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Is foreign Portfolio Equity Investment Inspired Growth Hypothesis Relevant in Emerging Markets?

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Abstract: Using panel data of 14 Asian and European emerging markets, this study examined the impact of foreign portfolio equity investments on economic growth. Generalised Methods of Moments (GMM) was used in order to cater for the dynamic nature of economic growth data and the possible endogeneity problem that exists between foreign portfolio investments and economic growth. The study noted that foreign portfolio equity investments positively but non significantly influenced economic growth in the Asian and European emerging markets, consistent with findings by Durham (2004). From a theoretical point of view, this finding is understandable since the current study excluded bonds (stable form of foreign portfolio investments) and only focused on foreign portfolio equity investments, a volatile part of foreign portfolio investments. Initial GDP was found to have had a positive and significant impact on GDP in line with Levine et al. (2000)'s observations. The study therefore urges Asian and European emerging markets to speed up the implementation of foreign portfolio investment enhancements policies and initiatives in order to guarantee long term positive growth. They should not only target foreign portfolio equity investments but foreign portfolio bonds investments as well if they intend to foster long term and sustainable economic growth.

Keywords: Investment; Foreign Equity; Growth; Emerging Markets

JEL Classification: F21; F43

1. Introduction

This section constitutes the background of the study, problem statement and research gap, contribution and structure of the paper.

1.1 Background of the Study

The South African Reserve Bank (2011) mentioned that foreign portfolio investment (FPI) is when foreign investors buy equities and bonds on the domestic stock markets. This follows that foreign portfolio equity investment (FPEI) arises when foreign investors purchase equity at the domestic stock markets. This was corroborated by Siegel (2002) who argued that the main reasons behind FPI is to get the highest possible return and risk diversification. According to Reisen and Soto (2001), unlike in foreign direct investments (FDI), FP and FPE investors do not wish to control or actively manage the companies which issued bonds and or equities. From both a theoretical and empirical literature perspective, foreign capital inflows are conclusively an important factor that enhances economic growth in the receiving country. For example, theoretical perspective proffered by Bekaert and Harvey (2003) and La Porta et al (1998) explained that foreign portfolio equity investments improves liquidity levels in the economy which in turn enables domestic firms to get cheaper access to funds for expansion purposes. Foreign portfolio investments increase resource mobilisation which reduces liquidity constraints for the domestic firms thereby contributing towards economic growth (Errunza. 2001). The

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empirical studies on the influence of foreign capital inflows on growth has been done by many researchers and findings shows that the results are inconclusive (Choong et al. 2010; Giovanni. 2005).

1.2 Problem Statement and Research Gap

Most studies that focused on the foreign capital flows-economic growth nexus focused on FDI and not on FPI or FPEI. Even the few studies that examined the foreign portfolio investment -growth nexus ignored the impact of foreign portfolio equity investment on economic growth (Ololade and Ekperiware. 2015; Mpofu. 2014; Duasa and Kassim. 2009; Ahmad et al. 2015; Durham. 2004; Mucuk et al. 2014). Despite the fact that emerging markets were the recipients of significant foreign capital flows during the last decade, consistent with Cavusgil et al (2013), they have received no attention in as far as research on FPEI-growth nexus is concerned. According to Cavusgil et al (2013:7), emerging markets warrant a separate study because they possess unique characteristics such as (1) experienced a wave of financial market, economic and political reforms over the past decade which attracted significant foreign capital flows, (2) their size, depth and quality of the financial sector is similar and (3) they were the main recipients of foreign capital flows during the last decade. No study that the author is aware of has investigated the FPI/FPEI-growth nexus exclusively using emerging markets as a unit of analysis. Other empirical studies have supported the FPI/FPEI led economic growth whilst some have corroborated the economic growth inspired FPI/FPEI nexus thus raising the possibility of the endogeneity problem that emanates from the feedback effect between the two variables. Prior empirical studies ignored the endogeneity problem that arises between FPI/FPEI and economic growth. The dynamic nature of the economic growth data was also ignored by previous studies that investigated FPI-growth nexus.

