63	0.80	Normal
Minor Surgery	11.3	9.11	0.73	0.64	Exponential

3.4. Model validation

The aim of verification is to ensure that the conceptual model is reflected accurately in the simulation model. Validating is overall process of comparing a model and its behavior to the real system (Sadjadi, Soltani, Izadkhah, Saberian, & Darayi, 2011). At first the conceptual model had been confirmed and validated by ED senior managers and senior nursing staff. After running the simulation model since there is no significant difference between the real performances indicators compared with output of the model the validation is confirmed *(Table3)*.

Table 2: Model validation

Difference (min)	Average simulation output (min)	Average real data (min)	Spend time in each stage
0.3	0.91	1.21	Triage
1.2	4.91	3.69	GP
0.13	1.52	1.65	Reception
1.1	5.62	4.5	Injection
0.4	6.9	7.3	ECG

4 SCENARIO ANALYSES AND DISCUSSION

Arena software is capable to give various outputs according to simulator purpose. As mentioned above, resource utilization, patient's length of stay, patient's waiting time are the most important key that we notice to ED simulation. For having sufficient accuracy in interpreting of simulation outputs, simulation has run in 10 replications that each replication consists of 365 days. The output shows the main resource utilization is in Beds, GPs and nurses that play important roles in patient's length of stay and waiting time *(Table 3)*.

Table 3: Model validation

Key performance		Current system	Mean in 10 replications
Resource utilization	Bed	14	0.86
	GP	2	0.74
	Nurse	3	0.52

Lack of sickbeds in this ED is one of the main reasions for congestion and overcrowded that have direct effect on patient's length of stay and waiting time. By adding 1 bed, bed utilization rate 6% is decreased. This rate can be reduced to 11% by adding two beds. In the next step, increasing beds and their impact on patient waiting times and total length of stay is examined *(Table4)*.

Table 4:Relation of number of beds and average wanting time for taking bed and average length of stay for inpatient

Bed	Average wanting time for taking bed(Min)	Improvement in average wanting time for taking bed %	Average length of stay for inpatient(Min)	Improvement in average length of stay for inpatient %
14 current system	59.6	-	603.6	-
15	31.63	+46%	576.5	+4.4%
16	15.22	+74%	564.2	+6.5%
17	8.35	+85%	558.1	+7.5%

According to analyses by adding sickbeds from 14 to 15 beds, the average waiting times for admission from 59.6 Minutes is reduced to 31.63 minutes and also cause 4.4 % improvement in the average length of stay. Adding two beds reduce waiting times form 31.63 minutes to 15.22 minutes and recovered 6.5% on average length of stay and adding three beds, reduced average waiting time for admission from 15.22 to the 8.35 minutes and improve 7.5% in average total length of stay for inpatients.

Another major source in ED is nurse. In the current system, the utilization rate of 3 nurses for inpatient is 52 percent while by increasing 1 nurse and 2 nurses the rate can be 49 and 47 respectively. Thus increasing 2 nurses will improve 9.6% in nurse utilization.

The analysis of results show although increaseing a nurse dosent have much impact on the average waiting time for taking bed but it will improve 0.58% in average average total length of stay for inpatients*(Table5)*.

Table 5: Relation of number of nurse and average wanting time for taking bed and average length of stay for inpatient

Nurse	Average wanting time for taking bed(Min)	Improvement in average wanting time for taking bed %	Average length of stay for inpatient(Min)	Improvement in average length of stay for inpatient %
3 current system	59.6	-	603.6	-
4	59	+1%	600.1	+0.58%

One of the key resources in ED is GP. In the current system two GPs visit patients in per shift. By adding 1 GP, the rate of this resource is reduced 26% and it can affect outpatient length of stay directly. Outpatient arrival to ED until visiting a GP takes 12 minutes. While by adding 1 GP it can be 7 minutes and this has led to better patient flow for continuing treatment and also has 1.1% improvement in inpatient length of stay. In the following we notice to combined scenarios such as adding two beds and one GP or adding three beds and one GP. Table 6 shows summarize of different scenarios.

Table 6: Simulation result under different scenarios

Key performance		Current system	Adding one bed	Adding two beds	Adding three beds	Adding one Nurse	Adding one GP	Adding two beds and one GP	Adding three beds and one GP
Resource utilization (%)	Bed	0.86	0.80 +6.9%	0.75 +12.7%	0.71 +17.4%	0.86 –	0.86 –	0.75 +12.7%	0.71 +17.4%
	Nurse	0.52	0.52 –	0.52 –	0.52 –	0.49 −5.7%	0.52 –	0.52 –	0.52 –
	GP	0.74	0.74 –	0.74 –	0.74 –	0.74 –	0.48 +35.1%	0.48 +35.1%	0.48 +35.1%
Average wanting time(min)	Visit GP	4.91	4.92 −0.2%	5.1 −3.8%	4.87 +0.81%	4.98 −1.4%	0.89 +81.8%	0.89 +81.8%	0.88 +82%
	Taking bed	59.6	31.63 +46%	15.22 +74%	8.35 +85%	59 +1%	58.1 +2%	15.4 +47%	8.31 +86%
Average length of stay(min)	Outpatient	78.53	78.50 +0.03%	78.86 −0.42%	77.82 +0.9%	78.63 −0.12%	71.81 +8.5%	71.66 +8.7%	71.89 +8.4%
	Inpatient	603.6	576.5 +4.4%	564.2 +6.5%	558.1 +7.5%	600.1 +0.58%	602.9 +1.1%	559 +7.3%	553.8 +8.2%

For outpatient adding on GP has 81.8% reduction in waiting time and thus 8.5% improvement in length of stay. For taking bed Patients should wait 59.6 minutes that s too long and requires serious attention. The result show adding one GP and 3 beds have most improvement in both average wanting time and average length of stay and can be selected as best scenarios.

5 CONSLUSION
Patient satisfaction improvement is very important issue in the health sector. This aim can be achieved in various ways, such as reducing queues, costs, improve service quality. The current study focused on ED and resource utilization, patient's average wanting time and average length of stay. We present different scenarios and adding one GP and 3 beds is best scenarios in this part.

Using simulation considered as an effective tool for improvement in the health sector in many countries but in Iran has less attention to it. Unwillingness and lack of cooperation from authorities in the health sector is one of the main limitations of this study .Limitations in data collection and tracking patients at different times was another problem. But we hope that this paper can be the beginning of a new approach to application simulation and its potential benefits in the health sector in this country.

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THE GUARANTEE OF QUALITY IS THE QUALITY OF MANAGEMENT

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ABSTRACT

In the quality competition regions the tendencies of the last decade indicative that dilemma what was raised by Kano on the mid of the first decade of 3rd millennium: "Management of quality or quality of management?" seems to be answered. Obvious for the market leader companies the guarantee of quality of production or service depends only on the quality of management either on system or on process level. What has to be done to reach it? What are the minimal conditions? What are the essential elements of culture change in quality approach? Instead of classic quality systems and classic quality approaches what should be used? In our article, we will deal with these topics and we will present a possible practice approach from a Hungarian subsidiary of a market leader multinational company. Some key areas where methods and approaches have to be changed:
- Management areas connection to quality management,
- Management areas connection with each other,
- Quality management connections with further quality functions,
- TQM and management and the quality management connections,
- Business excellence and well-operated quality system connections.

Keywords: Business excellence, Kano, Management of quality, Quality management, Quality of management, TQM and management

1 FROM QUALITY CONTROL TILL LATEST QUALITY MANAGEMENT TRENDS

1.1. Quality control (1910-1930/35) QC

Main characteristic of the first phase is the quality control. This core (the small black quality point on the figure 1) has started to infect the quantity and profit oriented production systems with the philosophy of quality. The first phase was characterized by strong finished product control. The paradox from management point of view is that the Quality Department is responsible for the quality but they have no active effect on production. They are responsible for the finished product and the purchased part control. This kind of control system has only very low passive effect on the real quality of the product. Only separation of the bad and good quality raw materials, purchased parts and final products.

1.2. Statistical quality control (1930/35-1970/80) SQC

In the second phase, the focus moved to strong production quality control (PQC). The focus is on the production process but this is not a quality step ahead just the small core quality point started to grow (see quality point on the figure 1). Its dimension became bigger but the point still sits on own surface. From management point of view, this step means that the production will be responsible for the quality of its tasks. This is the start point where everybody starts to be responsible for the quality of his tasks (not only for quantity, deadline, costs etc.). This is the start of privatization of quality.

1.3. Total quality control (1960/65-1985/90) TQC

The first huge quality step is the Japanese TQC, American QA (Quality Assurance), QSS (Qualitäts Sicherung System) and ISO 9000. These systems cover the two dimensions of the quality surface and this is the first time when the "T" appears, although in the Japanese QC it means "only" that the QC became total but it not cross the limits of the quality system (sub! quality system).

This is the first time when the audits appear and in their main focus stand the product audit.

The third step open the first ways to TQM to the third dimension of the quality. One of the subsystems of TQC, QA and ISO 9000 systems cross the limit of the quality systems and step on the non-quality system areas especially on the area of the production systems. This step was the first limited step into the space of quality. The small sheet what covers the total surface of the quality got a small thickness (see thick quality surface on the Figure 1) it turn into a slim (red, yellow, green on the figure 1) quality plate (TQM?).

Slowly the product audits change to process audits because the process audits have bigger effects on the quality than the product audits and the process audits also includes the product audits as well. From management point of view, the privatization of quality is increasing. Not "only" Quality and Production departments are responsible for quality. Every departments are responsible for the quality like Logistics, Human Resource, Purchasing, Maintenance, Research and Development as well.

1.4. Total Quality Management (1985/1990) TQM

The real change is the TQM when effective quality conscious management fulfills the entire space around the quality plates. Quality plates of the third phase (TQC) started to grow, it became a cube, and this TQM cube is fulfilled with quality conscious management. It means the TQM cube does not has to be fulfilled with quality it has to be fulfilled with management!

This is the key point, when instead of managing the quality system the comprehensive total management environment (the full cube, the 3 dimensions) takes over the quality consciousness.

It gives us the final answer for Kano's dilemma: "Management of quality or quality of management?" The quality of management takes over the leading role from the quality management on the quality developmental way. This is the reason why the process audits are changed to a total complex system audits (finance, human resource, production, quality, etc.).

If the TQM is symbolized with a cube, in that case in the TQM cube arrows show, the two-dimensional changes (planar, spatial).

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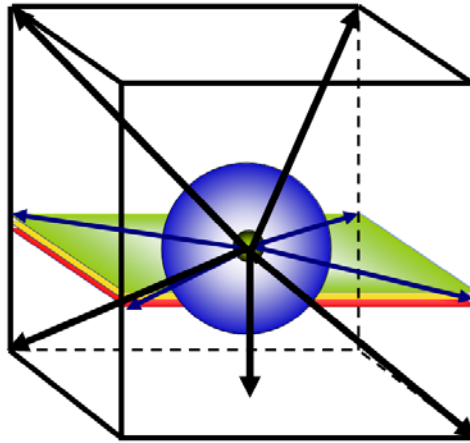
Figure 1: Cube symbol of quality systems development
(Szabó, 2013)

Tendency of the last 10-15 years. Why the quality management is improving?

In 2006, Feigenbaum explained it on an international conference with six long evolution phase:
- New effective approaches, methods and practices (QC, SPC, TQM, method systems),
- The leading companies use these (good practices, benchmarks are exists),
- The quality competition is globalized (and quickly change!),
- The customer satisfaction/dissatisfaction spread extremely quickly due to new possibility of information technologies.
- Organizations are continuously looking for new possibilities to increase the customer satisfaction (PDCA, CQI, CIP)
- Lead organizations keep the quality in the focus of their strategy.

1.5. Latest trends could be the follows according to J. Topár
- That dilemma what was raised by Kano in 2007: "management of quality or quality of management?" seems to be answered. Today it is not a question anymore. The quality of management determines the success of the quality conscious company. But for this the quality management and its targets have to be integrated into the total organization so TQM conceptualization and practice focused management is needed.
- Integrated management systems are needed where the essential management elements (sub systems – quality, health, security, environment, information, security systems, supplier, social responsibility etc.) of the company/organization/system have to be operated in one common integrated system.
- To increase the quality of management requires a comprehensive culture change in the company what reach all the level of management and every employee.
- Key factor of the operation is the continuous development. To measuring this the EFQM model could be used what helps with a regular self-evaluation to systematically identify the strength and weakness of the organization and treat these points.
- Role of the third party certifications dynamically changed.
- Supplier, partner networks rethink is needed. Improvement and development processes have to be harmonized. Real information has to be shared.

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- Existing quality systems have to be systematically developed to TQM direction.
- Sector specific quality systems and methods are used in service systems like public services: health care, administration, public education, public transport.
- The specific culture of the given organization is taken into consideration more significantly during the quality system and method selection process.
- Methods integrated into method systems (e.g. PDCA, DIMAIC, Six Sigma, Lean). Method systems converge to quality models and quality systems.

2 DEVELOMENT OF MANAGEMENT SYSTEMS AND THEIR CONNECTION TO QUALITY MANAGEMENT

With a view of above trends, it was analyzed from management science development point of view how the quality was integrated into the management systems and organization targets.

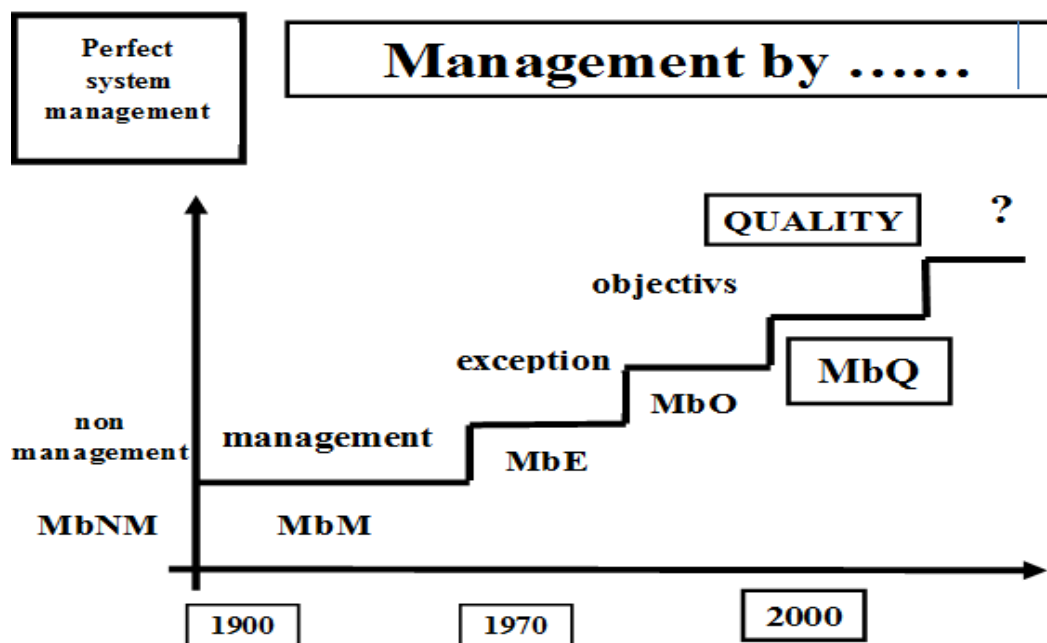This development presented on the follow "management by…" figure:

Figure 2: Management systems development till MbQ(=TQM?
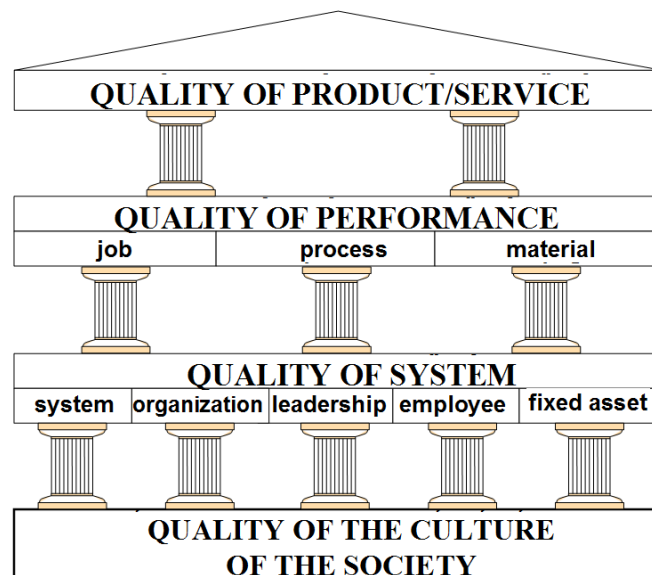*(Szabó, 2013)*

To follow these steps the organization could reach the TQM = MbQ management level if the organization put the quality into the main focus of the management so a quality committed management culture has to be implemented and operated.

From this point of view in the main focus of the development has to be the management. It has to be developed to a quality conscious management. Among the organization targets have to be the quality (e.g. instead of current management by objectives or management by exception or just volume or profit oriented management). So all in all the quality of the management has to be developed. In line with quality of management development process those management methods have to be used what could support the quality-focused targets (e.g. complex teams form different departments, quality conscious culture spread led by strategy human resource and quality management).

3 BUSINESS EXCELLENCE AND WELL-OPERATED QUALITY SYSTEM CONNECTION

3.1. Seghezzi palace

According to Seghezzi - European guru of quality management – the fundamentals of the quality palaces are the quality of the culture of the society. Only after a quality turn in the culture is realistic to reach success with a quality model in the practice especially if it is TQM based model.

Figure 3: Seghezzi quality palace model
(Szabó, 2013)

Recent quality palaces are usually turned with 180°. The basic is the strict activities of the quality control what is focusing on the quality of the product/service. We can say that the basic of a comprehensive quality conscious development of the quality of management could be a turned pyramid, a turned palace. In the interest of a fully comprehensive quality turn of the management, the quality system itself has to be turned!

According to our understanding, the comprehensive definition between the quality definitions is the quality management what includes all the quality activities.

The hierarchic pyramid of these activities are the follow:
- Quality management,
- Total quality control,
- Quality assurance,
- Quality control.

3.2. Instead of better management of quality, better quality of management

The quality competition regions of the world (USA, North America, EU, Japan and its followers) are searching path to TQM. According to my opinion, it also means that instead of better management of quality the focus has to be on better quality of management in the interest of successful competitive operation and excellent business performance.
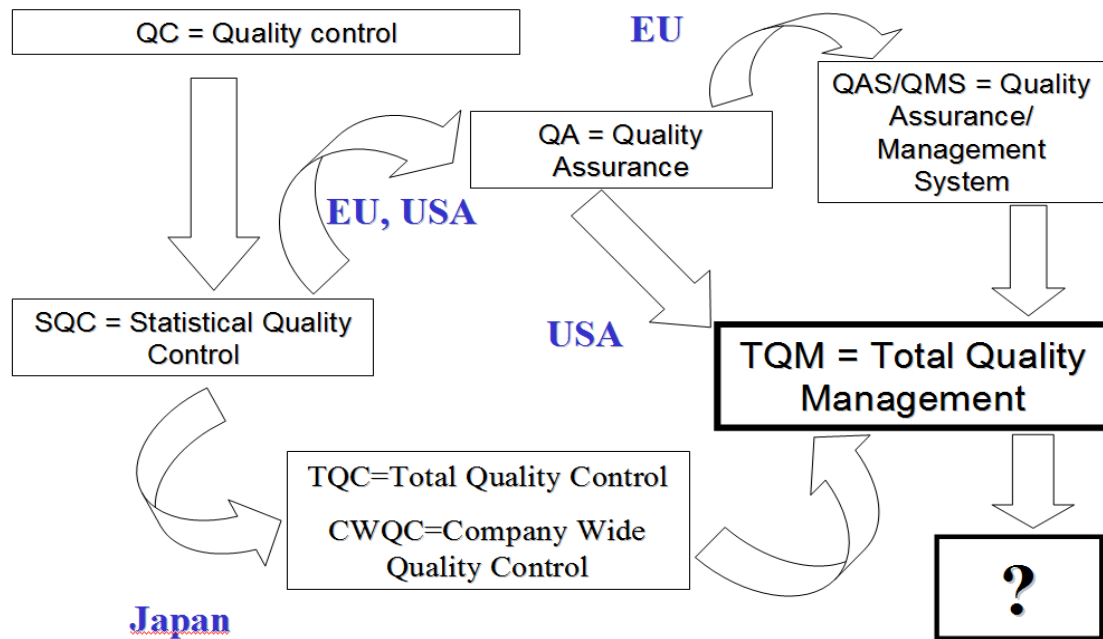
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Figure 4: Path search of the quality systems to TQM in different regions
(Szabó, 2013)

According to my opinion, TQM is not the top of the classical today known quality systems. TQM is the highest-level art of quality conscious system, organization and company management. TQM could be operate only for the full management because the bottleneck of every organization, system, company or team is the weakest link. Consequently all the elements or factors of the TQM have to be on the same stability and strength level as the others (12 elements or 9 "M" factors) if they are not on the same level in that case it will fail on the weakest management element or "M" factor.

Table 1: 12 elements of TQM (Szabó, 2013)

12 elements of TQM:	
Strategy management	Projekt and teamwork management
Quality and reliability management	Accounting & Finance management
Human Resource management	IT management
Design management	Management of quantitave methods
Marketing management	Production and technology management
General management culture, decision system, leadership theory	Issue based problem solving

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Table 2: 9 M factors
(Szabó, 2013)

3.3. Artistic palace of TQM and its methods

From a well operating quality system (e.g. ISO 9001 or GMP, HACCP) the artistic palace of TQM could be built if around the existing quality system we create a total quality conscious management (12 points of TQM, 9 M factors). This quality conscious management has to evenly fill the full volume of the TQM cube and it has to dissolve as a solvent the results, methods, regulations, knowledge, information etc. of the existing quality system and these in this way turn into public domain of organization.

Table 3: Classical QM and new TQM methods (Szabó, 2013)

Classical QM methods, what partly used by TQM	Comprehensive new TQM methods

− Error analyze methods:
  ▪ Pareto/ABC,
  ▪ Ishikawa,
  ▪ FMEA/FMECA,
  ▪ TIPHIB,
− Problem solving methods,
− QFD/QH (quality house),
− Quality teams,
− List of open points, check lists,
− Quality audits,
− Statistical methods,
− Flowcharts,
− Statistical process control cards,
− 5W + 1H,
− 5S,
− 7 steps problem solving,
− 5M,
− Sampling methods.
	− Data collection, visualization, analyze,
	− Benchmarking,
	− SWOT analyze,
	− Environment and market analyze,
	− Portfolio analyze,
	− Organization analyze,
	− Mission, vision,
	− Management style,
	− Company culture and development,
	− Communication analyze,
	− Motivation analyze,
	− Conflict and risk management,
	− Environment protection and culture,
	− Company audit,
	− Human resource analyze and development,
	− Work safety, health, work culture,
	− JIT; TPM systems,
	− PQC, SQM,
	− 7M, 9M,
	− PDCA problem solving,
	− Method systems (PDCA, six-sigma, lean),
	− QM method extension to non QM areas,
	− Decision making process and delegation analyze.

Another key step in this approach is that the used methods have to be changed and extended to the non-quality management departments. Quality management in hand with human management has to be responsible for this spread transmitter task.

Of course, several classical methods could be transferred to the new TQM methods (e.g. problem solving methods, QFD, error analyze methods, statistical process control cards etc.) but the way of change has to be the follow (figure not contains all the methods).

3.4. Main principles of well-operated quality systems
Used methods have to support the main principles

Table 4: Weighted order of TQM principles
(Szabó, 2013)

Three TQM principles	
1. Continuous development and improvement.	Minimize the gap between the plan and the results and continuously improve and develop the processes.
2. Employee empowerment.	Every level of the organization has to be involved into the decision making process.
3. Customer focus.	Identification of the external and internal customer demands and fulfillment of these.

Table 5: Weighted order of ISO 9000 principles
(Szabó, 2013)

Four from the eight principles of ISO 9000:2005
1. Continuous development and improvement.
2. Leadership skill of management.
3. Employee empowerment.
4. Customer focused organization and operation.

3.5. Required quality system
But the question is what the organization wants to reach? What is the fundamental objective or mission of the organization? Based on this decision the quality system has to be selected.

Table 6: The connection of the quality system and fundamental objectives
(Szabó, 2013)

Minimal required quality system

Fundamental objective	Required quality system
Meet the specifications	Quality control
Meet the function requirements	Statistical quality control
Meet the evident customer demands	Total quality control
Meet the hidden customer demands	TQM
Meet the environmental and society demands	Integrated systems

All in all the fundamental objectives of the organization have to be identified than the required quality system has to be selected and then the used methods have to be determined and this full system has to be operated.

3.6. Business excellence in practice, the Claas Group

Claas Group is one of the biggest agriculture company of the world with 3,8 billion EUR sales net income, 9697 employee and exactly 100 years business experience. Its fundamental objective is the follow:

„Claas derived its stability and corporate success from deeply rooted commitments and principles during its 100 years of history as a family-owned company. These principles include commitment and passion for innovation as well as fruitful partnerships and down-to-earth approach. All corporate activities are strategically focused on expanding and developing its lead in customer benefits, technology and the quality of the products. Claas places great value on its qualified employees who live up to these standards.

Around the world, agriculture at the beginning of the 21st century is being propelled by fundamental changes and trends. The growth of the world's population is one such trend. As a result, demand for food that is higher also in quality around the world.

Highly efficient agriculture equipment, products and services are necessary to meet rapidly increase global demands only limited by the agricultural land available. With this in mind, Claas develops its corporate strategy in a multi-stage, revolving process and sets its long-term goals in view of the specific conditions.

It includes expanding established market positions in regions of Western and Central Europe, North America, as well as significant growth in the agricultural production countries of Eastern Europe and Asia. Continuing to build on technological leadership cements its position as a premium provider of global importance.

The company's focus is always on comprehensive customer benefits throughout the continuous development of its after sales and financing offers and providing additional innovative products and services, especially for precision agriculture. The continuous optimization of all divisional structures and processes and the focus on qualified personnel with an emphasis on attracting and support employees with global awareness and adaptability are contributing to making this strategy a success.

This company strategy, fundamental objectives show that for Claas not enough to select the TQM as quality system they need to step ahead till the integrated quality systems. Especially in that case if we take into consideration that Claas is an agriculture company what has a very strong connection to the environment, to the society and growth of the world's population.

All in all the right quality system for Claas is the integrated system but it is a long and continuous improving process till Claas group could reach this level.

The first step to an integrated system was done in Claas Hungary in 2006. The ISO 9001 was successfully implemented. In the next three years, the quality costs significantly decreased with 30% and till 2012 the quality costs decreased with further 30%. It means the quality cost level was 51% lower in 2012 than in 2006. To see these great results management decided to step ahead.

In 2012, the ISO 14001 was successfully implemented in the company and from 2013, ISO 14001 and ISO 9001:2008 are operated together as an integrated system. From 2014, this integrated system will be complemented with a specific system. This is the Occupational Health and Safety Assessment Series MEBIR (OHSAS 18001, 2007).

The continuous development, process improvements, strong employee empowerment, management steps and used TQM methods results that today the quality cost of the company is less than 1% of the net sales and it is continuously decreasing. The management focus is on the quality with first time right approach.
This great result at Claas Hungary proves and confirms that to deal with quality systems is a really valuable and profit generating process. It increases the customers and owner's satisfaction. It increases the demands for the Claas products and it secures great workplaces for the employees.

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BUSINESS AS A COMPONENT MECHANISM OF SOCIAL PROTECTION OF POPULATION

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ABSTRACT
The social protection of population is a main direction of activities of any government. In modern period social protection of population is proceeding with the help of social policy. Mainly social policy implementation is done by the government. Currently in Georgia the main mechanism for social protection is social insurance, which is carried out by the Ministry of Labor, Health and Social Affairs. In Georgia social subsidy agency is responsible for the health insurance and medical programs. Under condition of marketing economy the limitation of interference of government in economy decreased means of social protection. In the modern conditions social protection mechanism should be developed jointly by the government and private sector measures. It becomes necessary to increase the role of business in the social protection of population, which with the difference of charity requests more social responsibility. The most important goal of any government is the effective employment of its population. The research objective is to explore the role of business in the social protection; to set the problems and find the concrete proposals for solving these problems. It is clear that operation of social policy measures can be entirely imposed on the business. As well as the business can ensure effective functioning of the employment level and thus contribute to the development of their own businesses as well as the social policy of government.
This paper formulates proposals is direction of the interaction of business and government, their activities for effective social protection of population.

Keywords: *Social Insurance; Social Policy; Social Protection*

1 INTRODUCTION
The important issue of business development in modern period is the social responsibility of business. The achieved success in all spheres of public life of developed countries showed that, despite the evaluation by theoretical aspects of market economy, it is considered as basis of social class differentiation of society, that the market economy divides people by "rich" and "poor". The market economy by its nature is "the social" and therein lies all mechanism, the proper use of which serves the interests and needs of people.

The current situation in the world practice have undergone all countries and there is strong sense that it is impossible to develop the national economy, to gain competitiveness in the world market, to increase investment attractiveness, if all politics is not directed to improve the social situation of human capital.

2 CHAPTER 1. VISIONS OF BUSINESS IN SOCIAL RESPONSIBILITY

2.1. European Models of Business Social Responsibility
The governments of UK and EU discuss the social responsibility of the business as one aspect of good corporate management, their voluntary activities. But in some cases, is the

requirement for business to reallocate resources in terms of social, in the form of compulsory system of the value. But the development of business, its successful activity depends largely on in the existence of socially ensured society, so social responsibility will be or not the voluntary action, the business is obliged to answer the echo from the society.

If we will analyze all factors of business activity: entrepreneurial skill, capital, the land, the labor tools and labor force - it is easy to guess that, all factors will be motionless without the labor force. The formula for business success is the connection of producing factors with the person, which appears in this formula as not only the labor force, also produced goods and user of services. According to this logic, the social politics should not be the burden of business, in the social policy implemented by the state the business should be socially responsible for employed people.

According to the European commission, the social responsibility is the concept, and with the help of it, the company makes the integration of social responsibility and environmental protection liabilities of its activities and in the relationship with the partners" (Communication, 2011) (COM, 2001, p. 366)

2.2. American model of business social responsibility
"According to view of the Nobel Prize Laureate in the field of Economics Milton Friedman: the businesses have only one responsibility – to use its resources in order to bring the profits, as long as these activities fit into the rules of the game." (Friedman, 2006, p. 111). So according to the Friedman's view, the role of the company is to earn the money and not in saving parliament or other humanism. Corporative American model of the social responsibility established in 19th century. Due to the peculiarities of American entrepreneurship, which based on maximum freedom of subject, many field of society relations stay as self-regulated. Among them the labor relations - employee and employer (bilateral agreement), and voluntariness of medical insurance. But business participation mechanism is sophisticated (trough corporative funds) in social support. To solve different social problems by business expense (sponsoring of pension provision for staff, insurance programs and professional education). If the American model the designation of corporative social responsibility discusses the responsibility to shareholders and profitability, the European model places responsibility on it in connection with the worker's and local society unions. The charity projects is not so popular in Europe as in USA, which explained by more substantial tax burden.

