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72nd International Scientific Conference on Economic and Social Development Development –
"Digital Transformation and Business"

Book of Proceedings

Editors:

Irena Zavrl, Dijana Vukovic, Ljerka Cerovic



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METHODS OF START-UP PROJECT DEVELOPMENT WITHIN THE COOPERATIVE RESOURCE MODEL

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ABSTRACT

This article defines the importance of application of the cooperative resource model in the process of innovation implementation. It provides an algorithm for the development of innovative start-ups. The research describes the basic techniques for innovative ideas generation, basic models for innovation project development: Osterwalder business model, logical framework approach, as well as the “envelope” model designed by Klimuk V.V..

Keywords: *Start-up development, Innovation, Algorithm for the development, Osterwalder business model, Logical framework approach, “Envelope” model*

1. INTRODUCTION

The existence and constant development of innovative products enable the creation of new competitive advantages for the region and the country. The process of creating innovation through cooperation of the main institutional sectors – science, education, business and government, proves to be effective, which is expressed in the functioning of the cooperative resource model. The maximum efficiency of each sector contributes to the creation of a competitive and unique product of high quality (Fig. 1).

2. METHODS OF START-UP PROJECT DEVELOPMENT WITHIN THE COOPERATIVE RESOURCE MODEL

The cooperative relations are based on a simultaneous and sequential type of interaction between partner sectors in the direction of jointly solving the problem. This is due to the need to simultaneously fulfil in all sectors the interconnection between the initial objectives set and the expected results – the creation of innovative products and their introduction to the market. The initiated previous objective shall serve as an indicator to initiate the development of a following one (in order to make certain possible adjustments based on retrospective analysis and compliance with planned benchmarks). The cooperative relations are based on a simultaneous and sequential type of interaction between partner sectors in the direction of jointly solving the problem. This is due to the need to simultaneously fulfil in all sectors the interconnection between the initial objectives set and the expected results – the creation of innovative products and their introduction to the market. The initiated previous objective shall serve as an indicator to initiate the development of a following one (in order to make certain possible adjustments based on retrospective analysis and compliance with planned benchmarks).

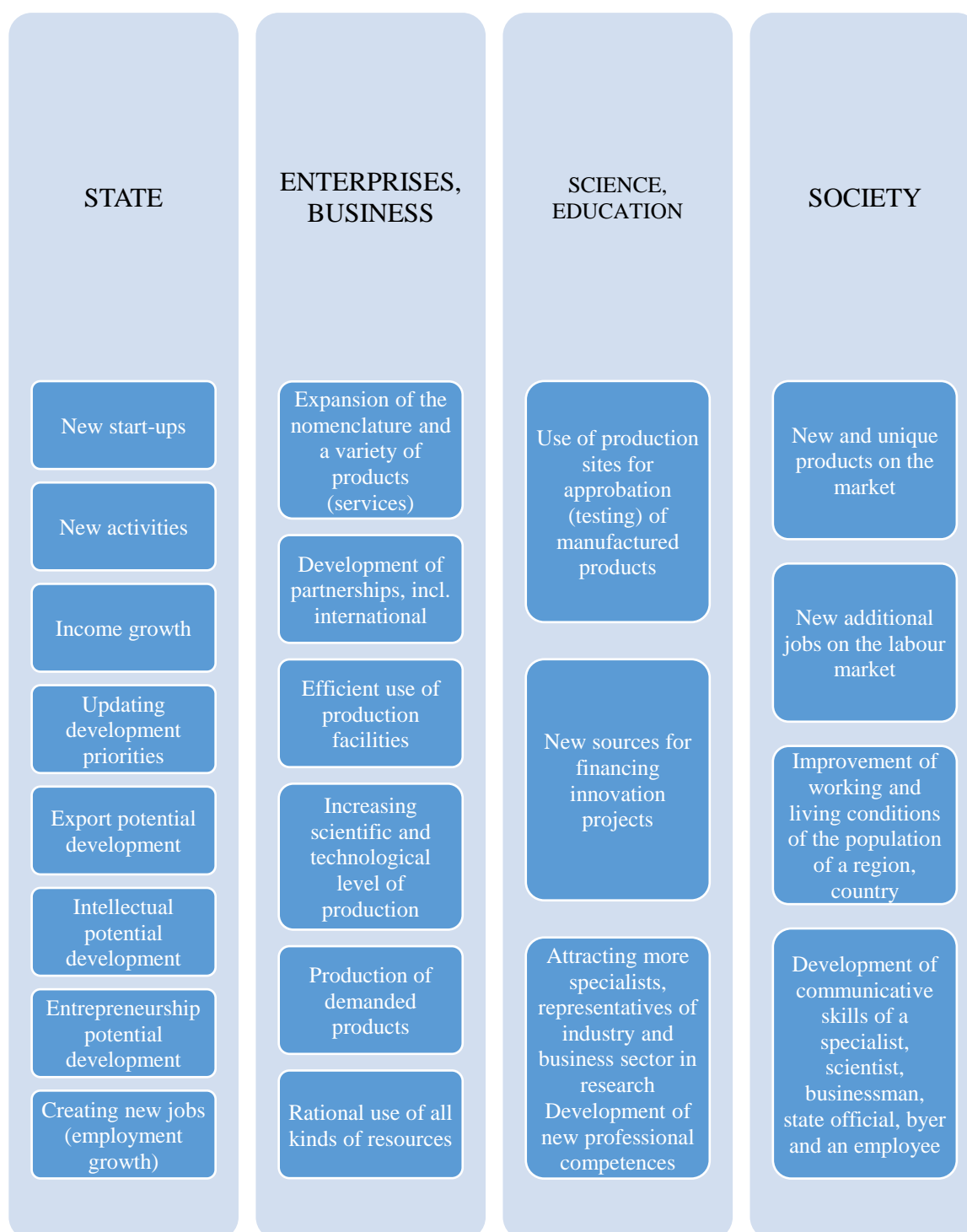


Figure 1: Advantages of cooperation between each sector in the “cooperative resource model”

Start-up innovation project development can be initiated in any of the presented sectors, but the true motivator is a problematic issue (aspect for improvement), which during its activity manifests itself in:

- negative dynamics of the values of the main and auxiliary indicators;
- deviation of the actual values of performance indicators (part of it);
- deviation of quantitative and qualitative characteristics of the investigated activity (its part, object) from the competitors` level of development, incl. foreign ones.

The initiated problematic issue in one of the sectors of national social and economic systems becomes a solvable task in cooperation with other sectors. This model is called a cooperative resource model, which usually is a temporary functioning of an alliance based on a cooperation of each sector (science, education, business, the real sector of the economy, government, society and foreign partners, if needed) in order to solve a set objective using its own specific (scarce for other sectors) resources.

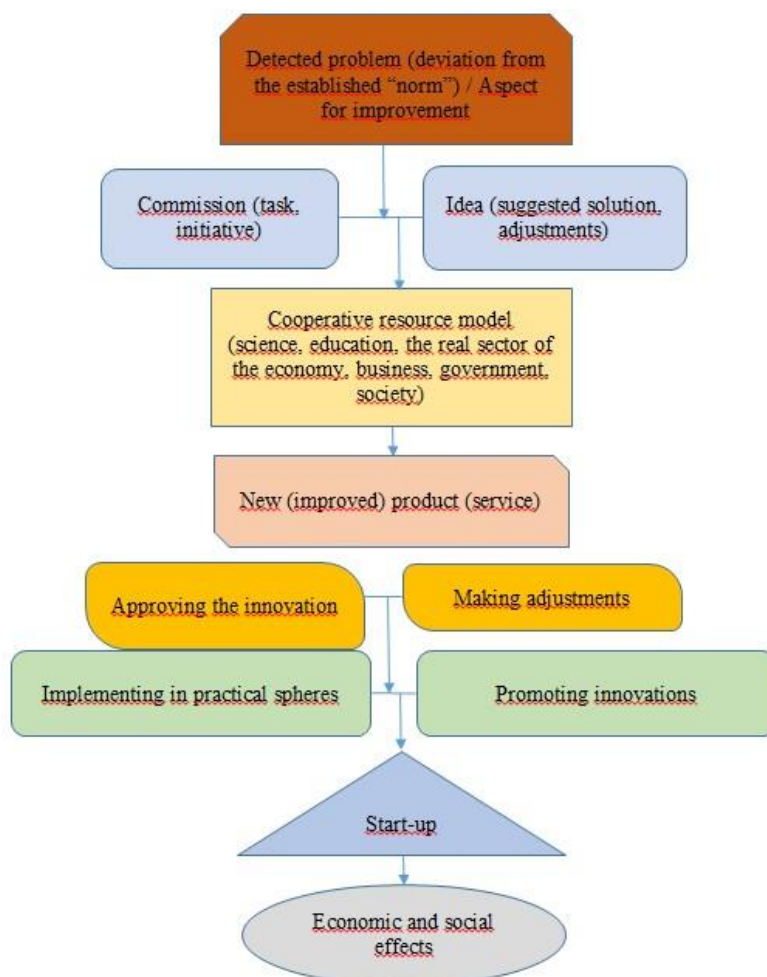


Figure 2: Algorithm of innovation project development

The following are functional areas of activities of sectors within the cooperative resource model:

- Education: creating a system of basic (professional) and auxiliary (social and psychological) competences based on the permanently updated theoretical knowledge, skills and practical skills consolidated on the basis of innovative forms;
- Science: conducting fundamental and applied research to solve a problem or to improve the functioning of a particular type of activity (part of it, objective etc.);
- Real sector of the economy: implementing the procedure of approbation of the obtained research and innovation development results with the help of own production facilities in real conditions, carrying out the expert's assessment of the obtained results of intellectual activity and making appropriate adjustment;
- Business: providing different options for financing research and innovation developments, conducting experimental work on the implementation of the results of intellectual activity in practical spheres and their commercialization;

- Government: developing a system of priorities for the development of a region or a country, promoting innovation projects (business projects, social innovations) in practical spheres of activity of an organization, business and the population;
- Society: performing an objective assessment of the level of satisfaction with the quality of sold and newly created innovative products (performed works, provided services), developing a set of current requests of consumers of organizations and the population of a region, country.

The step-by-step process of a start-up innovation project development is a set of consequent (parallelly consequent) procedures of transforming an innovative idea aimed at solving a current issue (aspect for improvement) into a final innovative product, tested in real life conditions, implemented in the practical activities of organizations (users) and the one that enables achievement of economic and social effects (Fig. 2). The structure of developed start-up project should include the following sections (Terziev, Klimuk, 2021a; 2021b; 2021c; 2021d):

- Stage “Idea”: Industry, type of activity, problematic aspect (field); Analysis of the problematic aspect, identification of influencing factors; Suggested solution; Relevance; Novelty (uniqueness); Available resources for the implementation of the set tasks; Planned operating costs; Planned investments; Expected results, technical and economic parameters, economic and social effects; Competitive advantages, special features; Risk accounting and measures to prevent them.
- Stage “Feedback”: Approbation of the obtained results in practical conditions (testing); Identification of deviations from expected results (shortcomings); Necessary adjustments based on the results of testing; Implementation in practical areas of activity; Implementation of a promotion campaign of the created product (service) on the market to increase its recognisability.

The most significant step in the process of innovation project development is the generation of ideas, which can be thoroughly planned (systematic) or spontaneous (unplanned). Based on a positive experience of educating young people (students of general education schools, vocational high schools, higher education institutions) and other interested persons about the basics of business innovation design and development of business competences a number of methods for generating ideas have been tested (Fig. 3).