1.3 Contribution of the Paper

The current study deviates from previous empirical work in that (1) it investigates the impact of foreign portfolio equity investment on economic growth in Asian and European emerging markets which have not been focused on before and (2) uses the GMM estimation technique that addresses the endogeneity problem and captures the dynamic characteristic of the economic growth data.

1.4 Structure of the paper

The rest of the paper is organized as follows: Part 2 is related theoretical literature whereas part 3 reviews empirical literature. Part 4 is research methodology and it covers aspects such as general model specification, descriptive statistics and correlation analysis. This part also explains the estimation techniques, show key results and their interpretation. Part 5 concludes the study. Part 6 is bibliography.

2. Related Theoretical Literature

La Porta et al (1998) and Bekaert and Harvey (2003) argued that foreign portfolio equity investments improves liquidity levels not only in the capital market but in the economy at large. The improved liquidity guarantees easy and cheaper access to capital, itself a necessity in terms of boosting economic activities and growth. This was supported by Laeven (2003) whose study suggested that financial constraints of companies are dealt away with if there is increased inflow of foreign portfolio equity investments into the stock markets. Errunza (2001) explained that foreign portfolio investments positively contribute towards economic growth via the capital market development channel in four ways, namely (1) improvement of information, institutions and regulation, (2) market growth and investor confidence boosting, (3) corporate control implementation measures and (4) upping resource mobilization which are critical for economic growth.

The neoclassical and endogenous growth theories form the foundation upon which the relationship between foreign portfolio investment and economic growth is discussed. Solow (1962) who pioneered

the neoclassical growth theory argued that higher portion of investment as a share of GDP stimulates the rate of economic growth in the economy. Another argument is that higher rate of physical capital stock accumulation, technological and total factor productivity plays an integral component in the stimulation of economic growth in the economy. The argument was sustained by Romer (1994) who suggested that spillover effects and positive externalities emanating from a knowledge centered economy are the most important variables that influence economic growth.

The endogenous growth model which was developed by Pagano (1993) argued that economic growth is endogenously determined, contrary to the neoclassical growth model which suggested that economic growth is determined by exogenous factors. According to Pagano (1993), foreign capital flows and financial development are the endogenous variables that constitute the main parts of the engine that spur economic growth.

3. Related Empirical Literature

Majority of empirical research on the subject matter supported the foreign portfolio equity investment–led growth hypothesis. These include Ndong (2015), Kania-Morales and Mroz (2014), Sumanjeet (2009), Adeniyi et al (2015), Loncan and Caldeira (2015), Nyang'oro (2013) and Elekwa et al (2016), among others.

Ndong (2015) investigated the impact of foreign portfolio equity investment on economic growth and equity returns in 11 major African stock exchanges using panel data analysis models with data ranging from 1990 to 2013. The study revealed that foreign portfolio equity investment positively but non-significantly affected both economic growth and equity returns. Using ordinary least squares (OLS) regression analysis with time series annual data from 1986 to 2011, Baghebo and Apere (2014) examined the nexus between economic growth and foreign portfolio investment in Nigeria. They noted that foreign portfolio investment to a larger extent was a positive and significant determinant of economic growth during the period under study.

Using correlation analysis, Errunza (2001) studied the relationship between economic development, foreign portfolio equity investment and financial liberalisation in Asia. The study found out that foreign portfolio equity investment mobilised resources which are a key and significant variable necessary for economic growth and development. This was concurred by Poshakwale and Thapa (2007) whose study revealed that foreign portfolio equity investment promoted economic growth through the stock market development's ability to mobile resources channel in India.

Table 1 summarises empirical evidence that focused on the relationship between economic growth and foreign portfolio equity investments.