2.3. Theories of business social responsibility
Formulated two opposite theory about social responsibility of business: according to corporative altruism, the companies are obliged to improve the quality of citizens life (use in Japan), and on the others hand the theory of corporative selfishness (Friedman, 1970, p. 32-33; p. 122-126) argues that, the business is obliged for increasing the incomes of shareholders, there are many intermediate approach between these two different positions. One of them is "the theory of discreet selfishness", according to this theory the company reduces the current profit by the social expenses and charity, and creates favorable social environment to get high profit in future. Among the followers of these two theories still is being acute polemics. The followers of "corporative selfishness theory" are calling this theory "destructive" which is built on lies, because is based on "suspicious and erroneous assumptions", which leads to the growth of the company's expenses and the deterioration of activity results. The followers of less radical approaches were trying to find the place of social

corporative responsibility in the theory of Friedman. For example, Douglas Denull argued that, the concept of Friedman detects principles of corporative social responsibility, but in somewhat limits the interests of shareholders, in order to improve it, he offers the rulers of corporation to sign the special agreement for maximization of profits with shareholders. The discussion about social responsibility of business against the background of this theory might be a little early to be considered in the reality of Georgia, but if we recall the business history of the past century of Georgia, the institute of Georgian charity and philanthropy has quite serious tradition. In spite of this, the social and altruistic projects confined to simple sponsorship, often by promotional campaigns, there is quite "discreet egoism", but these campaigns mainly have non-systematic and non strategic nature. As for the funds and special altruistic NGOs initiated by the business, in this respect none of them is not distinguished particularly active. It is considered, that the social responsibility of business needs strengthening and increasing.
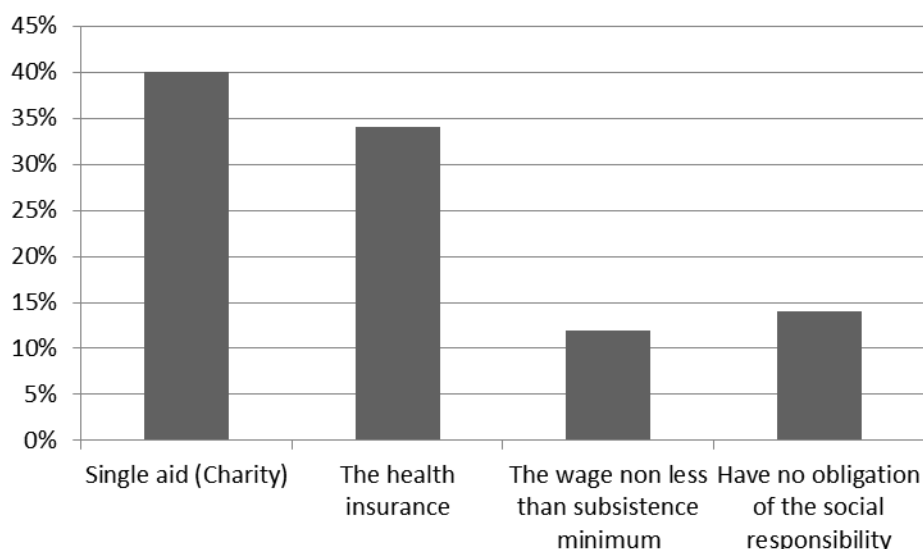
2.4. Business social responsibility in Georgia

According to the poll of Georgian strategic research and development center, 29% of businessmen could not explain the social responsibility, and the others the social responsibility discuss as the responsibility against the employees, payment of taxes, business transparency. Only a small part of businessmen are thinking, that the social responsibility implies funding of social sphere, care for society, to solve the problem of unemployment. Despite the fact, that the large part of Georgian companies the social responsibility understand narrowly and straightforward, a small part of them are still trying to input the social responsibility components in their activities. For example, "Wissol group" has the position of social responsibility manager. The social responsibility for them is the care for "market and customers, employees, health care, environment protection and business-partners", but in practice focused on transport, construction of churches and takes care of socially vulnerable children.

There is a great difference between the social responsibility of business of western companies and the social responsibility of business in Georgia, because the social responsibility in Georgia is considered as single action, and the western companies are implementing long-term social projects. Single charity cannot create feeling in the society, which once received social aid in case of need reoccurs.

The social responsibility of any organization has an important advantage for potential buyer. If the charity projects allows to customers to share emotional mood, the social responsibility – is the effective strategy of company working for mass market, which promotes the realization of corporative values and the extraction of customer's loyalty. In order to study the social responsibility were surveyed 42 companies in Georgia. The poll was held with the groups of individual interests, from the received answer determined, that 65% of employed people are not socially protected. In case of different directions of the social responsibility we decided to examine what kind of social responsibility is implementing by business representatives, in order to obtain full information about current situation. The question about the social responsibility of them, the most of them (40%) preferred single aid due to the charity, the next was health insurance (34%), not only with the participation of the employer, also including the employee, in third place were the businessmen, which assume that, the minimum wage of employee should not be less than the subsistence minimum (12%), however they named the reasons ,that they are not able to implement the payroll changes in this direction, and 14 % considers, that they have no commitment about the social responsibility.

Enterprise in Turbulent Environment

Figure1: The social responsibility measures of business representative

As we can see, the business has not yet comprehended the role of human capital to make their activity successful. Because the business sector in Georgia is still weak, they have to work under serious risk factors and uncertainty. Therefore, the expectation of social responsibility of business from powerful companies working in rich and stable economy is fair, but it is unfair to impose the same requirement for the private sector in developing country like Georgia. The additional demand of the social responsibility of business may be reduce the viability and competitiveness of Georgian companies. The studies about research of private polls and abovementioned organizations showed, that in Georgia the social responsibility of business for the society somewhat is known. The large part of businessmen properly estimates good corporative importance of citizenship, but the social responsibility mainly represented by the charity and do not intersect main priorities, which connected with the creation of jobs. Zarecki A.D formulates internal and external social responsibility and considers that internal social responsibility is at first the event of relationship with the personnel:

- The safety
- Payment of stable wages
- The medical and social insurance of employees;
- To improve the qualification of the staff due to training program;
- To help in critical situations;
- The external social responsibility includes:
- The Sponsorship and the charity;
- To participate in ecological programs of the state, region and municipality;
- The society relations in crisis situation;
- To output of the quality products. (Zarecki, 2013, p. 92)

Furthermore, the measures of social responsibility can be grouped by mandatory and responsibility forms. The mandatory forms are: the payment of taxes, the implementation of legislation, the social protection of employees, fulfilling the consumer's expectations, to care for ecological safety. The responsibility forms are: the charity, the funding for education.

All measures directly or indirectly directed to improvement of social condition of the population, and healthy society is the key to success of business. To prove this we use the opinion of the founder of corporation "Hewlett Packard "David Packard: "many consider that

the goal of any company's existence is to earn money. Despite the fact, that the money is important result of activity, we came to the conclusion: the company is the group of people, collectively solve the problem which unable to solve separate persons- contributing the society life". Such attitudes towards the corporative social responsibility in each country was proceeded the development of the charity, which was discussed by two aspects: at first, when rich person from his incomes was assisting the recipient, and second, when the commercial organizations transfer incomes to charity funds. In first case, we are dealing with purely altruistic actions, and second is corporative charity. The goals of any commercial organizations are to gain profit, which is the result of economical effectiveness of activity. So in the charity implemented by commercial organizations must be at some doses profit-making motive, otherwise the connection between charitable activity and commercial organizations can be interrupted.

3 CONCLUSION

Corporative responsibility in Georgia is in embryonic stage. Nowadays operates 57 charitable funds, but social problems are still the high quality, one reason for this is, that 1 650 000 socially vulnerable person standing face to face not very large – scale of business activity. Here is one of the principles: "the expense of business increases, the condition of vulnerable people doesn't improve" so charitable activity despite the tax benefits: after deduction from gross income to deduct of 10% of remaining amount, still cannot become corporative charity. The reason must be sought in socio-economic conditions of the country. Namely, due to the low level of life the business could not received the reverse effect from charitable activity, which can received the business structures of developed countries. In order to alleviate the problem we consider it necessary the joint participation of the business, the state and the society for improvement of social condition. In this direction the government should limit social assistance for the people, which are capable to working and in return to offer employment opportunities, and should facilitate the business structures, besides the society should understand the reduction of social assistance and to pay the main attention for increasing the formation and the use of finances of charitable funds, transparency of spending control, because the corporative social responsibility increases the traditional understanding of business responsibility. This is not only economical institute, its activity goes beyond boundaries of specific companies and impacts on society members, the state, and is involved in resolving of social issues.

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THE ROLE OF ORGANIZATIONAL CULTURE IN THE PROCESS OF INCREASING BUSINESS COMPETENCIES OF AN ORGANIZATION

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ABSTRACT
The economy crisis on a global level has pointed out the need for the creation of an optimal organization with the appropriate organizational culture which will fully implement the potentials of human resources while creating new values. The new values creation process has its revenues and expenditures. Any optimal organization strives to increase revenues through cost management. The expenditure which arises from work related injuries comprises 4 percent of world GDP. Thus, it is necessary to create an environment which will decrease the number of work related injuries by combining values of the organizational culture and by appropriate attitude towards human resources. Organizational culture groups all business operations into a whole, whereas human resources enable a more effective usage of material and non-material resources. By surveying the available literature, we can notice that there is a relatively small number of papers which deal with the role of human resources in the process of defining the organizational culture which will have an effect on the increase of the organizational competencies. The aim of this paper is to provide a comprehensive analysis of the national and international literature with the aim of defining the role of human capital which will, due to the appropriate organizational culture, contribute to lowering the number of work related injuries and consequently to lowering the costs and increasing organizational competencies. The initial hypothesis is the view that human capital, through appropriate organizational culture, contributes to decreasing the number and the severity of work related injuries, thus lowering the costs and increasing the organizational competencies. In this paper we will try to indicate the need for educating those who deal with human resources and the need for their better understanding of the role and importance of organizational culture in the process of decreasing the number and severity of work related injuries and that is the scientific contribution of this paper.

Keywords: human resources, organizational culture, safety culture, work safety

1 INTRODUCTION
In times of rapid changes which have become the primary characteristic of the majority of national economies, it is more and more difficult to follow the pace and intensity of those changes. Factors, which induce such a surrounding, are numerous. Some of them are internal, while some factors are external. Every organization has, to a greater or lesser extent, appropriate resources which are used for managing internal changes. Internal factors are numerous and they include: internal organization, division of work, motivation, employees` education etc. All the aforementioned factors generate certain pre-requirements for initiating changes. The main question is if there is a clear vision and understanding of the significance of the internal changes and of the need to manage those changes. Without clear management of those changes, and without generating environment in which the management anticipates the changes and acts proactively, creation and development of a successful organization on a long-term basis can hardly be expected.

On the other hand, managing external factors which characterize the environment in which each organization operates is a complicated activity and the majority of organizations is incapable of affecting these factors greatly. These factors depend on the macroeconomic indicators which characterize any national economy (GDP growth rate, foreign trade deficit, the implementation of certain agreements and rules on an international level etc.). It is evident that these factors as well cause some changes and introduce new game rules. Due to this, any organization has to try to recognize the direction of the future activities and changes in order to replace its business plans and adjust them with the trends in the domestic and foreign market.

Recognising the instigators of internal and external changes is an indicator of the significant role of the management in any organisation. The creation of leaders who are capable of recognising the changes is the only way to create business environment in which an organisation will use all its resources for instigating changes and for adapting to the changes that have already occurred. This process is extremely delicate and it requires that an organisation thinks globally and works locally on a micro level at the same time. It also requires that the values of the global changes are gradually implemented into internal strategies. All this points out the role and significance of human resources in the process of active adaptation to all the changes in the environment. In times of globalisation and market openness, there is less and less unfamiliarity in the business environment within which an organisation creates new values. Because of this it is more difficult to gain some comparative advantages which create pre-requirements for revenue growth. In such a surrounding, more and more organisations turn to internal activities and cost reductions as a way of increasing the business competences of an organisation. It is clear that there are fixed and variable expanses in any organisation. It is more difficult to influence fixed expanses as they are mostly connected with the level of the activities in an organisation and with the level of utilization of all the available capacities. Variable expenses are the subject of research and by actively managing them, better working conditions are created and the productivity is increased. A significant part of the expenditure of every organisation is the expenses incurred by work related injuries. It is clear that the organisations which undertake high risk activities spend more on work related injuries than organisations which run less risk due to the nature of their activities. However, costs incurred by work related injuries are extremely high and because of their nature a significant number of managers is unaware of their amount. According to research done by ILO (International Labour Organisation), it has been concluded than on one monetary unit, which can be measured as a direct consequence of a work related injury, come four monetary units which cannot be measured and expressed in monetary units (Todorović, Živković, 2010, p. 315). All this emphasises the need for creating a culture which will promote safe working environment as a significant component of development and increase of business competences of any organisation. The consequences of a change in the culture reflect in two directions: economic and human. Economic aspect refers to reductions of the costs incurred by work related injuries while the human aspect refers to the protection of a human life as an utmost value.

Taking into consideration what has been said previously, it is undoubtedly clear that the role of human resources is of great importance for creating business environment which will create pre-requirements for using all the potentials of an organisation. Creating an organisational culture which will gradually change the attitudes of the employees and induce the creation of values which will influence the way how the employees react in certain situations is a very significant pre-requirement for increasing the business competences of an

organisation and the society on the whole. It is clear that this is not a short process and that it does not end when a certain level of compatibility of the organisational culture values has been achieved. Precisely because of the changes which characterise today`s environment it is necessary to keep redefining the existing values, to synchronise them with the vision and the mission of the organisation and to motivate the employees to actively participate in the changes that occur in the organisation. It is our aim to analyse the available domestic and foreign literature which deals with combining of the organisational culture values, managing organisations, and lowering the costs incurred by work related injuries. The result of the analysis should point out the links between these factors and their influence on the enhancement of business competences of an organisation.

2 METHODOLOGY

By analysing the available domestic and foreign literature we have concluded that no research, which analyses the influence of the organisational culture and a certain system of values, assumptions and norms of behaviour which are focused on occupational safety and health on defining strategies which deal with management of the human resources, has been done. Due to this, a descriptive method of analysing the available literature has been used in this paper. In order to perceive the subject of the research clearly, we will define some of the basic terms connected with the organisational culture and human resources. In addition to this, a comparative analysis of the research conducted in Serbia and Slovenia based on the identical questionnaire will be given in order to present some trends more clearly.

3 ORGANISATIONAL CULTURE

Any society is based on the cultural heritage which is created during the development of the society. Organisational culture is a recent phenomenon and after analysing the available literature it can be said that a relatively low number of researchers grants this business component its deserved place. There are various definitions of organisational culture. Long ago, in 431 BC in ancient Greece, Pericles urged Athenians to respect values such as human dignity. He realised that a war victory or defeat might depend on such values (Weihrich, Koontz, 1994, p. 333). The concept of organisational culture was not something completely unknown in the organisational theory. The organisational culture was mentioned for the first time in the 30s, after Hawthorne experiments (Ivanova, Prihodko, 2008). Mayo and other Harvard experts took the stance that the bipolar structure of the industrial organisation should be replaced by a classic monopolar model of the organisation. In monopolar organisations, a strict hierarchy of the statuses and roles is dominant. According to them, the more system suppresses personality, the easier and more predictable it is thus it is much easier to manage. With the appearance of the Human Relation Movement, the perception and the understanding of the performers of certain activities changed significantly. The organisational culture as a scientific discipline within the organisational theory appeared around 30 years ago when in 1981 it was introduced as a subject at the Harvard University. The problem is that for a long time it was not clearly presented and studied as a separate scientific discipline. In the last two decades, more and more researchers are dealing with the appearance of the organisational cultures while doing research in the field of organisational theory (Handy, 1979; Morgan, 1997; Robbins, Judge, 2001).

One of the comprehensive definitions defines organisational culture as a system of assumptions, beliefs, values and norms of behaviour, which the members of an organisation develop and implement through mutual experience, which manifests through symbols and which directs their thinking and behaviour (Janićijević, 1997). Understanding the behaviour

of the employees in an organisation requires discovering their values, beliefs, customs, rituals or symbols. It is clear that we cannot talk about these values as permanent categories, which last for a long time in the same form. People are social beings and there is a desire in each of use for affiliation, bonding, and trust, both on the individual and on the group level. Adjusting individual attitudes to group values is a process that takes time and thus it is necessary to actively manage this process. While developing an organisation, there is always a question of how to create an ideal organisation through which pre- requirements for the efficacy and productivity increase of the whole system will be created in the easiest possible way. It has been noted that the productivity is highest in the countries with long history. The economic success of the Japanese economy is frequently accounted for by the openness of the Japanese culture for the other cultures, while respecting their own traditions at the same time. Many think that e.g. the Japanese company Sony achieved a big increase in the foreign markets precisely because of the respect they showed towards other cultures and customs (Žugaj, Cingula, 1992, p. 207).

Every organisation has its own cultural model which shapes the behaviour of all the members of the organisation. Without understanding that model, the organisation and the members of the organisation cannot be actively managed, nor can the business revenues be predicted. It is important to mention that the culture model must adapt to the environment in which the organisation operates. The superficial analysis of the behaviour of managers and the employees in different countries may show that there are no significant differences in their everyday behaviour. However, a more detailed analysis will show small differences which have a significant effect on the performance results of an organisation. Noticing those differences allows us to better predict the future behaviour in different national cultures. Clearly defining the current position is the main pre-requirement for undertaking any corrective actions with the aim of enhancing the operations of the organisation.

Numerous researchers in the field of management have concluded that the successful companies have a strong organisational culture with clearly defined attitudes, values and beliefs. However, a strong organisational culture has some disadvantages as well. Badly defined values, attitudes and beliefs, and the lack of clear picture about the quality of defined values can create pre-requirements for huge losses. The cause of potential losses may be the lack of desire, or the incompetence of the manager to create an appropriate organisational culture and to actively manage it. Any change is difficult. If an employee has a wrong perception about the quality of an attitude or a value, and the managers lack the needed knowledge and patience to present the advantages of the change in the way he or she perceive a certain attitude or a value in a right way, the economic losses are inevitable. There is no doubt that the organisational culture should be one of the pillars on which the development strategy of an organisation is based. The organisational culture is not only a measure of the value of an organisation, but also of the value of each member of the organisation. Culture induces the belief that the employees do not work only for money, but also for the satisfaction of the product or service users which is in the end reflected through the safety of the organisation and its members. Organisational culture has an influence on: the way strategic decisions are made, the level of adaptations to the changes in the environment, defining of mechanisms for coordination and control of all the business operations in the organisation, the way conflicts are dealt with and on the motivation of the employees. There is not a good or bad organisational culture. Organisational culture which is good at a certain point in time might be completely inadequate in another. There is not an ideal culture and every organisation tends to create an appropriate culture in accordance with the level of its business

growth and the attitudes of its members. A good manager must be capable of recognising and perceiving the attitudes of his or her employees. The most important thing a manager should do is to asses who can do what and that he or she divides tasks according to that. The assessment of the capabilities and competences of all the employees is an extremely complicated process and the contribution of the individuals within the organisation depends on this process. Whether the competences of the certain employees are overestimated or underestimated, the consequence might be the disruption of the rapport among the employees which can lead to the deterioration of the competences of the organisation. In the process of creating and changing the key values of the organisational culture, leaders must be the animators of changes, creators of new culture and guards of acquired values.

4 HUMAN RESOURCES MANAGEMENT

If we go back to history and analyse the significance of the production components for the creation of a new value, we can easily conclude that in the initial capital accumulation phase, human resources had no role at all. The labour was treated as an expendable good and no one dealt with that. As the time passed the realisation that the material resources are not the most important factor in enhancing the business competences of an organisation has been more and more frequent. In times of globalisation, when the increasing number of organisations turns to cost reductions as a way of increasing their revenues, the significance of the human resources as a factor in increasing the profitability of the company becomes more evident. This is as well indicated by the current situation when one of the decision making factors for investment, for both domestic and foreign investors , are human resources, their quality and competences. It is difficult to take a step forward towards modern markets and global international game without the appropriate, qualified staff.

The increase in productivity occurs in the process of knowledge development, those are some of the basic characteristics of the human resources. The following question arises automatically: How to manage such an important resource in business processes? How to use all the benefits of the motivated human resources in the process of enhancing the business competences of an organisation and creating the better start-up position in the everyday international or local market game? In order to answer some of the aforementioned questions, we need to start form the analysis of what drives the human resources. Long time ago, the main tendency of an individual was to satisfy his basic life needs. As the society develops and the life standards improve, the order of priorities in expectations of the human resources changes as well. Satisfying the basic needs is something that is implied and what people strive for is the acceptance of their personality and their status.

Due to the specificity of the human resources in the process of creating new values, the role of sectors which deal with human resources within an organisation is of great importance. In order to use the potentials of an organisation in the best possible way, it is necessary to create an appropriate environment which will instigate the constant wish and need for training of all the employees. Such environment in which it is strived for continual education and enhancement of all the business activities in the organisation might be demotivating for those who are unwilling to participate in continual education and training. Organisations should find out what is the cause of such an attitude or behaviour of an employee who resists the changes or training. Pre-requirements for the change in the opinions and attitudes must be created by adequate education and synchronised approach on an individual level. Each employee is a separate individual and thus it is necessary to invest additional effort in order to gradually close the gap between the attitudes of the individual and the organisation. Amazing

results might often be achieved with the existing staff with continual training and conversations with all the employees. By formulating the appropriate policy for management of the human resources as an important factor in the process of productivity growth, requirements for the increase of the business competences of the organisation are created. Stimulation and motivation of the employees fully benefits the process of enhancement of the individual and business competences of all the participants in the business process. The appropriate techniques might create conditions for the active participation of all the entities of an organisation in creating a stimulating surrounding. Of course, fines are the other side of the coin and are sometimes the only solution for a certain problem.

5 HUMAN RESOURCES AND THE COSTS OF WORK RELATED INJURIES AND THEIR RELATIONSHIP TOWARDS ORGANISATIONAL CULTURE

The role of departments which deal with the human resources management in relation to the tendency towards creating a safe and secure working environment is very important. Continual education of all the members of an organisation should include the system of safety and health at work as an important aspect which can lead to many savings within the organisation. Certain costs might be translated into money, but the human life can hardly be valorised in certain monetary units. Due to this, departments which deal with human resources represent an active participant in the process of development and creation of the conscious about the significance of respecting the prescribed procedures for safe work. Only through integrated operations of all the sectors in the organisation, conditions for safe and secure work might be created.

Studying the primary values of the organisational culture and work culture, in relation to the ways of managing the human resources, comes from the internationalisation of the business activities. While respecting the cultural differences which impact the operations of an organisation, a question of how to attract the best there is on the human resources market arises. The main goal is to attract as many candidates as possible so that the organisation could choose the best candidate for a certain position through a clearly planned selection process. There is always a question what is better: to recruit a candidate from the organisation or to bring someone from outside. Both options have its advantages and disadvantages. If you decide to continually run the selection of candidates who you recruit, follow their work, and after some period of time after checking their capabilities, find them an appropriate position. The advantage of choosing someone from the organisation is that you already know all the characteristics of a potential candidate thus it is easier to choose the best candidate. The disadvantage of this choice of selecting a candidate springs from the fact that in a large number of companies a monotonous atmosphere is created over time which reduces the creativity and inventiveness of the members of the organisation. The choice of the external candidate may bring an additional impulse which would generate new ideas and views on the business activities and this might be an excellent option. The problem with this option lies in the fact that a wrong choice is possible and this might jeopardise the existing culture and organisation of work. As we can see, the choice of a right candidate is not a simple activity and it requires continual training and education in departments which deal with human resources. The choice of a right candidate brings, among other thing, significant savings as every employee who starts working in an organisation generates expenditure in the initial phase. It takes time before an employee fully adapts to the organisation and before he or she takes certain tasks and responsibilities. One bad choice is not such a big problem, but if that becomes a routine, wrong choices might considerably increase the expenditure of an organisation and create a negative image in the external surrounding. Organisational culture

has a significant influence on all the business activities in an organisation. Activities in the sphere of health and safety at work are not an exception. The influence of an organisational culture is difficult to exemplify with direct data and economic indicators, either positive or negative. However, according to many authors there is a clear link, but the theoretical models have not been defined yet, neither has some significant research been done which would be representative and enable taking a certain stance. There are various methods and techniques both in theory and in practice which are aimed at increasing the health and safety at work. Two famous authors divide the history of safety research and safety enhancement into three phases (Hale, Hoveden, 1998). In the first phase, safety was regarded as a technical and technological problem and all the research dealt with the efficacy increase of the instruments. This phase lasted from the beginning of the 18th century till the beginning of the 19th century. This period is characterised by a great market desire for any product, thus the main goal of the organisations was to increase the production volume. Few theoreticians and practitioners dealt with the effects of the rapid development of technologies on the labour and with the potential consequences for their safety. The second phase is characterised by paying more attention to increasing safety through strategic recruiting, employees` skills enhancement and increased effort to boost the motivation of the employees. These are the measures which tend to improve work on an individual level. The third phase started in the 1980s, and is characterised by paying more attention to the organisational conditions for safety with the emphasis on management.

6 STUDYING THE ROLE OF THE ORGANISATIONAL CULTURE

The main pre-requirement for raising awareness of the significance and influence of the organisational culture on the health and safety systems points out the need for conducting more and more research. Unfortunately, in Serbia, there is not much research dealing with the organisational culture, and there is only one research that dealt with the link between the organisational culture and occupational health and safety, and the emphasis was put on the managers` relation to the organisational culture in the process of creating a safe environment. It is clear that through the educational processes and raising awareness of the significance and the link between the organisational culture, human resources and work related injuries, research must be organised with the aim of collecting as much data as possible. The comprehensive analysis of the available research and papers dealing with organisational culture pointed out the need for creating a clear concept, both methodological and theoretical, which will provide the future researchers with clear framework to be used in their research. Regardless of the fact whether it is research in a certain organisation or it is research in a few organisation, it is necessary to define a uniform model which will create pre-requirements for the comparison with other research. Results that will be obtained in such an analysis might be the basis for undertaking corrective steps in the process of creating an optimal organisational culture. In order to perceive more clearly the significance and the role of the organisational culture in the process of creating safe working environment, which will in the end have an impact on the expenditure of an organisation, we will show a part of research results. Research has been conducted in Slovenia and Serbia and it was based on the identical questionnaire. The research sample included 62 organisations in Slovenia and 62 interviewees. The sample in Serbia included 73 organisations and 801 interviewees. In the following section we will show the way in which certain claims are assessed when it comes to the values of the organisational culture such as: COOPERATION, FEEDBACK, RESPECT.

Table 1: Results of research in Slovenia (Kolenc, 2009)

COOPERATION	The average value	Standard deviation
I promote cooperation when it comes to Health and Safety at Work	5.55	1.51
I question and encourage employees to improve the issues relate to Health and Safety at Work	5.35	1.51
I help the others to deal with the challenging situations related to Health and Safety at Work	5.16	1.57
I encourage the acceptance and implementation of new solutions	5.98	1.43
I am ready to listen	6.56	1.07
I trust the others	5.74	1.49
I support other people`s decisions	6.08	1.39
I get the approval of the others before implementing innovations	5.40	1.51

Table 2: Results of research in Serbia (own source)

COOPERATION	The average value	Standard deviation
I promote cooperation when it comes to Health and Safety at Work	4.75	2.03
I question and encourage employees to improve the issues relate to Health and Safety at Work	4.26	2.10
I help the others to deal with the challenging situations related to Health and Safety at Work	4.59	2.00
I encourage the acceptance and implementation of new solutions	4.59	2.13
I am ready to listen	6.09	1.51
I trust the others	4.79	1.90
I support other people`s decisions	5.16	1.69
I get the approval of the others before implementing innovations	4.51	1.97

By looking at the results we notice that the highest values are those relating to the readiness of the employees to listen. This is on one hand good, but on the other hand, according to the authors it is of great importance that all the employees actively participate in business operations and that they give suggestions which will create conditions for a safer working environment. It is interesting that the interviewees in both countries have high values when it comes to the level of support to the others to make decisions on their own. This can be interpreted as the unwillingness to take responsibility for the decisions that have been made. The lowest value when it comes to the interviewees from Slovenia is noticed in the question dealing with the need to help the other employees accept certain standards. The lowest value

in the Serbian sample points out the lack of wish to enhance the production process and create a safe working environment through cooperation with other employees.

Table 3: Results of research in Slovenia (Kolenc, 2009)

FEEDBACK AND RESPECT	The average value	Standard deviation
I publicly acknowledge other people`s contribution	6.37	1.23
I immediately pay tribute to those who contributed to the enhancement of health and safety at work	5.87	1.47
I encourage others and I do not criticize attempts	5.67	1.50
I give positive feedback and I reward successfully realised measures	5.67	1.50
I motivate all the employees	5.70	1.50
I celebrate the success related to Health and Safety at work	4.15	2.02

Table 4: Results of research in Serbia (own source)

FEEDBACK AND RESPECT	The average value	Standard deviation
I publicly acknowledge other people`s contribution	5.84	1.66
I immediately pay tribute to those who contributed to the enhancement of health and safety at work	5.74	1.73
I encourage others and I do not criticize attempts	5.55	1.74
I give positive feedback and I reward successfully realised measures	5.59	1.79
I motivate all the employees	4.57	2.14
I celebrate the success related to Health and Safety at work	4.08	2.31

By looking at the results of research in both countries we notice again certain regularities, and that is that the interviewees in both countries assign the highest values in the part dealing with public appraisal of the contribution to the work process by other employees whose work has helped make an advance in creating a safer working environment. At the same time we notice that the both groups of the interviewees are not interested for celebrating the success related to health and safety at work. The employees` and managers` have a huge responsibility to create a safe working environment. Laws and sub-legal acts clearly define that both managers and employees are to create safe working environment. Because of this, it is very important to raise awareness about the increased responsibility to yourself and the other employees who share the same working environment while undertaking certain activities.