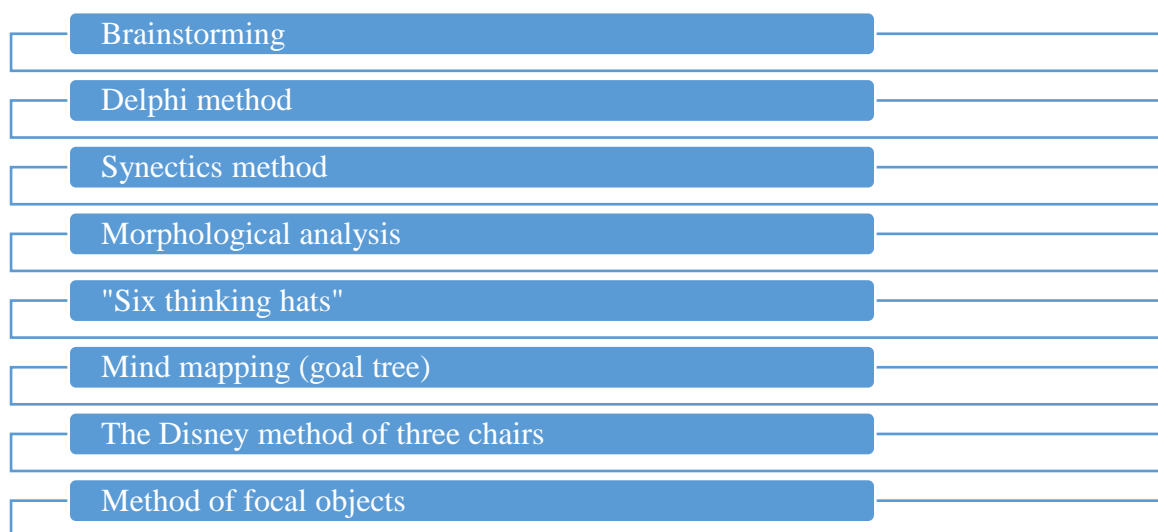


Figure 3: Methods of innovative ideas generation

Visualization tools for start-up projects are also widely used, which act as a canvas (template) of a step-by-step algorithm for substantiating an innovative idea in order to develop a high-quality project and present the results of intellectual activity. The main tools include (Terziev, Klimuk, 2021a; 2021b; 2021c; 2021d):

- Osterwalder and Pigneur business model.

This tool is a step-by-step algorithm for developing a final layout of an organizational, economic and production model for the implementation of business projects. This business model can be adapted to the development of components of scientific (innovative), social projects (Fig. 4) (2021e).

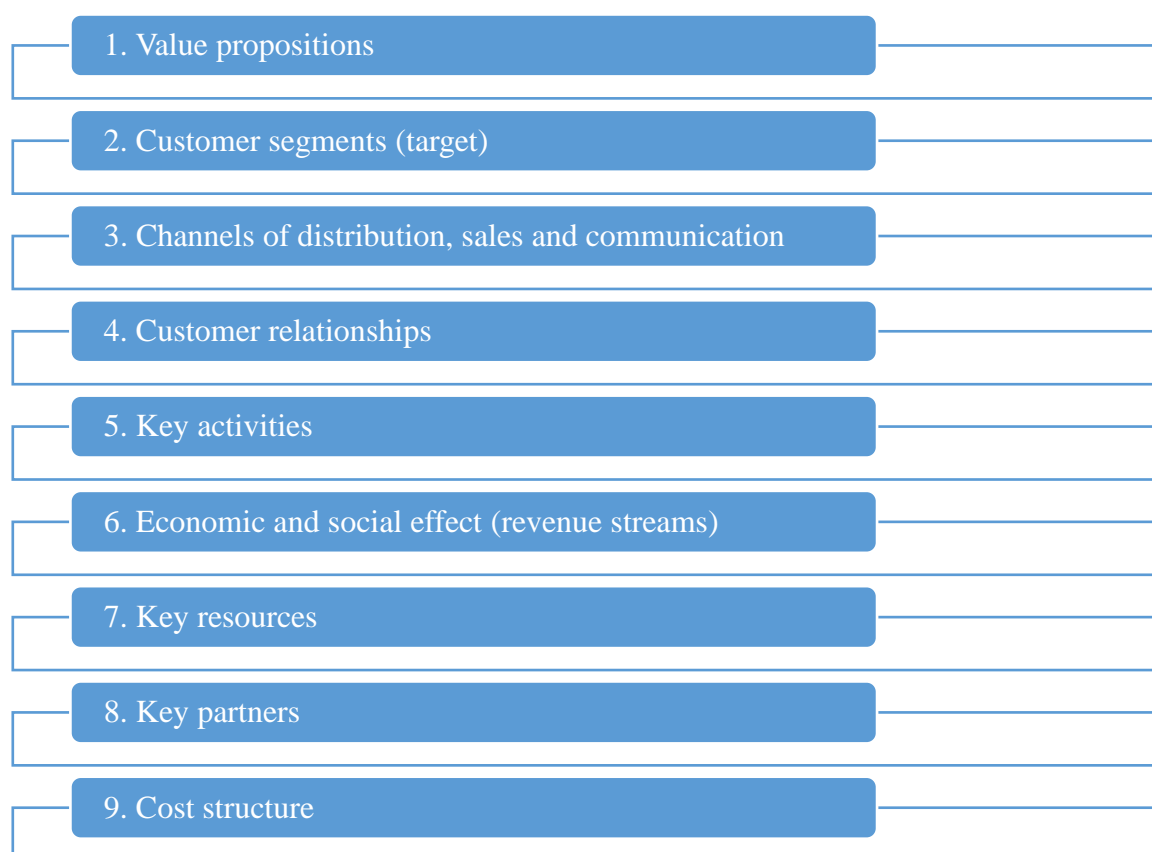


Figure 4: Osterwalder and Pigneur business model canvas

- Logical framework matrix

This tool is widespread in Europe and the USA. It is used for a step-by-step, sequential achievement of a common goal within the framework of the developed initiative by detailing it into specific tasks, intermediate results and a set of activities. A typical feature of the method is the use of a system of assumptions and risks that determine the effective implementation of each of the stages of project development. The method uses a system of quantitative indicators reflecting the degree of achievement of results, objectives, general goal, as well as sources and methods to confirm the obtained results at each stage. The method is used for writing scientific, educational projects, and can also be adapted for commercial purposes (Tabl. 1) (2021f; 2021g).

Description of the project (implementation logic)	Performance indicators (quantitative indicators)	Data sources	Assumptions and risks
Goal	Measurable indicators for Goal	Data sources for verifying status of Goal-level indicators	
Purpose	Measurable indicators for Purpose	Data sources for verifying status of Purpose-level indicators	Assumptions/risks between purpose and goal
Outputs	Measurable indicators for Outputs	Data sources for verifying status of Output-level indicators	Assumptions/risks between outputs and purpose
Activities	Required labour and material resources	Cost of labour and material resources	Assumptions/risks between activities and outputs

Table 1: Model of the logical framework matrix

- “Envelope” model
The tool is a 5-step universal algorithm for building a model of a scientific (innovation), social or commercial project. It takes into account the most important aspects in the developed model of commercial or social innovation, which are the structural components of common structures of scientific, innovation and business projects (Fig. 5).

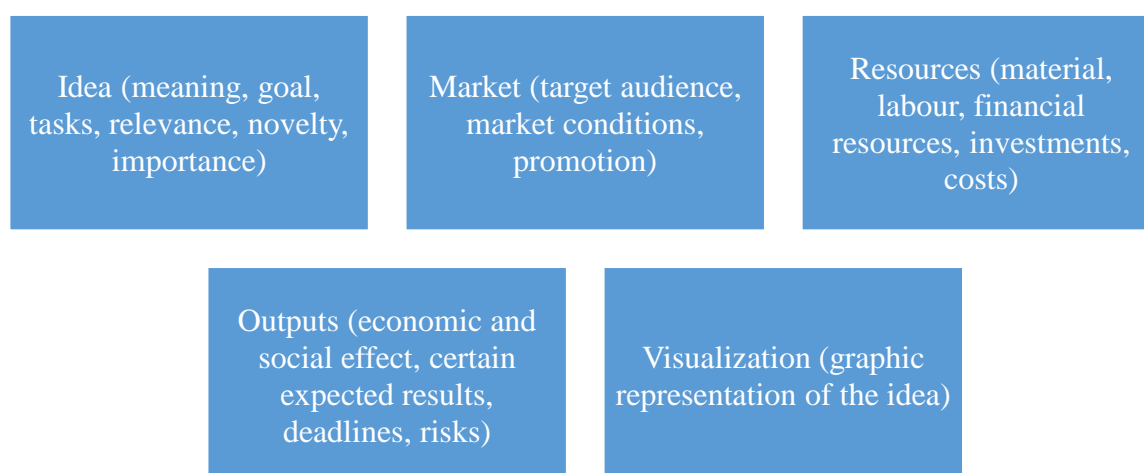


Figure 5: “Envelope” model for innovation project development (developed by Klimuk V.V.)

3. CONCLUSION

The successful implementation of a start-up project is determined by the detailed justification using the above-mentioned tools. First of all, it is necessary to analyse the studied problematic aspect by defining the shortcomings (“weak” points) in functional processes. The second step is to offer possible solutions to the arisen problem in order to eliminate it with the help of methods for innovation ideas generation. Thirdly, it is necessary to develop a graphical model of start-up idea implementation. Fourthly, to prepare a project application on the basis of the developed graphical model in compliance with the requirements of the relevant grant

programmes, financing and investing conditions. The final fifth step is to start a step-by-step implementation of a start-up project with constant monitoring of the intermediate results, their adjustments, if necessary, and advancement into practical areas.

LITERATURE:

1. Terziev, V., Klimuk, V. (2021a). *Methodological concepts for modernization of industrial enterprises in the concept of postindustrial development*. // 65th International Scientific Conference on Economic and Social Development – Online Conference, 19 February, 2021, Economic and Social Development (Book of Proceedings), Cakovec, Croatia, 2021, pp.1-5, ISSN 1849-7535.
2. Terziev, V., Klimuk, V. (2021b). *Strategic of models of post-industrial development of industrial enterprises in terms of the concept of national security*. // 65th International Scientific Conference on Economic and Social Development – Online Conference, 19 February, 2021, Economic and Social Development (Book of Proceedings), Cakovec, Croatia, 2021, pp.180-186, ISSN 1849-7535.
3. Terziev, V., Klimuk, V. (2021c). *Modelling the forms of international scientific and educational cooperation*. // 20th RSEP International Economics, Finance & Business Conference – Virtual/Online 17-18 February 2021, Holiday Inn Vienna City, Vienna, Austria, Review of Socio-Economic Perspectives RSEP, Ankara, Turkey, 2021, pp. 151-156, ISBN: 978-605-06961-8-9.
4. Terziev, V., Klimuk, V. (2021d). *Directions for modernization of innovative youth startup design in Belarus*. // 20th RSEP International Economics, Finance & Business Conference – Virtual/Online 17-18 February 2021, Holiday Inn Vienna City, Vienna, Austria, Review of Socio-Economic Perspectives RSEP, Ankara, Turkey, 2021, pp. 157-162, ISBN: 978-605-06961-8-9.
5. *Strategyzer. Corporate Innovation Strategy, Tools and Training*, (2021e). <https://www.strategyzer.com>, 21.03.2021.
6. *Logic Framework*, (2021f). http://www.pubhealth.spb.ru/STDDIST/Prevent/LFA_web.pdf, 03.2021.
7. *Project Cycle Management Guidelines*. (2021g). https://narfu.ru/upload/medialibrary/3fd/project-cycle-management-guidelines_eu.pdf. (03.2021).

CONSUMER BEHAVIOR OF GENERATION C AS A CHALLENGE FOR MARKETING EXPERTS

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ABSTRACT

There are many generational divisions nowadays, from Baby Boomer, Generation X, Generation Y, to Generation Z (iGen) and the latest Generation Alpha. Each of these generations is attributed with their own characteristics, and the members are determined by the year of birth. However, there is another generation that does not know the age limit, and it is Generation C, whose members are constantly connected via the Internet and devices that are products of the latest technology. Behaviors of members of different generations are frequent topic of scientific research, covering various areas. This paper is focused at the consumer behavior of Generation C members. They are significantly influenced by content marketing, which advertising industry often uses. The results of the research where 11 marketing experts were examined is presented in this paper with the aim to identify the role of social media and phases of the process of product selection, to answer the question about which social media platforms are used the most, to determine the relevance of social media and UGC and the relationship between UGC and FGC as well as to determine level of credibility of content published on the observed social media platforms.