Table 1. A summary of empirical studies on foreign portfolio equity investment and economic growth

Author	Country/Countries of study	Methodology	Research findings
Kania-Morales and Mroz (2014)	Poland, Germany and Great Britain	Vector Error Correction Model (VECM)	The study revealed a feedback effect between foreign equity investment and real gross domestic product (GDP in Poland. In addition, a unidirectional relationship running from foreign equity investment towards economic growth was observed in Great Britain and Germany.
Sumanjeet (2009)	India using data between 1990 to 2008.	Conceptual analysis	The economic environment of India was found to have been negatively affected by the volatility in foreign portfolio equity investments. The volatility also negatively influenced exchange rate and monetary policy management in general.
Adeniyi et al (2015)	Sub-Saharan Africa (SSA) countries using data from 1975 to 1984.	Ordinary Least Squares (OLS) regression analysis.	Foreign capital flows positively and significantly influenced economic growth in the SSA countries.
Loncan and Caldeira (2015)	Brazilian stock market listed companies	Arbitrage Pricing Model Analysis	Both aggregate and disaggregate data analysis shows that foreign portfolio equity flow had a significant positive impact on Brazilian stock market listed companies.
Nyang'oro (2013)	Kenya with monthly time series data from April 1996 to December 2011.	Multifactor pricing model analysis	Foreign portfolio equity investment was found to have driven upwards the stock market returns at the Nairobi Securities Exchange.
Elekwa et al (2016)	Nigeria using time series data ranging between 1980 to 2014.	OLS regression analysis.	Foreign portfolio equity investment had a positive and significant influence on both employment levels and economic growth in general Nigeria.
Waqas et al (2015)	South Asian countries	GARCH econometric model	Stable foreign portfolio investment was found to have lowered inflation rates and promoted real GDP growth rates in South Asian countries. The same study revealed that favourable macroeconomic environment attracted foreign portfolio investments into South Asian countries.
Osinubi and Amaghionyeodiwe (2010)	Nigeria with secondary and annual time series data ranging from 1970 to 2005	Parsimonious Error Correction Model	Economic growth was found to have been positively and significantly affected by foreign private investment in Nigeria during the period under study.

Ololade and Ekperiware (2015)	Nigeria using primary data obtained from 128 firms in manufacturing and financial sectors.	OLS	Nigeria's bond market immensely benefited from the foreign portfolio investment. Factors which attracted foreign portfolio investment into the Nigerian bond market include inflation rate, bond market capitalization, GDP, interest rates and external reserves.
Mpofu (2014)	South Africa using quarterly annual time series data (1985-2012)	Johansen co-integration and Vector Error Correction frameworks	Foreign portfolio investment Granger caused economic growth in South Africa in the short run whilst a negative relationship between the two variables was observed in the long run.

Source: Author compilation

The economic growth led foreign portfolio investment hypothesis was supported by a few empirical studies which include but are not limited to Duasa and Kassim (2009) and Ahmad et al (2015). Duasa and Kassim (2009) studied the nexus between economic growth and foreign portfolio investment in Malaysia using Granger causality econometric tests with quarterly time series data ranging from 1991 to 2006. They noted the existence of a uni-directional relationship running from economic growth to foreign portfolio investment and its volatile nature. This was supported by Ahmad et al (2015) whose study using multiple OLS regression analysis with data from 2001 to 2010 observed that higher levels of economic growth was a major factor that attracted foreign portfolio equity investments into China.

Durham (2004) and Mucuk et al (2014) are among some of the very few empirical studies which found that the relationship between economic growth and foreign portfolio investment either is positive but non-significant, does not exist or is very negligible. Durham 2004) failed to find any meaningful direct influence of foreign portfolio equity investments on economic growth in the 80 countries that were part of the study. However, the extreme bound analysis revealed that certain absorption capacities in the host countries must be present if foreign portfolio investment is to positively and significantly influence economic growth (Durham. 2004:293). Using co-integration analysis and variance decomposition econometric techniques with annual time series data from 1990 to 2012, Mucuk et al (2014) explored the nexus between economic growth and foreign portfolio investment in Turkey. Long run relationship was found to have been non-existent between economic growth and foreign portfolio investment in Turkey during the period under study.