The influence of the inappropriate organisational culture, as a consequence of the lack of clear vision of human resources management, will lead to creation of the conditions in which the probability of work related injuries is higher. The consequences of the work related injuries are reflected in significant business costs which might seriously disturb the financial stability

of an organisation. The role of the employees in the process of comprehending micro and macro environment is of great importance for the beginning of the creation of the safe working environment. There are not important and less important links in that chain. Managers have their role, but every employee also has a very important role in the process of creating and understating of the processes which happen during certain activities in the organisation. Everyone has a different perspective on a certain situation and everyone actively participates in all the processes which will contribute to the better understanding of those situations.

Good management often gets very important information from the actors themselves, information which cannot be obtained through observation. Such an approach, from the perspective of traditional theories of organisation, is disputable since the questions of authority and who makes decision in case there are opposed views arise. Opposed attitudes are to a certain extent a great way to get as much information as possible from all the participants about how the employees see certain processes. Of course, the management is the one to make decision but all the decisions must respect all the members of an organisation because only in that way the main goal may be achieved. The main goal is an universal organisational culture which will fit all the individual values and attitudes into collective values and attitudes which will become a hallmark of a certain organisation. There always needs to be a certain level of discordance with the existing culture and its values because in that way active synchronisation with the changes happening in the environment is enabled.

7 CONCLUSION
Linking the role and significance of the organisational culture to the human resources management is not something unknown. The lack of coordination in the process of creating an appropriate culture indirectly causes the reduction of productivity which reflects on the expenditure growth. A simple example might be the costs incurred by work related injuries. These injuries are frequently caused by the employees' lack of attention which is a consequence of his or her bad safety culture. All this points out the link between organisational culture, human resources and occupational health and safety, as factors which can to a greater extent create pre-requirements for enhancement of business competences of an organisation and the society on the whole. Departments which deal with human resources within the organisation are to face the constant challenge of coordinating individual attitudes and values with proclaimed, targeted values. Without appropriate education of both managers and the employees, it can be hardly expected that the conditions will be created which will enable that all the resources are used for the enhancement of the business competences of an organisation. Employees' motivation and willingness to change their attitudes and values and to prefer the collective over individual play an important role in that process. Based on everything said, we believe that we have proven the initial hypothesis that `human capital, through appropriate organizational culture, contributes to decreasing the number and the severity of work related injuries, thus lowering the costs and increasing the organizational competencies`. The future research should firstly incorporate the ethnographic methods with the aim of creating a certain model of behaviour through the analysis of the employees` behaviour and the employees` perception of the creation of the safe working environment in a certain number of organisations. In the next phase, such a model would present its financial aspect which is created by the decrease in the number and severity of the work related injuries.

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Entrepreneurship Cought Between Creativity and Bureaucracy

INFLUENCE OF CAREER MANAGEMENT SYSTEM ON CUSTOMER RELATIONSHIP MANAGEMENT IN HIGHER EDUCATION

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ABSTRACT
Large and rapid changes on the global market are emphasizing the importance of career management as a core component of competitiveness. Key to differentiation of service sector, including educational institutions, as opposed to other sectors lies in two basic characteristics of services such as intangibility and inseparability of production and consumption. It is these characteristics that emphasize the importance of human potentials as a key competitive determinant. People, their knowledge and competencies are becoming bearers of differentiation of businesses and a key component for earning profits in the current market environment.

The process of career management is one of written procedures that support the process of human resources management in the organization, and therefore it is one of quality documents that can influence the conversion of human potentials to human capital. The fact is that career management can be clearly identified and documented only in those organizations that have implemented a quality management system in accordance with the requirements of international standard ISO 9001.

Perceived quality of service in higher education has a positive impact on student progress and development. Thus the aim of paper is to show that relationship between students and faculty have a significant impact on dimensions of quality, which implies satisfaction of students, and thereby their loyalty. Special emphasis is placed on examination of relationship between perceived quality of service of higher education institutions and student results. Based on the data from the conducted research, policymakers in higher education can shape the strategy of higher education focused on the progress and development of students.

Keywords: Human Capital, competitiveness, career management, quality, ISO 9001, customer management, higher education institutions

1 INTRODUCTION
People, their knowledge, abilities, skills and competencies are the key component of any organization. Thus people are becoming carriers of differentiation between business entities. All assets, other than people, are inert and require human interaction in order to create additional value. Therefore it clearly leads to the conclusion, and from the foregoing it follows, that the main task for any modern organization is to attract and retain the best people and perform a wide range of high quality activities and tasks of human resources management. Quality management systems direct organizations attention towards human resource management, with the aim of increasing the efficiency and competitiveness of the organization on the global market. From the aforementioned a link is visible between human resource management and quality management in organizations. However, the question arises,

can the quality management system be used as a tool for the management and development of human resources in organizations.

The process of career management is one of the written procedures that support the process of human resources management in the organization, therefore it is one of the quality documents that can crucially influence the conversion of human potential to human capital. The fact is that the career management can be clearly identified and documented only in those organizations that have implemented a quality management system in accordance with the requirements of international standard ISO 9001.

Legislative regulations that regulate quality management at all levels of the Croatian education system is continuously improving and adjusts to the European acquis communautaire. The issue of quality management in the education system has been actual for a while now. Although at higher levels of the organization (ministry, agencies, etc.) the system is already established, a common problem is the application at the level of educational institutions (from elementary schools to higher education institutions). Measures relating to quality improvement are often made only at the declarative level, without the actual application and understanding of the purpose. One of more common causes for this is the inadequate education of those who should participate in this system and lack of understanding for basic principles of quality management. For the full implementation of the management system it is often necessary to change the mindset of all people affecting the quality of services provided (from headmaster/dean, through teachers/professors to technical staff).

International standards dealing with the management systems are issued by the International Organisation for Quality (ISO), among them is the famous ISO 9001 - requirements for a quality management system. ISO 9001 provides a number of tools that greatly facilitate the realization of goals and raising of the level of quality management. By applying the tools of ISO 9001 it is much easier to meet the legal requirements, achieve actual improvements in the quality of teaching and also improve the management of the whole organisation.

2 DEVELOPMENT IMPORTANCE OF HUMAN CAPITAL FOR THE COMPETITIVENESS OF ENTERPRISES

The human factor is increasingly gaining importance. The importance of human resources is pointed out in the first half of the 20th century, when it recognized the importance of motivation, informal relationships and leadership style. Official literature begins with the major analysis of this topic. Numerous authors have already in the earlier stages pointed out the importance of continuous investment in employees, including in the 18th century, Adam Smith in his works emphasized the importance of education of individuals to society as a whole, in the 19th century, Karl Marx by analyzing the factors of productivity puts at the first place the expertise and skill of workers (Britvić, Blažević, Tenjeri: 2013). Although the study of the importance and role of knowledge can be studied further, the first who tried to scientifically set up the knowledge, experience and skills of employees in some kind of framework was Frederick Taylor who in 1911. published his work "The Principles of Scientific Management". Joseph Schumpeter, in 1934. in his work "The Theory of Economic Development" by studying the economic changes argued, that for the emergence of new products the "recombination" of knowledge is important (Bontis, 2002.). But it was only in the 20th century that the studies are being focused towards proving the connection between education and economic performance which emphasizes the importance of the role of "human capital" and investment in it at achieving the objectives of economic development

(Bahtijarević-Šiber, 1998: 121). Therefore, the notion of human resource management involves "a series of interconnected activities and tasks of management and organizations aimed at ensuring an adequate number and structure of employees, their knowledge, skills, interests, motivations and behaviors needed to deliver current, development and strategic objectives of the organization" (Bahtijarević-Šiber, 1999:16).

It is theoretically argumented for the significance of development and career management for improvement of organisation capital as the basis for creating greater competitive advantage of organizations (Vemić-Đurković, Marić, Đurković, 2011: 193), therefore, in a dynamic economic environment, employee development is a continous process that needs to be ran by the employer. McCourt and Eldridge (2003:2) have defined human resource management as "the way organizations manage their staff and affect their development and training.". The process of career management is one of the written procedures that support the process of human resources management in the organization. After the rulebook on the organization and systematization, catalogue of job descriptions, analytical estimates, tariff annexes and employment contract, career management process is one of quality documents that can influence the conversion of human potentials to human capital (Drljača, 2012:253).

The model of intellectual capital is becoming increasingly important at the beginning of the nineties (Pulić, 1997.). Nowadays, education plays a very important role in improvement of service quality and improvement of strategic success factors of company is conducted primarily through better education and human resource management (Heskett, 1988). About the connection between career management and planning at the organization level a clear judgment is given by the two Baruch strategic approaches - two distinct strategies (Baruch, 2004:27) vertical integration and horizontal coherence. Career development of each person takes place within the work and the wider social environment (Babić, Kordić, 2011:251), and based on the strategy of vertical integration are identified the needs for human resource of the organization. Due to the lack of career management of employees in organizations there is no optimal investment in the development of competence, no advancement in profession or the hierarchy within the organizational structure based on competence, there is no optimal business results for the organization or sustainable success (Drljača, 2012:254).

3 STARTING POINTS FOR MAKING OF A COMPETENCE PROFILE AND THE EXISTING LEGISLATION WHICH COVERS THE AREA OF QUALITY MANAGEMENT IN EDUCATION

When it comes to educational standards and standardization in education, it is necessary to note a dilemma: whether the education requires standardization or personalization? Educational standards are created on the idea of measuring the quality of education, which are usually advocated by educational administrations and government agencies, which are interested in external control rather than real life (Strugar, 2012:37). Approach to student-centered teaching aims to create measurable learning outcomes which are in higher education recognized as the competencies that students should develop during their studies. Therefore, said approach involves shaping of curriculum based on competencies as a new paradigm in education (Previšić, 2007), which aims to achieve a constructive connection between the outcome of learning with activities, approaches to learning and teaching and student workload. For designing appropriate learning outcomes at the level of teaching subject or an hour, teachers who are put in the position of instigator and guide of learning, must have a solid foundation in a precise and clearly defined competencies at the level of the curriculum, which in turn must be consistent with regional competencies within each profession and the

Croatian Qualifications Framework. Therefore, the progress of schools is closely related to the competencies of lecturers because the quality of lecturers education is one of the main components that influence the level of students' educational achievement (Jurić: 2007).

In the process of Croatian accession to the European Union the legislation that covers the quality of education and quality management has changed to a considerable extent. Almost all of laws and related ordinances mention quality and quality management as an important notion. Also, pedagogical standards have been enacted that also to a large extent regulate the quality requirements. Within the education system exist institutions for the external evaluation that monitor the quality and results achieved in the quality of teaching. We can conclude that the regulatory frameworks exist and that the work has started on the implementation of the system.

Legislation in higher education was constantly being adjusted to EU regulations. This adjustment was started at the beginning of accession negotiations on Croatian accession to the EU. By analyzing the current legislation, an emphasis is visible on defining the quality standards expected of universities, polytechnics and colleges. Key role in defining quality standards in higher education in Croatia is linked to the National Council for Higher Education, National Science Council, the Rectors' Conference, the Student Union, the Council of Polytechnics and Colleges, the Agency for Science and Higher Education (abbr. AZVO). However, the primary responsibility is on the institutions of higher education and scientific organizations. Based on the review of legislation and evaluation of application in practice, the forementioned is evident, the legislative framework exists, number of activities are initiated, but according to the author there is a lack of practical application and understanding of the meaning of all these activities. Implementation of the ISO 9001 standard often has a positive effect and facilitates the practical application of these requirements. (Kolenc-Miličević, Britvić, Miličević, 2012:69)

3.1. PROBLEMS OF QUALITY MANAGEMENT IN EDUCATION

By analyzing the concept of quality each individual has a different perception of quality, but what is it specifically? Authors are often defining quality as "the degree to which a set of characteristics meets the requirements" (Funda, 2008:9), or the totality of product or service properties that underpin their ability to meet the expected requirements. Quality can be defined as the readiness for use (Juran, 1982.), as added value (Shannon, 1997: 94-97), as a continuous, never completed improvement (Foster, Thomas, 2001:36). Something is quality when it has the ability to satisfy the expectations of customers or users. Therefore, the quality is customer satisfaction (Juran, J.M, 1988.) and adaptation to requirements (Crosby, 1984.). According to the to quality management system ISO 9000:2000, quality is the degree of inherent (close) characteristics that meet the requirements, or the degree to which a set of interdependent characteristics fulfill the requirements. Lazibat (2009) defines the quality as a measure or indicator of volume or amount of use value of a product or service to meet specific needs in a particular place and at a certain moment, or when that product or service in the social process of exchange is confirmed as a commodity. However, what will today meet the consumer's needs and demands, tomorrow may be completely unacceptable and unnecessary.

It is known that higher education is a traditional and often rigid system. The public view of higher education is as a production of skilled manpower or as a training for a career of researcher. Thus the quality of the higher education is a complex concept and in its creation, maintenance and development participate countries, teachers, administrators, employers,

students and other interest, mainly professional, groups. Quality is also a constant struggle to overcome perceived weaknesses (Mencer, 2003:72).

Following forementioned the conclusion that the insistence on finding a generally accepted definition of quality is actually kind of a waste of time, (Mencer:2005) although in all systems that create new value, as well as in the higher education system, it can be concluded: First, quality means different things to different people; second, quality is closely linked to the processes and outcomes of these processes (Vroeijenstijn, 1995:13). The quality is thus related to three closely related cause and effect values, namely - the purposes, processes and people (King Taylor, 1992:40).

3.2 DEVELOPMENT OF A QUALITY MANAGEMENT SYSTEM AND THE INTERNATIONAL STANDARD ISO 9001

ISO 9001 appeared as a need and response to the problems of globalization with which organizations have increasingly encountered in international trade of goods and services. Therefore, standards are not only a great help in building a quality management system, but are also "a kind of a passport (in the form of certificates) for the free flow of products (goods and/or services) primarily within the European Union and with time in Europe and the world" (Skoko, 2000:153). If we look at the economic activities and branches, the application of ISO 9001 started off from the industry of material production, then engulfed activities of immaterial production (services) and is now spreading through educational and governmental organizations and institutions.

In the world today there are more than 1 million certified companies in all areas of business. Common misconception is that the quality management system according to ISO 9001 is intended for production companies and it does not make sense to apply it to systems such as education, public and local government, health, etc. ISO 9001 is essentially a way of thinking and approach to management in a way that the best practice in the management has been converted into to requirements of standard.

International standard ISO 9001 is the first standard that combines the requirements for a quality management system in all areas of human activity. The ISO 9001 standard was created as an aspiration to consolidate the requirements of quality within one standard. ISO 9001:2008 is now the most accepted standards in the market and most frequently used model of quality management systems. Standard was issued by the ISO organization in 1987 and until today it had three revisions (1994., 2000. and 2008.) and is expected to have a new edition in 2015. Currently the application level of ISO 9001 in the systems of primary and secondary education in Croatia is low. In the higher education institutions the standard ISO 9001 is in practice more frequently used than in primary and secondary schools, but that number is still below the EU average.

Policy of quality management system according to ISO 9001 explicitly requested, among other things, that the organization must commit towards constantly working on improvements and education of human resources. International organization for quality encourages the work of experts in specific areas in order to bring the standards closer to a particular group of users. In this case, IWA-2 (IWA - International Workshop Agreement) guidelines provide practical answers on how to apply specific requirements of ISO 9001 in the field of education. The guidelines are explanations of how to apply the requirements in education and what to be focused on in certain areas. Additionally part of IWA-2 guidelines is a questionnaire for self

evaluation of educational institutions (Annex A) as well as examples of the processes in education, measurements, records and tools (Annex B). IWA-2 guidelines represent a useful tool for understanding and application of ISO 9001 in the education sector and certainly should be considered when building a quality management system.

As previously stated requirements of ISO 9001 are largely associated with the legislation in education that covers quality management and quality management practices. There is a clear link between ISO 9001 and practices in the management of schools, which is logical because it is already stated that the ISO 9001 is a good management practice turned into the standard.

4 CASE STUDY - COLLEGE OF VIROVITICA

College of Virovitica was established by the Decree of the Croatian Government on seventh of September, 2007. Development of the College since its inception to the end of 2013. in continuity was in three main directions:

1. Development of human resources necessary for continuous improvement of the quality of the teaching process, professional and applied scientific work,
2. Development of material resources necessary to ensure optimal conditions for teaching and improvement of student standards,
3. Participation in the Community by creating conditions for participation in the development of local communities through the transfer of knowledge through cooperation and partnerships with industry, public, private and civil sectors.

In 2009. The Academic Council adopted the Strategy for Development of the College in the period from 2009. to 2013. where, as one of the objectives, is highlighted the development of quality assurance systems and the development of human, material and financial resources. By the end of 2010. work has began on setting up a quality assurance system. In 2011. an integrated quality management system has been introduced (which was made up of ISO 9001:2008, with IWA 2:2007 guidelines for educational institutions, Safety Management System OHSAS 18001:2007 and financial management and control FMC) that is certified and monitored annually by the certification company - QS Group Zurich Swizerland. Similarly, in 2012. the Center for Quality Management was established.

As one of the basic components for encouragement of employees and management of their careers is a measure to encourage additional education. This measure directly affects the quality of the employees that is automatically projected on the quality of their work and teaching. In connection with the above-mentioned measure the College encourages and funds its employees to further education through postgraduate specialist and doctoral studies, as well as to actively write papers and participate in conferences, exchange of knowledge and experiences with colleagues from other higher education institutions. In order to allow direct analysis of the quality of work of the teaching staff, in the winter semester of 2009. was conducted the first electronic student survey whose objective was to evaluate the quality of teachers and teaching.

4.1. HYPOTHESIS

The aim of this paper is to analyze student survey, which is conducted at the College, in order to determine whether there are indicators that confirm that the introduction of ISO 9001:2008 with IWA 2:2007 guidelines for educational institutions have improved the quality of communication with students, the availability of teaching materials, the organization of seminars, lectures and exercises, the organization of tests and exams.

According to the above two hypotheses of this study can be stated:

H 1. Rating the students gave with regards to the quality of communication with students, the availability of teaching materials, the organization of seminars, lectures and exercises, the organization of tests and exams is increased with respect to the period before the introduction of ISO 9001:2008 with IWA 2:2007 guidelines for educational institutions;

H 2. Movement of the grades, in accordance with the linear trend established from the available data, is on the rise.

4.2. METHODS OF ANALYSIS
Student survey in the College is carried out since the academic year 2009./2010. when the survey was approached by only 38 students or 7% of the total number of students. In the academic year 2010./2011. the survey was approached by 156 students, in the academic year 2011./2012. the survey was approached by 289 students, and in the academic year 2012./2013. the survey was approached by 251 students.

Student survey of the College is conducted twice a year, after the completion of the first and second semester in the academic year. Every student has the right to participate in every survey, which is anonymous, once. All data obtained by the implementation of student surveys are stored in a database on the server domain.
Areas that are assessed for each lecturer are:
1. expertise, competence and ability to transfer knowledge,
2. substantiating lectures with examples from practice,
3. communication with the students and the availability of teaching materials,
4. organization of lectures, seminars and exercises,
5. organization of tests and exams.
Since the survey is conducted twice during the academic year, this paper observes average score of the academic year on the subject of communication with students and the availability of teaching materials, the organization of lectures, seminars and training courses, organization of tests and exams, and the total score for all areas. For the data collected relative changes were observed in the current period compared to the previous period, ie chain index, the average rate of change and the trend. Data was analyzed in MS Excel.

4.3. RESULTS OF RESEARCH
Students grade for the field of communication with students and the availability of teaching materials for the academic year 2010./2011. was less by 5.73% compared to the academic year 2009./2010. One year after the introduction of ISO 9001:2008 with IWA 2:2007 guidelines for educational institutions in the academic year 2011./2012. score increased by 2.62% compared to the academic year 2010./2011., while for the following academic year an increase of 6.29% was noted as compared to 2012./2013.

Entrepreneurship Cought Between Creativity and Bureaucracy
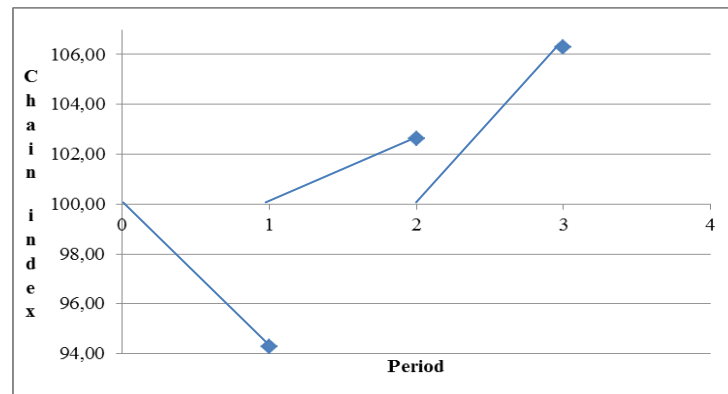
Figure/Chart 1: Movement of rating in the field of communication with students and the availability of teaching materials for the period from 2009./2010. (period 0) to 2012./2013. (period 3)

According to the previous chart one can clearly see how the rating in the period from 2009./2010. up to 2012./2013. was increased by 0.93%. Assuming that the movement of the grade in the field of communication with students and the availability of teaching materials continue in accordance with the linear trend that was established on the basis of the period, a grade of 4.22 out of 5 can be expected in the academic year 2014./2015.

Grade students gave to the field of organization of lectures, seminars and exercises for the academic year 2010./2011. was less by 6.67% when compared to the academic year 2009./2010. After implementation of ISO 9001:2008 with IWA 2:2007 guidelines in the academic year 2011./2012. the grade was increased by 4.37% as compared to the academic year 2010./2011., and in the next academic year grade was further increased by 7.06% as compared to 2011./2012.
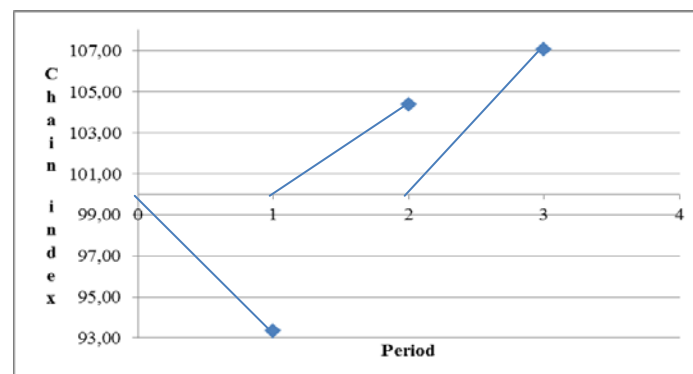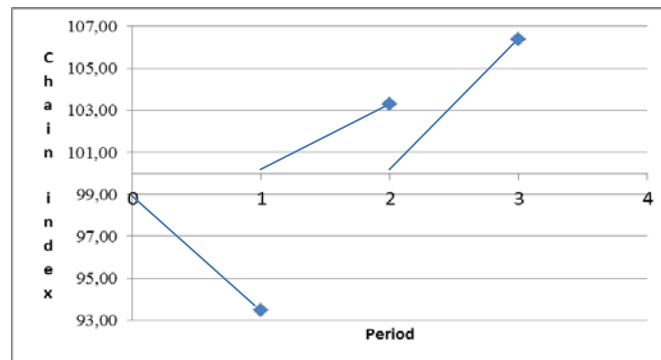

Figure/Chart 1: Movement of rating in the field of organization of lectures, seminars and exercises for the period from 2009./2010. (period 0) to 2012./2013. (period 3)

Therefore, the grade for a period of 2009./2010. up to 2012./2013. was increased by 1.41%. Assuming that the movement of the grade in the field of organization of lectures, seminars and exercises continues in accordance with the linear trend that was established on the basis of the observed period, a grade of 4.31 out of 5 can be expected in the academic year 2014./2015.

Third grade given by students is focused on the area of organization of tests and examinations which was in the academic year 2010./2011. less by 6.52% as compared to the academic year

2009./2010. One year after the introduction of ISO 9001:2008 grade was increased by 3.28% compared to the academic year 2010./2011., whereas for the next academic year the grade was further increased by 6.40% as compared to 2011./2012.. The grade for a period of 2009./2010. up to 2012./2013. was increased by 0,90%, and with assumption that the movement of the grade in the field of organization of tests and examinations continues in accordance with the linear trend that was established on the basis of the observed period, a grade of 4.26 out of 5 can be expected in the academic year 2014./2015.

Figure/Chart 1: Movement of rating in the field of organization of tests and examinations for the period from 2009./2010. (period 0) to 2012./2013. (period 3)

Total grade students gave for all observed areas in academic year 2010./2011. was less by 6,78% as compared to academic year 2009./2010. One year after the implementation of ISO 9001:2008 with IWA 2:2007 guidelines for educational institutions in the academic year 2011./2012. the grade was increased by 3,69 % as compared to academic year 2010./2011., and the grade was further increased by 6.59% in the next academic year in comparison to academic year 2011./2012.
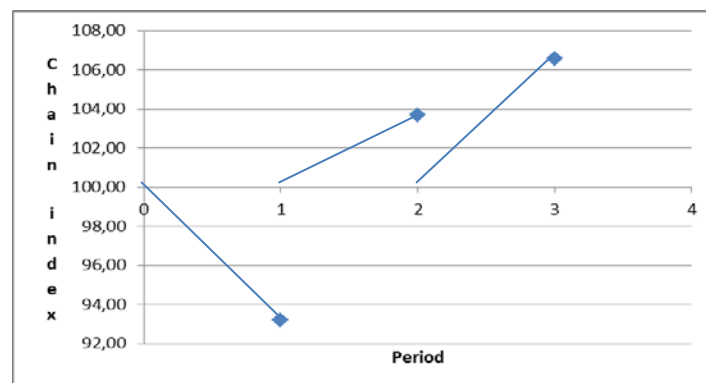
Figure/Chart 1: Movement of total rating in the period from 2009./2010. (period 0) to 2012./2013. (period 3)

The grade was increased by 1,00% in the period of 2009./2010. up to 2012./2013. From the above-mentioned indicators it can be clearly seen that the encouragement of employees with additional training and improvement of their competencies can directly affect the change of attitudes of end-users and give a better image in the perception of students about the College. This clearly imposes that the quality and career management of lecturers has a strong impact on management of their competencies which can potentially imply the loyalty of end users.

5 CONCLUSION

Career management is strictly related to strategic decisions of the organization, therefore the development of employees is an ongoing process that needs to be initiated by the employer and the implementation of the ISO 9001:2008 management system is an ideal opportunity for this. The quality management system defines the written procedures that support the process of human resources management in the organization, and thus is one of the documents of quality that can influence the conversion of human potential to human capital. There is no doubt that the career management can be clearly identified and documented only in those organizations that have introduced quality management system, and hence the quality management system is a good foundation for building human resources management system.

From everything said before it leads to the conclusion that ISO 9001 can greatly assist in the work of educational institutions at all levels of education. The greatest advantage of standard ISO 9001 is in its simplicity. The application of standard ISO 9001 facilitates the fulfillment of the requirements which the legislator puts in front of educational institutions, but in parallel with that it encourages the development of human potential and their competencies, which directly affects the competitiveness of the organization and the user's perception of the organization.

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SMALL AND MEDIUM-SIZED ENTEPRISES IN TERMS OF THEIR GOALS

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ABSTRACT
The strategic management represents current direction of management. It is applied in all types of enterprises, including small and medium sized ones. Using principles of process management within SMEs has its limitations caused mainly by size of the enterprise and the related focus on operational management. Other specificities are function accumulation, informal leadership, preference for oral communication before written, etc. Nevertheless, implementation of strategic management can increase competitiveness, reduce costs, improve decision-making, facilitate implementation of the employee motivation system, shorten delivery times, higher quality of customer satisfaction, etc. The aim of this article is to find how much SME include principals of the strategic management by their aims.

Keywords: Goals, SME, Strategic management

1 INTRODUCTION

SMEs are indispensable in all economies, can be described as a driving force of business, growth, innovation, competitiveness, and are also very important employer. In the Czech Republic performed on 31th 12 2011 some business activity 1,066,787 legal and natural persons who are placed in the category of small and medium-sized enterprises. The total number of active enterprises are small and medium-sized enterprises participated in 2011 a total of 99.84%. The share of employees in small and medium-sized enterprises amounted to 60.85% in relation to the employees of the Czech economy. According to Řehoř, in 2007 the small and medium-sized businesses will create and offer new and quality jobs.

According to Srpová (2010), management of small and medium-sized enterprise has many specifics. In small companies due to the small number of employees and managers many functions are accumulated within the competence of only a few workers predominates, informal leadership is more common, oral communication is preferred over written, etc. According to a team of authors (2012) however, a high degree of flexibility to adapt rapidly to changing SME factors, it determines the face and reduce the growing globalization tendencies associated with the onset of multinational corporations and chains.

Strategic management, based on long-term forecasts, helping the company to anticipate future challenges and opportunities (Keřkovský and Vykypěl 2006). According Sedláčková, Buchty (2006) strategic management gives clear goals and directions for the future of the company and its workers a sense of security. Strategic management helps to increase the quality of management, leads managers to improve their deciding. Keřkovský, Vykypěl (2006) further states that strategic management helps improve communication in the company, project coordination, staff motivation and improve resource allocation.

Entrepreneurship Cought Between Creativity and Bureaucracy

Dedouchová (2001) gives two definitions of strategy, traditional and modern. Traditional definitions approaches to understand the strategy of the company as a document in which there are long-term objectives of the company, determined the process of operations and allocation the resources needed to meet these goals. The modern concept sees strategy as the company prepared for the future. The strategy includes the long-term objectives of the company, the process of strategic operations and deployment of enterprise resources needed to meet these goals so the strategies would be based on business needs, take into account the changes in its resources and capabilities, and at the same time adequately respond to changes in the environment of the company. The central concept of strategic management is a strategy that is closely linked to the objectives it tracks. According to Kotler, Keller (2012) strategies express the basic idea of which way the company goals will be achieved. The article deals with the mapping of the fundamental characteristics of SMEs in terms of their strategic management by terms of their aim.

2 INTRODUCTION

This article is provided as one of the outputs of the research project "Process management and the possibility of its implementation in small and medium-sized enterprises" of Grant Agency of the University of South Bohemia GAJU 068/2010/S and. and serves as one of the sources for grant GAJU 039/2013/S.

In the research project was used secondary data (financial statements of SMEs who took part in the research) and primary data which was obtained primarily through quantitative methods questionnaire supplemented by qualitative method of in-depth interviews. For the classification of small and medium-sized enterprises has been used a new definition of the European Union (European Commission: A new definition of SMEs 2006) in accordance with the Law No. 47/2002 Coll. as amended. This system has been adapted for the needs of the research, according to the following table number 1, where the group of small businesses was divided into two groups according to the number of employees in order to achieve detailed breakdown. In the South bohemian region was registered in 2011 68,826 economic entities from the selected category.