Keywords: *Generation C, Generation Z, content marketing, consumer behavior*

1. INTRODUCTION

Children who are born and raised in a digital environment represent their generation. Their development and consumer behavior have been strongly influenced by technology, which is essential for their daily functioning. The very term "Generation C" is a name which synthesizes English terms *connected*, *creative*, and *click* – prone to clicking the electronic mouse (according to Selwyn, 2009; Jones and Shao, 2011). The generation which does not know the world without computers could be described as a digital generation – a generation whose needs for the highest possible speed of communication and obtaining information are continuously growing. It is also one that is always focused on multiple tasks simultaneously and has a wide range of attention, learns by an endless search for information, and sees the latest technology as the best friend. It is important to mention Generation Z, seemingly very similar to Generation C. The members of Generation Z did not experience a transition change from analog to digital age; they grew up with technology, unlike (some) members of Generation C who are not determined by their birth years. However, they share the main feature of constant technological connectivity. The interesting thing about Generation C is that this generation, by communicating with each other in online communities, has the ability to cause hype for a certain product. This is a generation that is looking for new content every day; a generation whose decisions are based on online content.

Many brands have recognized this and have focused their marketing activities on content marketing. Consumer reviews in online communities are published at a high rate; they influence other members of such communities and due to this are certainly one of the elements that marketers should be addressing. Nowadays, the traditional “word of mouth” reviews are online and they have a global character. A brand’s online ratings affect its consumer’s perception, and thus its value. Brand marketing activities also influence consumer behavior, especially those that are placed highly through content ways of marketing. However, the reverse is also true here, as today consumer behavior creates brand marketing activities. Therefore, the conclusion is that the online community is a marketing circle, which is characterized by an increasingly intensive information circulation. Following the above, this paper seeks to focus on the importance of content marketing for the behavior of Generation C, which has the function of two-way communication between brands and consumers, but also as the marketing’s consequence – mutual communication of consumers in online communities.

2. GENERATION C

Generation C has been talked about for more than a decade, and the number and connectivity of its members seems to be increasing. Generation C is a generation connected in a way like none before. It is a generation that shares its experiences not only with its acquaintances, but via the Internet with all users of social networks, forums, mobile applications and other modern platforms intended for socializing and exchanging opinions. Members of Generation C are not defined by age range or residence, and their main feature is reflected in the constant connection. Technology has created this generation and erased the range of years which would distinguish them, as is the case with other generations. Members of this generation share information, experiences, praise for products, services and brands, but also criticism through digital platforms. They are members of communities which can be very large, so a review shared in the online community can reach an extremely wide audience. Members of Generation C have the opportunity to ask other consumers questions about a particular product or service and therefore get an extremely large number of answers from consumers of these products or services in an extremely short time, with other members of the community having insight into this. Hype for a product or service can be created this way; the opposite is also possible. This is how members of this generation are looking for the variety of experiences of other consumers. Generation C wants to participate not only in mutual conversation, but also in conversation with the companies. Generation C expects added value, the story behind the company; environmental awareness, sustainable production and similar topics of today; if the consumer also supports the activism that the company promotes, this can create a very strong emotional connection of the consumer with the brand. According to Nielsen’s (2012) infographic dating back to 2012, 23% of Americans were young people aged 18 to 34. It was these young people who made up 27% of the population watching videos, 27% of the population visiting social networks or blogs, 33% of those who owned tablets and 39% of those who used smartphones. According to Think with Google (2013), “59% of Generation C members say the internet is their main source of entertainment and 38% turn to their phone first when they want to be entertained.” As many as “66% of them [are] spending the same amount of time or more time watching online videos compared to TV”. Also, “55% [of them] say they are connected to 100 or more people through social sites, while 15% are connected to 500+ people.” Think with Google (2013) calls Generation C a “new powerful force in consumer culture” and lists them as “people who care deeply about creation, curation, networking, and community.” According to Nielsen (2014) “[for] most American consumers, their everyday lives and their digital lives are now wholly intertwined. So much so that in 2013, the Oxford Dictionary officially codified the term *digital detox* – ‘a period of time during which a person refrains from using electronic devices such as smartphones or computers...’ – by adding it and its definition to its online

version (which, ironically, is accessible only via a digital device)". According to their method of accessing Facebook during January 2021 in Croatia, 97.4% of users accessed this social network using mobile phones, while only 2.6% of users accessed Facebook exclusively via laptop or desktop computer. 35.0% of people accessed this social network via mobile phone and laptop, or desktop computer and 62.4% of users accessed Facebook exclusively via mobile phones (We are social and Hootsuite, 2021:38). In January 2021, 80,000 households in the Republic of Croatia used Smart Home devices (We are social and Hootsuite, 2021:32). As many as 81.5% of global Internet users aged 16 to 64 searched the Internet (via any device), a month before the survey, to purchase a particular product or service. Furthermore, a month before the survey, 90.4% of global Internet users aged 16 to 64 visited a retail website or an online store, 69.4% used a shopping app on their mobile phone or tablet. 76.8% shopped online via any device, while 55.4% made online purchases via mobile device. (We are social & Hootsuite, 2021:225). When it comes to researching about and encountering brands and products, most users aged 16 to 64 do so through search engines, at 33.9%, 32.6% via advertisements on television, while 29.4% through word-of-mouth; this is followed by 28.2% doing so via ads on social networks; 27.6% at brand and product websites, 26.0% at online retail websites, 25.3% on ads on websites, 24.4% through recommendations or comments on social networks, 24.2% from TV shows and movies, and 24.0% on websites with customer reviews (We are social & Hootsuite, 2021:264). Consumer communication on the Internet through various communities, primarily on social networks, can play a major role in decision making about future purchases and creating perceptions about a particular brand. Social networks have enabled fast communication, exchange of opinions and writing reviews, all of which can have a very wide reach. Generation C is known as the generation for which many companies have switched to content marketing. It must not be forgotten that Generation C consumers also are the ones who create content through comments and reviews in the form of statuses, stories, discussions and the like. Some consumers are so involved in this world of online content that they have become the so-called 'influencers' and work for the purpose of content marketing, presenting their followers with content for which they are paid or otherwise rewarded.

3. CONTENT MARKETING

It is very important to know the expectations of modern consumers, whose desires and needs are changing faster than ever. Because of this, content marketing is especially important, which is represented today in various channels of marketing communication. Content marketing has a very broad role, as it informs, teaches, sometimes solves problems, and always approaches the consumer from whom trust and loyalty are expected in return. Content marketing is also one part of inbound marketing. Opreana and Vinerean (2015:30) cite interactivity and engagement as the most prominent elements of inbound marketing. In content marketing, the focus is on the content itself. Not every piece of information from a company is content marketing, seeing as the content must indicate the value that a particular product or service offers to the consumer. In addition, content marketing often has the function of educating and informing consumers for free. These can affect the perception of the brand in the minds of consumers and strengthen consumer confidence and their loyalty to the company. Content strategy must foresee the creation of content that will be desired and shared by the reader and thus increase the reach of the audience. Companies can encompass multiple ways to support content marketing on the Internet using their content strategies – blogs and internet articles, for example, or e-guides on various problems with solutions offered for them, which also contain recommendations for the use of products and services that the company has on the market. Webinars also fall into this category, as well as newsletters for subscribers, e-books, infographics, "how to" videos and images, etc.

This type of marketing is not as aggressive as typical advertising. According to the “11th Annual B2C Content Marketing Benchmarks, Budgets, and Trends: Insights for 2021”, the top three best organic content distribution channels used by B2C marketers in the last 12 months include social media platforms at 82%, websites or organization blogs at 79%, and email at 76% (Content Marketing Institute & MarketingProfs 2021:22). Facebook is the best organic platform for content distribution for B2C marketers, as far as social media is concerned. Because of this, among the most popular social networks that B2C content marketers have used in the last 12 months are Facebook at 97%, Instagram at 81%, YouTube at 72%, Twitter at 67%, and LinkedIn at 65% (Content Marketing Institute & MarketingProfs 2021:23). There are three phases through which content marketing must work: 1) top of the funnel (TOFU); 2) middle of the funnel (MOFU); and 3) bottom of the funnel (BOFU). TOFU is used to raise brand awareness, as the emphasis here is on content that will not force purchases, but will instead focus on providing information related to a particular need, problem, or on answering questions. This is where potential customers may encounter the brand or its new product or service for the first time. This phase therefore includes websites, blogs, infographics, e-books and similar. MOFU is used for including the targeted offer and here the content goes into depth; for example, comparative charts, webinars, guides and videos, amongst others. BOFU represents the final phase, during which potential consumers are directed to the content aimed at sales, and the tools of this phase are most often case studies, demonstration webinars, consultations and similar. This is the key phase in which the decision must be made (CMS Wire, 2019). Each of the above phases is of utmost importance. The TOFU phase must allow visibility, awareness; in the abundance of competition, it is necessary to find a way through which the potential consumer will reach the content wanting to be presented to them. In this phase, the potential consumer is looking for information in a large amount of competitors’ content. Search Engine Optimization (SEO) can aid in this part, as it will provide better visibility in search and thus increase the possibility of potential consumers discovering a website, blog, infographic, e-book and similar. After the first TOFU phase, in the MOFU phase we have content users and as such, the content itself is crucial in this stage. According to the Search Engine Journal (2020) “the average landing page conversion rate is 2.35%. If your website attracts 100 visitors, chances are that only 2 visitors will turn into leads. But even this figure comes with its prerequisites. Conversion happens only if visitors see your products/services as an ideal solution for the problem they are facing, or if they fit their interests and preferences.” Based on this, it is incredibly important to choose content in this phase and adapt it for the potential consumers. As mentioned above, comparative charts, webinars, videos, guides and similar are used here. The final BOFU phase is the phase in which a decision must be made by the potential consumer, who at this stage should already be willing to become a consumer of the product or service presented to them through the previous phases. Now, their decision needs to be finalized, they are likely to go through with the purchase, but what is missing is the final confirmation that this product or service is exactly what they need and want. The content at this stage must confirm the above and reassure them that their decision to purchase is the right one. Case studies, demonstration webinars, consultations, etc., are used in this phase, as already mentioned, but an additional drive is often needed here. Thus, nowadays many companies offer trial periods of using the product with free returns, various discounts and additional membership benefits, free gifts with purchase and similar. Reviews of satisfied consumers are also used here to convince potential ones of the correctness of the decision. The technical aspect is also important in this phase, as the purchase must be simple so that this last click does not undo all the well-done phases. The methods of payment, price and speed of delivery must benefit the customer. Content marketing is marketing used by many influencers.

The Cambridge Dictionary (n.d.) offers several definitions of the term influencer, for example: “someone who influences or changes the way other people behave: young people are increasingly influencers on their parents’ decisions”; “a person who is paid by a company to show and describe its products and services on social media, encouraging other people to buy them.”

4. AUTHORS’ CONTRIBUTION REGARDING GENERATION C

Different authors approach the definition of Generation C differently; while some idealize digitalization, others have a critical approach. In their work, Veen i Vrakking (2009) state that the speed is what defines consumer behavior of Generation C since speed is what marks the establishment of communication, sending messages and learning, creates an intolerance to waiting for a response to a sent message. The imperative of speed and reactivity are important reasons for practicing the skill of doing several activities at the same time or multitasking (Prensky, 2005; Veen i Vrakking, 2009; Tapscott, 2011). Brian Solis, a digital analyst, anthropologist and futurist, states that the letter ‘C’ in the very name of Generation C “presents a connected society based on interests and behavior. Gen C is not an age group, it’s a lifestyle. Members of Generation C are always on. They rely on the shared experiences of strangers to guide their actions. And, they know that other Gen C’ers rely upon their shared experiences to find resolution” (Infomentum, 2014:2). The definition of Generation C Infomentum uses in “Generating Success with Generation C” is that it is a “‘psychographic group’ who share a similar state of mind including personality traits, values, attitudes, interests and lifestyle. [Members of Generation C] are not linked by a date of birth.” (Infomentum, 2014: 4). The same report for members of this generation states that they are ‘digital natives’ who are always connected, communicating, computerised, community-orientated and are always clicking. In general, they are realists and materialists as well as being culturally liberal, politically progressive and upwardly mobile. They own a multitude of devices including smartphones, tablets, laptops and smart TVs that are regularly updated and replaced. Generation C is larger than any other demographic category and is constantly growing. As a result, their importance cannot be underestimated.” (Infomentum, 2014:4). "The true definition of Generation C lies in their constant demand for two-way communication. If the decline in radio listenership and television viewing has proven anything, it is that Generation C is not interested in broadcasting. They have their own opinions and - thanks to the Internet - they have more than enough channels through which they can share them” (Infomentum, 2014: 5). Raymond Morin’s 2015 article “10 Ways That Generation C Impact Us” states that members of Generation C affect society as a whole – they accelerate social change in organizations, call for political and social change, and encourage the emergence of new technologies. As connected consumers, members of this generation change the rules of marketing, adopt a sharing economy, become more environmentally conscious, and demand health care reforms through advanced technologies. Furthermore, it is stated that digital generations will learn and access information differently, while consuming cultural content in kilobits per second (Morin, 2015). Hanley (2019) states that there are only two generations: connected and unconnected. Those who “communicate, build relationships, and make online purchasing decisions become part of the Connected Generation” (Hanley, 2015: 15). Furthermore, Hanley (2019) defines the connected generation as “individuals who are willing and open to communicate, build relationships, and make purchasing decisions based on digital content and user experience.”, while calling the unconnected generation “everyone else,” i.e. "consumers prone to personal transactions, unwilling to communicate via email or other digital tools, and who have a general skepticism about the Internet." He also notes that the connected generation is sold to “based on their intention to buy, not their age” and that the above-mentioned generations do not have characteristics that would determine them based on the years of their birth.