4. Research Methodology

This study examined the impact of foreign portfolio equity investment on economic growth in Asian and European emerging markets using GMM estimation technique with data ranging from 2001 to 2014. The list of Asian and European emerging markets used in this study is according to IMF (2015) classification criteria and also subject to the availability of data. The Asian emerging markets include China, Hong Kong, Indonesia, India, Philippines, Republic of Korea, Thailand and Singapore whilst the European emerging markets are Czech Republic, Greece, Poland, Portugal, Russia and Turkey.

4.1 General Model Specification of the Growth Function

Of the several factors that influence economic growth, the most common ones according to literature include foreign portfolio equity investment (FPEI), foreign direct investment (FDI), human capital development (HCAP), financial development (FIN), gross savings (SAV), infrastructure development

(INFR), trade openness (OPEN) and exchange rates (EXCH). The growth function which capture the above factors is shown in equation 1.

GDP=f (GDPLag, FPEI, FDI, HCAP, FIN, SAV, INFR, OPEN, EXCH) (1)

Net FPEI (% of DP), net FDI (% of DP), human capital development index, credit provided by the financial sector (% of DP), gross savings (% of DP), electric power consumption (% of GDP), total exports and imports (% of DP), local currency as a ratio of the United States dollar and GDP per capita were used as measures of FPEI, FDI, human capital development, financial development, savings, infrastructure development, trade openness, exchange rates and economic growth respectively. All the data was extracted from International monetary fund, World Bank databases and various United Nations Development Programme reports.

Although foreign portfolio equity investment is the main independent variable affecting GDP, FDI, human capital development, financial development, gross savings, infrastructural development, trade openness and exchange rates were identified by similar prior studies as the significant explanatory variables for growth (Mpofu. 2014; Osinubi and Amaghionyeodiwe. 2010). In order to enhance the accuracy of the empirical results, the influence of the explanatory variables on growth was controlled for.

Literature which justifies the inclusion of the above explanatory variables in the growth function are discussed next. Kumar and Pradhan (2002) observed that there are resources that flow along with FDI into the host country such as technology, capital, managerial expertise, organizational skills, international market know-how and access, all of which are necessary ingredients for economic growth. According to Calvo and Sanchez-Robles (2002), capital investment which comes through FDI inflows into the host country is one of the key ingredients to economic growth. Consistent with Nath (2005), FDI promotes economic growth by increasing capital contribution and total factor productivity in the economy of the host country. It is against this background that this study expects FDI to have a significant positive influence on economic growth.

Keynes (1936) argued that human capital development as proxied by education enhances economic growth. This view has been supported by empirical studies such as Li and Huang (2009). Following Dunning (1988), human capital is a locational advantage that attracts FDI thereby boosting economic growth in the host country. The study therefore expects human capital development to have a positive and significant impact on economic growth. On exchange rates, Husek and Pankova (2008) argued that depreciation of the host country's currency improves the inflow of FDI and economic growth in the host country due to that foreign investors would buy more assets in the host country using the same amount of home country's currency. This perspective was supported by an empirical study done by Caglayan and Torres (2011), which noted that Mexico received more FDI and associated economic growth due to loss of value of its domestic currency. This study therefore expects the nominal increase in the exchange rate figure (appreciation of the home currency) to have a negative effect on economic growth.

Proponents of trade openness inspired economic growth hypothesis, Balassa (1978) and Chenery and Strout (1966) argued that more foreign currency is received due to a rise in export earnings. This enables a country to easily and cheaply import necessary production inputs that are needed domestically for manufacturing and economic growth enhancing activities. The view was corroborated by Hart (1983) and Ben-David and Loewy (1998) who noted that exports allow countries to get hold of advanced technologies and better management practices both of which trigger technological diffusion into the economy. Trade openness is therefore expected to positively affect economic growth in this study.