Table 1: Classification of SMEs (own processing according to the European Commission 2006)

Enterprise size	Number of employees (Annual Work Unit)	Annual turnover	annual balance sheet
Midium enterprise	50 – 249	< 50 mil. €	< 50 mil. €
Small enterprise	25 – 49	< 10 mil. €	< 10 mil. €
	10 – 24	< 10 mil. €	< 10 mil. €
Micro enterprise	0 – 9	< 2 mil. €	< 2 mil. €

Enterprises with up to 9 employees (micro-enterprises) represent 18% of the total number. Small enterprises represent less than 4% of all the small and medium-sized enterprises in the region. There are registered 78% of medium-sized enterprises within the region (Statistický bulletin – Jihočeský kraj 2011, Statistical bulletin).

According to the legal form of business in the basic aggregate there dominate private entrepreneurs (77%), after that companies (9%), associations (5%), corporations of proprietors and cooperatives (3%), foreign persons (2,5%) and others. (European Commission. Key figures on European business with a special feature on SMEs 2011).

The prevailing business activities according to the classification of economic activities CZ-NACE in the examined aggregate constitute Wholesale and retail (22%). Building industry and industry are represented within the research identically with 13%, within the region there are about 21 000, or 19 000 as the case may be, and so they occupy the second and third position from the point of view of CZ-NACE. Business activities according to CZ-NACE such as section A - agriculture, forestry and fishing, section B - mining and extraction and section I – accommodation, catering and restaurants, were eliminated from the research because of their different perception and management of company processes – these are completely specific groups. There was chosen a research sample from the base aggregate with the method of improbability of random choice by reason of difficult conditions of data collection.

The research sample consists of 187 small and medium-sized enterprises of South Bohemia region. Composition of the research sample according to size (number of employees) and activity is indicated in table no. 2 and 3 and in graph no. 1 and 2.

Table 2, Chart 1: Composition of the research sample of small and medium-sized enterprises according to number of employees (own survey - GAJU 068/2010/S)

| Number of employees	Number of enterprises	
0 - 9	20	11%
10 - 24	70	37%
25 - 49	36	19%
50 - 249	61	33%
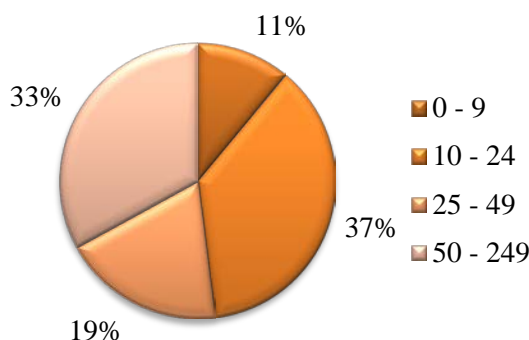
Table 3, Chart 2: Composition of the research sample of small and medium-sized enterprises according to business aktivity (own survey - GAJU 068/2010/S)

Activity	Number of enterprises	
Building industry	51	27%
Engineering	57	30%
Wood production	22	12%
Food production	11	6%
Commerce	22	12%
Services and Transport	24	13%
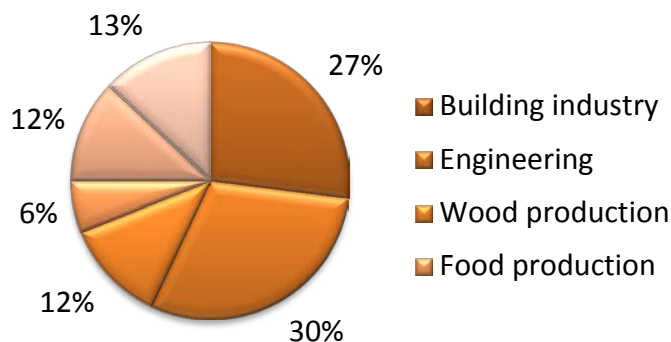
3 RESULT

Analoui and Karami present (2003) that majority of the small and medium sized companies has formally (as written document) or not formally determined strategy. Presented research brought short term goals and brought also the similar results. Strategy has the goal to push forward the company towards to achieve short term goals and finally to achieve its basic purpose. The goals of the small and medium sized companies are often based on personal goals and preferences of the owners. Determined goals in such a way are logically very subjective, they are often not chosen correctly in comparison with the milieu where the companies create activities. The goal of the company should always correspond with the chosen mission and should put into respect strong and weak aspects of undertaking, opportunities and distress that the company can use or must face them. In general the goal of the company should answer the basic questions of undertaking and present requested result

In the research sample of the small and medium sized companies in the frame of research there were identified 6 categories of the company goals. The category Quality was dominant. The companies presented for their goal both satisfaction of the customers (also employees) increasing the quality, good name of the company and flexibility. Following most often presented goal was Development, both development of the whole company and separate development of the partial parts. Innovation was also presented as the main goal in this category. Category Stability has also very strong representation the companies presented the whole stability at the market and also stability of prices. In this category the companies also mentioned keeping the number of employees. Another goal is connected with this matter and it is covering the market and survival that was followed in minimum cases. Concerning studying small and medium sized companies goals Profit was, of course, dominant one.

In the chart 4 numerousness of searching of the goals of some small and medium sized companies according to the number of employees is presented. And graph nr. 8 shows these results. Following characteristics can be seen from these results. Concerning micro companies the goals are concentrated on Quality (64 percent), further Development (50 percent), and Stability (41 percent) on the contrary, no company follows the goal Survival. The small companies to 24 employees follow the goal Stability in 57 percent cases. In the small companies with more than 25 employees the main goals were Quality, Development and Stability (55 percent). These companies (the same as micro companies) do not follow the goal Survival, in comparison with the small companies to 24 employees, that follow this goal, but only in 4 percent. The medium sized companies follow in a dominant way the goal Profit (55 percent), the second most often followed category is Development (46) 43 percent medium sized companies follow the goal Stability and 34 percent the goal Quality. Minimum medium sized companies follow the goal Survival and Covering the market.

Table 4: Numerousness of the studying goals of searched MSP according to the number of employees (own survey - GAJU 068/2010/S)

Number of employees	Number of the comp.	Goal					
		Quality	Covering of market	Survival	Development	Stability	Profit
0 – 9	20	64%	18%	0%	50%	41%	32%
10 – 24	69	43%	4%	6%	32%	57%	40%
25 – 49	35	55%	8%	0%	55%	55%	33%
50 – 249	60	34%	8%	8%	46%	43%	51%

Table 5 show numerousness concerning diversity according to the activity of the studying small and medium sized companies, 6 categories of goals were analyzed here. Category Quality is dominant in the business companies (72 percent). Also less than 50 percent companies follow this goal in engineering production, on the contrary, food companies follow this goal minimum (18 percent), this group follows mainly category Stability in 73 percent cases. Companies in construction and wood working ones follow the goal very strongly. Business companies follow this goal very rarely. Following the goal in the category of Covering the market was minimum in all studying activities of research of small and medium sized companies. Companies working in services including transport follow this goal in 15 percent and companies in engineering production follow this goal least of all in 4 percent. The goal Survival is minimum followed, food companies and business companies do not follow this goal at all. In total 60 percent small and medium sized companies in engineering production follow the goal Development, 48 percent in services including transport and 38 percent wood working companies. Construction companies follow this goal minimum (27 percent).The goal Profit is strongly dominant for no category of the companies. This goal is followed by 55 percent construction companies, 43 percent woodworking companies, 42 percent companies in services. Food companies follow this goal only in 18 percent.

Table 5: Numerousness of the goals examined MPS according to the activities
(own survey - GAJU 068/2010/S)

Activity	Number of companies	Goals					
		Quality	Covering of market	Survival	Development	Stability	Profit
Construction	50	40%	7%	7%	27%	62%	55%
Engineering	57	49%	4%	7%	60%	38%	36%
Woodworking	22	29%	5%	5%	38%	71%	43%
Food	11	18%	9%	0%	36%	73%	18%
Trade	21	72%	12%	0%	36%	28%	36%
Service and Transport	23	36%	15%	3%	48%	42%	42%

As it was mentioned above, the goal of the company should set off the basic mission of the company with the respect to the weak and strong side. These matters were also analyzed in the examined small and medium sized companies and are presented in the table 6 and 7. It can be seen that the companies consider very strong sides resp. Competitive advantage Range (38 percent), and Quality of labour (36 percent). 22 percent companies consider very strong page Flexibility and 16 percent numerousness Know-how. The remained strong pages that were presented by the small and medium sized companies were not more than 10 percent. There were, for example, personal approach, good name of the company, quality of employees, reliability etc.

*Table 6: Numerousness of strong sides/competitive advantages/ examined MSP
(own survey - GAJU 068/2010/S)*

Strong sides/competitive advantages	%
Good name of the company	9
Flexibility	22
Know-How	16
Completeness	5
Quality of labour	36
Quality of employees	8
Lower price	5
Personal approach	9
Range	38
Satisfaction of customers	3
Reliability	7
Hinterland of the company	4

Most often presented weak side resp. threat was insolvency of the customer-40 per cent examined small and medium sized companies. In total 25 percent companies presented decline of sale, less than policy of the state, growth of costs, and 18 percent companies presented competition. About 10 percent companies presented decline of demand, lack of qualified workers, economic crisis, but also low innovation or poor knowledge of languages of employees.

*Table 7: Numerousness of weak sides /threats/of examined MSP
(own survey - GAJU 068/2010/S)*

Weak sides /threats/	%
Insolvency	40
Decline of sale	25
Policy of the state	21
Growth of costs	21
Competiton	18
Decline of demand	11
Economic crisis	7
Lack of qualified workers	7
Slow reactions	2
Strength of currency	2
Language	0,5
Stagnation	0,5
Low innovation	2

4 CONSLUSION

In the case, the company has determined goal, it is aimed mainly at stability, further at quality, development and profit. Small companies follow more quality and development, but medium sized companies follow mainly development and profit. Examined small and medium sized companies consider their strong pages mainly range and quality of labour and on the contrary as threat insolvency.

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TRADE CREDIT IN THE CRISIS: SELLING OR FINANCING?

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ABSTRACT
The analysis considers Italian SMEs and investigates, over the years 2009-2011: the existence of functional relationships between the incidence of trade receivables and payables and corporate profitability; the existence of interdependencies between trade credit policy and trade debt policy; the co-existence of interchangeable and complementary conditions between trade debts and bank loans and other sources of funding.
We can conclude that there are interdependencies between trade credit policy and trade debt policy, that trade credit is a source of flexible way of financing, also available in periods of crisis, which affects the profitability of firms and can be utilized as a complementary and substitute source of financing to bank loans.

Keywords: bank-firm relationship, financial crisis, SMEs, trade debt, trade credit.

1 INTRODUCTION

Intercompany credit overtime has assumed a growing importance in all industrialised countries. There are many reasons that lead to the use of trade credit which can be traced to real and financing functions. Real functions refer to credit offers which support the selling policy. This means that trade credit is a way to strengthen client relationships, to guarantee product quality, to allow discrimination of prices and to improve the profitability of firms. From a financing point of view trade credit can represent an alternative form of financing in the short term.

The study develops in two directions. The first has the intention to overview the contribution that intercompany credit has had on the profitability of small and medium sized enterprises (SMEs): this issue is rarely dealt with in literature, especially in reference to Italians SMEs. The second investigates the existence of an interdependent relationship between trade credit policy and trade debt policy in SMEs, and the existence of complementarity and substitutability between trade credit and other financing sources.

The empirical analysis is carried out on SMEs during the period that directly followed the explosion of the world financial crisis (2009-2011). This study contributes to reference literature for various reasons. Firstly, Italy represents an important case to study the determinants and the implications of trade credit, as it is characterised by an elevated practice of this, much higher than other European countries. Secondly, this study was carried out over a three-year period, during the economic and financial crisis. Thirdly, in literature the financial reasons for recourse in trade credit are usually dealt with debtor firms; this study also takes into consideration creditor firms, and the overall net position of these firms. The variable that comes from the difference between trade receivables and payables is taken into consideration: this variable contributes to the financial need for working capital.

The results of this study confirm the influence of trade receivables and payables on the profitability of enterprises and confirm the recourse in trade credit as a form of alternative and substitute financing for SMEs also during times of economic and financial crisis.

The paper is organized as follows: the second paragraph gives us a brief review of the literature that leads to the research hypotheses; the third paragraph illustrates the methodology of the research; the fourth paragraph describes the sample and the fifth discusses the results. The last paragraph sets forth brief conclusive assessments and the implications of the studied phenomenon.

2 LITERATURE REVIEW AND RESEARCH HYPOTHESES

Trade credit is the financing between enterprises, resulting from the granting of agreed deferred payments to the client by the supplier. Through the granting of trade credit, the seller forgoes an immediate cash flow, for real-type motivations, in the hope to set up, expand or consolidate relations with customers. The main aim is to begin a relationship with potential clients and to expand relationships with existing clients: trade credit can be a useful support tool for sales policies and a way to undertake and consolidate relationships with clients, thanks to the product quality guarantee and price discrimination (Lee and Stowe, 1993; Long Malitz and Ravid, 1993; Schwartz and Whitcomb, 1979).

Another aim is represented by the consolidation of business relations. Trade credit is proposed as a stabilising tool for demand: the seller reacts to the temporary shortage of demand by allowing more deferred payments, giving the purchaser a greater use of trade credit and a higher level of stock than would have been possible under unchanged payment conditions. Apart from these motivations, recourse in trade credit also has financial motivations.

Trade credit also assumes a role as a source of funding in the extent to which enterprises that supply goods allow deferred payments to meet the needs of working capital of the purchaser. Literature weighs on the relevance of the financial reasons for the use of trade credit, on one hand verifying their existence and significance, and on the other distinguishing the transactional and financial components. The transactional element refers to trade credit as a synchronisation tool between receipts and payments instead of using money, for a better forecast of cash flow, and treasury management planning in case of unexpected payments (Schwartz, 1974; Ferris, 1981; Emery, 1987; Long, Malitz and Ravid, 1993).

A survey carried out by Banca d'Italia (Finaldi Russo and Leva, 2004) demonstrated that enterprises put more weight on the synchronisation of payments, which is considered to be the main reason by about half of the sample. Transactional reasons are predominant for enterprises which make a more intense use of trade credit.

Finaldi Russo and Leva (2004) show wide diffusion of non-onerous trade credits, payment practice beyond the deadline, very few penalty charges and, at the same time, underline the increased recourse in supplier loan for enterprises that use trade credits for financial reasons rather than real–type reasons. However, the influence of financial reasons affects trade debt much less than real-type motivations.

Inaccurate information on the financial system and the presence of underdeveloped financial institutions (Fisman and Love, 2001) and also weak legal recovery rules (Carmignani, 2004) – unable to insure, in case of debt insolvency, procedures and mechanisms that are efficient in

protecting the creditor – may determine substitutability or complementarity between trade credit and bank credit. Similar conditions determine rationing of bank credit (Schwartz, 1974), which has a greater influence on the financing of opaque or young enterprises (Huyghebaert, 2006) which leads to recourse in trade credit as a fall-back determined by the insufficiency and inadequacy of sources of finance from third parties or banks (Duca 1996; Jaffe and Stiglitz, 1990; Petersen and Rajan, 1997).

Complementarity conditions and an extended recourse in trade credit is noted, when non-financial enterprises know how to monitor the credit capacity of a firm and they are able to transfer funds, borrowing from intermediaries and granting deferred payments to other enterprises, otherwise rationed for reasons of misinformation (Demirguc-Kunt and Maksimovic, 2001).

Opaque firms, that are predominantly small in size, can be subject to credit rationing (Stiglitz and Weiss 1981) and can turn to trade credit as an alternative source of financing. Trade credit, obtained according to the assessment made by the credit provider in respect of the creditworthiness of the firms to be financed, increases the good quality reputation of creditors and allows them to earn easy access to bank credit. Alphonse Ducret and Severin (2004) therefore claim that trade credit can be replaceable but also complementary to bank debts.

A dynamic and complementary relationship exists between trade credit and bank credit, which results in partial substitutability. Enterprises use trade credit because they are exposed to credit rationing – in this a substitution effect is formed –and at the same time trade credit signalises and reveals information to the banks about the reliability of the financed firm from its suppliers, facilitating access to bank debt.

The substitutability and complementarity between trade credit and bank credit are assumptions not mutually exclusive, but that can occur in economic-financial system and come together with the prevailing real motivations for recourse in trade credit.

Following the reference literature, real motivations for recourse in trade credit outweigh financial motivations. The importance of the real type motivations determines the contribution of trade payables and receivables to the profitability of a firm.

There are many reasons that justify the contribution of intercompany credit to the profitability of a firm. Firstly, granting deferred payments can increase sales, allow price discrimination, improve and consolidate relationships with clients, facilitate the extension of market share and improve profitability. Similarly an increased use of trade credit can improve profitability, as deferred payments allow firms to value and guarantee the quality of their product.

Even more positive impact is expected for SMEs as the higher percentage of trade payables may represent the availability of intercompany financing even in situations of opacity and credit rationing by banks or other intermediaries.

For the above reasons, a positive influence is expected from intercompany receivables and payables on the profitability of SMEs and the following research hypotheses are formulated:

HP1: Significant positive relationships exist between the incidence of intercompany receivables and payables and the profitability of SMEs.

Small and medium sized enterprises can be subject to conditions of sale from suppliers that have a larger market share: the offer of trade credit, imposed by the exploitation of market power of suppliers, may determine the adoption of a balancing strategy, financing the supply of trade credit with trade debt. To investigate the financial reasons for recourse in intercompany credit it is necessary to acknowledge the existence of interdependent relationship between trade credit policy and trade debt policy. It may be therefore useful to investigate the importance of financial determiners of intercompany credit and the existence of substitutability and complementarity in intercompany credit in relation to other sources of financing by third parties.

As claimed in literature and for the above reasons, the following research hypotheses are formulated:

HP2: A strict interdependence relationship exists between trade credit policies and trade debt policies for SMEs.

HP3: Conditions of substitutability and complementarity coexist between intercompany credit and financing from banks or third parties for SMEs.

3 METHODOLOGY AND ANALYSIS VARIABLES

In coherence with literature, to verify the research hypotheses, linear regression models on a yearly basis are used and these models are put under observation for three years.

The variables used for the analysis are presented in Table 1.

To verify the first research hypothesis the following model is used:

$$Y_{ik} = \alpha + \beta_1 CRCLTA_i + \beta_2 DEFORTA_i + \beta_3 SIZE_i + \beta_4 GROWTH_i + \beta_5 DSIZE_i + \beta_6 INBANEL_i + \beta_7 INBANOL_i + \beta_8 INALEN_i + \beta_9 INALOL_i + \beta_{10} SOLVENCYRA_i + \beta_{11} LIQUIDITYRA_i + \beta_{12} LOGETA_i + \beta_{13} DUMAREA_i + \varepsilon$$

Where i identifies the single observations of the sample; Y_{ik} is the performance measure expressed by the k independent variables; β_1, β_2... are the parameters that have to be estimated with the model; α is the constant and ε is the error.

The dependent variable is represented, alternatingly, by the following profitability indices: ROA and ROI. The independent variables, used to verify the first research hypotheses, are represented by the incidence of trade receivables to total assets (CRCLTA) and the incidence of trade payables to total assets (DEFORTA). The control variables are indices that summarize the relationship of the firm with the banks and other lenders (INBANEL, INBANEL, INALEN, INALOL), the patrimonial and financial balance conditions (SOLVENCYRA, LIQUIDITYRA) and the general characteristics of the firms (LOGETA, GROWTH, SIZE, DSIZE, DUMAREA).

To verify the second and third research hypotheses the following models are used:

$$Y_{ik} = \alpha + \beta_1 INBANEL_i + \beta_2 INBANOL_i + \beta_3 INALEN_i + \beta_4 INALOL_i + \beta_5 ONFIN_i + \beta_6 ROS_i + \beta_7 ROE_i + \beta_8 CURRENTRA_i + \beta_9 SOLVENCYRA_i + \beta_{10} LDIM_i + \beta_{11} LOGETA_i + \beta_{12} DUMAREA_i + \varepsilon$$

$$Y_{ik} = \alpha + \beta_1 INBANEL_i + \beta_2 INBANOL_i + \beta_3 INALEN_i + \beta_4 INALOL_i + \beta_5 ONFIN_i + \beta_6 ROS_i + \beta_7 ROE_i + \beta_8 CURRENTRA_i + \beta_9 SOLVENCYRA_i + \beta_{10} LDIM_i + \beta_{11} LOGETA_i + \beta_{12} DUMAREA_i + \beta_{13} VARSPEC_i + \varepsilon$$

Where i identifies the single observations of the sample; Y_{ik} is the dependent variable expressed by k independent variables; $\beta_1, \beta_2, \ldots$ are the parameters that have to be estimated with the model; α is the constant and ε is the error.

This analysis keeps trade payables and receivables separately so as to assess the existence of financial reasons in the decision to offer deferred payments and/or in the choice of recourse in trade debt: the dependent variables are, alternatingly, the incidence of trade receivables on the total assets (CRCLTA) and the incidence of trade payables on the total assets (DEFORTA).

Useful predictors to verify the second and third research hypotheses are INBANEN, INBANOL, INALEN, INALOL, ONFIN, related to the incidence of debt towards banks and third parties - for short and long term periods - on shareholder equity and the rate of financial charges on the total turnover. The independent control variables are related to the general characteristics of the firms (LDIM, LOGETA and DUMAREA) and to the financial and economical balance conditions (ROS, ROE, CURRENTRA, SOLVENCRYA).

The existence of a significant dependency relationship between trade payables and receivables and the independent financial variables could confirm the use of intercompany credit for financial purposes.

The existence of a direct dependent relationship between dependent variables and bank loans could show system conditions which allow *complementary* use of intercompany financing and bank financing. The existence of an inverse relationship of dependency signals an *alternate* use of intercompany credit with respect to bank financing.

The dynamic of the ratio between net mercantile credit and total assets (CRMERTA) is also investigated. Net mercantile credit is very significant for the purpose of analysis, as it represents the amount of working capital that can be covered by financial debts. The existence of significant dependent relationships of the variable CRMERTA compared to the independent financial variables could confirm the importance of financial motivations in the recourse in trade credit.

The difference between the two models related to the second part of the research consists in the presence (net model) or not (gross model) of an extra independent variable (VARSPEC), specular in relation to the dependent variable. In the net model that shows as dependent variable the incidence of trade receivables on the total assets, the incidence of trade payables is considered among the explanatory variables. In the net model that presents as dependent variable the incidence of trade payables on the total assets, the incidence of trade receivables is considered among the explanatory variables (Fabbri and Klapper, 2008; Gibilaro and Mattarocci, 2010). If the decision to include the specular variable results statistically significant and determines an improvement in the statistical significance of the model, trade credit policy and trade debt policy can be considered closely interrelated.

4 SAMPLE AND DATA
The reference sample is composed of SMEs where the balance sheets were available in the Aida Bureau Van Dijk database in February 2013.

The enterprises present the following characteristics;
- Legal status: active company; independent company;
- Number of employees more than or equal to 1 and less than 250;
- Total assets less than 43 million euro;
- Budget availability: non-consolidated balance sheet for the years 2008, 2009, 2010, 2011.

The study was carried out for the years 2009, 2010, 2011, in which the impact of the financial crisis exploded in the Italian economic system. The sample is made up of enterprises from all over Italy and very different in terms of location and business sectors, according to the ATECO classification 2007. The size of the sample varies through time depending on the availability of data. The number of firms is equal to 2049 for the years 2009 and 2010 and 2038 for 2011.

5 RESULTS OF THE ANALYSIS
The results of the econometric models are discussed analyzing the first research hypothesis. Results of regression analysis allows to state that the first research hypothesis is verified.

The linear regression model is statistically significant for both dependent variables in the three years that were under observation (Tables 2, 3), even though the predictive ability results rather limited. The result of the collinearity test allows us to exclude collinearity problems between the variables: the value of the *Variance Inflation Factor* (VIF) is always inferior to the critical threshold indicated in literature. The results of the *White heteroskedasticity test* demonstrate heteroskedasticity problems; therefore, a robust standard errors analysis is conducted.

The dependent variables ROA and ROI show a direct significant dependency relationship with the incidence of trade receivables (CRCLTA), for all years under observation resulting in evidence that trade receivables contribute to the profitability of total assets and to the operating profitability of the SMEs.

The relationship between the dependent variables and the incidence or trade payables (DEFORTA) is not constant. In fact, we can see a significant and direct relationship only for the ROI variable in the three years studied. The ROA doesn't present any significant dependency relationship with DEFORTA. Overall, the incidence of trade payables contributes to the profitability of the invested capital , but is not influential on the profitability of the total assets.

Moving on to the second and third research hypotheses, observation of the results of the regression analysis allows us to state that the second and third research hypotheses have been verified (Tables 4, 5). The linear regression models are statistically significant in the three years of study for all three dependent variables, considered alternatingly. The results of the collinearity tests allow us to exclude problems of collinearity: the value of the *Variance Inflation Factor* (VIF) is always inferior to the critical threshold of literature. The results of the *White heteroskedasticity test* demonstrate heteroskedasticity problems, therefore also for the second part of the study, robust standard errors analyses are conducted.

The second research hypothesis is verified by comparing the gross models, that don't consider the specular variable as a regressor, and the net models, that consider the specular variable as a regressor. The comparison between gross and net models shows that the net models allow an improvement of the analysis (the value of R squared increases significantly) and we can therefore assume - in line with reference literature (Fabbri and Klapper, 2008; Gibilaro and Mattarocci, 2010) and confirming the second research hypotheses – that there is an interdependent relationship between trade credit policy and trade debt policy. The use of trade payables and receivables – and their incidence on the balance sheets of SMEs – are closely interrelated.

The verification of the third research hypothesis takes into account the results of the gross models and is related to the coexistence of substitutability and complementarity conditions between trade credit and loans from third parties or banks. The importance of financial motivations is evident in the relationship between the incidence of trade receivables (CRCLTA) and the variable ONFIN, which represents the incidence of financial charges on a business's turnover: the relationship is consistently significant and inverse for all years studied.

To offer greater support to the financial motivations, there is also a statistically significant relationship in the dependent variable CRCLTA in relation to all the variables that show incidence of debt towards banks and third parties, both for short and medium term (Table 4). The relationship is direct only in the variable which shows the incidence of debt towards banks for a short term (INBANEL); the relationships with the variables INBANOL, INALEN, INALOL are instead inverse.

The presence of a significant direct dependent relationship between the incidence of trade credits and the incidence of bank loans or third parties is a symptom of double intermediary conditions, therefore of complementarity between credit from third parties and trade credit. For the variable CRCLTA the presence of a direct functional relationship with short term bank financing emphasizes the importance of transactional motivations other than solely financial in the granting of trade credit.

It is also possible to observe statistically significant relationships between the incidence of trade payables (DEFORTA) and predictive finance variables (Table 5). In particular we can confirm a significant and inverse relationship with the ONFIN variable, for every year studied. There is also a statistically significant relationship with the incidence of long term bank debt (INBANOL), and with the incidence of debt towards other financers for medium and long term (INALOL), but in this case, the relationship is always inverse. The presence of an inverse dependent relationship highlights substitution conditions in the use of different sources of financing: a greater recourse in third party or bank financing results in a lower recourse in trade credits. The relationship with the incidence of medium and long term bank loans (INBALOL) is statistically significant in all the years studied but higher in 2011. The relationship with INALOL is higher in 2010 and 2011: the medium and long term financial predictive variables show a greater importance following an increase in the financial and credit crisis.

The coexistence of complementarity and substitutability conditions between intercompany credit and financing from banks or third parties is also confirmed by the results of the regression model which considers the incidence of mercantile credit on total assets

(CRMERTA). The existence of a significant and direct dependent relationship between CRMERTA and external financing sources sustains the hypotheses of complementary use of trade credit compared to financing from banks or third parties: enterprises try to minimize the amount of financial needs in situations of credit restrictions and increase it in times of greater availability of bank credit. Conversely, a non-direct dependent relationship highlights an alternative use of trade credit compared to financing from third parties, showing a minimization of financial requirements in credit expansion situations. The empirical analysis confirms the coexistence of complementarity and substitutability conditions, as the CRMERTA presents a significant direct relationship with short term and a significant and inverse relationship with medium and long term bank financing (INBANOL) and with short term financing from third parties (INALEN).

6 CONCLUSION

The analysis conducted has highlighted the complex motivations for recourse in trade credit, determined by internal and external factors, varying from real motivations, transactional reasons and financial reasons.

The results of the study confirm the contribution of trade credits to profitability of assets and to operating profitability of SMEs, throughout each year of study: the analysis also confirms the constant importance of real motivations in the granting of trade credits during the crisis.
The analysis highlights the fact that trade credit policy and trade debt policy are closely interrelated.

Results of the analysis referring to the incidence of trade payables signal a substitutability relationship between intercompany debt and financing from banks or third parties. Over the years, the significance of the dependent relationship increases, to demonstrate that the longer the crisis continues, the stronger the financial motivations for recourse in trade payables are and to confirm the important function of substitution of intercompany debt compared to financing from third parties or banks.

The hypotheses of the coexistence of conditions of complementarity and substitutability is verified by observing the results referring to the incidence of trade credit and the incidence of net mercantile credit. In particular, we can see a direct functional relationship between the incidence of trade credit and the incidence of short term bank financing, testifying double intermediary conditions and a complementarity. Regarding the incidence of net mercantile credit, we can also confirm the coexistence of complementarity and substitutability conditions, as we can also see a significant direct relationship between the dependent variable and short term bank financing and an inverse relationship with the incidence of medium and long term bank financing and short term financing from third parties.

On this front, the importance of transactional motivations other than solely financial in the granting of trade credit has been highlighted.

In line with reference literature (Alphonse, Ducret and Severin, 2004), the results of the study allow us to state that the substitutability and complementarity between trade credit, bank financing and financing from third parties are circumstances that can be verified in the same financial-economic reality (i.e. Italy), and that the substitutability and/or complementarity conditions can operate together with the prevailing real motivations of recourse in trade credit.