When Hanley (2019) divides generations into connected and unconnected, he notes that traditional marketing tactics, which work on the unconnected generation (e.g. cold calls, recommendations, newspaper ads, TV commercials, radio ads, billboards, direct mail), will not work on the connected generation as well. He further notes that “the internet has changed the way consumers of the connected generation decide what to buy” and that “Google has called that moment of online decision-making the Zero Moment of Truth”. In addition to the above, Hanley instructs that for the “development of business in the modern market, it is necessary to capture the consumer of the connected generation in his Zero moment of truth” and lists five tactics that can help. These are 1) intimacy (embedding personality in messages); 2) vulnerability and humility (acknowledging mistakes and failures); 3) enriched media (transition from simple text to audio or video, such as YouTube, podcast, etc.); 4) social proof (testimonials, recommendations, reviews, etc.); 5) feedback (customer comments on blogs, social networks, etc.). According to Hanley, (2015:23) “consumers of the connected generation, when choosing a supplier for each individual product and service they need, have more options than they would ever need. The consumer of the connected generation wants to trust who he is doing business with. According to a 2013 brand engagement survey conducted by Gensler, 87% of consumers choose brands that match their values, and 71% of consumers will not buy brands whose values go against their own. The essence of the business is not what the company believes it is, but what the customer perceives it to be.” Furthermore, Hanley points out that consumers in the connected generation want to know who the company behind the products and services is and what benefits they get from it. He also states that “brands that win the battle for attention, go a step further and create in consumers the experience of using a brand with which consumers can connect on a deeper level and use it as part of self-expression.” Finally, Hanley concludes that “we live in a world of options, and our decision to digitize the essence, the soul of our business can either make us a ‘Choice’ - or just another choice in a sea of suppliers and commodity traders” (Hanley, 2015: 34). Hanley notes that “we live in the golden age of attention”, and further believes that web content must add value to users’ lives more than once because one-time wonders will not survive. He believes that Internet content users are maturing, that they are “willing to discriminate against shallow, worthless content” and that they “rarely chase headlines or tolerate bad web design.” At the same time, he also warns that “the connected generation does not want to give the content even a millisecond more than it deserves.” Although micro content is important and aids the continuous spreading of messages, he believes that marketing of long-form and enriched content should never be given up on (Hanley, 2015:41). According to research conducted by Barna & World Vision (n.d.:8) with respondents from the connected generation, 77% of them claim that events around the world are important to them, 57% feel connected to people around the world, 33% often feel deep concern for themselves, and 32% often feel that someone believes in them. “The connected generation feels the influence of broad, global trends more than they feel loved and supported by people close to them” (Barna & World Vision, n.d.:10). In addition to contemporary authors, there is one author who long ago predicted not only the Internet, but the Generation C as well. Humanity of Marshall McLuhan’s time could hardly fully grasp his brave predictions and the way he wrote them, using metaphor and oxymoron – even today’s society cannot fully comprehend the whole ideology of this medium of the future. In the coming decades, many of his messages will become even clearer and may take on a different meaning because, as McLuhan himself argued, it is not the content itself that matters, but the effect and the action – that is, the change that it achieves. The way McLuhan interpreted the media, alongside his brilliant lectures and performances, brought him numerous social accolades and recognition not only as a scientist, but also led him to a level of fame almost equal to the pop and rock stars of his time (Zgrabljic Rotar, 2008:3).

There is a famous saying originally formulated by John Culkin, which McLuhan liked to repeat: *"we shape our tools, and then our tools shape us"* (Logan, 2013:51); it depicts today's situation with various tools available to us on Internet. Rarely has a consumer not given his contact to a seller in order to receive notifications about their offers. This tool was designed by the consumer themselves as they placed themselves into a category and submitted their profile and later, this same tool affects the consumer themselves, convincing them of the benefits of the offers delivered to them. As a theorist, McLuhan was among the first in the world to link technology to the concept of tribes (Gabriels, 2012:1). Considered from today's perspective, we can spot many social networks in which influencers have their followers and earn based on their amount, through product or service recommendations. In a concrete example, every influencer on the social network Instagram with his followers makes a form of a tribe. Such tribes also exist on the social network Facebook, in various groups accessed by people of the same or similar interests. McLuhan also predicted YouTubers, bloggers and influencers on social networks when he claimed that the *"age of automation will be the age of 'do it yourself'"* (Danesi, 2015:264).

5. RESEARCH METHODOLOGY

In the selection process of people to participate in the focus group of experts, the approach to choosing the sample for it was to base it on the researcher's decision. A key feature of this type of sampling is the researcher's assessment, according to which s/he decides who can offer the best information to achieve the research objectives. This type is used in situations where one wants to describe a particular phenomenon or investigate something about which little is known. In this particular case and for the purposes of this paper, the invitation to participate in the group interview was given exclusively to experts dealing with promotion on the Internet and social media, as well as marketing managers employed on social media platforms dealing with their maintenance and communication with end users. Given the chosen research method, the objectives of researching through a focus group are defined as:

- identifying the role and importance of social media in consumer behavior of Generation C;
- identifying in which phases of the process of product selection and purchase social media is present;
- identifying which social media platforms Generation C consumers most often use when choosing a product or service;
- determining the relevance of social media and UGC (User-Generated Content or the content created by product users) during and after consumption of the product or service;
- determining the level of credibility of content published on the observed social media platforms
- examining the relationship between positively or negatively intoned UGC and FGC (Firm-Generated Content) with the intent of selecting a product or service.

Eleven experts responded to the call. The structure of the sample by gender consisted of 54.54% women and 45.45% men. Furthermore, in the sample there were 48% of experts dealing with promotion on the Internet and social media; a share of 52% represented marketing managers employed on social media platforms who deal with their maintenance and communicate with end users. Analysis of textual data yielded the following results. Experts believe that social media has changed the behavior of today's modern consumers, and this is especially evident in their expressing of satisfaction and dissatisfaction on social media. They also believe that the division according to the age structure of consumers does not make a clear distinction between consumers of Generation C and of Generation Z. Therefore, when analyzing communication on social media, they primarily take into account psychographic characteristics and based on them, create the distinction between generation C and Generation Z.

Furthermore, Generation C consumers today use social media to gain insight into the specific activities provided by the manufacturer of the purchased product, to communicate with other users of the product, as well as for two-way communication with the supplier of the product or service. However, in addition to changing the behavior of both Generation C and Generation Z, social media has also changed the behavior of product manufacturers. Respondent – expert 6: “Generation C consumer wants to trust the manufacturer they purchase a product or service from and they easily share their satisfaction or dissatisfaction within a group. The satisfaction of Generation C consumers originated as being shared on social media. Through social media we can notice the problem sooner, before the rating of the manufacturer on the Internet starts to fall.” The respondents find that Generation C consumers which have experienced an incredibly negative experience have a much higher motivation for sharing their comments, as opposed to consumers who have had a positive experience with the purchased product or service. Respondent – expert 2: “It was shown that the increase in the rating correlates with the increase in the price, which will not affect Generation C consumer’s significant withdrawals from the product.” With the above, experts see that there is more and more advertising on social media, as well as that promotion through social media can achieve a viral effect. The experts’ opinion is that in the phase before realizing the need, videos with a negative tone can damage the existing image of the product or service, or create a negative image of the product or service. Videos with a positive tone, on the other hand, will affect the creation of a positive image of the product or service. In this phase, the sender of the information and their credibility play a large role, because if Generation C consumers can identify with the post on social media, it directly affects the perception of the credibility of the content and the image of the product. Experts believe that consumers of Generation C, or Generation Z, use social media during the phase of searching for information. Generation C, or Generation Z consumers search for information related to the activities of the manufacturer, as well as specific interests that cannot be reached by other forms of communication. Social media is also present in the phase of evaluating alternatives. They make it fast and simple to compare dozens of available alternatives, and make it easier to choose the best value for money, which benefits both Generation C and Generation Z. Experts agree that social media is becoming more sales-oriented, and that there is a growing number of platforms that enable the sale of products and services. Through social media, Generation C consumers most often book and buy a product or service. Respondent – expert 9: “Facebook is focused on sales and as such is becoming extremely sales-oriented. Facebook turned out to sell very well, which was inconceivable until recently. Until recently, social networks were an inspiration, and now they are a sale.” In addition to social media, Generation Z consumers also buy through traditional media, which directly depends on the medium through which they will achieve a lower price of the service. After purchasing a product or service and using it, Generation Z consumers document their experiences and post photos primarily to brag about the purchased product. The ease of posting content on social media in this phase is also encouraged by new technological solutions such as cameras that do not store captured photos on a memory card but post them directly on Facebook, Instagram, or TikTok. Experts believe that leaving comments related to the service provided is extremely important because they themselves collect information in this way, and believe that such a way of behaving is appropriate towards future users. Respondent – expert 8: “Users no longer trust FGC but UGC, i.e. direct experiences of the persons themselves – persons who have used the product or service.” When it comes to the type of UGC, they trust the text (comments and reviews) more than the photos because they believe that the photos can be altered by various programs and show a non-realistic condition and non-existent consumption by consumers. They also emphasize the importance of the quality of published content because in practice it has been shown that low-quality video or photos will not receive a lot of views and attention, while high-quality will.

Comparing platforms (Facebook, Instagram, YouTube, TikTok), research shows that Generation C consumers trust the content posted on Facebook the most as it contains the largest amount of content posted by their friends, and they trust them more than strangers on social media. Facebook groups provide a sense of community; advice shared in specific groups related to product or service experiences have a big impact on the choosing of a product. Facebook is of great importance in the phase of recognizing the needs of Generation C consumers. Facebook is used for promotion and branding; videos posted on Facebook and likes have a greater role in rising awareness regarding a different product or service. Despite this, Facebook and Instagram have become extremely sales-oriented and have been shown to effectively sell products and services. In this context, their role in the future is expected to grow. Summarizing textual data regarding the relationship between social and traditional media, experts claim the traditional media has a great role in the pre-realization phase. Both types of media are present in the information search phase. Generation C consumers search for information about products and services while valuating alternatives; they also use traditional and social media during the purchase itself. Their choice of which media to use for purchasing depends directly on the media which offers the lower price. In most cases, Generation C consumers access social media via smartphones, and use fewer and fewer tablets for this purpose. The reason for this is the growing screens of smartphones. Respondent – expert 3: “Tablets lose their impact, mobile phones replace them, especially mobile phones with large screens. The screen dimension determines the matter of content. You choose the screen size according to the content you are interested in. The expectation that the tablet will replace a laptop or personal computer is wrong.”