According to Singh (2010) and Romer (1986), higher level of savings has a long term positive and significant influence on real GDP through its ability to stimulate investment activities. On the other

hand, Solow (1957) put it on record that savings positively affect economic growth in the short run during which period there is absence of capital shifting between other nations and the domestic economy. Consistent with this literature, this study expects savings to positively affect economic growth. Schumpeter (1911) is of the view that financial markets through their functions such as risk diversification, savings mobilisation and channeling funds towards higher return investment projects provide the avenues through which the financial sector positively impacts on economic growth. McKinnon (1973) and Shaw (1973) added that financial sector enhances the growth of the economy by mopping up savings and directing them to productive activities. It is against this background upon which the current study expects financial development to positively and significantly influence economic growth.

According to Fedderke and Garlick (2008), infrastructure is an input into the production process for both goods and services hence is a necessity in the growth of the economy. For example, a power generation infrastructure which is not steady and unreliable causes intermittent stoppages in the production activities and slows down economic growth (Fedderke and Garlick. 2008:4). Infrastructural development is therefore expected to positively impact economic growth in this study.

4.2 Pre-estimation Diagnostics

Descriptive statistics and correlation analysis were done in this sub-section.

Table 2. Results of descriptive statistics

	DP	PEI	DI	CAP	IN	AV	NFR	PEN	XCH
Mean	3416	.75	.12	.79	3.67	0.96	017	3.55	.53
Media	0550	.03	.54	.80	5.39	.92	.05	.94	.47
Maximum	6007	0.6	9.87	.94	36	4.74	284	60.9	8.38
Minimum	61	6.06	.03	.52	0.81	.70	.98	.24	.22
Standard. deviation	2293	.37	.61	.10	0.06	0.14	516	7.92	.79
Skewness	.15	.18	.63	0.55	.56	.06	.65	.12	.02
Kurtosis	.15	0.50	.50	.40	.30	.79	.71	.57	.97
Jarque-Bera	3.97	747	70.91	2.64	4.44	6.93	7.37	3.78	05.4
Probability	.00	.00	.00	.002	.001	.00	.00	.00	.00
Observations	96	96	96	96	96	96	96	96	96

Source: Author compilation from E-Views

Where GDP stands for gross domestic product per capita, FPEI is foreign portfolio equity investment, FDI is foreign direct investment, HCAP stands for human capital development, FIN represents financial development, SAV is gross domestic savings, INFR stands for infrastructural development, OPEN is trade openness and EXCH represents exchange rate.

Table 2 show that there are outliers and extreme values in the GDP data for Asian and European emerging markets. The standard deviation from the mean of the GDP data which is above 1 000 and the

large range of 55 546 provides evidence of the existence of extreme values and outliers in the GDP data. HCAP data set is skewed to the left whilst the data for all other variables used in this study are skewed to the right. The Jarque-Bera criteria shows that only data for human capital development and financial development follows a normal distribution because the corresponding probability values are not 0. Following Stead (2007), only human capital development, financial development and gross savings data is normally distributed since the two variables are the ones with Kurtosis values close to the standard (k=3).

Table 3. Correlation results

	DPPC	PEI	DI	CAP	IN	AV	NFR	PEN	XCH
DP	.00								
PEI	.24***	.00							
DI	.64***	.62***	.00						
CAP	.73***	.16**	.40***	.00					
IN	.44***	.20***	.33***	.34***	.00				
AV	0.008	0.23***	0.18***	.27***	0.40***	.00			
NFR	.11*	0.25***	0.22***	.36***	0.19***	.90***	.00		
PEN	.81	0.23***	0.18**	.36***	0.21***	.87***	.89***	.00	
XCH	0.19***	0.14*	0.16**	.02	0.47***	.70***	.54***	.42***	.00

Note: ***/**/* denotes statistical significance at the 1%/5%/10% level respectively.

Source: Author compilation from E-Views

Table 3 shows that there is a significant positive correlation in Asian and European emerging markets between (1) foreign portfolio equity investment and economic growth, (2) FDI and economic growth, (3) human capital development and economic growth, (4) financial development and economic growth, (5) infrastructural development and economic growth and (6) trade openness and economic growth. The finding resonates with literature. Contrary to literature, savings and exchange rates are negatively and significantly correlated with on economic growth.