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Table 1: Regression variables

NAME	DESCRIPTION	MEASURE
CRCLTA	Incidence of trade receivables	Ratio of the sum of accounts receivable in the short and medium term and total assets
DEFORTA	Incidence of trade payables	Ratio of the sum of trade payables in the short and medium term and total assets
CRMERTA	Incidence of net mercantile credit	Ratio of the difference between trade receivables and trade payables and total assets
ROA	Return on Assets	Ratio of net income and total assets in the exercise
ROI	Return on Investment	Ratio of operating income and invested capital
ROS	Return on Sales	Ratio of operating income and sales revenues
ROE	Return on Equity	Ratio of net income and shareholders' equity
INBANEL	Incidence of short-term bank debt	Ratio of short-term bank borrowings and shareholders' equity
INBANOL	Incidence of bank debt in the medium and long term	ratio of medium and long-term bank debt and shareholders' equity
INALEN	Incidence of debts to other financiers in the short term	Ratio of debt to other financiers in the short term and shareholders' equity
INALOL	Incidence of debts to other financiers in the medium to long term	Ratio of debt to other financiers in the medium and long-term and shareholders' equity
CURRENTRA	Current ratio	Ratio of current assets and current liabilities
SOLVENCYRA	Solvency ratio	Ratio of equity to total assets
LIQUIDITYRA	Liquidity ratio	Ratio of the difference between current assets and total inventories and short-term debts
ONFIN	Impact of financial charges	The ratio of total financial charges and the sum of the sales revenues and other revenues
LDIM	Firm's size	Natural logarithm of the number of employees
SIZE	Firm's size	Natural logarithm of total assets
DSIZE	Dummy variable for the size	Dummy equal to 1 if the number of employees is greater than or equal to 50 and if the total assets is greater than or equal to EUR 10 million
GROWTH	Annual sales growth	Ratio of the difference between sales at time t and at time t-1 and sales at time t-1
LOGETA	Firm's age	Natural logarithm of firm's age at the time of the analysis
DUMAREA	Dummy variable for the territoriality	Dummy equal to 1 if the firm is located in the Centre and North of Italy

Table 2: Trade credit and profitability of SMEs

Dependent variable: ROA			
	2009	2010	2011
const	10,320 ***	9,063 ***	8,063 **
CRCLTA	5,040 ***	3,753 ***	5,041 ***
DEFORTA	1,338	-1,081	-0,508
SIZE	-1,385 ***	-0,667 **	-0,820 **
GROWTH	0,083	0,534 **	0,146
DSIZE	-1,365 **	-0,809 *	-1,007 *
INBANEN	-0,123 **	-0,096 **	-0,158 ***
INBANOL	0,044	-0,135	0,041
INALEN	0,134 ***	0,066	-0,036
INALOL	0,119	-0,073	-0,718
SOLVENCYRA	0,057 **	0,033 **	0,049 ***
LIQUIDITYRA	0,898 **	1,097 ***	1,210 ***
LOGETA	0,551 **	-0,628	-0,597
DUMMYAREA	0,058	0,080	1,295 ***
R²	0,074041	0,068391	0,087545
F	9,374902	7,399781	9,539983
P-value(F)	3,76E-19	2,17E-14	1,49E-19
N. observations	2014	2023	2016

Significance Level: (***)1%; (**)5%; (*)10%.

Table 3: Trade credit and profitability of SMEs

	Dependent variable: ROI					
	2009		2010		2011	
const	2,510		10,142	***	-1,318	
CRCLTA	5,405	***	4,272	***	6,322	***
DEFORTA	11,566	***	7,513	***	7,153	***
SIZE	-0,380		-0,905	***	0,120	
GROWTH	0,087		0,001		0,082	
DSIZE	-0,167		-1,759	***	0,013	
INBANEN	-0,314	***	-0,192	**	-0,231	***
INBANOL	0,040		-0,074		-0,074	
INALEN	0,159	***	0,013		-0,284	
INALOL	-0,261		0,285		-0,307	
SOLVENCYRA	0,012		0,011		0,022	
LIQUIDITYRA	0,990	***	1,341	***	1,041	***
LOGETA	0,407		0,004		-0,212	
DUMMYAREA	0,044		0,282		1,555	***
R²	0,091895		0,083093		0,094117	
F	13,43941		9,728103		12,33898	
P-value(F)	6,63E-29		6,04E-20		3,00E-26	
N. observations	1818		1839		1822	

Significance Level: (***)1%; (**)5%; (*)10%.

Table 4: Trade credit - gross and net models

	Dependent variable: CRCLTA											
	2009 lordi		2009 netti		2010 lordi		2010 netti		2011 lordi		2011 netti	
CONST	0,405	***	0,212	***	0,419	***	0,201	***	0,422	***	0,217	***
INBANEN	0,013	***	0,014	***	0,010	***	0,012	***	0,012	***	0,013	***
INBANOL	-0,013	***	-0,011	***	-0,020	***	-0,015	***	-0,019	***	-0,014	***
INALEN	-0,011	***	-0,012	***	-0,009	***	-0,010	***	-0,007	*	-0,007	**
INALOL	-0,037	***	-0,031	**	-0,047	***	-0,032	**	-0,029	*	-0,011	
ONFIN	-0,014	***	-0,008	***	-0,012	***	-0,006	***	-0,013	***	-0,007	***
ROS	0,000		0,000		-0,001		0,000		0,000		0,001	
ROE	0,002	***	0,001	***	0,001	***	0,001	***	0,001	***	0,001	***
CURRENTRA	0,046	***	0,042	***	0,048	***	0,042	***	0,049	***	0,045	***
SOLVENCYRA	-0,004	***	-0,002	***	-0,004	***	-0,002	***	-0,004	***	-0,003	***
LDIM	-0,002		0,007		-0,003		0,003		-0,001		0,006	
LOGETA	-0,004		0,000		-0,005		0,002		-0,006		0,001	
DUMAREA	0,041	***	0,046	***	0,048	***	0,052	***	0,032	**	0,038	***
DEFORTA			0,358	***			0,407	***			0,358	***
R²	0,264021		0,313029		0,262088		0,327201		0,256548		0,306379	
F	49,33392		65,1382		48,69421		67,29566		48,29719		67,47826	
P-value(F)	1,60E-102		6,20E-141		3,00E-101		5,80E-145		5,60E-101		2,60E-146	
N. observations	1857		1857		1852		1852		1925		1925	

Significance Level: (***)1%; (**)5%; (*)10%.

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Table 5: Trade credit - gross and net models

	Dependent variable: DEFORTA											
	2009 lordi		2009 netti		2010 lordi		2010 netti		2011 lordi		2011 netti	
CONST	0,541	***	0,466	***	0,535	***	0,445	***	0,572	***	0,493	***
INBANEN	-0,002		-0,004	**	-0,003	*	-0,005	***	-0,003		-0,005	***
INBANOL	-0,006	*	-0,004		-0,012	*	-0,008		-0,015	***	-0,012	***
INALEN	0,003		0,005		0,002		0,004	*	-0,001		0,001	
INALOL	-0,018	**	-0,011		-0,037	***	-0,027	**	-0,051	***	-0,046	***
ONFIN	-0,016	***	-0,013	***	-0,013	***	-0,011	***	-0,015	***	-0,013	***
ROS	-0,002	***	-0,002	***	-0,002	***	-0,002	***	-0,001	**	-0,001	***
ROE	0,001	***	0,001	***	0,001	***	0,000	**	0,001	**	0,000	
CURRENTRA	0,010	***	0,002		0,016	***	0,005	*	0,012	***	0,003	
SOLVENCYRA	-0,005	***	-0,004	***	-0,005	***	-0,004	***	-0,005	***	-0,004	***
LDIM	-0,023	***	-0,022	***	-0,015	***	-0,015	***	-0,019	***	-0,019	***
LOGETA	-0,008	**	-0,008	**	-0,017	***	-0,016	***	-0,018	***	-0,017	***
DUMAREA	-0,014		-0,022	**	-0,010		-0,020	**	-0,015		-0,021	**
CRCLTA			0,186	***			0,217	***			0,187	***
R²	0,414629		0,453608		0,392243		0,445872		0,412206		0,451604	
F	75,12858		86,5255		69,86931		88,32376		77,02677		89,66533	
P-value(F)	9,00E-150		7,40E-180		1,70E-140		7,40E-183		4,70E-154		1,00E-186	
N. observations	1857		1857		1852		1852		1925		1925	

Significance Level: (***)1%; (**)5%; (*)10%.

Table 6: Net mercantile credit

	Dependent variable: CREMERTA					
	2009		2010		2011	
CONST	-0,136	***	-0,116	***	-0,151	***
INBANEN	0,015	***	0,013	***	0,015	***
INBANOL	-0,007	***	-0,008	***	-0,004	
INALEN	-0,014	***	-0,011	***	-0,007	
INALOL	-0,019		-0,011		0,022	
ONFIN	0,002		0,002		0,003	**
ROS	0,002	***	0,001		0,002	**
ROE	0,000		0,001	**	0,001	***
CURRENTRA	0,035	***	0,032	***	0,037	***
SOLVENCYRA	0,001	**	0,000		0,001	**
LDIM	0,021	***	0,012	**	0,019	***
LOGETA	0,005		0,012		0,012	
DUMAREA	0,055	***	0,058	***	0,047	***
R²	0,112461		0,102181		0,111125	
F	19,1188		18,2148		16,53681	
P-value(F)	1,08E-39		1,12E-37		5,25E-34	
N. observations	1857		1852		1925	

Significance Level: (***)1%; (**)5%; (*)10%.

EDUCATION AND KNOWLEDGE MANAGEMENT BY USING AN E-LEARNING AND M-LEARNING EDUCATION

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ABSTRACT
Today's economy, corporations are increasingly facing with new challenges. Escalating competition in a globalize market, expanding a markets, shrinking corporate resources, rapid shifts in technology, and the recruitment and retention of talented and skilled people are just a few of these challenges. The knowledge and skills of the corporation's employees are now being held with the corporation's monetary assets. Today's knowledge is a commodity and a strategic resource of knowledge-intensive organisations and it is effective Management is critical for competiveness. The companies had to face it with the changes and developing their Knowledge Management with the challenges of the modern world. This paper studies the relationship between the classic and new concept of Knowledge Management. The best way to transfer knowledge is an e-learning and m-learning. By using e-learning and m-learning approach means to improve technological solutions in the company and structure of organisation is also important. First of all, need to be concentrate on organisational solutions (culture, behaviour, HRM) in order to support existing practice that can lead to stronger communication and cooperation between employees, which are the roots of personalisation approach. So, it need to be develop IT solutions in order to support geographically dispersed employees, which are unable to communicate in an effective way. That is the rule of sociotechnical system is true in these cases even if a company concentrates on technological solutions, it has to create the organisational background of the usability. Leadership and cultural change are basic factors of change processes that are also basic enablers of Knowledge Management activities. If companies have successfully developed their initial knowledge management program, will last for, at least, several years. The leadership has to be realised that old solutions are not last forever, and without the help of conscious change management, these achievements could be lost.

Keywords: e-learning, knowledge enablers, knowledge-intensive, knowledge management, m-learning

1 INTRODUCTION

Challenges of the modern world e.g. profit and global crisis requires changes within the organization of education because there is no time and money for expensive external collaborative educational institutions. Corporations are constricted by the need to show short-term results no matter what circumstances exist. Under the pressure after a while increases can be overwhelming. Because of that situation, corporations have viewed training as a necessary expense rather than an investment.

Data is an objective view of a certain event or things. The organization stores data, usually, in IT systems to employees allowed their use. Data divided in two different groups, first group

would be quantity and meaning by that like costs, inventory tracking. Second group would be quality and it's very interested in accuracy (timeliness), relevance, clarity of data. Data do not express the knowledge. They are representing bare view of the situation that does not involve judgment or interpretation and could derive action from them.

Information becomes information in the moment when user has added meaning, relevance and context. So, information distinguish two aspects and they can be quantitative, meaning by that how much e-mails maybe linked to integrated whole, how much messages was sent to some point in time. Second meaning is qualitative, meaning that observing information and degree of the benefit of information it's on the high level that can be better understand the situation and being able to make decisions.

Everywhere around us, there are various data. The moments when they become valid to us they start become an information. When realized interconnections and interdependence of information and the context where there are and when have understanding of them, then became and talking about knowledge. When knowledge is transformed into action then became an intellectual capital. An intellectual capital can be defined in several ways, one of them is knowledge the value of convertible, the sum of all knowledge and skills of employees to the company delivers a competitive advantage and the knowledge is the sum of patents, processes, employee skills, technology, information about customers and suppliers.

The definition of knowledge is a collection of ideas, experiences, intuition, skills and learning when is the potential to create a new value. The aim is to focus knowledge to improvement of enterprise productivity through improvement, employees, products, services, customer and processes. Knowledge generated in the minds of people (experts) and according to Nickols F. (Cortada and Woods, 2000) can be divided into explicit knowledge and that is everything what is stored in the books and is obtained in the educational process. Today is increasingly digitalized and can be quickly adopted. Secondly cover implicitly or silently knowledge (tacit knowledge) and is based on experience and is in the minds of people. This knowledge is the result years of experience and accumulated skill. That knowledge is personalized and it's not easy to get and often remains untapped and undiscovered. This knowledge has little value if is not in use, but when is in use then usually brings very high value to company. The main problem is that how this knowledge shared throughout the enterprise.

Knowledge management denotes directional coordination factor of production knowledge and framework conditions that encourage network connecting all of the individually available knowledge to the knowledge of organization. Individually and jointly knowledge is using to create a new value. Management knowledge is not the knowledge control factor but only special emphasis note. For the management of the organization need a different level information and knowledge.

The level of knowledge represents a knowledge base of the organization and this is an area where pass through social network connection in the form of communication. Both levels related with the information and documentation processes. With information being filled from data creates the knowledge, the additionally, can talk about the operational level (level of action), which pass through the development of knowledge and use of knowledge in processes of value creation. In the process of using the knowledge changes into the level of concrete action. Knowledge of the results activity is to spread the memory i.e. quasi learning.

Three levels (level of knowledge, the level of data and the level of activity) along with five central processes (information, documentation, communication, learning processes and processes of use) make the main model management of knowledge. Documenting knowledge is transformed into information (clearly expressed).

Knowledge transfer is the process of linking supply and demand of knowledge. Building on the model level management skills distinguishes knowledge transfer for social cohesion and transfer that occur by using of information and communication tools. When transferring knowledge for the sake of social cohesion should be for users and suppliers of knowledge arrange appropriate communication framework for the exchange (e.g. e-learning, m-learning).

2 WHAT IS THE KNOWLEDGE MANAGEMENT?

Knowledge Management is a series of activities and they are mutual interrelated between the Company and Management with the aim of developing of the knowledge, skills and competencies of the employees through Education and Training (figure 1). The result of the Knowledge Management in the company is seeking current and future needs and creates a new opportunities.
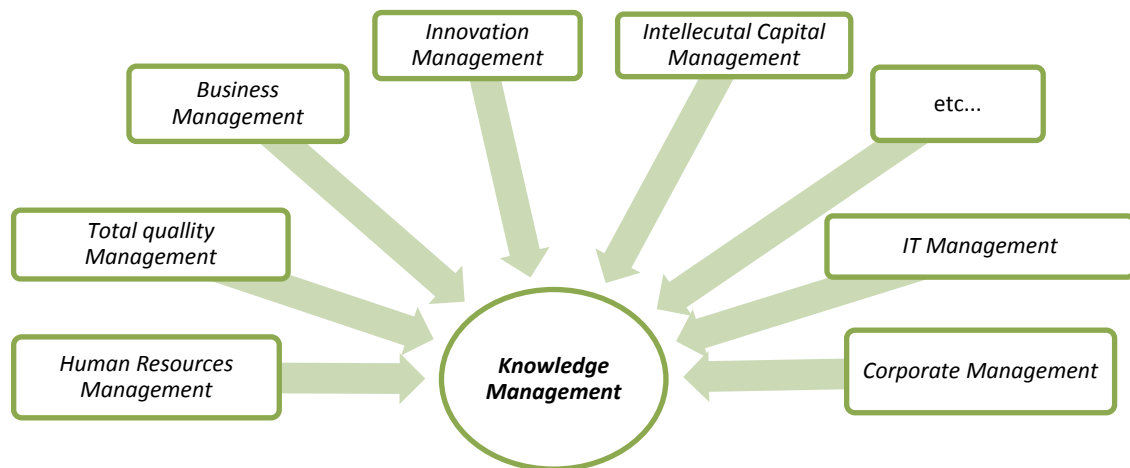
Figure 1: Knowledge Management in the Company, (source: created by author)

Tasks of the Knowledge Management in the company are formulation and implementation of the develop strategies, acquisition and application of knowledge, advance business process knowledge development, monitoring and evaluation activities through the development and application of knowledge in the enterprise, monitoring of company profits as a result of the application of the knowledge (figure 2).

Entrepreneurship Cought Between Creativity and Bureaucracy
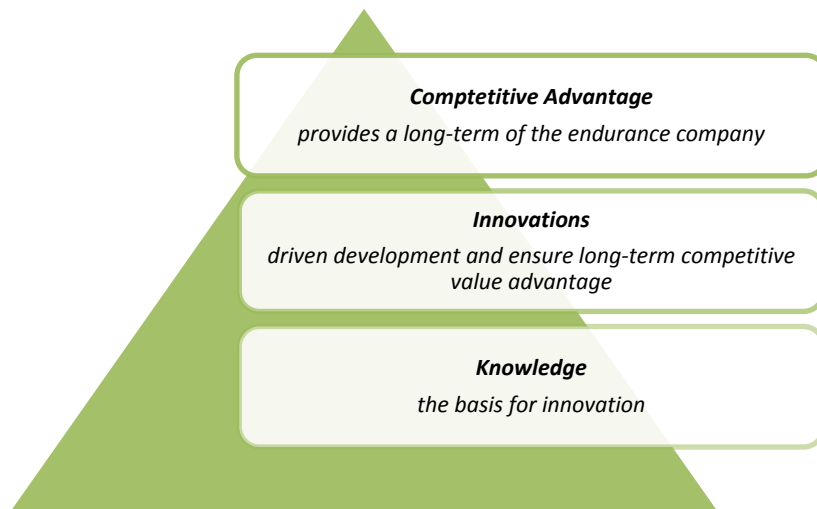
Figure 2: Tasks of the Knowledge Management in the Company, (source: created by author)

The target of the Knowledge Management is transfer and dissemination of knowledge throughout the organization, ensuring the knowledge they need to make an optimal decisions in the Company, promoting and ensuring quality development of new knowledge, providing support and incentives for the acquisition of knowledge from external sources, developing skills of employees for the successful implementation and use the knowledge, ensuring methods of distribution of new knowledge to all employees (figure 3).
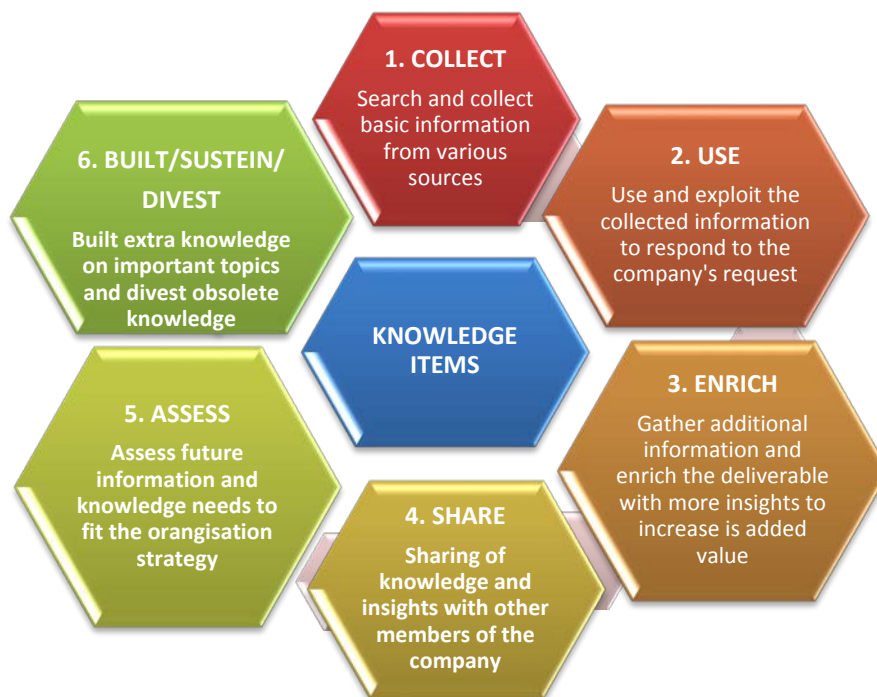
Figure 3: Six major life-cycle components of knowledge sharing culture,
(source: www.deloitte.com

2.1. Common mistakes in building an e-learning and m-learning strategy

There are a lot organizations which they have successful and sustainable e-learning and m-learning program. But if evaluate the strategy it's visible that program of e-learning and m-learning has often a lot of weakness. According to Rosenberg M. (2012) there are a few common mistakes in building an e-learning and m-learning strategy such as:

No vision is a common mistake that organizations do and because of that they have to ask themselves: "Where and what we want to be in some period of time?"

Equating technology with strategy if the strategy is to get a LMS[1] , build a mobile learning network, or add a social media tool , have to be aware that technology is not strategy, but it is only an important enabler. Try asking "How does technology advance the mission and vision of our organization, and what evidence will we accept that it's working?"

Confusing strategy with tactics because both are essential and you shouldn't mix them. Organizations that have strategy without tactics often look good but make little progress. Organizations with tactics and no strategy are likely progressing is chaotically and they are having too many directions.

Looking at development and delivery rather than the bigger business picture can blind you to bigger challenges and opportunities, and can make vulnerable to "non-essentialness". E-learning organizations can focus too much on the wonderfulness of their technology, facilities, course catalog, etc. are sometime clueless when their budgets are cut or their support dries up.

Focusing on creating a traditional training offer online will reduce the efficacy of results. There's a lot of junk out there and it maybe better strategically to have fewer online courses that really work and make an impact, than a whole catalog of marginal titles.

Going it alone; failure to reach consensus from a strategic standpoint, this is where governance matters.

Misreading executive support means that executives love learning and most love e-learning but at the first sign of business trouble, they cut training budgets for leaning and jeopardize employee's development.

Thinking this is part time or short-term work but it's not. Here's where management, leadership, and strategy intersect.

Ignoring risks, weakness, and threats because of they are not focusing on their challenges. SWOT analysis is good for help point you in the right direction.

Failure to manage change implementing e-learning into the organization can be stressful and can surface resistance in the organization. Recognizing this and dealing with it is the key of a successful implementation into the business.

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[1] Learning Management System – manages the administration of training, usually includes functionality for course catalogs, launching courses, registering students, tracking student progress and assessments.

2.2. Planning process for the e-learning and m-learning

E-learning and m-learning have become extremely important for the education technology revolution. E-learning refers to electronically supported learning and teaching of any kind. Any form of learning in which digital communication, electronic devices or the internet is used to support the learning process might be described as a form of e-learning, which also comprises education technology. E-learning includes such processes as computer based learning and internet based learning, but it is not necessarily require either a computer or an internet connection but only the use of electronics (learning language using a CD Rom or watching an educational television program). Best platforms by using an e-learning are Game Classroom or Quizinator, Chem Collective, Fifty Sneakers.

M-learning is an abbreviation of mobile learning, which means using portable devices that allow the employees to learn in different environments and whilst on the move instead of being restricted to a classroom setting or tied to a desk (using by wireless devices such as iPods and tablets and increasingly sophisticated mobile phones iPhones and android handsets expanding the potential applications of the concept exponentially). Best platforms by using an m-learning Scavenger Hunt app.

The primary differences between m-learning and e-learning fall into four main categories: timing, information access, context and assessment (Feser, 2010):

1. Timing is the time when learning is expected to take place and anticipated duration of the learning session. M-learning is untethered and can be done anytime and anywhere. In addition, the small screen sizes of today's mobile devices means individual interaction sessions, and by extension, learning sessions are much shorter in duration than e-learning.
2. Information Access with e-learning will be applied at a later time, it is critical that the material be understood and remembered until it is needed. M-learning, on the other hand, is more about accessing information at the moment it is needed. This implies that successful m-learning is more about easy and convenient access to information and less about committing information to memory.
3. Context is one of the key areas where m-learning is distinguished from e-learning. With e-learning, as with instructor-led sessions, it is critically important to establish the context so that the learner understands the importance of the subject matter. With m-learning, however, the context has already been established.
4. Assessment methods are very different for the two learning styles. While Donald Kirkpatrick's four levels of learning evaluation are applicable to both e-learning and m-learning the approach to evaluation is different. When assessing an e-learning module, it is relatively easy, through a series of questions to determine the success of level 1-learner reaction (what the learner felt about the training) and level 2-learning (the resulting increase in knowledge of capacity). However, with level 3-behavior and level 4-results, it becomes much harder to assess the impact of the e-learning. Thin is not to say that Behavior and Results are hard in and of themselves to measure. So many other factors can influence a person's behavior or an organization's results, that it is difficult to tie these changes specifically to e-learning. Much easier to assess m-learning's impact on both an individual's behavior and the ensuing business results.
5. Different doesn't necessarily mean better that are proofing the differences between m-learning and e-learning may suggest that one learning style is better than the other. They are both appropriate in the right situation.

There are a lot of benefits by using m-learning and e-learning in the business and it need to combine them all the time considering of situation. Learning needs to be modernized to blend with the social experience to ensure it meets younger employees' needs. Benefits of m-learning are access (any time), convenience (when you have time), and retention (recall or refresh the memory), overcoming resistance (instead of having long classroom sessions), acceleration (instant access to topical and contextual learning), speed (available comparatively quickly).

In 2011, Haag Jason, who specialized in Education and Training Management and Instructional Technology at the University of West Florida, take an empirical study in paper *»From elarning to m-learning: The Effectiveness of Mobile Course Delivery«*,(2011), on June 1st, 2011, 40 participants at Sheppard Air Force Base (AFB) in Wichita Falls, Texas completed the TIP[2] mobile course. Overall, the age demographic of the participants was more heavily weighted toward the younger age ranges of 18-22 and 23-27 year olds. This demographic was representative of the majority of participatns that were located at Sheppard AFB. The course was made available to 71 paritipants inculuding both active duty servicemen and servicewomen (36%) and civilians (63%). Of these 71 participants roughly 86% were from the Services (59% U.S. Air Force, 15% U.S. Army, 7% U.S. Marine Corps, 4% U.S. Navy), with the remaining 13% from various Department of Defense organizations (Defense Agency at 3%, Combatant Command at 3%, and other at 7%), and 1% didn't answer.

Participants in the study belive that mobile course delivery provides many benefits (figure 4). Thirty-four percent of the participants cited convenience as the most beneficial feature. Time management (22%) and touch screen interactivity (20% were nearly even as the second and third highest responses, respectively. More concise information (11%) and training with no distractions (10%) were also closely matched for the fourth and fifth ranking positions while 3% answered »other«. For those participants that answered »other they provided the following comments:

- User actually felt more distracted when using the mobile phone
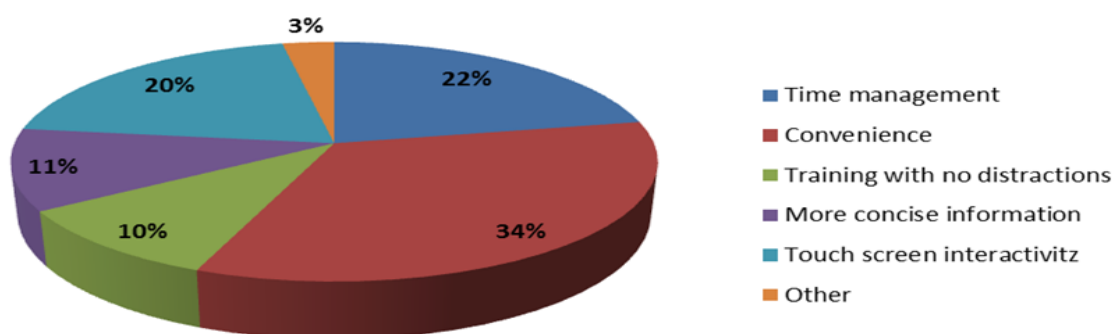- Portability of the training

Figure 4: Which of the following aspects of mobile course delivery did you find to be most benefical; (source: Haag, 2011)

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[2] Trafficking In Persons

Should training materials be delivered on a mobile device or should be provided as an alternative option to e-learning courses. The following question in the end-of course survey was asked: If given the option, would you prefer that other mandatory computer-based training courses be available on your mobile device (instead of only on a desktop or laptop)? The responses to this question were evenly distributed in the preliminary survey. However, in the end-of-course survey (figure 5) fifty-eight of the participants answered, »yes« to this question, with an overwhelming response rate of 85%. Since this was the participants' first experience with completing a course on their smartphone, the response to this question could have been quite different if they had a negative experience with the mobile TIP course. This response indicates there was definitely a high degree of effectiveness of the mobile TIOP course. Only eight of the participants (12%) answered »no« to this question. This response could be either indicative of learners who prefer e-learning couses or it could perhaps stem from the negative feelings that are so often associated with obligatory training.
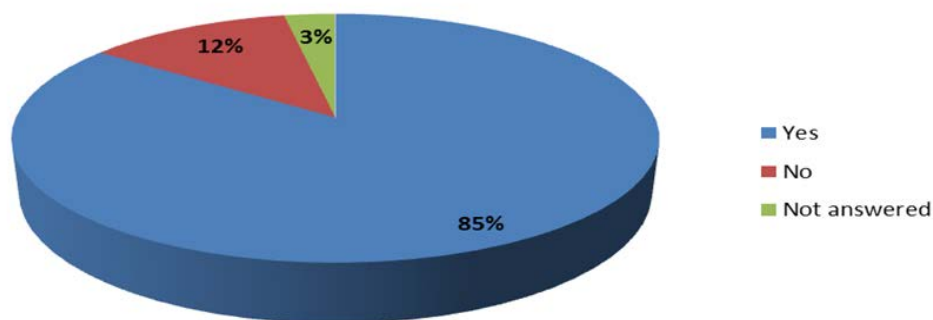
Figure 5: Courses Available on Mobile Phone, (source: Haag, 2011)

In 2005, professors Anderson and McCormick wrote *A Common Framework for E-learning Quality and Ten Pedagogic principles of e-learning*, describing an approach to the development of effective e-learning programs.

Principle 1: Match to the curriculum should be matched with and aligned to appropriate curriculum through clear objectives; the relevance of content covered the appropriateness of student activities and the nature of the assessment.

Principle 2: Inclusion through different types and range of achievement; physical disabilities that can be particularly supported by e-learning; different social and ethnic groups and gender.

Principle 3: Learner engagement should be evident in being both educational and motivating.

Principle 4: Innovative approaches should be evident why learning technologies are being used, rather than a non-technological approach which achieves the same end as effectively.