6. CONCLUSION

Generation C has changed the way of advertising, making consumer decisions, and it also changed the way of buying and selling. It has enabled a quick discussion of products and brands, and the ability to review them on a global scale. It has raised the consumer standard like nothing before. This is a generation that likes to think before buying, to consult; however, impulsive shopping has not disappeared. On the contrary, many reviews and recommendations have great power to influence consumer behavior and as such can lead to impulsive buying by consumers who are prone to it. As for the very prediction of Generation C consumer behavior, in accordance with the knowledge gained through the available literature – which points to the unstoppable growth in members of this generation, as well as various types of content marketing seeking to influence their consumer behavior – it is concluded that through their continuous communication of a reviewer nature, consumers become more demanding and cautious in making their decisions. The dissatisfied consumer is no longer afraid to share his dissatisfaction, and the dissatisfaction of members of Generation C can become globally available within moments. Negative reviews are not the biggest enemy of brands, as sometimes they play in their favor as they give a dose of credibility. Too positive reviews can seem paid, and this audience wants objectivity and concreteness without unnecessarily embellishment of the story around the product. High speed of reaching information about the requested product is expected, but so is quality content. Here is an opportunity for brands to place first-hand information, but not in the traditional way of aggressive advertising, but in modern ways with content marketing. Modern marketing is not advertising – it is content and it must provide a certain value and benefit to the consumer, and often the possibility of two-way communication as well.

LITERATURE:

1. Barna & World Vision (bez dat.). The connected generation. Faith for the Future. Accessed through Barna Access. Accessed 23.05.2021.: https://access.barna.com/wp-content/uploads/2019/10/The-Connected-Generation_Access_compressed.pdf.
2. Barna & World Vision (bez dat.a). The connected generation. The Barna group. Accessed through Digital Academy. Accessed 23.05.2021.: [https://digitalacademy.cru.org/content/dam/digital-academy/playbooks/Cru%20Marketing%20-%20The%20Connected%20Generation%20\(Barna%20Report\).pdf](https://digitalacademy.cru.org/content/dam/digital-academy/playbooks/Cru%20Marketing%20-%20The%20Connected%20Generation%20(Barna%20Report).pdf).
3. Content Marketing Institute & MarketingProfs (2021). 11th Annual B2C Content Marketing Benchmarks, Budgets, and Trends: Insights for 2021. Accessed through Slide Share. Accessed 17.04.2021.: <https://udayjonwjwrtn7kixzuo6eiaby-ac4c6men2g7xr2a-www-slideshare-net.translate.goog/CMI/11th-annual-b2c-content-marketing-benchmarks-budgets-and-trends-insights-for-2021-241725618/1>.
4. Cambridge Dictionary (bez dat.). Influencer. Accessed through Cambridge Dictionary. Accessed 17.05.2021.: <https://dictionary.cambridge.org/dictionary/english/influencer>
5. Chaney, D., Touzani, M., & Ben Slimane, K. (2017). Marketing to the (new) generations: summary and perspectives. *Journal of Strategic Marketing*, 25(3), 179–189. Accessed through Taylor & Francis Online. Accessed 15.05.2021.: <https://www.tandfonline.com/doi/full/10.1080/0965254X.2017.1291173>.
6. CMS Wire (2019). The 3 Flavors of Content: ToFu, MoFu and BoFu . Accessed through CMS Wire. Accessed 09.05.2021.: <https://www.cmswire.com/content-marketing/the-3-flavors-of-content-tofu-mofu-and-bofu/>.
7. Danesi, M. (2015). Popular Culture: Introductory Perspectives. Accessed through Google Books. Accessed 25.05.2021.: https://books.google.hr/books?id=yz59CAAAQBAJ&pg=PA264&lpg=PA264&dq=The+age+of+automation+to+be+the+age+of+do+it+yourself++danesi&source=bl&ots=5m-XBtiUJH&sig=ACfU3U1VdOzfDjE1_QaRNHyoo5jAG6Tcug&hl=hr&sa=X&ved=2ahUKEwimtKCd9efwAhVvk4sKHSvpDN0Q6AEwDHoECBoQAw#v=onepage&q=The%20age%20of%20automation%20to%20be%20the%20age%20of%20do%20it%20yourself%20%20danesi&f=false.
8. Disrupt Marketing (bez dat.). The Connected Generation. 12 Digital youth trends you need to know. Accessed through Disrupt Marketing. Accessed 26.05.2021.: <https://disruptmarketing.co/resource/the-connected-generation/>.
9. Gabriels, K. (2012) McLuhan's Philosophy of Media – Centennial Conference, Chapter: Rethinking McLuhan's concept of 'tribe' in view of 'Second Life', Belgium: Royal Flemish Academy of Belgium for Science and the Arts. Accessed through ResearchGate [online]. Accessed 25.05.2021.: https://www.researchgate.net/publication/303809672_Rethinking_McLuhan's_concept_of_tribe_in_view_of_Second_Life.
10. McLuhan, H. M. (2008) Razumijevanje medija: mediji kao čovjekovi proizvođači. Zagreb: Golden marketing - Tehnička knjiga.
11. Morin, R. (2015). 10 Ways That Generation C Impact Us. Accessed through Currati. Accessed 18.05.2021.: <https://curatti.com/generation-c-center-social-transformations/>.
12. Dialog komunikacije (2019). Provedeno prvo istraživanje o generaciji Z u Hrvatskoj. Accessed through Dialog komunikacije. Accessed through Dialog komunikacije. Accessed 03.05.2021.: <https://dialog-komunikacije.hr/blog/provedeno-prvo-istrazivanje-o-generaciji-z-u-hrvatskoj/>.
13. Fistić, M. (2019). Utjecaj digitalizacije na generacijski jaz – od bejbibumersa do generacije Z. *Communication Management Review*, 04(01), str. 120-139. Accessed through hrčak. Accessed 03.05.2021.: <https://hrcak.srce.hr/223656>

14. Fleishmanhillard (bez dat.). A new virtual sanity. Culture over consumption. Youth&Culture. Accessed through isuu. Accessed 18.04.2021.: https://issuu.com/fhflondon/docs/gen_c_a_new_virtual_sanity_report?fr=sOTg4ZDEzOTgzNzQ.
15. Global web index (2020). Gen Z. Observing the latest trends on Gen Zs. Accessed through Global web index. Accessed 05.05.2021. https://www.globalwebindex.com/hubfs/Downloads/Gen%20Z%20-%20GWI.pdf?utm_campaign=Generic%20nurture%202019&utm_medium=email&_hsmi=98894404&_hsenc=p2ANqtz-9Cfi2W3dIzBQsgbRwD8CPvNpGtUbNZLr0pfQg-TOuQg2C8FIRapNtGyrE6SeudoZXINB8tTAFy6KM1Lv60dFdrO4xURg&utm_content=98894404&utm_source=hs_automation
16. Hanley, R. (2019). 5 Content Marketing Tactics the Connected Generation Can't Resist. Accessed through Ryan Hanley. Accessed 18.05.2021.: <https://ryanhanley.com/5-content-marketing-tactics-the-connected-generation-cant-resist/>.
17. Hanley, R. (2015). Content warfare. how to find your audience,tell your storyand win the battlefor attention online. Accessed through Ryan Hanley. Accessed 19.05.2021.: <https://ryanhanley.com/wp-content/uploads/2019/11/content-warfare-print-ready.pdf> .
18. Hardey, M. (2011). Generation C: content, creation, connections and choice. International Journal of Market Research, 53(6), 749–770. Accessed through Academia. Accessed 11.05.2021.: https://www.academia.edu/8472490/Generation_C_content_creation_connections_and_choice_MARKETING_COMMUNICATIONS .
19. Infomentum (2014). Generating Success with Generation C. Accessed through Infomentum. Accessed 27.05.2021.: <https://www.infomentum.com/hubfs/Gen%20C/Infomentum%20Generating%20Success%20with%20Generation%20C%20Report.pdf> .
20. Jones, C. i Shao, B. (2011). *The net generation and digital natives: implications for higher education*. York: Higher Education Academy.
21. J. M. Tvenge (2017). Internet generacija. Dezorijentisanost dece u digitalnom dobu. Psihopolis Novi Sad: Psihopolis Institut.
22. Logan, R. (2013). McLuhan Extended and the Extended Mind Thesis. Accessed through Research Gate. Accessed 25.05.2021.: https://www.researchgate.net/publication/267037788_McLuhan_Extended_and_the_Extended_Mind_Thesis_EMT .
23. New York Post (2020). Generation Z is bigger than millennials — and they're out to change the world. Accessed through New York Post. Accessed 08.05.2021.: <https://nypost.com/2020/01/25/generation-z-is-bigger-than-millennials-and-theyre-out-to-change-the-world/> .
24. Nielsen (2012). Introducing Generation C Americans 18-34 Are the Most Connected. Accessed through Nielsen. Accessed 04.04.2021.: <https://www.nielsen.com/us/en/insights/article/2012/introducing-generation-c/>.
25. Nielsen (2014). The digital consumer. Accessed through Nielsen. Accessed 05.04.2021. <https://www.nielsen.com/wp-content/uploads/sites/3/2019/04/the-digital-consumer-report-feb-2014.pdf>.
26. Opreana, A., Vinerean, S. (2015). A New Development in Online Marketing: Introducing Digital Inbound Marketing. Expert Journal of Marketing, 3 (1), str. 29-34. Accessed 18.04.2021. <https://marketing.expertjournals.com/23446773-305/>.
27. Prensky, M. (2005). Digitalni urođenici, digitalne pridošlice: razmišljaju li doista drugačije. Edupoint – Časopis za primjenu informacijskih tehnologija u obrazovanju, 40(5).
28. Search Engine Journal (2020). Buyer-Centric Content: How to Write Content for TOFU, MOFU & BOFU. Accessed through Search Engine Journal. Accessed 09.05.2021.: <https://www.searchenginejournal.com/buyer-centric-content/381406/#close> .
29. Selwyn, N. (2009) . *The digital native – myth and reality*, Aslib Proceedings, 61(4), 364 – 379.

30. Tapscott, D. (2011). *Odrasti digitalno: Kako mrežna generacija mijenja svijet*. Zagreb: Mate d.o.o. i Zagrebačka škola ekonomije i menagementa ŠEM
31. Veen, W. i Vrakking, B. (2009). *Homo Zappiens and its cusequences for learning, working and social life*. Achen: RWTH.
32. Vision Critical (bez datuma). The everything guide to Generation Z. Accessed through Vision Critical. Accessed 08.05.2021.: https://www.apogee.us/wp-content/uploads/2017/05/GenZ_Final.pdf .
33. Think with Google (2013). Meet Gen C: The YouTube Generation. Accessed through Think with Google. Accessed 04.04.2021.: <https://www.thinkwithgoogle.com/consumer-insights/consumer-trends/meet-gen-c-youtube-generation-in-own-words/> .
34. We are social & Hootsuite (2021). Digital 2021. Global Overview report. Accessed through We are social. Accessed 07.04.2021.: <https://wearesocial.com/digital-2021> .
35. We are social & Hootsuite (2021a). Digital 2021: Croatia. Accessed through Datareportal. Accessed 12.04.2021.: <https://datareportal.com/reports/digital-2021-croatia>.
36. Zgrabljic Rotar, N. (2008). Razumijevanje medija : Marchall McLuhan - 40 godina poslije. Accessed through Crosbi. Accessed 25.05.2021.: <https://www.bib.irb.hr/416234> .

INFORMATION AND COMMUNICATION SUPPORT FOR BUSINESS ACTIVITIES IN GENERAL HOSPITAL

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ABSTRACT

Nowadays, the work of general hospitals without information and communication support is unimaginable. Due to information and communication support, it is possible to create an integrated hospital information structure that combines business, hospital, radiological and laboratory information systems. In addition to this horizontal integration within the hospital, there is also a vertical integration of the hospital to other stakeholders in health care (Croatian Institute of Public Health, Croatian Institute of Emergency Medicine, Croatian Health Insurance Fund, family physicians and pharmacies). Horizontal and vertical integration, from the economic point of view, enables more efficient and effective performance of the hospital, which is ultimately measured through positive financial indicators (savings in human, material resources as well as increasing revenue). The subject of the research in this paper is information and communication support for business processes in a general hospital. The problem studied is how to apply modern information and communication technology in the hospital in achieving positive financial indicators. The purpose or main goal of the research is to show how information and communication technology affects improved conduct of business processes in the hospital (how it positively affects management and more effective control) and thus the improvement of economic indicators. The hypothesis that is imposed from the purpose of the research is: with the application of information and communication support to business processes in the hospital, the business results are improved. The methods used to confirm the hypothesis are observation and measurement, and a case study. The introductory part of the paper presents the context of the topic, after which the research is explained. Through the presentation of research results and discussion, an attempt to confirm the hypothesis is made. In conclusion, all this is synthesized and guidelines are given for further research related to the innovative application of information and communication technology (artificial intelligence, Internet of Things) with the aim of improving the work of a hospital and improving financial indicators.