4.3 Research Methodology and Results Discussion

This section covers unit root testing, GMM estimation framework and results discussion.

The study had to perform stationary tests at 1st difference after observing that not all variables were stationary at level (see Table 4).

Table 4. Panel root tests –Individual intercept

	Level				First difference			
	LLC	IPS	ADF	PP	LLC	IPS	ADF	PP
LGDP	-4.28*	-0.87	38.67***	74.73*	-7.92*	-4.36*	64.33*	60.98*
LGDPINITIAL	-0.91	2.72	16.35	17.64	-8.55*	-5.70*	81.01*	93.70*
LFPEI	-6.98*	-5.42*	78.64*	92.47*	-15.23*	-12.39*	159.93*	240.06*
LFDI	-9.14*	-6.93*	96.92*	68.47*	-15.82*	-13.27*	169*	207.63*
LHCAP	-9.23	-5.73*	80.52*	90.58*	-13.93*	-9.49*	132.13*	260.61*
LFIN	-0.27	3.19	11.38	8.06	-6.89*	-4.53*	68.64*	74.90*
LSAV	-4.02*	-1.80**	42.19**	45.57**	-11.22*	-7.97*	107.45*	131.55*
LINFR	-5.40*	-1.61***	36.47***	54.46*	-1.47**	-2.03**	54.73*	87.92*
LOPEN	-3.40*	-0.17	27.78	40.99***	-12.66*	-8.37*	112.82*	147.26*
LEXCH	-2.95**	-0.35	31.92	54.40*	-8.98*	-5.44*	73.74*	67.26*

Note: LLC, IPS, ADF and PP stands for Levin, Lin and Chu; Im, Pesaran and Shin; ADF Fisher Chi Square and PP Fisher Chi Square tests respectively. *, ** and *** denote 1%, 5% and 10% levels of significance, respectively.

Source: Author's compilation from E-Views

All the ten variables under study were found to be stationary at 1st difference and therefore integrated of order 1. This result meant that it was safe to proceed with the GMM estimates.

According to Levine et al. (2000), previous economic growth has an influence on the current rate of economic growth, also referred to as the dynamic nature of the economic growth data. The dynamic nature of economic growth data was also supported by Sghaier and Abida (2013) in a study of the impact of FDI on economic growth in North African countries. In econometrics, equation 1 is written in the following format in order to capture the effect of foreign portfolio equity investments on economic growth, consistent with Sghaier and Abida (2013, p. 6).

$$GDP_{it} = \beta_0 + \beta_1 GDP_{\text{it-1}} + \beta_2 FPEI_{\text{it}} + \beta_3 X_{\text{it}} + \mu_i + \varepsilon it \quad (2)$$

Where $GDP_{\text{it-1}}$ is the initial GDP per capita, X_{it} stands for a vector of explanatory variables shown in equation 1. Time invariant and unobserved country specific effect is represented by μ_i, intercept terms that capture changes common to all countries under study is shown by β_0, t and i subscripts stands for time and country respectively whereas εit is the error term following Ndambiri et al (2012, p. 21) and Sghaier and Abida (2013.

In this study, equation 2 was then estimated using the GMM approach in order to test whether the marginal influence of FPEI on economic growth, represented by β_2 is positive and statistically significant. The main strength of the GMM estimation technique by Arellano and Bond (1995) is that it addresses the endogeneity problem which arises because the lag of the dependent variable is correlated to the error term. The approach is also able to deal with dynamic data such as economic growth. Following Ndambiri et al (2012), the first step GMM estimator was used in this study because of its ability to give more reliable results.

According to the study, initial GDP positively and significantly influenced economic growth in the Asian and European emerging markets, consistent with Levine et al (2000). A 1 unit increase in initial GDP resulted in an increase in economic growth by 94.5 units. Human capital development also had a positive and significant impact on economic growth. A 1 unit increase in human capital development

led to a 39.5 units positive growth in economic growth in the Asian and European emerging markets. Gross savings was also found to be a significant factor influencing economic growth since every 1 unit increase in gross savings positively affected economic growth by 16.7 units in Asian and European emerging markets. These results resonate with literature.