Principle 5: Effective learning can be demonstrated in a variety of ways by using a range of different approaches in the learning platform that will allow the employees to choose one type of education that suits her/him or that can be personalized by satisfying a number of the characteristics of good learning.

Principle 6: Formative assessment should be provided.

Principle 7: Summative assessment must be valid and reliable.

Principle 8: Coherence, consistency and transparency must be internally coherent and consistent in the way the objectives, content, employee's activity and assessment match to each other. I t must be open and accessible in its design.

Principle 9: Ease of use meaning be transparent in its ease of use.

Principle 10: Cost-effectiveness meaning technology solutions need to be justifiable and affordable and the costs sustainable. Education institutions can leverage technology to achieve their missions at a lower cost, with greater reliability, in a scalable model of instructional delivery.

3 HOW E-LEARNING AND M-LEARNING CAN INCREASE ROI

Return on investment is quite different than cost savings. Cost savings are reduction in expense, while return on investment is the rate or percent of return on investment. By implementing technology based on e-learning and m-learning is one way to increase ROI and decrease expenses.

Fletcher (1990) after carefully reviewing over forty independent studies found that Technology Based Training (TBT) yielded time savings of 35-45% over traditional classroom instruction while obtaining equivalent or better gains in learning retention and transfer. Adams (1992), Cantwell (1993), Bradley (1993) and Hofstetter (1994) later confirmed these results across several years and hundreds of studies. Likewise Hall's (1997) in-depth review of over 130 case studies found that computer-based training required significantly less time than instructor-lead training. The amount of reduction in time ranged from 20-80% with 40-60% being the most common range for timesaving. None of the studies reported a decrease in training effectiveness and most reported a substantial increase in training effectiveness (both learning retention and transfer). Hemphill (1997) found that while TBT saves time, it does not negatively impact effectiveness of learning.

E-learning and M-learning minimizes travel costs that have shown a numerous studies by at least 50% (Hall, 2005). Other studies have shown that if implemented properly these costs can be reduced by at least 80% (Hemphill, 1997).

E-learning and M-learning minimizes time away from work Fletcher (1990) found that computer-based training yielded time savings of 35-45% over traditional classroom instruction. In addition, Hall's 1997 case study review found that computer-based training required significantly less time than instructor-lead training. His review indicated that the reduction in time ranged from 20-80% with 40-60% being the most common time saved.

E-learning and m-learning is cost effective because it can reach more people in a shorter amount of time than traditional learning. If this cost is spread out even further by purchasing off-the-self multimedia training on a "per head" basis the total cost is significantly lower than traditional instruction. Multimedia learning on the average saves approximately 20% in the first year of implementation. In the second and third years when development costs are not

factors, the average savings for multimedia learning grows to nearly 50%. Multimedia training savings in the first year increase to an average of 45% (Allen, 2000).

E-learning and m-learning can better meet the needs of geographically diverse employees because is flexible. It is self-paced and can occur any time and any place, is easily modified (especially web delivered content) thus making it more adaptable for translation and change of content for different cultures and languages.

E-learning and m-learning provides more consistent course delivery Adams (1992) found an average delivery variance of 59% between presentations by classroom instructors. In contrast e or m-learning is very similar to a performance that is filmed or taped. The instructor can review, edit and re-edit their presentation until it is just right. In addition no after how many times the class or learning module is presented it will not change or vary. This leads to very consistent delivery of material that is not possible in a traditional classroom approach.

E-learning and m-learning can offer more individualized instruction and studies have shown that if e or m-learning is constructed properly it can produce more individualized instruction (Adams, 1992). Employees can take computerized pre-tests on the content of the class and based on their performance, only receive material or instruction on what they need.

E-learning and m-learning achieves consistently better learning results than traditional teach Fletcher (1990) and Wright (1993) report that e-learning achieves consistently better learning results than traditional classroom instruction. Adams (1992) reported the following results e-learning produced a 60% faster learning curve as compared to traditional instruction, students had up to 50% higher content retention for e-learning over traditional classroom instruction, e-learning students demonstrated 56% grater gains in learning than did students who were taught by traditional instruction, consistency of learning was up to 60% better for students taught through e-learning over those taught by traditional methods, consistency of the presentation of material was 40% higher for e-learning and training compression was up to 70% faster for e-learning than it was for traditional classroom training.

Employees receiving on-going training are significantly more productive than those who do not Forman (2004) reported that employees who received on-going training work more efficiently than did their counterpart who received no on-going training. Forman stated that as a result of this increase in efficiency the following occurred: the cycle time for manufacturing was significantly decreased, sales significantly increased, absenteeism decreased, product quality significantly increased with less waste due to error and reduction in accidents and lost time injuries.

Training results in less employee turnover comprehensive study by Corporate University Review found that extensive an ongoing training and development was second only to stock options as a primary means of attracting and keeping talented workers (Corporate University Review, 1999) A thorough review of the literature by McNamara (1999) found that ongoing training significantly reduced employee turnover.

Customer satisfaction increases with employee training and without customers there would be no corporate income. A study by Bain Consulting (Business Week, 1992) demonstrated that increasing customer retention by as little as 2% had the same effect on profits as cutting costs by 10%.

4 CONSLUSION

Numerous studies have shown that people learn faster with multimedia training especially by mobile phones (m-learning). They more accurately recall what they learned over a longer period of time, and they are better able to transfer what they learned to actual performance. Studies conducted by the military, education and industry cite a 15-25% increase in learning with significant increases in retention and transfer of training.

Brandon Hall (2005) reviewed a number of studies on multimedia training and return on investment. The studies involved such companies as Intel, American Airlines, Pacific Gas and Electric, IBM, Bethlehem Steel, Bell South, Steelcase, and Pizza Hut. In all studies reviewed the results indicated significant increases in the quality of learning when computer and smart phones based training was compared with traditional classroom instruction.

While e-learning and m-learning is not the universal answer for all human performance issues, it can provide viable solutions to many of the new challenges that face corporations. Well-constructed computer and smart phone based learning training, if employed appropriately, can yield significant improvement in learning and performance. This positively affects and significantly improves a corporation's competitive advantage.

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ECONOMY OF COMMUNION: A NEW APPROACH TO SUSTAINABLE DEVELOPMENT OF FAMILY BUSINESSES IN CROATIA

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ABSTRACT
At the beginning of the twenty first century, there was an ongoing debate concerning the role of economy of communion (EoC) in achieving corporate sustainable development (CSD). A traditional approach to build CSD has been concentrated on the strengthen management material goods in order to increase the added value for the shareholders. Based on the limited focus of the traditional approach towards CSD and the pressure of the global business practices, enterprises are taking defensive position and reactive approach for solving business problems. Such approach is not sustainable and as a result, enterprises in general and family business in particular must shift their paradigm from materialistic management to new post-materialistic value management. Therefore, the purpose of this study is to achieve a deeper understanding on how the EoC can contribute to sustainable development (SD) of family businesses in Croatia. The main objective of this study is to investigate new values of post-materialistic management (i.e., culture of giving, profit distribution, ecology and the responsibility for future generations) and their influence on SD of family businesses in Croatia. In the context of new values of post-materialistic management, the profit and growth are not the final objectives of the business activity but elements of the wider circle of the corporate values. Common good of all stakeholders is put in the forefront. This qualitative study is based on a comparative analysis of the research results from the review of relevant literature and empirical research conducted by Živković (2012) on the EoC. The research results indicate that there is an alternative to business models of market economy. Principles of EoC, the business model that puts humans and their spiritual and material needs and development in the forefront, contribute to sustainable economic, social and environmental development. Practical application of the "culture of giving" develops relationships that promote the development and distribution of profits to internal and external stakeholders, thus contributing to SD of family businesses.

Keywords: corporate sustainable development, culture of giving, economy of communion, family businesses

1 INTRODUCTION

Until the end of the 20th century professional, scientific and business literature did not include a religious dimension as a fundamental value for achieving sustainable development of family businesses. With the advent of Economy of Communion (EoC), a business model of more equitable distribution of profits and responsibility for future generations began seriously exploration of complex issues that are associated with the integration of religious perspectives in the contextual framework of the corporate world. Contribution to sustainable economic,

social and environmental development of family businesses is based on three concepts: the EoC, sustainable development and family businesses.

The purpose of this paper was to achieve a better understanding of how the EoC can contribute to the sustainable development of family businesses in the Republic of Croatia. The primary objective of this study was to explore the new values of post-material management (e.g., culture of giving and spending, profit distribution, ecology and the responsibility for future generations) and their impact on the sustainable development of family businesses. In the context of the new value of post-material management, profit and growth are not the ultimate goal of business activities but elements of a wider range of values.

The structure of this paper consists of five main chapters. The chapter 1(Introduction) briefly introduced the reader to the topic, purpose and objectives of the work. Chapter 2 (Literature review) is systematic review of the relevant literature, the one that is important for this topic. Chapter 3 (Methodology) described research methods and identifies research questions. Chapter 4 (Research results) presented the results of research focusing on the research questions. Chapter 5 (Conclusion) summarized the key findings of the entire paper with recommendations for practical applications and future research.

2 LITERATURE REVIEW

This chapter was designed in a manner that described the theoretical framework of the subject matter and the concept of the EoC, sustainable development and family businesses. It consists of four main topics (subchapters). The first topic of discussion is the theoretical framework of the subject matter, with a focus on stakeholder theory. The second topic dealt with the EoC through its historical development and a brief description of the terms of gratuity, the consumer society, the culture of giving and ethical behavior. Furthermore, the third theme deals with the concept of sustainable development and identifies the degree of the EoC's impact on sustainable development. Finally, the fourth topic discusses about the concept of the family business and the role of the EoC in family businesses.

2.1. Stakeholder theory

This paper uses the concept of stakeholders as a theoretical framework to investigate the impact of the EoC on sustainable development of family businesses. Proponents of the EoC, corporate social responsibility (CSR) and managerial ethics argued that one of the central concepts associated with social issues is stakeholder theory (Boesso and Michelon, 2010; Donaldson and Preston, 1995; Freeman, 1984). Stakeholder theory reflects a strategic approach designed to improve the efficiency of enterprises (Freeman, 2004). Freeman (1984) has defined the term stakeholder as "any group or individual who can affect or influence the realization of the achievement of company goals" (p. 46). The importance of this theory received a new dimension during the mid-1980s when Freeman (1984) published his book " Strategic management: A stakeholder's approach". In this book, Freeman argued that the leaders of multinational companies (MNCs) should consider new external stakeholders i.e., the local community and environmental activists in addition to shareholders, customers, employees and suppliers. Stakeholder theory suggests that maximizing shareholder value cannot be achieved without meeting the needs of other interest groups or stakeholders (Jamali, 2008). This implies that the shareholders / owners should share created value to other primary stakeholders (Clarkson, 1995; Donaldson and Preston, 1995).

2.2. Economy of Communion

The fundamental values of a society: spiritual, intellectual, sociological today are nothing but stagnation, which is reflected in the economic area that accompanies economic depression, financial crisis, distrust and fear of the future and lack of stable growth and development. The basic value of human being is expressed in his capacity of personal charity talents for the good of his neighbor in all aspects of life. "The true art of giving releases a series of values that characterize the act of giving: gratuitousness, joy, breadth, unselfishness and deliver it from risk or danger of being misunderstood or misused." (Bruni, 2005). Precisely, gratuitousness and charity are foundation of the EoC.

Communion is unthinkable without reciprocity and without unity shared with others and represents a special kind of good that we understand and feel only when we give ourselves free to others with high hope to the success of our intentions, regardless of possible setbacks and difficulties. Enterprises that operate with the EoC principles are responsibly taking care of customers and suppliers and other stakeholders involved in the process of production and distribution, and their relation to a nature and environment. The founder of the EoC, Chiara Lubich, 1991, after visiting Sao Paolo in Brazil, noted that people do not have place to work where they could get a chance to work and earn some money for their and their families' needs. In those early days of hers idea had even better clarified: company profits should be given to the communion for three specific objectives:

a.   enterprise development
b.   for spreading of so-called culture of giving and communion
c.   for the needy ("poor"), primarily for those in contact with the community, "Focolare" (Bruni, 2013)

Bruni (2005) talks about the concrete application of the EoC in real companies because communion enters into everyday business processes with the desire to devote more attention and feeling in daily work to all participants of business process employed which, in the end, even raise the quality of the performance itself. Magzan and Miletić (2012) recognize the company of the EoC by their detachment from the prevailing market logic and use the terms of reciprocity and charity, with the aim of achieving the main point in the market belong to the community by working in a positive and constructive way in its development. Bruni (2013) defines the companies in the EoC as those who build their identity on gratuity and without defined "sophisticated contract" and develop "enterprise culture gratuity" that must be incorporated into the overall entrepreneurial vision.

Human life contains great non-material values that he/she gets for free: love, friendship, beauty, prayer. Pope Benedict XVI (2009), in considering the problem of uneven development of certain countries and continents, concluded that in mutual exchange countries should strive towards those forms of economic activities which contains gratuitousness and communion within. Hollis (1998) argued that the market has to take care of the principle of gratuitousness and that it cannot function properly without mutual trust. Živković (2012) states that the culture of charity notices entities in the business process, their specific needs, allows exchange between entities in a market where subjects receive and retain the best value and give others their value for certain cash equivalent and create new value in the market from which generates economic development. Marshall (1987) argued that people are able to provide others a lot more than they normally do, and economists should reveal these hidden potentials and use them for the development of society as a whole. "The culture of giving rests on a foundation of work which we define as a human right that is a reflection of his humanity in which a human been participates in the transformation of nature, according to his

needs, but at the same time builds himself as a person and becomes more human." (John Paul II, 2003).

2.3. Sustainable development and Economy of Communion

In today's global economy, natural resources are used in a very inefficient manner and they are spending like they are available in unlimited quantities and for an indefinite period, which is unfortunately a big misconception of consumer society that puts profits in the first place, even when the health of users of these manufactured goods are affected themselves. There are different definitions of the term "sustainable development" and we will mention only a few of them: It is argued that as the planets conventional natural resources are consumed, it has a profound effect on society and the environment (El-Kafafi and Liddle, 2011). In order to maintain current levels of lifestyle, help solve some of the developing nation's problems and ultimately survive, the world will look more to technology and science for the answers and this will call for partnerships that deliver new approaches and science-based innovations (Teresko, 2006). These partnerships are related to Triple Helix method, which leads to sustainable growth.

Sustainability is ensuring that economic, environmental and social developments go hand in hand (Dee, N., Gill, DE and Livesey, 2011). Sustainable development needs to be profitable in order to be effective. The second definition is based on the concept of sustainable growth, originally developed by Higgins (1977.) According to Encyclopedia of Business (2012),"the sustainable growth rate (SGR) of a firm is the maximum rate of growth in sales that can be achieved, given the firm's profitability, asset utilization, and desired dividend payout and debt (financial leverage) ratios. The variables in the model include: (1) the net profit margin on new and existing revenues (P); (2) the asset turnover ratio, which is the ratio of sales revenues to total assets (A); (3) the assets to beginning of period equity ratio (T); and (4) the retention rate, which is defined as the fraction of earnings retained in the business (R)." The third definition of sustainable growth is that "income from a firm's operations in future accounting periods that can support debt repayment" (Answer.com, 2012). It implies a rate of growth expected from retained earnings without external financing, and without altering financial leverage. Sustainable growth models assume that the business wants to: 1) maintain a target capital structure without issuing new equity; 2) maintain a target dividend payment ratio; and 3) increase sales as rapidly as market conditions allow (Encyclopedia of Business, 2012).

The project of the EoC and sustainable development model has some common points: taking care of nature, i.e., the environment, taking care of society (the poor and needy people) and the economic component that is expressed through profit and financial stability of businesses. It is necessary that all three elements are equally involved in performance in order to maximum efficiency is achieved. In order to better the interactions terms economics of communion and sustainable development, as well as an expression of their compliance is shown in Figure 1, which represents an equilateral triangle.
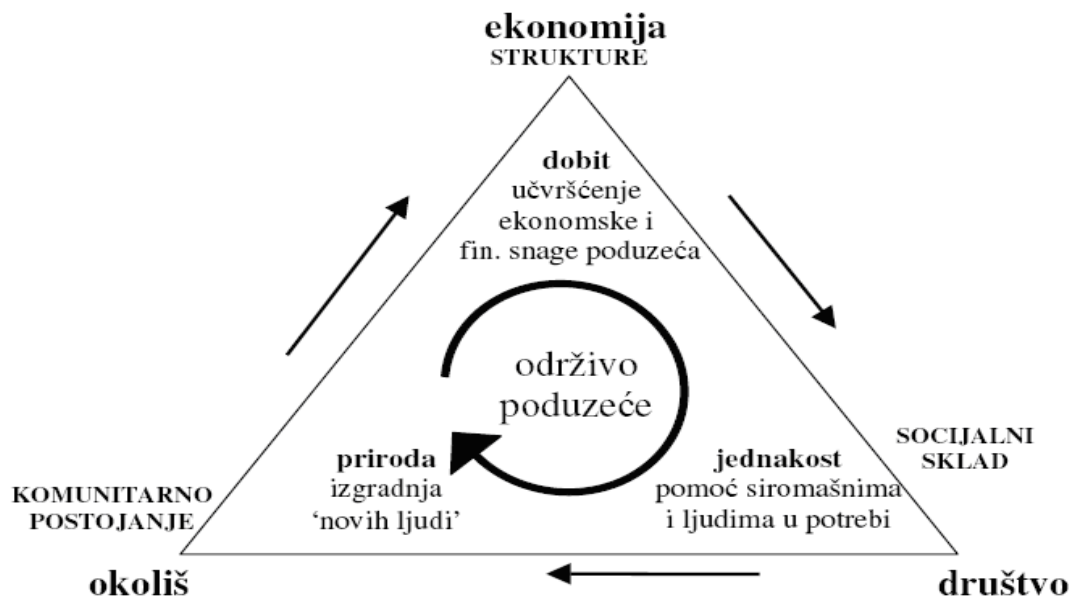
Figure 1: Triangle of sustainability in economics of communion
(Segreteria Internazionale Economia di Comunione, 2009/2010, p. 8)

Part of the triangle which relates to social harmony implies not only a one-time assistance to the needy rather than constantly extracting third profit for this purpose, which is defined for all companies that operate according to the principles of the EoC. The second part of the triangle relates to the environment in which companies are investing money of the EoC and the time of its workers and thus meet the requirements of sustainable development. The third part, the economic profits and positive financial performance is a necessary condition that must be met by enterprises led by the EoC, otherwise, they can't help others.

2.4. Family businesses and Economy of Communion in Croatia

Family businesses are the most common represented in the form of ownership of organizing and running a business in the world economy and in Croatia as well. Unfortunately, domestic scientists and institutions pay insufficient attention to family businesses, and, as a result, we have highly limited number of serious empirical research in this area. Nowadays in the world there are countless definitions of family business and we will choose, for the purposes of this paper, only a few of them in order to show the stratification of the term;

- a majority stake in the hands of an individual or a few members of the same family (Barnes and Hershon, 1976)
- company is considered family business when it is closely linked to at least two generations of the family and when that relationship has mutual influence to the company's policies, as well as the interests and goals of the family. (Donnelley, 1988)
- most important operational decisions and plans of succession are influenced by family members who are in management or on the board of the company. (Handler, 1989)
- ownership and leadership of one or two members of the same family. (Upton and Petty, 2000)

Kružić (2004) cites data of the International Academy for Research family business, according to which between 80-95% of all the world's private companies are family and generated more than 75% of gross domestic product and employ more than 85% of the total number of employees. According to Senegović (2012), the family business in Croatia

participating in the total share of more than 70%. A family business can be viewed as a new value where family members enrich themselves by business experience, and, at the same time, the company receives a dimension of trust and unity (Senegović, 2012). Such a positive combination of family and business, if properly guided and directed, can build a sustainable system which will successfully coexist for centuries and will successfully overcome the transfer of ownership of several generations.

Weber, Lavelle, Lowry et.al. (2003) observed flexibility as an important competitive advantage of family businesses that allows them constant adaptation to new challenges of the market and fast decision even the most important financial decisions, unlike businesses where ownership is divided. Breton-Miller (2005) believes that: **c**ontinuity, **c**ommunity, **c**onnect and **c**ommand - "4C" – is the basic foundation of success of family businesses and enable them to successful survival in a demanding market for many years as a market leader. Below are some of the main components of family and business, and we compare them with the foundations companies of the EoC.

- connection between family members
- connect them feelings, loyalty, membership
- provide each other with a sense of security and support
- membership is for life (or longer)
- equality of family members
- subjectivity, etc.

On the other hand, the business is the term most often used as a simplified general designation of any action that incorporates professionalism, entrepreneurship, trade and monetization. Main features of the company are the following:

- uncertainty
- taking over some (moderate) risk
- experimenting, tracing, researching
- community of people with different interests
- defined tasks and objectives
- look for the expected results
- membership lasts as long as it achieves its goals
- emotional relationships are less important, rationality, etc. (Kružić, 2004)

Comparing these two terms, we can safely conclude that there is conflict of interests but when we put them together in one common term - family business - we get a new value that is already there for thousands of years and operates in the global market. Where is the secret? Where the similarity with companies of the EoC? Companies of the EoC have some of the main characteristics:

- culture of charity
- gratuitousness
- friendship and community
- care for the needy
- feeling for the benefit of all stakeholders in the business
- longevity and safety

We conclude that there are points of contact between the families and companies of the EoC: connection between family members, a sense of loyalty and belonging (friendship and

community), provide each other with a sense of security and support (care for the needy, feeling for the benefit of all stakeholders in the business, longevity and safety), however still remain some elements that are present in the companies of the EoC, and are not represented in family businesses, and they are: culture of charity and gratuitousness. Precisely these elements are needed in order to transform family businesses into companies of the EoC and enable long-term sustainable economic development and enable long-term sustainable economic development of one economy.

3 METHODOLOGY

The primary objective of this study was to explore the new values of post-material management (e.g., culture of giving, gratuitousness, profit distribution, ecology and responsibility for future generations) and their impact on the sustainable development of family businesses. In order to achieve the primary objectives, the following research questions (RQ) were designed:

RQ1: How does EoC affect the sustainable development of family businesses in Croatia?

RQ2: How can family businesses be transformed into companies of EoC?

In an attempt to answer the above research questions, using the content analysis of relevant literature with a focus on empirical research conducted by Živković (2012) on the EoC in Croatia. For the purpose of triangulation of research results will be used special analytical methods: historical, statistical and comparative method. For a thorough research and analysis, it is important to use both: The first one to get precise data that will produce an appropriate, the other one because of conclusions that it will reach by itself based on an analytical approach to research (Faculty of Philosophy, Rijeka, 2009).

4 RESEARCH RESULTS

This chapter is designed in a way that presents the results of research focusing on the answers to RQ. The primary goal of data collection and analysis was to investigate how the EoC may contribute to the development of family businesses in the Republic of Croatia. Therefore, we have designed two key RQ:

RQ1: How does EoC affect the sustainable development of family businesses in Croatia?

RQ2: How can family businesses be transformed into companies of EoC?

These research questions serve as the framework for the analysis of the research conducted by Živković (2012) and secondary sources of relevant data. They are based on three main concepts: EoC, sustainable development and family businesses.

4.1. Territorial presence enterprises of economy of communion

In this section, the authors analyzed only selected results of research conducted in the work: "The impact of EoC on the sustainability development" (Živković, 2012) to make a comparison with the results of secondary research, and get a better overview of territorial presence companies of the EoC by country. The Figure 2 demonstrates the number of companies that use principles of EoC. It shows that the largest number of companies operating as EoC is in Brazil which is understandable because it is precisely in that country began the process of establishment of EoC, especially as represented cities of Sao Paulo and

Recife. Italy is also the seat of the movement and it is the second country in which operates most companies. Southeast Europe also has plenty of companies, and is located just behind Italy in the number of entities involved in the project. Croatia is represented by twelve companies of EoC, which is not such a bad result when we compare it with the total population. Early 2013, Križevci hosted World Conference of companies in EoC, which also confirms the importance of Croatian companies and their impact on the environment.
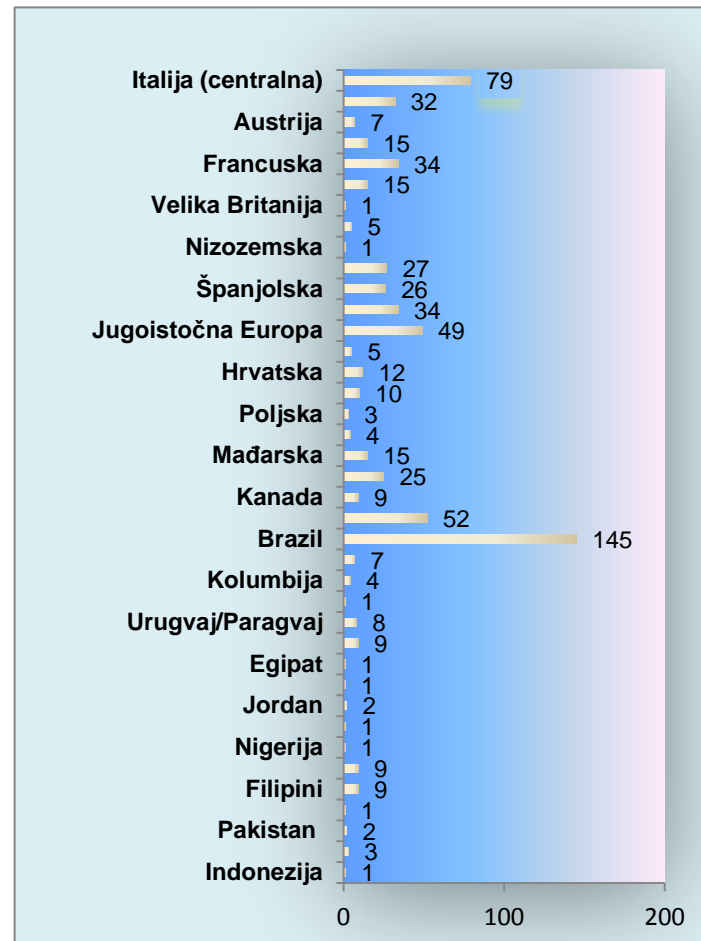
Figure 2: Number of companies in the economy of communion by country. (Segreteria Internazionale Economia di Comunione, 2009/2010, p. 8)

4.2. The sectors of business and number of employees in companies of the Economy of Communion

Furthermore, from the existing research, we used data about sectors of business, type of business, size and financial stability of the companies of the EoC in the world as shown in Figures 3, 4 and 5. Figure 3 shows the areas of business at companies in the EoC by sector.

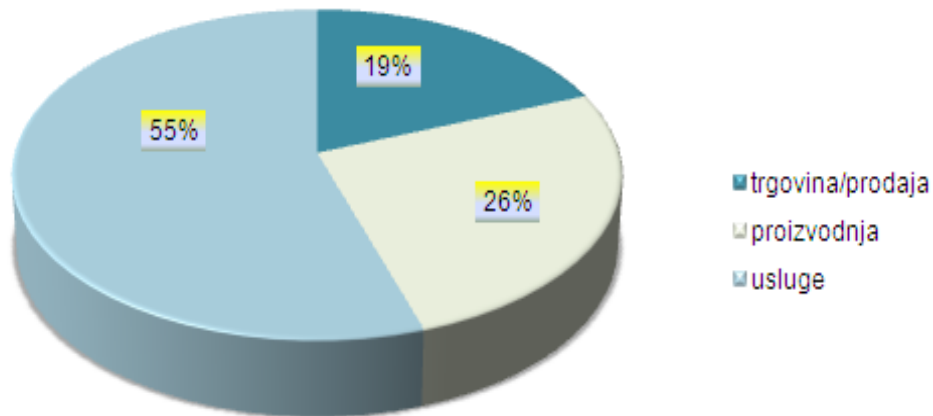**Entrepreneurship Cought Between Creativity and Bureaucracy**

Figure 3: Distribution of companies in the economy of communion by sector. (Segreteria Internazionale Economia di Comunione, 2009/2010, p. 9)

The highest percentage of companies in the economics of communion - is engaged in services (55%), production is represented by 26%, and trade and sales by 19%.Figure 4 shows the companies in the economics of communion by the number of employees.
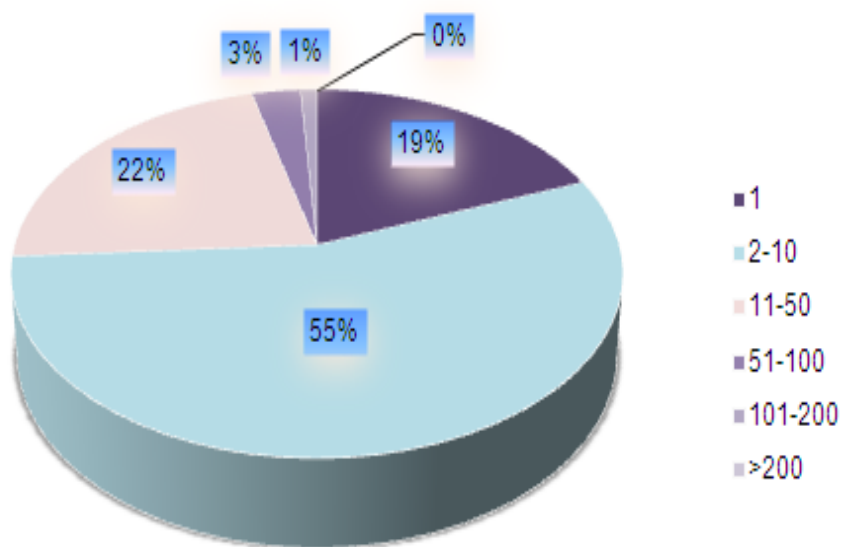

Figure 4: The division of the company in the economy of communion by the number of employees. (Segreteria Internazionale Economia di Comunione, 2009/2010, p. 9)

Aforementioned figures clearly indicated that the majority of companies (55%) employing up to 10 employees who belong to microenterprises and 22% of companies employing between 10-50 employees placing them in small businesses. Creating new jobs and businesses, notably in Latin America, a project of the EoC produces bigger and bigger companies, and is capable of greater and greater demands in the context of the big companies, which will be a lot of more in the future. Figure 5 shows the cost structure of the company in the economics of community.
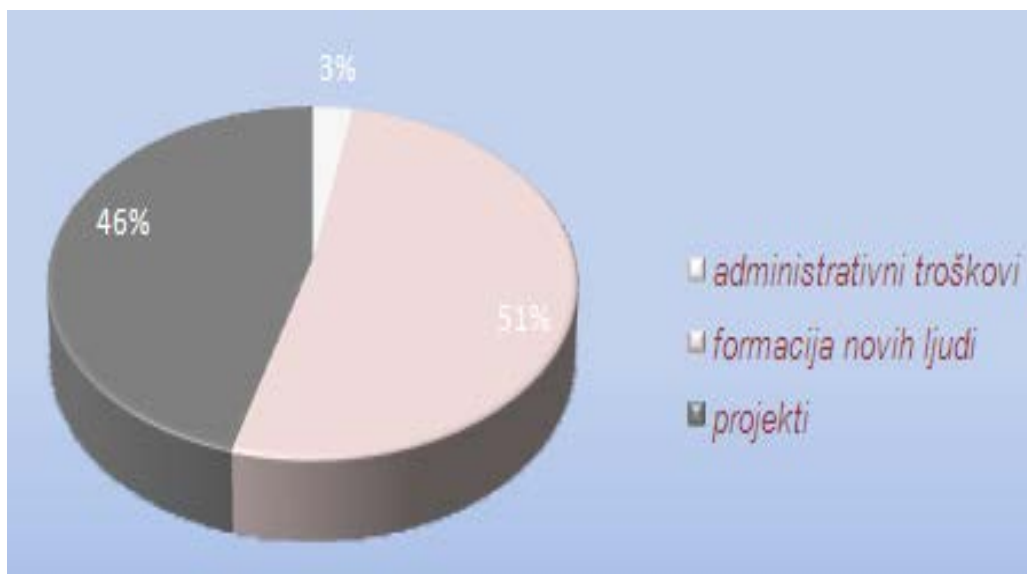
Figure 5. The distribution costs of the project in 2009/2010 year. (Segreteria Internazionale Economia di Comunione, 2009/2010, p. 29)

A good proportion of distribution of costs between 51% for the formation of new people and 49% for new projects of the EoC contributes building of the good future for the EoC. The low percentage of administrative costs indicates that the administration of the entire project is not expensive and it can generate out the new effects for further investment in new people and new projects.