Keywords: *business processes in a hospital, economic indicators, information and communication support, vertical and horizontal integration*

1. INTRODUCTION

We live in a time in which, thanks to all the progress, life expectancy has been extended, which results in a greater burden on the health system. In other words, patients consume more drugs, they consume more medical materials, and there are more hospitalizations. On the other hand, medical technology is advancing. There are sophisticated diagnostic and therapeutic procedures, sophisticated methods of treatment whose cost is high. In addition to the above, health insurance systems in the world sometimes cause the impossibility of adequate treatment. In the case of individual insurance, individuals often do not pay for insurance, so in the case of illness they cannot obtain adequate health care (the example of the United States). In the case of solidarity insurance, it happens that allocations from employees' salaries are not sufficient or

there are simply not enough employees to raise enough money for adequate health care (the example of Croatia). Information and communication technology can help in financial planning and management, in monitoring and reporting on financial effects, in organizing, projecting and planning these effects for future operational periods. Due to all of the above: the age of the population, sophisticated treatment methods, inadequate funding, and health systems around the world are in crisis, i.e. they have high costs. We need to find ways to deal with increased costs and how to increase revenues. Rationalization of hospital operations (Verhovec, M. et al., 2014) with the aim of increasing efficiency and efficient use of resources while improving the level of service quality and reducing hospital expenditures and their losses are becoming an increasingly important topic. One of the solutions is the application of information and communication support to business processes that take place in health care. In this paper, the emphasis is on general hospitals. The aim of this paper is to show that the application of information and communication technology can reduce costs and increase the value of economic indicators. In other words, by applying information and communication support to business processes in the hospital, it is possible to influence the economic viability of the hospital.

2. APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGY IN HOSPITAL

Justification theme is reflected in the strategy of development of health care in the period 2020-2022 (MIZ, 2020) and is visible throughout the text ... " to a complete computerization of the Ministry and the health care system will improve the management of medical records in accordance with the requirements of the protection of personal data, will provide are availability, security, data sharing and monitoring, indicators of quality of clinical efficacy and availability, patient safety, unexpected adverse events, transparency of all healthcare procedures and rational use of all resources with a sense of economic reality... "(MIZ, 2020: 8) ... „By applying telemedicine services, it is possible to make an accurate diagnosis in the shortest possible time and enable further fast and effective treatment, which is especially important in emergencies. The application of telemedicine services in radiology, neurosurgery, surgery and neurology avoids unnecessary and repeated diagnostic and therapeutic procedures and shortens the patient's stay in the institution of the telemedicine access center. " (MIZ, 2020: 5). For information and communication technology to be a support in the course of business processes, it must be adequate, which means that it is not an end in itself but to be applied where it is really needed and in the way it satisfies the business process. The prevailing opinion is that information and communication technology (ICT) is used by "both priests and thieves"; everything is "just a matter of technology". This relativization of the role of information and communication technology can be dangerous because it causes its avoidance, which has consequences for the hospital's operations. On the contrary, the application of information and communication technology needs to be taken seriously and quite widely. To be effective, medical staff:

- through education should be computerized and information literate
- who in formal education did not have training related to information and communication technology, should attend courses - lifelong learning
- should be continuously trained to work with specific applications (e.g. integrated hospital information system).

In addition, the hospital management should create conditions for the effective application of information and communication technology within the business processes of the hospital). The following will be displayed not on it is vital prerequisites to information communication and technology support the business activities in the hospital.

2.1. Integrated hospital information system

The integrated hospital information system consists of:

- hospital information system
- radiological information system
- laboratory information system
- business information system.

The integrated hospital information system enables the monitoring of the most important process in the hospital "patient treatment". The hospital information system facilitates work in dispensaries and wards. For each patient it is possible to quickly fill in administrative data (with the help of vertical connection with CEZIH - "CEZIH check"), writing findings, printing forms, enrolling in nursing (nursing part), writing medical documentation in the department (history, epicrisys, discharge, discharge letter). It is also possible to order radiological or laboratory tests. There is full integration with the radiological information system and the laboratory information system. In the hospital information system, tests are ordered, accepted in the mentioned diagnostic systems, and radiological images or blood tests are returned to the hospital system in the archive of patient findings. Integration is achieved at the data level based on the so-called. HL7 standard. In the case of outpatients, findings (radiological images or blood findings) are sent directly to family physicians via a central information system. In the background of the integrated hospital information system is a business system that takes care of the accounting and finances of the hospital. It is connected to the integrated hospital information system at the level of data on the consumption of materials and medicines and invoices for treatment costs. Advantages: faster and more efficient implementation of the business process. Resource savings: labor, material resources, time. More complete recording of materials and procedures in the polyclinic, i.e. stacks in hospital treatment (Poje, Braović, 2019), which leads to higher invoicing of services.

2.2. Telemedicine

If a patient needs a consultation opinion, then the radiological images are sent via an application to another doctor who examines them and gives his opinion. In addition to councilor opinion, telemedicine also enables "distance learning". Advantages: reduction of costs for the patient, faster arrival to the diagnosis, which means that we do not need to drive the patient to Zagreb, for example, there is no need to be filmed... it is not necessary for the patient to stay in hospital for two or three days. The savings are also in the fact that we do not need to send employees somewhere for a seminar (accommodation costs, per diems, etc.).

2.3. Dietitian

This system allows for a personalized diet with respect to the patient's illness. It is connected directly to the hospital information system. In the hospital information system, a diet is set for a specific patient. Everything is visible in the kitchen and in that way it is known what needs to be prepared for a certain patient. Advantages: there are no mistakes in nutrition, nutrition becomes part of the treatment, costs related to the purchase of food are better controlled, and optimal stocks are provided.

2.4. Pharmacy

All transactions related to medicines and medical consumables are performed here. The application of the system enables unit therapy per patient and control of antibiotic consumption. All data on drugs and medical supplies are carried to the pharmacy and transferred to the hospital operating system. Advantages: great savings in the procurement of medicines and medical supplies because the condition is visible at all times.

There are signal stocks that warn you when and what to get. Through unit therapy, there is no overuse. Additional costs due to procurement misunderstandings are avoided. Namely, ordering is automated according to wholesalers, and each box of medicine is serialized, which enables unit therapy and monitoring, precise monitoring of consumption (optimal stocks are enabled).

2.5. Reporting system

There are a set of reports that support management in decision making. At any time, managers themselves can release reports on financial indicators, quantitative indicators, employee performance and quality indicators. Benefits: Faster management response leading to reduced costs and increased revenue. In addition, the savings are in human resources that would eventually prepare reports and in the time of reporting.

2.6. E business

This is about the vertical integration of the hospital with other stakeholders in health care. The hospital works with eReferrals, eRecipes, eFindings, and eNewborn. The application of ICT in this case improves the vertical integration, i.e. connecting the hospital with other stakeholders in the health system: family physicians (FP), pharmacies, HZZO, HZJZ. ICT enables referrals to be sent electronically on the FP side, orders to be made to the hospital, prescriptions to be sent to the pharmacy. On the hospital side, the use of ICT enables the receipt of electronic referrals, faster admission of patients, work planning (by setting deadlines for ordering visible FPs), sending findings electronically to FPs and registering newborns. All of the above results in faster and more efficient activities, fewer mistakes, and savings in time and manpower and material resources. All this also leads to financial savings.

3. RESEARCH

3.1. Conducted a survey on the support of information and communication technology

The conducted study on a sample of 602 health care workers shows (Lucas, 2015; Braš et al., 2015; Spitzberg, 2013):

- 66% say they work faster with information and communication technology (ICT)
- 76% say knowledge of ICT makes everyday work easier
- 56% say that to them ICT leaves more time to work with patients
- 88% say that ICT makes it easier for them to access important information for their job

The results of the questionnaire marked in blue show:

- that the application of information and communication technology assists nurses/ technicians in performing their daily work
- that the application of information and communication technology speeds up administrative tasks and leaves more time for patient care.

3.2. Observation and measurement

We observed and measured the work of nurses / technicians in the process of entering administrative data with and without smart cards (surgical polyclinic and internal medicine polyclinic). The duration of the whole research was three weeks in order to prove the principle of repeatability and to annul the element of chance (Williams, Cooper 2017; Domitrić 2016; Bruce 2003; Kennedy 2017). The aim of the implementation of observation and measurement is to prove exactly that the application of information and communication technology helps to work faster and reduce administration. Observation and measurement is carried out on three occasions (three months in a row - in each month one week without the use of readers and cards, one week with the use of readers and cards). Here, we show results for first week, only.

Observation and measurement are designed in such a way that all variables are the same (employee, same computer, number of patients, diagnosis of patients, and type of referral). The only thing that changes is working with and without a reader and card. Large activities work a certain clinic for a week without the use of a smart card, the second week the same clinic works with a smart card. Measured: number of patients, patient enrollment time, patient processing time (for the same incoming diagnosis), number of patients performed per unit time.

Results:

Smart card reader application	Number of patients / hour	Average patient enrollment time (min)	Number of patients who came to pick up the findings / hour	Patient treatment time (for the same incoming diagnosis) / minute (from enrollment to departure)
NO	10	6	3	20
YES	15	4	0	15

Table 1:1st iteration (first week without, second week with smart card)

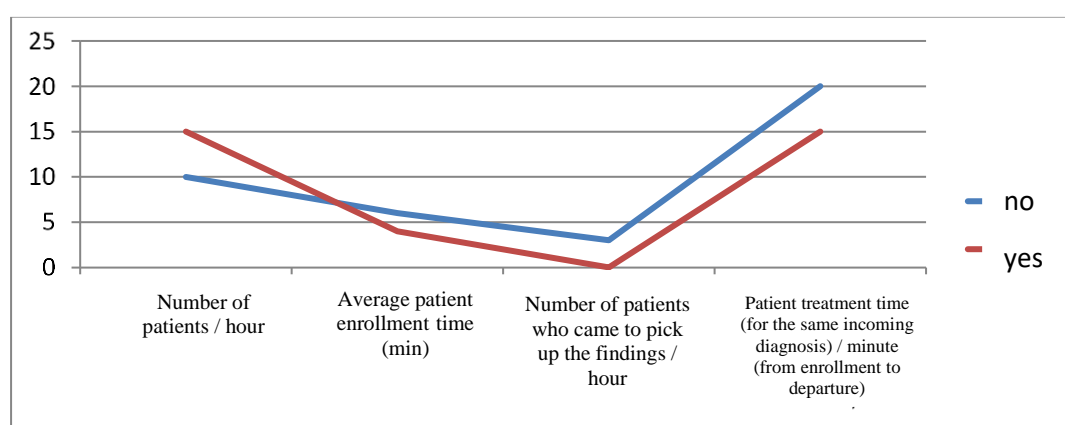


Figure 1: Results of the first iteration

The second task in this part of the research was to perform observation and measurement of work with and without the application of a decision support module. The task was performed by observing and measuring to prove exactly how the application of the reporting module helps faster work and more accurate reports (reduced number of errors). The observed and control group consists of the same persons. They work at Excel for a week, copying data from original documents. The second week they use a reporting module. Observation and measurement is performed on three occasions (three months in a row - in each month one week data from individual documents are copied, one week a reporting module is used). Here, we show results for first week. Observation and measurement is formed in such a way that all variables are the same (employee, same computer), type of analysis - "Average time duration of hospitalization." The only thing that changes is the way it works: the use and non-use of the reporting module. Here it measures: the time and number of employees needed to process the information collected "manually" and the time of copying to Excel, and the number of errors. On the other hand, the time and number of employees required to obtain the same reports (related to nursing documentation) are measured using a reporting module. The person observing and recording the results is the plan and analysis manager. The time and number of people needed to process the information collected "manually" and the time of copying to Excel and the number of errors

are observed and measured. On the other hand, the time and number of people needed to obtain the same reports (related to nursing records) are measured using a reporting module. For the purposes of measurement, one standard report is taken - "Average time duration of hospitalization".