Foreign portfolio equity investments, FDI and infrastructural development (measured by electrical consumption) had a positive but non-significant impact on economic growth in the Asian and European emerging markets. This finding on positive influence on economic growth is in line with literature whilst the insignificant influence part can be attributable to the type of proxies that were used for the variables. Foreign portfolio equity investment and electrical consumption represents a narrow aspect of foreign portfolio investment and infrastructural development respectively. The impact of net FDI on economic growth depended mainly on the net values of FDI for the individual countries. Large net FDI contributes more towards economic growth and vice versa for the impact of small values of net FDI on economic growth. Contrary to literature, trade openness and exchange rates had a significant negative impact on economic growth whereas financial development negatively but non-significantly affected economic growth. Although Table 5 shows that foreign portfolio equity investment positively influenced economic growth, the impact is not significant in Asian and European emerging markets.

Table 5. Generalised Methods of Moments Estimation Technique Results

Variable	Co-efficient	Standard Error	T-statistic	Probability
Constant	0.724***	0.131	5.51	0.000
LGDP Initial	0.945***	0.011	86.10	0.000
LFPEI	0.004	0.003	1.24	0.218
LFDI	0.004	0.008	0.47	0.642
LHCAP	0.395***	0.088	4.50	0.000
LFIN	-0.020	0.017	-1.16	0.246
LSAV	0.167***	0.043	3.87	0.000
LINFR	0.006	0.017	0.35	0.729
LOPEN	-0.117***	0.034	-3.40	0.001
LEXCH	-0.022***	0.008	-2.63	0.009
Diagnostic tests				
Adjusted R-Squared	0.99			
Durban-Watson statistic	1.64			
J-statistic	186			
Probability (J-statistic)	0.000			
Wald Test	3 712.35***			
Endogenous regressor test	186.00***			

***, ** and * denote 1%, 5% and 10% levels of significance, respectively.

Source: Author's compilation from E-Views

The endogenous regressor test statistic was found to be significant at 1% thus the study failed to reject the null hypothesis which says that all the regressors in the model are exogenous. This finding shows that the economic growth model used for the purposes of this study is suitable. Consistent with Ndambiri et al (2012), the Wald test statistic shows that the model passed the joint significance test at 1% (see Table 5), a sign that the model used is appropriate.

5. Conclusion, Policy Implications and Possible Future Research

This study examined the impact of foreign portfolio equity investment on economic growth in Asian and European emerging markets using the GMM estimation technique with data ranging from 2001 to 2014. Theoretical literature argues that foreign portfolio investments has a significant positive impact on economic growth. Apart from supporting the theory, the empirical literature mentions that economic growth and macroeconomic stability are some of the factors which attract foreign portfolio investments. Another group of empirical researchers found out that foreign portfolio investments have a positive but non-significant impact or negligible influence on economic growth (Durham. 2004). The paper observed that foreign portfolio equity investments positively but non significantly influenced economic growth in the Asian and European emerging markets, consistent with findings by Durham (2004). From a theoretical point of view, this finding is understandable since the current study excluded bonds (stable form of foreign portfolio investments) and only focused on foreign portfolio equity investments, a volatile part of foreign portfolio investments. Initial GDP was found to have had a positive and significant impact on GDP in line with Levine et al. (2000)'s observations. The study therefore urges Asian and European emerging markets to speed up the implementation of foreign portfolio investments enhancements policies and initiatives in order to guarantee long term positive growth of their economies. They should not only target foreign portfolio equity investments but foreign portfolio bonds investments as well if they intend to enhance long term positive and significant economic growth. Subject to data availability, future studies should investigate the impact of foreign portfolio investments on economic growth in all emerging markets using GMM method. Moreover, examining the preconditions that must exist in the emerging markets before foreign portfolio investments significantly influence economic growth is another possible area of future research.

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