In Križevci, Croatia, there is a strong center of EoC in Croatia called "Maripoli Križevci". A particular example of a member of the project's daycare center "Sunbeam", which operates in the manner of the EoC, shows business practices that positively affect the local community. This business entity is located in a culture of giving that is in the daycare center learning from the very beginning of the development of children. Access to children, education and values that promote the education of children in line with the foundation of the EoC, children learn acceptance of diversity, the need for donations, a deeper understanding of economics and the special approach to the nature.

The culture of this educational institution is divided into three concepts:
1. The culture of giving – daycare center is especially careful and educate children in a way that takes special care to donate to the needs of others. Methodological approach to the donation through the game brings significant effects in the development of children through the years in kindergarten and they are becoming more sensitive to their environment and those around them.
2. The culture of acceptance - especially accepting differences in others as a positive factor in socializing and sociological dimension, especially in kindergarten work on mentorship in which the individual is assigned the role of "supervisors and teachers" other (older-younger) where the mentor involved in aiding and socialization of those for which he/she in charge.
3. The culture of peace - peace within ourselves and peace with others, it is also particularly important to be at peace with nature (Magzan and Miletić, 2010)

4.3. Results for RQ1. How does EoC affect the sustainable development of family businesses in Croatia?

According to research data (Živković, 2012), the financial stability of the company in the EoC is based on the optimal ratio of cost allocation: 51% for the formation of new people and 49% for new projects economics of communion while maintaining low administration costs.

The companies in the EoC, which are evident from secondary research, operate very responsibly towards primary stakeholders (i.e., employees, customers, suppliers). In addition, a special attention is given to environmental protection as well as to family businesses with a new value based on the EoC principles. As a result, family businesses receive a dimension of trust and unity that makes sustainable systems that can exists for centuries if successfully overcomes the transfer of ownership to the next generation. Comparing data from secondary sources, we can conclude that the EoC through its model of corporate social responsibility and concern about the financial stability of the company positively affects the operation of family businesses on their way to achieve sustainable development in Croatia.

4.4. Research results for RQ2. How can family businesses be transformed into companies of EoC?

The findings related to RQ2 showed that the private daycare center "Sunbeam" Križevci, which operates in the EoC, is based on a culture of giving in which children learn from the first days in the daycare center and continue to live with this culture in the process of personal development. The values that are promoted in the education of children are in line with the foundations of the EoC. Children learn acceptance of diversity, the need for donations, a deeper understanding economy and the special approach to the nature.

Using secondary sources, we found that there is a link between family businesses and the EoC: certain emotional connection between family members, friends and community, a sense of security and support. However, elements such as the culture of giving and gratuitousness were not recognized in family businesses. Based on empirical evidence and findings from secondary sources, we can conclude that: gratuitousness and culture of giving are necessary in order to transform family businesses into the companies with the EoC principles with the aim of long-term survival and sustainable development.

5 CONCLUSION

The consumer society is taking uncontrollable desire for consumption of material goods as an expression of the dehumanization of human relationships and processes and further alienation of a man and society to which it belongs. Based on this problem, the purpose of this study was to investigate and provide a better understanding of the EoC as a new business model, and its impact on sustainable development of family businesses in Croatia. The basic objective of this study was to explore the new value of post-material management (e.g., culture of giving, gratuitousness, profit distribution, ecology and responsibility for future generations) and their impact on the sustainable development of family businesses. In order to achieve the objectives of this study, we have designed the two main research questions:

RQ1: How does EoC affect the sustainable development of family businesses in Croatia?

RQ2: How can family businesses be transformed into companies of EoC?

The findings of this research clearly indicated a path of how the EoC may contribute to sustainable development of family businesses. These findings were supported by the answers to the research questions that highlighted the following conclusions: (a) economics of community through its model of corporate social responsibility and concern about the financial stability of companies effects on the family businesses on their way to achieve a sustainable development in Croatia; (b) fundamental elements of the economy of communion - the gratuitousness and culture of charity - are needed in the family businesses in order to become companies in the economics of communion with the aim of long-term survival and sustainable development.

Potential limitations of this study stem from the relatively small scope of research subjects and the lack of literature which deals with the concept of the EoC. The research results can be a good stimulus to family businesses in Croatia to adopt the EoC model as a path of sustainable development in a time of global recession and business stagnation. Recommendations for further research are: to include a larger number of businesses in various business sectors and better explore the impact of gratuity to sustainable development.

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SOCIAL RESPONSIBILITY, SUSTAINABILITY AND MICRO-ENTERPRISES: CONTRIBUTIONS MADE BY A MICRO-ENTERPRISE

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ABSTRACT
This article presents the experience of a small environmental consultancy company when adopting the concept of Social Responsibility. The goal is to encourage other businesses to accept the challenge of overcoming social and environmental problems to build sustainable societies. We will show how companies, even small ones, can work with transparency, valuing employees and staff, improving its environment continually, bringing together partners and suppliers, protecting consumers, promoting its community, and committing to the common good. The company mentioned in this article achieved these purposes by building 'social bridges' among institutions of various fields and locations in the metropolitan region of Rio de Janeiro.Gênesis Environmental Education Centre is a consultancy firm whose mission is to educate about sustainability, through environmental education activities, aimed at various segments of society. It was created in 2005 and is located in Tenente Elias Magalhães street, 140, Colubandê, São Gonçalo, in an area of ecological interest due to the existence of threatened species, the Atlantic forest, streams and a spring. Gênesis Centre is always concerned about environmental issues and, since its implementation, it has conducted activities aimed at schools, businesses, and religious institutions. The main activities are training courses, workshops, development and implementation of projects, environmental education, and nature trails. The Centre promotes education for sustainability through the concept of Social Responsibility, applied as a guiding principle for all activities and networks. The company follows guidelines organized by Ethos Institute regarding Social Responsibility.

Keywords: companies, social responsibility, sustainability

1 INTRODUCTION
This article was developed based on partial results of a research that has been carried out in the metropolitan region of Rio de Janeiro (RMRJ) since 2010. We aim to investigate how Brazil has faced the challenges of overcoming unsustainable urban spaces and building sustainable cities. Results showed that Brazil has adopted strategies that include the elaboration of documents, and planning of actions to be performed by participants, such as universities, companies, and NGOs. This article presents the experience of a micro-enterprise in the field of environmental consultancy. We emphasize the adoption of the Social Responsibility concept in partnership with several institutions, particularly Universidade Federal Fluminense (UFF). Our purpose is to show that even small companies can adopt values and work with transparency. Any enterprise should value employees, improve its work environment, invest in networking, protect costumers, help community, and commit to the common good. We aim to motivate other small companies to participate in the challenge of overcoming socio environmental problems and building sustainable societies. To achieve this goal, we will not only explain the process, but also present contributions made by the university so that new companies can feel interested in participating, via university extension.

According to Correa (2013) 'extension' is defined as an educational, cultural and scientific process that brings together teaching and research inseparably, enabling a transforming relationship between university and society. Extension in public universities is systematized in the following thematic areas: Communication, Culture, Human Rights and Justice, Education, Environment, Health, Technology and Production, and Work.

Each thematic area is developed following defined programmatic lines where interdisciplinarity is stimulated, which foresees the existence of thematic interfaces and interactions. Special emphasis is given to the participation of university sectors of extension in the preparation and promoting of public policies. These policies aim to assist the population, improve education and public services, and open up new processes of production, innovation and knowledge transfer. Thus, access to knowledge is facilitated, contributing to the technological and social development of the country.

Universidade Federal Fluminense is located in Niterói, Rio de Janeiro. Like most of Brazilian universities, UFF kept apart from social issues. This situation started changing in the '90s, when teachers began to approach the community by developing activities in the area of education and health. In 1999, the National Plan of Extension (PNE) was signed, promoting these activities. Currently, they are performed in several places, following the guides established by PNE:

Impact and transformation: Establishment of a relationship between universities and other sectors of society aiming at transforming performance. This performance should focus on the interests and needs of the majority of the population. It should also create public and regional development policies.

Dialogic Interaction: Establishment of a dialogue between universities and social sectors enabling two-way actions, and exchange of knowledge. Thus, the speech of academic hegemony can be overcome, enabling partnerships with social movements to surmount inequalities and exclusion.

Interdisciplinarity: Interaction of models, complementary concepts, analytical material and methodologies, seeking theoretical and operational consistency. It aims to structure the performance of participants in the social process and enable the interaction among organizations, professionals, and people.

Education - Research - Extension: Every action related to extension must be linked to the education process and the production of knowledge. Students must assume their role as main agents in their technical training, not only to learn required skills, but also to become conscious professionals and citizens. Thus, they recognize themselves as responsible for their rights and responsibilities, adopting a transforming view towards society.

These guidelines helped universities assume their institutional role in the solving of problems in partnership with other sectors of society. Universities approached members of health, transportation, and housing forums; groups representing gender, ethnicity, and environmental issues; and campaigns for underprivileged groups, such children, adolescents, and the elderly. It is worth mentioning that universities showed their commitment during a remarkable moment in the Brazilian scenario: the increase of peripheral areas in the urban centres, due to the growing poor population in the cities and big metropolises. Of a population of nearly 33

million poor, 35% were in cities and 41% in metropolises. Currently, Brazilian cities have gone through transformations caused by the inclusion of Rio de Janeiro, São Paulo, and Brasília in the context of global cities. This insertion creates new urban territoriality, frequently deepening spatial segregation. (Santos, 2005).

2 SOCIAL RESPONSIBILITY

During the 1980s, Brazilian companies began to recognize the importance of adopting practices of Social Responsibility. This recognition was enabled by the approach between private sectors and social movements. The sociologist Herbert de Souza, known as Betinho, launched the national campaign Citizens' Action against Hunger, Poverty and for Life, counting on the institution Pensamento Nacional das Bases Empresariais (PNBE) as a supporter [PNBE is a non-corporative business entity that fights for the interests of the population]. In the 1990s, non-governmental organizations help to consolidate practices of Social Responsibility. Among these organizations, IBASE stands out for the dissemination of the social accounting process and the creation of ETHOS Institute.

Social Responsibility is the obligation a company has to participate in the process of overcoming socio-environmental problems through actions, as Chiavenato says:

"Social Responsibility is the level of obligations an organization has to take actions to protect and improve the well-being of society as it seeks to achieve its own interests". (Chiavenato, 2004, p. 119)

Social Responsibility can be one of the paths to be followed to promote sustainability. Currently, several companies have adopted the concept. In this process, six stages are identified according Garcia (2006).

STAGE 1: The organization does not assume responsibilities towards society and does not take actions to favour responsible citizenship. There is no promotion of ethical behaviour.

STAGE 2: The organization presents some isolated actions to minimize problems, recognizing the impacts caused by its products, processes and facilities. Occasionally, it promotes ethical behaviour.

STAGE 3: The organization begins to elaborate processes to assess the impacts of its products, process, and facilities. It also demonstrates some leadership dealing with important issues to the community. People get involved in efforts for social development.

STAGE 4: The process of assessing the impacts of products, processes and facilities is in phase of systematization. The organization demonstrates leadership in important issues to the community in various ways. Frequently, people get involved in efforts for social development. The organization promotes ethical development.

STAGE 5: The process of assessing the impact of products, processes and facilities is systematized, enabling the prediction of public problems. The organization leads issues of interest to the community and the industry. The company systematically motivates people to get involved in efforts for social development. There are implemented methods to evaluate and improve the performance of the organization in the exercise of responsible citizenship, and in the treatment of its public responsibilities.

Large companies are at this last stage. They conduct projects in the communities where they are located. These companies focus on themes related to the needs of the community and its routine, like the training of workforce and the fight against violence, through projects to create jobs and income. Small companies are at stage 1 and 2.

2.1. Micro-enterprises and Social Responsibility: Gênesis Centre

According to Sebrae-SP, there are 5.1 million companies in Brazil. Of this total, 98% are micro and small businesses (MPEs). Small businesses (formal and informal) account for more than two-thirds of industry occupations. These firms are fundamental in promoting economic growth, generating jobs and income, and improving quality of life. Their contributions are acknowledged mainly because of the the exposition enabled by this type of business, and the employment of workforce, including those who has difficulties to participate in the labour market, like young people seeking their first job and people over 40. Small companies give dynamism to the economy of cities and neighbourhoods. Recent data from IBGE inform that MPEs represent 20% of the Brazilian GDP. Additionally, they are responsible for 60% of 94 millions of jobs in the country, and represent 99% of 6 millions of formal business in Brazil.

The participation of MPEs in the total of profitable business in Brazil has increased. While businesses, regardless their size, had an annual total of 4% growth, small firms grew 6.2%, and micro ones 3,8%, between 2000 and 2008. In the same period, MPEs were responsible for nearly half of the total of formal jobs generated, that is, 4.5 million jobs.

The concept of Social Responsibility has been adopted on a slow path, because companies lack resources to be employed in activities that are not directly related to its business processes. Additionally, most of the time these companies do not present enough knowledge in management to improve results. FIRJAN and ETHOS Institute elaborated a step-by-step plan to motivate micro and small firms to adopt the concept. Gênesis Centre used this guide for its activities. This centre works as a consultancy company whose mission is to offer programmes and projects to its customers. The aim is to promote education for sustainability, thus contributing to create autonomous and critical individuals with ethical values.

It also helps to create participative, transparent and fair institutions; to involve communities in collective interests towards tolerance and equity; to encourage environmental practices that preserve biodiversity and develop ecological processes to sustain life. Gênesis Centre has a sustainability council, formed by masters and PhDs from Brazil and abroad responsible for building a sustainability policy.

It was created in 2005 and is located in Tenente Elias Magalhães street, 140, Colubandê, São Gonçalo (a city from the metropolitan region of Rio de Janeiro). The territory of São Gonçalo has 248, 72 km, thus corresponding to 4.4% of the metropolitan region. According to statistics from the 2000 census, the city has approximately 1 million inhabitants with a population density of 3.577,9 people per Km. The main access is by BR 101 and RJ 104, which faces the city of Niterói, to the south, and Itaboraí, to the north. São Gonçalo has 90 neighborhoods distributed in 5 districts: São Gonçalo, Ipiiba, Monjolos, Neves and Sete Pontes.
The neighbourhood of Colubandê has about 95,000 inhabitants and is located in the headquarter district of São Gonçalo. It presents 3 different areas:

Central Area - The most valued area where most services, companies, and markets are located.

Historic Area - It is located along RJ 104 highway, and is considered historic because the neighbourhood derived from it. An important milestone in this place is Colubandê Farm, where the Forestal Battalion is currently located.

Intermediate Area - between the end of Salvatori (Makro and CCPl) and the borders of Rocha neighbourhood. This area is integrated by Água Mineral sub-neighbourhood, formed by several lots demarcated in the '50s and '60s. This area had a relevant importance in São Gonçalo from 1940 to 1960 because of a company of mineral water. The closure of the factory caused a significant decline in the area. The situation worsened in the following years due to violence, especially coming from 'extermination groups'. Even nowadays, the whole area suffers the stigma of being a violent local.

Genesis Centre is located in this area and develops projects to assist schools, companies, and religious institutions. The principal activities are training courses, workshops, environmental education, and environmental trails. The company has four employees, three of them live in the community. Like most of the locals, they quit school early and entered the labour market. However, all of them are encouraged to return to school, and take training courses to become qualified professionals.

Since its beginning, Gênesis Centre has socio-environmental issues as one of its main concerns. The focus is on Social Responsibility, because it promotes education for sustainability. Very early directors noticed that it would be very important to employ this concept in all activities and networks. For this reason, the strategy of Social Bridges[1] was adopted. The partnership with UFF was established through the integrated program of research and extension Underprivileged Urban Childhoods, Environmental Education and Sustainability, and through the research group HIDROUFF.

The company follows guidelines organized by Ethos Institute: Adoption of values; work with transparency; valuing employees and collaborators; continual improvement of the environment; involvement of partners and suppliers; protection of customers and consumers; promoting the community; and commitment to the common good. Of these items, only the protection of customers has not been dealt yet.

Gênesis' mission requires commitment to socio-environmental issues regarding the community, the city, the region, and the planet. It also aims at the building of sustainability. We follow an expanded and progressive conception of sustainability. The first concept considers sustainability a pragmatical process of sustainable development. The second introduces new dimensions that provide an understanding that goes beyond economic and environmental issues. Thus, sustainability can be thought according to specificities of each country or region. In Brazil, this last concept helps us think about sustainability from an ethnic and racial point of view, considering inequalities experienced by the afro-descendant population. We work with the following main dimensions:

Environmental Sustainability: It refers to the capacity of the environment to absorb aggressions caused by human actions, or recover from them. It also seeks a balance between emission rates and/or production of residues, and absorption rates and/or regeneration of natural resources.

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[1] It is the union between companies aiming to seek solutions for social demands.

Ecological Sustainability: It refers to the physical base of the growth process and aims at the preservation and the conscious use of supplies of natural resources.

Cultural Sustainability - It is the need to support cultural diversity and practices existing in different regions of the world. These practices build the identity of nations.

Social Sustainability - It aims to improve quality of life, reduce social exclusion rates, through public policies related to redistributive justice.

Political Sustainability - It refers to the building of full responsible citizenship for individuals through the strengthening of democratic devices to formulate and implement public policies on a global scale. It also refers to government and governance on a local, national, and global scale.
Institutional Sustainability - It aims to design and strengthen engineering courses that take into account criteria related to sustainability.

3 GÊNESIS CENTRE AND THE UNIVERSITY
Genesis Centre participates in extension activities of the programme Underprivileged Urban Childhoods, Environmental Education and Sustainability, and also of the research group HIDROUFF, line of research Environment, Sustainability and Social Responsibility.

Prior to the implementation of Gênesis Environmental Education Centre, Colubandê neighbourhood was degraded due to sand and wood extraction, to produce coal, and frequent forest fire. There was also hunting for small animals and felling of trees for construction. Due to degradation, many plant species died out and a fountain virtually dried up. The main environmental problems of Colubandê are social curtailment of children and adolescents, pollution caused by garbage, and destruction of biodiversity.

The social curtailment of children.

It refers to limitations on the formation of children's human capital. This concept is used in Economics to refer to a stock of skills that begins to be built in childhood and adolescence. Each individual will accumulate the amount of skills equivalent to his/ her inborn talents, private and public resources. (Barros and Mendonca, 1995)

The authors suggest three situations in which the accumulation can occur: existence of private and public resources, existence of public resources, and inexistence of public and private resources.

Segregated spaces, like Colubandê, belong to the third group: their population cannot afford educational and cultural services. To make things worse, government do not provide these services in a satisfying way, either in quantity or in quality. Schools are examples of inefficient service offered by governments. In many cases, constructions are precarious: small rooms, low ceilings, bathrooms in bad conditions, and ugly architecture.

Although some segregated neighbourhoods are near places that offer various services, their residents do not have access to them. It happens because residents from segregated neighbourhoods are not aware of the existence of these services, or are denied access to them.

There are some concrete impediments: lack of sufficient resources to commute to other places, lack of company, or symbolic reasons.

The insufficient provision of educational and cultural services compromise children's human capital. This capital could offer qualified work force in the future, and could also offer the young better salaries. Instead, these teenagers will probably get low paid jobs that require poor qualification. Thus, they will be fated to stay at the same social and physical environment they were raised, as Bordieu confirms (1997):

"... those who do not have a good financial condition [and do not receive investments] are kept apart, physically or symbolically, from rare social wealth and condemned to live with undesirable, and less rare, wealth and people. The lack of investment intensifies the experience of finitude: it attaches the individual in one place". (Bordieu, 1997, p. 26)

We noticed that a precarious environment can cause a feeling of indignity, which is expressed through violence, making the individual lose opportunities in the place he/she lives, mainly at school. That is why we develop activities to improve self-esteem and to fight the social curtailment of children. The media is frequently reporting violent acts commited by children and adolescents from Colubandê at home, in the community, at school, and parties. That is the only situation in which these individuals are given prominence. Our strategy was to give them visibility because of positive attitudes, exposing materials produced by these children and teenagers: texts containing protest messages organized in small books and posters. These books were published and have been used as teaching material in schools. Some texts were translated into French and presented at a panel discussion about urban childhoods in Brazil and in France, at Aliança Francesa (a French course in Niterói), as part of celebrations of the International Year of France in Brazil. Additionally, these children and adolescents participated in a video-clip that has been broadcast in several countries including Germany, which is using it at schools.

Environmental Pollution caused by garbage.

Although there is regular garbage collection, part of the population through garbage in derelict lands, and into the river that crosses the neighbourhood. Thus, garbage is always present in the landscape of Colubandê. The river, once used for leisure, is now polluted with plastic bottles and sewage. When there is heavy rain, the river overflows its banks and goes into nearby houses. Lands that could be used as sport courts or even squares are full of garbage, disseminating diseases and degrading the landscape. The campaign E se não tivesse Lixo? (If no garbage existed?) was created to face this situation. The initiative counted on the participation of children from 3 schools of the neighbourhood and was conducted with lectures, groups of discussion, production and distribution of materials. As a result, the amount of garbage had a significant reduction in the neighbourhood and schools.

Destruction of biodiversity.

Colubandê presents a framework of degradation due to the extraction of sand and wood, for coal production, and frequent forest fire. There was also hunting for small animals and felling of trees for construction. Most of the population, especially the young, participated in the process of degradation, because they were unaware of the ecological, environmental, and

historic importance of the area. Due to degradation, many plant species died out and the fountain virtually dried up.

With the implementation of Gênesis Centre, however, this situation changed, and there is no more hunting either sand extraction. Only forest fires remain, because many of them are caused by hot-air balloons. A campaign was organized in 2010 to encourage children to plant trees, using seedlings and seeds distributed by Gênesis Centre.

Besides these actions, many others have been developed. This is only possible through the establishment of partnerships, as showned in the following table.

Table 1: Summary table of activities

GUIDELINE	ACTIONS AND PARTNERS
Adoption of values and transparency	Choice of mission aligned with sustainability
Valuing employees	Encouraging the return to school Opportunity for training in the environmental area
Actions in favour of the environment	**Campaigns about garbage** Universidade Federal Fluminense Faculdade Batista of Rio de Janeiro
	Campaign about water Universidade Federal Fluminense Faculdade Batista of Rio de Janeiro
	Campaign to encourage the planting of trees in the community Universidade Federal Fluminense Faculdade Batista of Rio de Janeiro Evangelical institutions
	Distribution of seedlings and seeds for the metropolitan region of Rio de Janeiro Makro supermaket chain Municipal plant nursery
Promoting the community	**Projects for children** Universidade Federal Fluminense

4 CONCLUSIONS

Results achieved by these activities show that micro-enterprises can develop activities aligned with Social Responsibility concepts, contributing to the building of sustainability. The lack of technical staff and financial resources can be supplied with partnerships with companies of various areas. Each one of them can contribute providing dissemination channels, financial resources, qualified personnel, and information on the topics to be treated. Like Gênesis Centre, other small companies can establish partnerships with universities to empower their actions. Research shows that many small and micro-enterprises are located in suburban neighbourhoods of large cities, places that present a series of problems regarding socio-environmental issues. The social curtailment of children and adolescents is one of the most urgent problems to be tackled. Activities like projects and courses can help children to overcome vulnerabilities and become propagators of sustainability.

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Entrepreneurship Cought Between Creativity and Bureaucracy

SIGNIFICANCE OF ENTREPRENEURS NEGOTIATION AND COMMUNICATION SKILLS

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ABSTRACT:

In the modern business many companies seek a competitive advantage exactly through good negotiating skills which calls for the possession of excellent communication skills. Negotiation skill is a prerequisite for the development of entrepreneurship and conflict resolution between the two negotiating parties with the aim of creating long-term business partnerships. This paper highlights the fundamental hypothesis of the importance of the development of entrepreneur communication skills in the negotiation process as a key competence in the development of entrepreneurship. Entrepreneurs are generally positively focused on the development of their entrepreneurial careers but their knowledge and acquiring of practical skills needed for starting and running a business is mediocre, while initiatives aimed towards gaining required competencies are insufficient. The purpose of this paper is to raise awareness between entrepreneurs of the importance that knowledge of negotiating tactics has for those who steer business processes as well as for the implementation of common principles of communication, acceptance and cooperation in the business environment.

Keywords: communication, entrepreneur, negotiation

1 INTRODUCTION

Entrepreneurship is considered to be one of the key lifelong learning competences. It is the basis for the acquisition of specific skills and knowledge needed for entrepreneurs to start economic activity. Systematic study of entrepreneurship is considered a fundamental prerequisite for the development and growth of the overall economy. SME entrepreneurs act as drivers of innovation and employment on a market as a whole. Their basic characteristics are related to communication skills, proactivity, creativity, risk-taking, responsibility, flexibility with limited resources. This implies an understanding of the business environment in terms of identifying opportunities, based on merit, skills, knowledge necessary for entrepreneurs to establish and maintain business activities. With rapid changes in the market, entrepreneurs have encountered the challenges of survival or rapid growth and the need to develop communication is increasingly emphasized, primarily in the negotiating process. If we consider that entrepreneurship is a rational set of attitudes, skills and knowledge needed to realize certain business activities, the employees who have mastered communication and negotiating skills actively manage the project including capacity planning, organization, management, leadership, delegation, analyzing as well as the possibilities of team and individual operation.

2 IMPORTANCE OF COMMUNICATION IN NEGOTIATING

Communication can be defined as the process of conveying information and meaning between the sender and the recipient using one or more written, oral or visual electronic channels. The essence of communication is sharing - providing data and information. (Courtland and Thill, 2012, p. 4). Communication, besides it being the transmission of messages, can also represent influencing the other person or oneself, where what is important is the content of communication and its effects in achieving life goals (Leinert-Novosel, 2012, p. 15). Negotiations stating conflicting or different attitudes in order to realign and find what is in the common interest (Anić et al, 2004, p. 219). Negotiation can be defined as the process of social

interaction and communication between people with the aim of reaching a lasting agreement based on some common interests, all in order to achieve the set targets and avoid conflicts (Rouse and Rouse, 2005, p. 191). Furthermore, negotiation is the process of combining different viewpoints into a single, joint decision (Bendahmane and McDonald, 1984, p. 51).

Communication processes, nonverbal and verbal, are primary for resolving conflicts and achieving goals of the negotiation. Sender encodes the message that he channels to the recipient. The recipient decodes the message which gives it meaning and corresponds to the sender. With feedback, the sender receives insight that the recipient has understood the message. The wider is common experiential field of negotiators, the more successful communication will get. The width of the common experiential field increases with better knowledge of the other side and understanding of timely information.

An important component of the negotiation meeting is communication that allows a better understanding of the strategy and needs of the other side and creates space for the exchange of views and finding creative and mutually acceptable solutions. Often the most important element of the communication process is active listening and correct interpretation of what is being said, as well as observation of non-verbal signals and asking questions that help in understanding the emotional state of the persons with whom we converse. Communication can be improved by replacing the role that enables negotiators to better understand the position of the other side so as to actively advocate until the other party is convinced that the position has been properly understood. Changing roles can cause cognitive and changes in attitudes and achieve a better result in negotiations.

By their nature negotiators exchange information for the purpose of making better decisions and generating new business opportunities in an uncertain environment . They also achieve competitive advantage thanks to the negotiating skill which results in long-term business partnership and customer loyalty. By practicing the stated art entrepreneurs learn on daily basis from their own and immediate experience which acts as a powerful motivating factor. Thus they themselves identify problems, perceive opportunities, set new goals and evaluate the effects of their decisions. That encourages lateral critical thinking which is characteristic of entrepreneurial behavior.

The negotiator cannot check every fact and therefore must accept some of the information which it has, otherwise negotiation would not be possible. The other side in the negotiating process values credibility and persuasiveness of the negotiator. Their credibility depends primarily on their presentation, qualifications, and perceived reliability. There are several factors that affect the credibility and those can be controlled: reputation, belief in the first impression, the intention of persuasion, emphasizing or mitigating differences in status, appearance, associates, perceived competence, and perseverance. Characteristics of successful negotiator are also essential traits of an entrepreneur.

For entrepreneurs, communication and negotiation skills become immaterial resource only when their potential value is perceived by the human mind as a must for gaining competitive advantage in the marketplace.

The company can achieve outstanding results with good negotiating skills of its employees. For this reason, negotiation is considered one of the required skills that employers increasingly require from employees. Therefore, it is necessary to create a significant number

of business people who dispose with negotiating skills at higher levels of operability. Unlike the average ones, successful negotiators carefully plan the negotiating process and meetings with the other party. During the planning they are considering several options, and pay special attention to areas where requirements of both sides match.