Results:

Week: 1.	Application of reporting modules	Number of people	Time (min)	Number of errors
1.	YES	1	0.5	0
2.	NO	3	180	2

Table 2: First week

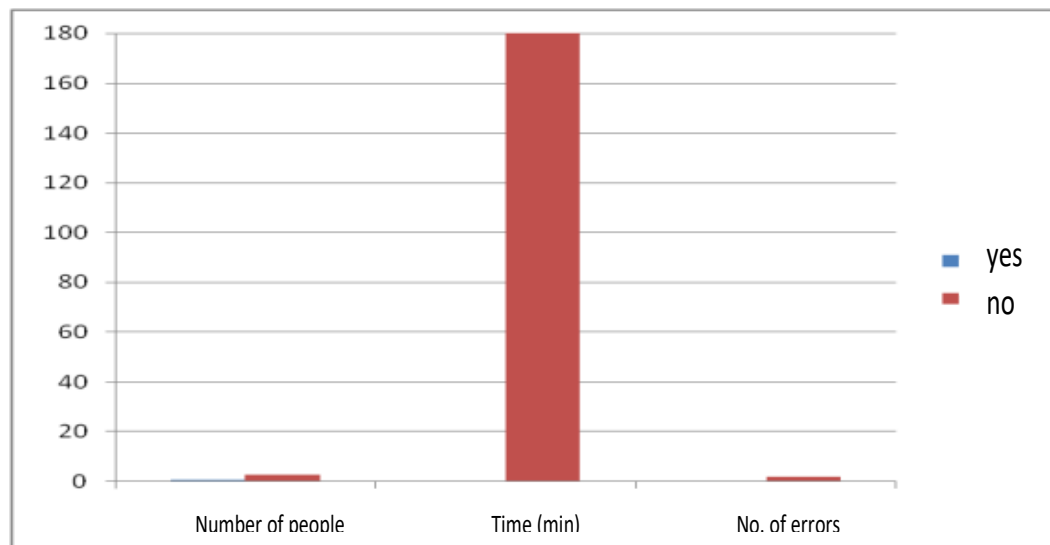


Figure 2: Measurement results 1st month

4. BUSINESS PROCESS MODEL "PATIENT TREATMENT"

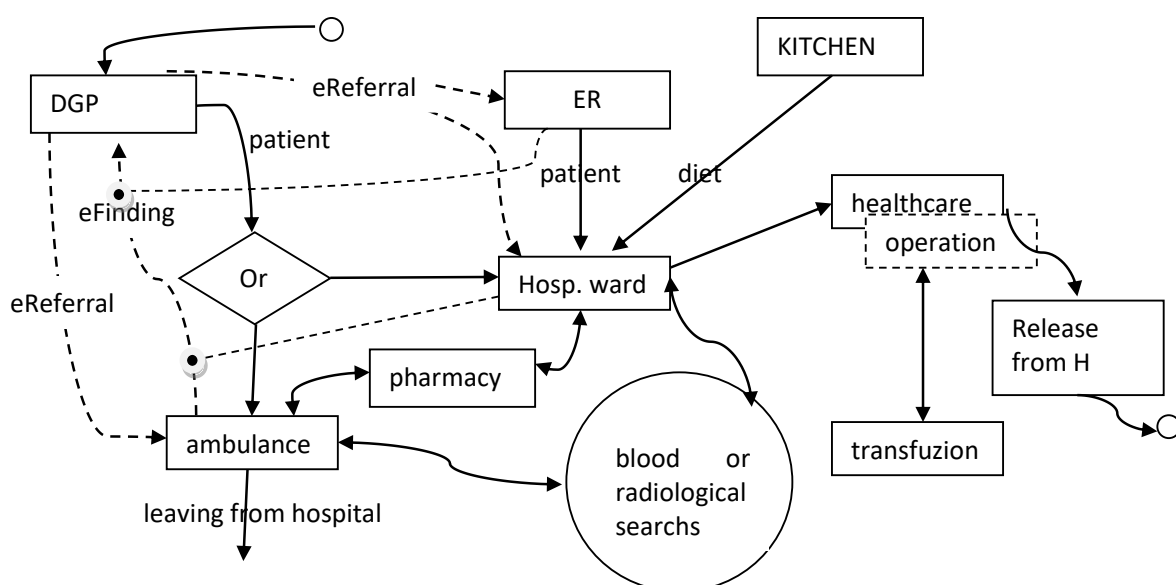


Figure 3: Business process "treatment of the patient"

By observing the business process of "patient treatment", it was determined that it takes place in the manner described below. The description will highlight the places of support of information and communication technology for the business process. It should be noted that the savings due to ICT support to the business process were analyzed. The patient enters the hospital in three ways: with a referral to the polyclinic, regular admission to the hospital (mainly due to surgery) and through a unified emergency hospital admission (with or without a referral). The family medicine doctor (FP) refers the patient to the hospital. FP issues an electronic referral that is visible at the hospital in the clinic where the patient comes. ICT helps here because the patient does not have to come to his FP just for a referral but comes directly to the hospital. When registering a patient in the outpatient clinic and admitting him to the waiting room, the medical staff or administrator accepts the referral from CEZIH and thus automatically downloads the patient's identification data and the referral data (on the referral diagnosis). ICT helps here as evidenced through observation and measurement. If the patient needs a diagnostic examination (blood sample or radiological examination), the doctor in the outpatient clinic places an order according to diagnostic activities (radiology or biochemical laboratory). The patient goes for an imaging or blood draw and as soon as the examination, radiological picture or the results of the blood draw are visible to the doctor in the clinic. The integration of the information system here helps to have no paperwork; it speeds up the process of getting to the diagnosis. If the patient can be taken care of in an outpatient clinic, he is discharged home after treatment. The case in which the consumption of materials and medicines and the so-called diagnostic-therapeutic procedures are available to the invoicing department which, based on the case, generates an invoice paid by the HZZO. When recording the consumption, there is a direct connection with the condition of the departmental warehouse, the quantities are checked and it is prevented from going into negative stocks. When admitting a patient through a unified emergency hospital admission, if the patient has a referral, the procedure is the same as in the outpatient clinic. If the patient comes without a referral, the enrollment procedure is very simple. The help of ICT is reflected in the moment of the need for hospitalization of the patient. It is done automatically: the patient record is opened and all expenses are automatically transferred to the ward. In the ward there is a connection of the hospital system with the application in the kitchen in the sense that the medical staff in the ward orders a diet (food) and the request is visible in the kitchen. The diet is completely personalized and is part of the healing process. The outcome of treatment can be a cure or improvement of the condition and in that case the patient is discharged. The birth certificate with all the materials used and the procedures performed is visible in the invoice department. Invoicing is done here according to the health insurance bureau). Otherwise, invoicing for both outpatient clinics (specialist counseling care) and for hospital treatment is fully automated. During hospitalization (the patient's stay in the hospital), specialist examinations and diagnostic tests are required. ICT enables the automatic ordering of the same and the return of findings to the archive related to the patient. If a patient needs surgery, ICT helps prevent blood substitution by allowing unambiguous and safe blood ordering. Observing the process of "patient treatment", it was concluded that it is a process composed of a series of causal activities between which there is a connection at the level of information exchange. The whole process is supported by information and communication technology that saves time, material and human resources. It will be described the way how ICT support process, in the next chapter.

5. RESULTS AND DISCUSSION

When considering the impact of information and communication technologies on the hospital's operations, it should be emphasized that there are direct economic effects and indirect economic effects. Direct economic effects are immediately measurable in money through cost reductions and revenue increases.

Example: the verification of the justification of searches by comparison with guidelines within a laboratory or radiological information system is X HRK per year. This information is available to the management through the reporting system, always in a certain period and on a "click". The second example is directly visible by comparing invoices from suppliers that the digitization of radiology saves on films, developers and fixes between HRK 500,000.00 and HRK 750,000.00 per month. Indirect economic effects are not immediately visible in money through cost reductions and revenue increases. For them it is interesting to observe how ICT optimizes the running of internal processes, as well as affecting the effective work of the employees and increase their knowledge, to optimize internal processes and trained employees affect patient satisfaction. Through all this, indirectly, the financial effects are measurable. To measure indirect economic effects, the so-called Balanced Scorecard method (Kaplan, Norton, 1993) ¹an example is the use of smart cards in the work of the polyclinic, primarily in the admission of patients. By observing and measuring, it is possible to determine exactly how many patients were received in a unit of time and how long it takes to register one patient with and without the use of a smart card. So we still don't have a financial indicator. However, the analysis can get to the data on how many percent of the accelerated registration process, how many patients we have received per unit time. This tells us that the internal process is improved because it is faster. The analysis also shows that employees work faster and more efficiently (on the one hand there are fewer mistakes because, for example, referrals are withdrawn directly from HZZO, and on the other hand the so-called DTP procedures are better recorded - first examination, control examination, wound dressing...which leads to better collection by HZZO ... we come to the financial indicator). Using information and communication technology, the patient is more satisfied because he performs diagnostic tests faster (e.g. he comes to the surgeon and needs an X-ray ... the doctor writes an order directly to radiologists, they know who comes to them and what to do before the patient physically reaches them - they can organize their time and perform a larger number of patients. When the patient is imaged, the X-ray image is currently available to the surgeon even before the patient returns. In this way, the patient, quickly and efficiently performs diagnostic tests, no waiting and he is more satisfied. Optimization of the internal process, trained employees and more satisfied patients leads to a better financial effect. Why? In addition, it can be concluded that if the internal process is faster, more patients are performed per unit time - so more diagnostic is recorded -therapeutic procedures, there is a higher probability of co-payment (for patients who do not have insurance or need some DTP for which a surcharge is required). Skillful employees guarantee that DTPs will be better recorded, that patients will be ordered more accurately (via the eOrdering module), that there will be better quality control of supplementary insurance, so there will be less probability that the examination will not be charged ... A more satisfied patient means that he to recommend a hospital to people from your environment "because everything is over there faster, there are no long waits, the employees are kind ...". All this indirectly affects the economic viability of the hospital. Nevertheless, the use of information and communication technology comes at a price. The management of the institution quite justifiably asks what the costs of introduction and use are. Here one should be careful, i.e. make a quality cost-benefit analysis. What is the minimum is that hospitals must also have their own hospital information and system because it is prescribed by the Health Strategy 2016-2021, and the National Strategy of the Ministry of Health 2020-2022². The strategies do not prescribe the extent to which this BIS will be covered. It prescribes data, reports that hospitals are obliged to send to the HZZO and the Ministry on a daily and / or periodic basis.

¹ Available: <https://www.researchgate.net/project/Balanced-Scorecard-13> ; Retrieved: 5 August 2021.

² Available: <https://zdravlje.gov.hr/UserDocsImages/2018%20Financijski%20planovi,%20strate%C5%A1ki%20dokumenti%20i%20javna%20nabava/Strate%C5%A1ki%20plan%20MZ%202020.-2022.-za%20objavu.pdf> ; Retrieved: 4 August 2021

By observing and analyzing the costs of a specific general hospital, it was determined that:

- annual cost of overall informatization, which means the cost of integrated hospital information system (hospital, business, radiological, laboratory information system, kitchen application, pharmacy and reporting system) + maintenance: purchase of spare parts for computers, server, printers, monitors + gross salaries of departments for computerization, justify the cost to the hospital only for the ejection of films, fixers and developers on radiology and the introduction of digitized images over 5 months. Thus, the cost of all computerization on an annual basis for 7 months is practically non-existent. Thus, through only one segment of the use of information and communication technology in the observed hospital, a positive financial effect was achieved. What is problem is the model of financing hospitals by the HZZO and the salaries of employees (above all doctors).