3 NEGOTIATION AS A BUSINESS PROCESS

Negotiation is a central part of the trilogy that every entrepreneur practices on daily basis. Presentation, negotiation and sales are the activities with which entrepreneurs meet daily at work, at a meeting with business partners and friends. Oftentimes entrepreneurs enter into negotiations without preparation and that results in uncontrolled business situations. It should be noted that people who reach favorable results of the negotiations are the ones who posses knowledge, skills and personal qualities to negotiate, who have a plan of negotiations and who take up a negotiating position. On the other hand, unprepared negotiators generally achieve lower quality of negotiations.

Negotiations can be considered successful when both parties are satisfied with the outcome of the negotiation. To achieve this it is necessary to prepare a strategy which clearly separates targets to be achieved. Negotiation is the art of adaptation. Entrepreneurs often have biases related to gender, race, nationality, assets that may limit the possibilities of communication with the parties, and thus the process of negotiation. Therefore, it is necessary to encourage flexibility, which is crucial for negotiators and find a way to discard prejudices which can come out during negotiations as wrong.

For the negotiating parties, negotiating is oftentimes a lengthy process. Therefore, it is important to relate towards the other negotiating side with respect. Such an attitude from the start of negotiations helps to create a positive mood with all parties involved. Typically through negotiation a company can effectively influence the long-term benefits that are reflected in financial terms, but also through high-quality, long-term, partnership relation. Most business owners negotiate in order to be in the most favorable position compared to the competition.
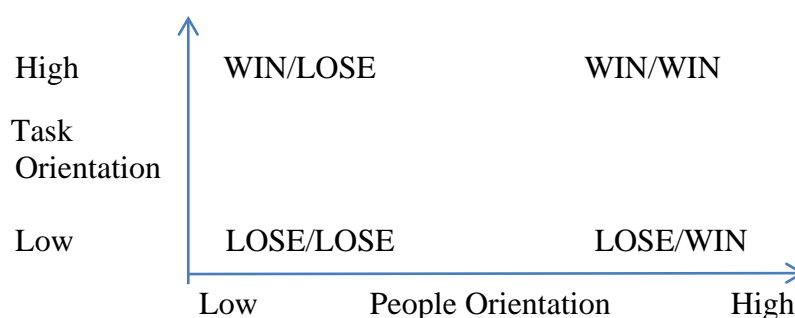

Figure 1. Possible outcomes of negotiations (Dew, 2008, p. 60)

Figure 1. Possible outcomes of negotiations (Dew, 2008, p. 60) shows the possible outcomes of negotiation:
- **win/lose** situation with a strong focus on the task and goal, and little focus on mutual agreement with the other side,

- **lose/lose** situation with a weak focus on the task and the desires and goals of the other side so both sides lose,
- **win/win** situation with both parties focused on their tasks and goals, but also respect the objectives of the other and jointly find a valid solution,
- **lose/win** situation in which a party gives a lot of attention to the objectives of the other side, but loses focus on its own tasks and goals.

Edward de Bono states in his work - *Tactics - The Art and Success* how tactics adapt to the strategy and set target. Knowledge of tactical methods can encourage creativity, innovation and speed of finding tactical solutions in the negotiation process. If the entrepreneur is a participant in negotiations in different business situations, he will be more inclined to mastering the many tactical methods which will result in the improvement of its operational activities in practical situations.

Successful negotiator knows how to shape the influential message and is skillful in knowing how to receive the message sent by the other party. Vaccination against arguments the other hand can be achieved in three ways:
(1) Prepare arguments only in favor of your position, (2) come up with arguments only against your position, and then come up with counter-arguments, i.e. to consider how you can refute these arguments, (3) devise arguments in favor of your position and against your position, and then come up with counter-arguments that can refute the one and the other. (Lewicki, Saunders and Barry, 2009, p. 230)

In companies negotiating is increasingly becoming an unpredictable process which seeks to achieve business or closely related organizational interests. Negotiation as a special skill can no longer be delegated to a handful of experienced professionals. The all more significant strategic emphasis on managing relationships primarily with suppliers, integrated approach to marketing and sales and with the reliance on external growth through acquisitions and strategic alliances, has made the negotiation significantly more influential in achieving overall business success.

In strategic partnerships negotiations lay the foundations for the future, thus the more important the business is the more far-reaching outcome of the negotiations are. The future and prosperity of businesses often depends on the outcome of negotiations. Entrepreneurs who want a quick and successful economic development, in addition to the acquired professional knowledge and skills, necessarily have to master the art of negotiation. With such approach using different techniques, one strives to achieve the maximum possible added value of each business activity.

4 CONSLUSION

Today's business brings new challenges that every entrepreneur needs to adequately react to by raising awareness of the importance of communication and negotiation skills. In the business world the art of negotiation is an important prerequisite for the successful achievement of business goals. These skills are still insufficiently recognized by entrepreneurs as the main backbone of purchase and sale activities. In addition to awareness about the importance of business negotiation to economic growth, it is necessary to develop different types of educational programs. Negotiation is a skill like any other – it gets adopted by learning and one eventually becomes more successful at it. The task of the entrepreneur in negotiations is sometimes to put together what cannot be put together, find a common interest, even when it seems nowhere in sight. For a successful entrepreneur, mastering

communication and negotiation skills is a prerequisite for achieving good business results and maximizing competitive advantages.

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THE ROLE OF SMES IN THE EUROPEAN INITIATIVE: EUROPE 2020 - THE EUROPE OF INNOVATION

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ABSTRACT
Innovation is a way of thinking and a culture that can be nurtured and has a number of scales of implementation. At company level it's easily driven if the management has the will and sees the benefits. High tech companies both small and large are more likely to have this type of culture because of the people they employ and the fact they are always thinking to solve technical problems. Many continuous improvement management systems/techniques also involve getting the primary through to tertiary work groups to think of better and innovative methods of working or developing new techniques and technologies. How you get this to work at country or european level could only by a multi layered approach. Encouragement of small r & big D using SME(<= 5 employees - more than 60% of the companies in EU) tax credits as most countries already do is a prerequisite however restrictive tax law constraints allowing payments only to universities and research associations are counter productive.
SME are commercial enterprises with ultimate objective of being profitable. R&D, which precedes any innovation, usually requires investment and a guarantee on returns. Thus, a typical SME, especially nowadays, would suffer from lack of spare cash and wouldn't be willing to borrow, for any financial liabilities are detrimental. The guarantee on returns is perceived as a gamble, and thereby introduced uncertainty can be unacceptable for a small certainty and stability seeking company.
Regarding SME's to innovation, it is important to take into discussion the regional inovation, as well as part of regional economic & political structure and tax policies.

Keywords: *innovation, KET's , regional innovation, SME.*

1 INTRODUCTION

Innovation is the ability to convert ideas into value for your company, customers and shareholders. Successful innovation is not a one time deal, but a process that delivers sustained, long term profitability. Any company can develop one or two innovations over the course of time, but having a focused vision will deliver **sustainable innovation** – producing profitable results for your company time and time again.

Implementing innovation depends on a disciplined strategy customized to the needs, size and culture of an organization. First determine what type of innovation you hope to achieve with your organization. Innovation can be incremental, which features a new process or way of doing business, or it can be transformative, which debuts an entirely new way to deliver value. Transformative innovations are few and far in between. These true game changers open up new businesses and markets. Organizations tend to use 80% of their resources on incremental enhancements, according to a 2003 study by the London School of Business. However, be warned that companies that focus entirely on incremental innovations have difficulty keeping up with new competitors that enter the field.

Creativity in the form of fresh ideas, whether from executives, salespeople or customers, is an invaluable resource to any organization. But these ideas need guidance and structure in order to achieve the key goal of Innovation: profitable growth. To successfully channel ideas into a profitable result, it is necessary to establish a formalized New Product Development (NPD) Process, from concept to launch.

Management literature has placed a lot of attention to the issue of innovation in SMEs, which have contributed extensively to cornerstone innovations of our time. In an interesting study conducted by Barbara Scozzi and Claudio Garavelli of Bari Polytechnic and Kevin Crowston, of Syracuse University, we see how SMEs have -among other diverse factors- some size related advantages. Many are flexible and have strong relationships with customers, enabling rapid response to technical and market shifts. Small firms can have good internal communications and many have a dynamic and entrepreneurial management style (Rothwell, 1994). Some studies suggest that the average capability of technical people is higher in small firms and that innovations in these firms can be less expensive (Cooper, 1964). In summary, innovation in small firms can be (more) efficient and effective (Vossen, 1998).

On the other hand, Scozzi and her colleagues continue, "many SMEs are not innovative at all. Researchers have stressed the differences between a limited number of very innovative small firms and a large number of non-innovative firms" (Acs and Yeung, 1999; Hadjimanolis and Dickson, 2000).

Many obstacles to innovation in SMEs are also stressed in the abundant innovation literature written on the issue of SMEs. The lack of financial resources, inadequacy of management and marketing, lack of skilled workers, weakness in external information and linkages, and difficulty in coping with government regulations, to name a few, are all factors that limit their competitiveness (Buijs, 1987; Freel, 2000; Rothwell, 1994). SMEs may be unable to exploit new products because of the limited organizational and marketing capabilities.

In the majority of SME's (<= 5 employees - more than 60% of the companies in EU) is that most of the owners think that "he/she knows everything" about the area his/her business and approximates innovation (if they do) mainly empirically. Thus decisions about investing on innovation are too vague (most of the times negative).

Innovation can be seen at SME's and is depends on individuals who thinks out of box., The term Innovation often relates to the ideas/products which are been developed in big companies. SME's has a power of Innovating Disruptive Technologies which big companies doesn't.

What about the regional aspect of innovation ? We think it is a crucial parameter for involving SME's to innovation.

We think (talking about the perception of innovation) we shouldn't forget other "intangible" variables (is it possible to quantify them ? - We don't know yet), such as regional economic & political structure, tax policies, mentality, religion and cultural aspects. How can we integrate these issues into a common European policy towards innovation? (it is one of the policies that has been left for EU in comparison with rest of the world e.g. China). It is not a simple question to be answered, even if we are talking about a conglomeration of regional SME's (primary, secondary or tertiary sector). We agree that there are bright examples of some

SME's which had applied innovative procedures and produce accordingly such "products". But is it enough ? We don't know.

2 HORIZON 2020 – "FAST TRACK TO INNOVATION"

One of the subjects of negotiation in the Trilogue on Horizon 2020 is a proposal for a "Fast Track to Innovation". This was not in the original Commission proposal for H2020, but is an idea from the Parliament. It would be a new instrument, and rather different from the rest of H2020.

Commissioner Marie Geoghegan-Quinn has said since the beginning that H2020 will be an innovation programme. But much of what we hear from the Commission in preparation for H2020 is about science and research. It all sounds rather like FP7. A Fast Track to Innovation (FTI), even though details are still lacking, would put the focus squarely on innovation: closer-to-market activities and much faster implementation than for the mainstream instruments.

The basic argument for FTI is that the FP programming cycle is painfully slow: themes have to be identified, then put into annual work programmes, then published in calls for proposals, then proposals have to be written, then evaluated and selected, then grants have to be negotiated ... this can take two years or more. That may be all right for much scientific research, but not for innovations that need to get to market fast in order to win the innovation race with international competitors.

What should be the scope of FTI? In principle, the whole innovation chain - from proof of concept of innovative ideas through to first market applications. FTI should give support to help innovators beat bottlenecks at any point in the innovation chain. The main focus would probably be demonstration and commercial uptake activities.

Should FTI work bottom-up or top-down? In principle, it should work bottom-up so as to be open to all innovations. In practice, some sort of focus will probably be necessary so as to avoid too many applications in relation to the budget ("over-subscription"). But the focus should not be too prescriptive. FTI could be operated in all areas of societal challenges and LEITs, but preferably by a single management unit so as to ensure consistent implementation.

Calls should be permanently open, with three or four cut-off dates per year. Evaluation should emphasise potential impact rather than scientific excellence (it's about innovation, not science). Total time to grant should be short, say 4 months.

What about the characteristics of projects? Probably on the small side, say €250k-€500k. Apply the general H2020 rules in order to keep things simple, e.g. minimum of three participants from three countries.

Would FTI duplicate other H2020 schemes? Perhaps, to a small extent, but that is always hard to avoid. Would it duplicate the new SME instrument? Perhaps, in some cases, but it would also be open to SMEs outside of the EU's restrictive SME definition as well as to innovation projects led by research performers (e.g. spin-offs). Would it duplicate the proposed "Innovation Actions"? Perhaps, although we still know very little about what the Commission intends here, and one has the feeling that they will be larger-scale, top-down projects.

What budget? There is always a good case for beginning a novel scheme as a pilot scheme, in order to road-test it. But pilot schemes need to be of realistic size, i.e. the budget should be large enough to fund a significant number of projects, and the scheme should run over several years so as to be able to monitor actual results. FTI could start with a relatively small budget but then get a top up if it works well (e.g. after the H2020 mid-term review).

Is it practically feasible? Why not? There are some similar national programmes that appear to work well (e.g. in Finland and Germany). And there is useful experience in recent Commission schemes, e.g. DG Connect's FET-Open, DG RTD's Aeronautics-Level 0, DG Enterprise and Industry's Eco-Innovation Programme. H2020 says it's an innovation programme. It needs innovation instruments. FTI should be given a try.

The Europe 2020 strategy clearly signalled the importance of industrial competitiveness for growth and jobs as well as for Europe's ability to address grand societal challenges in the coming years.

3 KEY ENABLING TECHNOLOGIES AND SME'S

Mastering and deploying Key Enabling Technologies (KETs) in the European Union is central to strengthening Europe's capacity for industrial innovation and the development of new products and services needed to deliver smart, sustainable and inclusive European growth.

Whilst European R&D is generally strong in new KET technologies, the High Level Group - HLG has observed that the transition from ideas arrising from basinc research to competitive KETs production is the weakest link in European KET enabled value chains. This is demonstrable evidence of the impact to-date of the absence of a major focus on enabling innovation in the EU and an over-emphasis on basic research both within EU research programmes and in some Member States.

This situation, namely the gap between basic knowledge generation and the subsequent commercialisation of this knowledge in marketable products, has been commonly identifi ed across the KETs and is known in broad terms as the "valley of death" issue. Its eff ects can include not only relocation of manufacturing and R&D, but also the disruption of entire value chains with their ultimate consequences on the sustainability of various strategic sectors in Europe. The "valley of death" is due to many factors including the absence of smart regulation, the unavailability of pre-commercial R&D support, insuffi cient access to large scale fi nance, and lack of political support and pro-active KET policies.

This "Valley of Death" has been identifi ed in many competitor countries, including the USA, China and Taiwan. All have established coordinated programmes in strategically important areas that cover the full innovation chain addressing basic and applied research, demonstrators, standardization measures, deployment and market access, all at the same time and, signifi cantly, in a logical joined-up manner. Deployment is aided by targeted instruments addressing all technology readiness levels of competing technology approaches, from basic science through proofof-concept and prototypes, to large-scale demonstration actions and public procurements. Developing new policy issues and fi nancial instruments to support KETs will be meaningless if the identifi ed critical "valley of death" problem cannot be solved. The KET sectorial analysis highlighted three specifi cities of KETs within an European context. Firstly, KETs, in general, are only diff erentiated by their degree of

maturity. Secondly, KETs are ubiquitous in both new and traditional products. Thirdly, there is a signifi cant interdependency of KETs in the development of advanced products. All these facts underline the need for the European Commission to stimulate and develop an integrated KET approach covering the spectrum of all six KETs. The analysis also clearly showed that it is the same key stages that determine the development of all KETs. An integrated approach to KETs is therefore perfectly possible and enables common solutions and actions, each of which can then achieve a more signifi cant critical mass, eff ectiveness, visibility and impact. It is primarily the degree of maturity along the development process of each KET, which diff erentiates each of them. This degree of maturity depends mainly on their order in the history of emergence of technologies, with two extremities, that of microelectronics which emerged in the 1950's and nanotechnology which emerged in the 1980's, which represent the most and least mature respectively of the six KETs currently considered. The knowledge acquired throughout the maturation process of a KET enables innovation ecosystems and industries to accelerate the development of new KETs. An integrated approach to KETs will therefore allow the use of the know-how and feedback of experience of the more mature KETs to accelerate the development of more.

Crossing the "valley of death" in the key enabling technologies in Europe requires the delivery of solutions to thethree successive stages implicit in this crossing.

The fi rst stage, called "Technological research" consists of taking best advantage of European scientifi c excellence in transforming the ideas arising from fundamental research into technologies competitive at world level. These should be both shown through proofs of concept and be proprietary, that is protected by patents. It is these patents that will guarantee both the future freedom to exploit these technologies by European industry and their capacity to resist counterfeits and copying. From a more general perspective, an IPR strategy for global markets along with a single and effi cient European system for IP protection and enforcement are urgently needed.

The second stage, called "Product demonstration" allows the use and exploitation of these KETs to make innovative and performing European process and product prototypes competitive at world level. This requires fi rstly putting in place pilot lines having both the KETs technology prototyping facilities to enable the fabrication of a signifi cant quantity of innovative product prototypes arising from these KETs. Secondly, establishing the prototype product validation in terms of its user performance requires both demonstration and deployment operations at appropriate scale on European sites, protecting the technological advance achieved. In both cases, the objective is to make a demonstration at real scale of the relevance in terms of user value and the competitiveness of new product prototypes containing one or several KETs.

The third stage, called "Competitive manufacturing" should allow, starting from product prototypes duly validated during the demonstration phase to create and maintain in Europe attractive economic environments in EU regions based on strong eco-systems and globally competitive industries. In particular, production facilities competitive with their US and Asian equivalents in terms of production volumes and therefore price of products.

This will allow further strengthening of the capabilities of EU industry to more successfully deploy KETs-based products, face international competition and master solutions to tackle

grand societal challenges. In fact, in KETs where economies of scale are of importance, only advanced manufacturing based on the latest technologies and at a signifi cant level will allow:

- The acceleration of the learning curve on new manufacturing technologies, processes and products in order to arrive amongst the fi rst on non-mature markets with a high probability of penetration.
- To absorb the enormous fi xed costs of quality production on a volume suffi ciently important to attain production costs in line with those of international competitors, notably Asian.
- To retain the production know-how at the top level, this is the only guarantee of a complete mastery of all these crucial KETs steps on European soil.
- To develop an industry for advanced manufacturing generating a source of export revenues, and support the downstream producers of machinery capable to produce the most advanced manufacturing technologies in Europe (machinery, software, services, etc.), as well as the development and improvement of manufacturing systems (technology and processes) in order to build effi cient, modern and high technology manufacturing facilities in Europe.
- To master the whole product life cycle, from resource effi cient and energy saving production to recycling processes.

The role of globally competitive fabrication facilities at large volumes where economy of scale is required is therefore very important to nourish economic eco-systems, in particular with regard to SMEs, which act as sub-contractors and suppliers to downstream industry users. Only signifi cant fabrication facilities will have the integrated capacity of technologies and product development to be able to react to the international competition and follow the rapid renewal dynamics in the fi eld of KETs-based products. The improvement of framework conditions for KETs will also encourage dynamic markets for KETs.

The crossing of the "valley of death" in the KETs can therefore be imagined in the following manner in constructing a European bridge comprising three pillars:

- The technological research pillar based on technological facilities supported by research technology organisation;
- The product development pillar based on pilot lines anddemonstrator supported by industria consortia;
- The competitive manufaturing pillar based on globally competitive manufacturing facilities supported by anchor companies.

This crossing of the "valley of death" presupposes appropriate framework conditions; in particular that current EC fi nancial, legal and commercial support measures would be adapted in order that European technologies KETs could be successfully developed, deployed and protected, that enterprise and especially SMEscould develop, that local innovation ecosystems could be born and grow, that the products could benefi t from standardization activities, that emerging markets could be privileged and that the rules of international commercial engagement could guarantee a fair competition between producing nations at world level. It is therefore a complete political and regulatory environment which needs to be put in place in order that the eff orts made across the three pillars would be crowned by success.

The three pillar bridge will trigger a virtuous cycle of innovation and economic development. The fl ow from knowledge generation to market enables companies to successively pass:

- From basic science to technology by the technological research stage;

- From technology to product by the product development stage;
- From products to large scale production stage by competitive manufacturing stage to have access to global competitive markets.

The return fl ow from market to knowledge generation closes a virtuous cycle leading to a competitive growth and in turn also facilitating a market pull.

In particular:

- It is only based on market experience feedback that one can acquire a true understanding of user needs and therefore the relevant specifi cations of future products. It is also this large volume production that ensures a signifi cant return on investment for Europe in terms of orders, employment and taxes, thus enabling a harmonious societal development.
- From this feedback loop, products arising from the demonstration phase will have been correctly specifi ed, they will naturally fi nd an optimal usage value which will in turn lead to a relevant demonstration. The return on investment of this stage is therefore de-facto guaranteed.
- The product evolution expected by consumers having been identified, it is therefore easier to identify the technologies in gestation or to initiate the technological developments required to address the technological breakthrough needed. The level of relevance of the technology is in turn improved signifi cantly along with its chances of future exploitation.
- Finally the technological developers can, in turn, identify the most relevant ideas in the knowledge reservoir arising from the European fundamental research. This research base will therefore become more "useable" and more "useful" thereby ensuring a return on investment at its proper level.
- At the same time, early feedback from the manufacturing community will allow European industry to understand and identify new possible product specifi cations. This is only possible if these communities remain in Europe. Such a virtuous cycle constitutes a solid bridge which links the basic science to the global market.

4 THE SME'S INSTRUMENTS IN HORIZON 2020

The SME instrument in Europe 2020, Horizon 2020, addresses the financing needs of internationally oriented SMEs, in implementing high-risk and high-potential innovation ideas. It aims at supporting projects with a European dimension that lead to radical changes in how business (product, processes, services, marketing etc.) is done. It will launch the company into new markets, promote growth, and create high return on investment. The SME instrument addresses all types of innovative SMEs so as to be able to promote growth champions in all sectors.

Expected impact of the Programe and European Policy Europe 2020 – Innovation Europe:

- Enhancing profitability and growth performance of SMEs by combining and transferring new and existing knowledge into innovative, disruptive and competitive solutions seizing European and global business opportunities.
- Increase of private investment in innovation, notably through private co-investments and/or follow-up investments in successfully supported SMEs.
- The expected impact should be clearly substantiated in qualitative and quantitative terms (e.g. on turnover, employment, market seize, IP management, sales, return on investment and profit).
- Market uptake and distribution of innovations tackling the specific challenge in a sustainable way.

Innovative SMEs have been recognised as being able to become the engine of the green economy and to facilitate the transition to a resource efficient, circular economy. They can play an important role in helping the EU to exit from the economic crises and in job creation. The potential of commercialising innovative solutions from SMEs is however hindered by several barriers including the absence of the proof of concept, the difficulty to access risk finance, the lack of prototyping , insufficient scale-up studies, etc. Growth therefore needs to be stimulated by increasing the levels of innovation in SMEs, covering their different innovation needs over the whole innovation cycle.

Innovative SMEs should be supported and guided to reach and accelerate their full green growth potential. The targeted at all types of eco-innovative SMEs in all areas addressing the climate action, environment, resource efficiency and raw materials challenge, focusing on SMEs showing a strong ambition to develop, grow and internationalise.

The specific challenge addressed by the topics is to enable SMEs - in traditional sectors, such as manufacturing industries, in sectors of particularly rooted in Europe's history such as cultural heritage as well as in new sectors including different services and creative industries, and the social economy – to innovate and grow across traditional boundaries, through new business models and organisational change.

5 CONCLUSION

SME are commercial enterprises with ultimate objective of being profitable. R&D, which precedes any innovation, usually requires investment and a guarantee on returns. Thus, a typical SME, especially nowadays, would suffer from lack of spare cash and wouldn't be willing to borrow, for any financial liabilities are detrimental. The guarantee on returns is perceived as a gamble, and thereby introduced uncertainty can be unacceptable for a small certainty and stability seeking company.

SME Innovation is a point source feature, derived from individuals or small core groups founded on a strong underlying communications net to other point sources. Larger enterprises attenuate the communications net by introducing bureaucrats who are by definition innovation-less.

There is an no guarantee on returns--it is a gamble, but it is supposed to be an educated gamble. Uncertainty is what businesses must live with, like humans. *Micro, small, medium, large, they all do innovations. Innovation is not just R&D, that is only one aspect*. If you innovate your manufacturing process or your organisational structure you have truly innovated as well. If the end result is change, satisfaction through some return such as profits you have innovated! As was famously stated by an innovation guru: "It matters not what you create, but what you contribute." That simply put is innovation.

Our businesses are at a cross-roads, in terms of existing structures and purpose, and future demands. Most command and control businesses were designed and built based on a competitive model and framework that is dissolving. As trade barriers fall, competition increases and low cost options shift from country to country, building an ever more effective command and control environment is like akin to "fighting the last war". Organizational structures need to change. But you know this already. Gary Hamel told this in "The Future of Management". The real question is**: *do you understand the impact of this treatise when it comes to innovation?*

Innovation as a business model or organizational ideal sometimes seems intent on following a path to incomprehensibility and irrelevance. Practitioners, seekers-after, and proponents alike are caught up in a whirlwind of buzzwords, lists of critical-things-to-do, and claims for knowing the single most important next step to innovation. Just about everyone has their own recipe, or strategy, or secret or unique set of tactics. They are everywhere.

The cause of this confusion may be simple: ***Innovation is not linear, but harvesting the value created by innovation is.*** And when we try to cause innovation by linear thinking, we run into as much trouble as we would if we tried to harvest innovation value via the non-linear. We are mixing up ways of thinking when we consider innovation as a linear process; in fact, we need two sets of rules to think about innovation and the harvesting of innovation, much as we need two sets of rules to consider quantum mechanics and classical mechanics.

Applying overtly linear thinking to innovation strategy leads us to a kind of post hoc ergo propter hoc world, which goes something like this: "Look, this (company, geography or organization) is innovative. These are the things that seem to be different about them. So, let's do those 'different things' the same way, and we'll be innovative too!" Then, various mixes of components and features of innovative cultures are identified, extracted, and sprinkled into non-innovative organizations, stirred around and . . . well, usually, organizations just keep on operating more or less the way they did before they attempted innovation. We may refer to this as the "law of innovation inertia."

Serendipity is just around the corner.

To illustrate, take the current Holy Grail of innovation — failure — as an example. In highly innovative ecosystems, failure is a commonplace because risk is high and transactions are frequent. ***People operating in innovative ecosystems tend to try more things and to operate faster, generating more successes . . . and a lot more failures.*** Observers then note that failure is a feature of highly innovative organizations. That observation is then translated into the world as something like: "If you want to be innovative, fail often."

Will "failing more often" cause innovation? Not likely. The only thing that will certainly follow the tactic of more failure will be more failure. And failure is neither a goal nor a tactic for innovation. Lifting failure frequency out of innovative cultures and installing it into another culture, with the notion that more failure will cause innovation, is almost certainly a flawed way of thinking.

Imagine a large company that recognizes the need to become "more innovative." Imagine that the company is a public company, in a highly regulated business, answering to twitchy shareholders. Imagine sitting down with the CEO of that company and saying: "You need to fail more." This might be a short, and possibly none-too-pleasant, conversation.

While it is true that failure is a feature of highly innovative organizations, and there is a strong correlation between failure and innovation, the relationship is not one of causality. Setting out to intentionally fail more is not the same thing as setting out to succeed, with failure considered in a proper strategic context. Said a little differently, the paradigm is not one of failure, but one of frequency of trial. The actual underlying dynamic in highly innovative cultures is a larger number of transactions and attempts at new things (all done with a strong

commitment to being successful), which nearly guarantees a large number of failures . . . and a larger number of successes.

Focusing on failure (the lagging indicator) rather than on the underlying dynamics of innovative cultures (leading indicators) tempts us to ignore or de-emphasize the critical role of serendipity in innovation. Organizations live, work and prosper by and large in a linear world, and speak in linear ways to stakeholders. This is how innovation value is "harvested." Allowing luck to come in the door as a strategy is difficult, confusing and strange, because it presents as non-linear. But the interesting question is not whether we consider luck as a strategy, but whether or not we are adroit enough in our thinking to be the master of luck – to be the creators of "engineered serendipity."

It is not the frequency of failure that is important but rather the conditions that allow for innovation success. These tend to be cultural norms that govern transactions (interactions) and which create the conditions for innovation "luck." Profound trust between individuals and teams (trust that is as freely given as it is gratefully received); a deep-seated desire for fairness; a commitment to a win-win environment; diversity of thinking and points of view . . . these and other normative values in an organizational culture dramatically increase interactions, trial and experiment, and create the conditions for innovation. Under these conditions failure is seen not as a necessary outcome, but as an acceptable and well-understood feature of risk.

The intellectual sleight-of-hand to be mastered is the ability to think about and lead non-linear innovative conditions inside of a linear organizational structure, while at the same time managing and leading the harvesting of value in a linear fashion. It is not one or the other; it is both – at the same time.

Before beginning the next innovation effort, *here are some key questions for SME's from to consider for mapping out an effective innovation plan.*
1. What type of innovation does your organization need?
2. Does your innovation satisfy customer needs?
3. Who are your innovation champions?
4. How will you measure success?
5. How will success be rewarded?

And the ultimate value encompassed in a potential innovation attempting to achieve resonance, comes from three main sources:
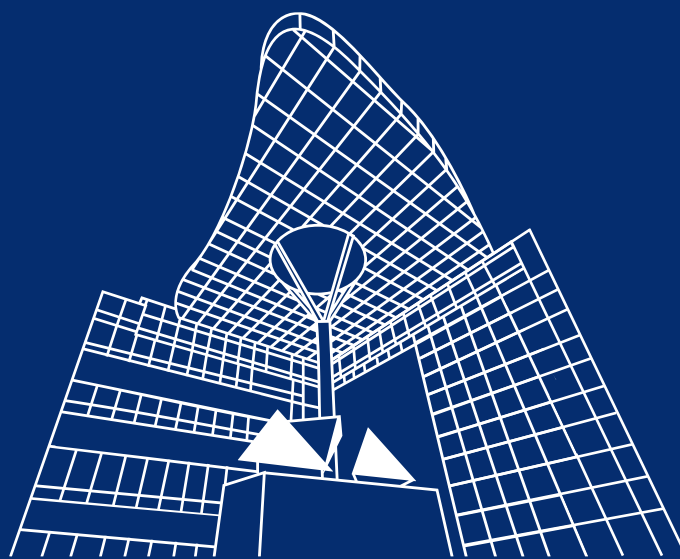1. Value Creation
2. Value Access
3. Value Translation

Innovation = Value Creation * Value Access * Value Translation

You'll notice in this equation that the parts multiply, and as a result if you do any of the three badly, your potential innovation will fail. But *do ALL three well and you will have the opportunity to achieve innovation resonance.*

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