5.1. Economic advantages in the work of the polyclinic

The results of observation and measurement show

- that by using a smart card, the total time of the patient's stay in the outpatient clinic is shorter
- that the application of the smart card increased the number of patients treated per unit time
- a larger number of treated patients results in:
 - a larger number of applied procedures paid for by the Croatian Health Insurance Institute (HZZO) - a positive financial effect of the general hospital's operations.
 - Patient satisfaction is higher because they are treated faster (spend less time on admission and more time with the doctor)
 - using information and communication technology the findings are sent automatically to general practitioners (thanks to the use of a smart card) and patients do not come to the hospital just to pick up the findings

Application of information and communication technology in the work of the clinic:

- Faster patient registration
- Shorter stay of patients in the clinic
- Higher patient turnover
- More written DTP procedures
- More collected participation fees
- Faster information flow (faster diagnostic results)

By applying information technology (specifically the card reader and the card itself) the administration is faster, i.e. more patients are processed per unit time. This is because thanks to the smart card there is a vertical connection of the hospital with HZZO (Croatian Health Insurance Institute) and from CEZIH (central health information system of the Republic of Croatia) general data on insured persons who automatically enter the hospital information system and do not have to enroll. In addition, by withdrawing the eReferral, the data from the referral (type, diagnosis, referral number) are automatically entered in the case of the patient. Compared to manual enrollment, it was found that the application of information and communication technology speeds up administration and leaves more time to provide health care to patients. Looking at the number of patients admitted with the help of a smart card and a smart card reader, the average increase in the number of patients is 43%. In time, the administration process with the use of a smart card and reader is reduced by an average of 2 minutes per patient, which saves 30% of time in an hour. If we observe the total stay of the patient in the clinic (enrollment + medical examination) then it is noticed that the share of administration without the use of information and communication technology is 29.50% of total time spent, and with the use of information and communication technology 22.96% of total time spent in the clinic.

When the economic aspect is observed - by "processing" more patients per unit time, several diagnostic-therapeutic procedures (DTP) and several diagnostic-therapeutic groups (DTS) are performed and invoiced. Fixed assets (computers) are better used, as are employees. The unit cost per employee is lower because more work is done for the same hourly rate (the nurse enrolls more patients). Due to the fact that the nurse has more time for health care, she can better record DTP and DTS procedures and materials used, as well as data related to nursing care. The application of information and communication technology prevents possible mistakes and thus streamlines business (medicines and medical supplies are properly applied). All this leads to a positive financial effect of the hospital's operations.

5.2. Economic advantages of telemedicine

- "Second opinion" - the possibility of seeking a expert opinion via telemedicine
- Remote reading of findings
- It is cheaper for an institution to pay per examination than to have a full-time employee
- Faster reading of findings

5.3. Economic advantages in the work of the unified hospital information system

Due to the integration of the hospital with the laboratory and radiological system, the diagnosis is made faster and with better quality. The possibility of error is minimized (the possibility of patients suing for wrong treatment is reduced). No unnecessary printing, it is minimized (savings on paper, toner, printer use). Thanks to the integration with the pharmacy, there are minimal stocks in the departmental warehouse (savings on medicines and medical supplies).

5.4. Economic advantages in hospital treatment

Information and communication technology in the process of hospital treatment enables the review of the entire medical documentation of the patient (earlier hospitalization), which makes it impossible to make a wrong diagnosis. In addition, thanks to ICT, individual therapy, personalized nutrition, faster diagnostics, paperless business, integration with invoicing are enabled. ICT causes a reduced need for human, material and financial resources and accelerates the activities within hospital treatment.

5.5. Economic advantages in the operation of a pharmacy

The pharmacy is accessing medical supplies and medicines. This is where master data is maintained and mapped to the hospital information system. Here the so-called individual therapy per patient and in this way the costs are reduced because it is possible to plan exactly how many drugs and consumables are consumed and so much is ordered from the supplier. In addition, it cannot happen that there is too much or no medicine in the departmental warehouse. Minimum inventories are kept so the stated cost is lower.

5.6. Economic advantages in the work of the kitchen

Thanks to the connection between the hospital information system and the application in the kitchen, it is possible to create a personalized menu for an individual patient in accordance with his illness. The department requires a specific diet and this information is available in the kitchen. From an economic point of view, this streamlines the procurement and consumption of food and thus reduces costs.

5.7. Economic advantages in the work of radiology

Digitization saves on films in radiology, between 450,000.00 and 500,000.00 kn per year. Virtual colonoscopy - great savings in time and money and greater patient satisfaction. The Speakerphone converts speech into text.

There is no need for an administrator to copy text from the dictaphone to the program. The findings are returned to the archives of patients for hospital i.e., general practitioners and directly to patients for outpatients.

5.8. Economic advantages in the work of a biochemical laboratory

The biochemical laboratory uses all programs that are integrated at the data level with the hospital information system and family medicine physicians (FP). FPs order blood tests through CEZIH, and tests for hospital patients are ordered through the hospital information system. When ordering blood tests, there is a comparison with the guidelines, thus enabling optimal orders in the sense that, for example, CRP cannot be ordered two or more times in 24 hours because there is no need for it. Economically, this saves medical material, contrasts, tests.... costs are reduced. The average savings in the past three years on this item alone is around HRK 250,000.00 per year. Blood findings are returned to the hospital information system in the findings archive. For external patients, FPs are sent via CEZIH, i.e. directly to patients by e-mail.

5.9. Economic advantages in the operation of the business system

All transactions related to the recording of the consumption of medical materials and medicines, the operation of the pharmacy and departmental warehouses, the collection of participation fees, automatically end up in the business information system. This system enables faster and more accurate business transactions (accounting, procurement, planning, analysis, material and financial operations, inventories) and allows fewer people to do all these jobs.

5.10 Economic advantages in reporting to management

The conclusion is that in the absence of the application of information and communication technology, the same report requires more people, more time and a higher number of errors. It is to be expected that the application of information and communication technology (ICT):

- reduces the number of errors (increases accuracy) in reports sent to management
- to increase the speed (shorten the time) in the preparation of reports related to nursing, namely to the ward nurses, to the head nurses of the services and to the head nurse of the hospital (according to the Administration).
- Information and communication technology also helps to meet the requirements of management, i.e. the preparation of reports. By applying the so-called. Reporting system (one of the modules within the integrated hospital information system) reduces the possibility of error (when transcribing), faster access to the information needed to generate reports and less people are needed to generate reports. This shows both the *observation and the measurements* that were carried out. The scale was also observed: the number of people, the time required for the report and the number of errors in case a reporting system is used as opposed to manual entry in Excel from individual forms. If we look at the number of people needed to make a report, the average savings is 33% because with the application of information and communication technology, one person is needed to make a report, not three. The time difference is drastic. With the application of information and communication technology, it takes an average of 1.14 minutes to produce a certain report, while without the application of information and communication technology, it takes an average of 169.80 minutes to produce the same report.
- The aspect of speed is not negligible here either, because the application of information and communication technology enables management to react in a timely manner to observed anomalies, which ultimately leads to more successful business (timely response to information causes reduced costs and increased revenue). Timely reporting to the management is important because it enables the management to solve the identified problem

by optimizing the business process, additional training of employees (courses, seminars, in-service education), which leads to greater patient satisfaction with the service provided. All this indirectly affects the better financial effect. The basis for BSC is quality reporting that is better with the application of information and communication technology as evidenced by observation and measurement. Prerequisite for better application of information and communication technology are IT and information literate employees.

6. CONCLUSION

If we have outdated technology, we must engage more resources (human, material, time) which requires higher costs and poorer economic results. Newer technology, automates business processes, therefore speeds them up, there is no need for so many human resources, savings are in material resources (example: only digitization in radiology and film ejection, fixes and contrasts causes savings of approx. 900,000.00 kn per month), everything unfolds faster. Application of information and communication technology (ICT) in decision-making: enables faster reaction, no mistakes, fewer people participate in the preparation of the report (savings!) - all this enables managers to make better decisions. Modern ICT in healthcare processes enables savings (example: in the hospital there are devices on which doctors dictate findings, discharge letters... medical documentation; these devices convert speech into text where it is automatically written into the application without the need for administrators to listen dictaphone). In the next 5-7 years, hospitals will introduce artificial intelligence, the Internet of Things, which will lead to greater health literacy of patients, and indirectly reduce the cost of the hospital - better business! - due to the fact that better health literacy of patients enables less frequent visits to the doctor, proper taking of medication, that patients act preventively in maintaining health, that patients stay in the hospital for a shorter period of time. In addition to the information and communication support for the business activities of the hospital that exists now, in the next 5 to 7 years, hospitals will typically use artificial intelligence that will affect patients' health literacy and better health care. Better health literacy of patients enables less frequent visits to the doctor, proper taking of medication, that patients act preventively in maintaining health, that patients stay in the hospital for a shorter period of time... in a word it allows for lower healthcare costs. The application of information and communication support to the business processes in the hospital enables better economic indicators in the work of the hospital. How? The answers will be presented in this paper. In short, the introduction of horizontal and vertical connections between business processes inside and outside the hospital with the help of information and communication technology allows business processes in the hospital (the main process is "patient treatment") to be optimized, streamlined, faster and more efficient. Medical and non-medical staff should be trained to work with information and communication technologies and to be computer and information literate, in order for the processes to be such. Trained employees who work with the help of modern technology provide better health care, so patients are more satisfied (the faster they learn the diagnosis, the better treated). The consequence of all the above: improvement of internal processes, educated staff and satisfied patients is a better financial result (more rational treatment process - lower costs, treatment of more patients per unit time, application of advanced techniques - more expensive DTS - which means higher hospital revenues...).

LITERATURE:

1. Braš, Đorđević, Miličić (2011), Communication between doctors and patients, MEDIX, February 2011, God. XVII, number 92.
2. Bruce (2003), Seven Faces of Information Literacy, Faculty of Information Technology, QUT, 2003

3. Domitrović (2016), Education of nurses in the Republic of Croatia in comparison with European Union standards, University of Zagreb, School of Medicine, University of Zagreb, Faculty of Medicine
4. Kaplan, Norton (1993), The Balanced Scorecard: Translating Strategy into Action, Harvard Press, UK
5. Keneddy (2017), A look at digital literacy in health and social care, British Journal of Cardiac Nursing September 2017, Vol. 12 No. 9
6. Lucas (2015), The art of public speaking], MATE doo Zagreb, 2013
7. Ministry of Health (2020), Strategic Plan of the Ministry of Health for the period 2020-2022
8. Poje, Braovic (2019), Hospital Information System - Advantages and Disadvantages , Bilten HDMI 2019: 25 (1)
9. Spitzberg (2013), (Re) Introducing Communication Competence to the Health Professions, J Public Health Res. 2013 Dec 1; 2 (3): e23
11. Verhovec et al. (2014), On health from an economic perspective, Institute of Economics, Zagreb
12. Williams, Cooper et al. (2017), Information Literacy in the Workplace, European Conference on Information Literacy (ECIL), 2017.

EFFICIENCY AND ANALYSIS OF THE POLISH AND BOSNIAN-HERZEGOVINIAN ECONOMIC DIPLOMACY MODEL

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ABSTRACT

To respond to the changes caused by recent globalisation processes, responsible governments build an efficient economic diplomacy model capable of answering the challenges they are facing. The organisation of the economic diplomacy activity network is divided in literature into the unified model, partially unified model, model of competition, third agency model and model of resignation. This research will try to confirm the basic hypotheses (H1) The economic diplomacy model conducted by the economic diplomacy actors in Poland is the partially unified model and (H2) The economic diplomacy model conducted by economic diplomacy actors in Bosnia and Herzegovina is the unified model of economic diplomacy. The data structure of the analysed countries of Poland and Bosnia and Herzegovina encompass general and economy data, emphasizing the macroeconomic indicators, tax system, foreign trade exchange, specificities of the economic diplomacy development, network, i.e. economic diplomacy model, organisation, as well as the human potential issue, or the modality of recruiting and training economic diplomacy staff.

Keywords: *economic diplomacy models, Polish economic diplomacy network, Bosnian-Herzegovinian economic diplomacy network, country study*

1. INTRODUCTION

Different countries use differently organised systems to promote their economic interests in the global environment, so we call such a system an economic diplomacy model. Regarding the organisational qualification of existing economic diplomacy models, the most cited in literature, and the most used basis in research studies is the analysis done by Kishan Rana (2000: 5-6) who grouped the economic diplomacy network into five organisation models:

- a) Unified model – where the Ministry of Foreign Affairs completely manages and unifies issues linked to foreign affairs and foreign trade
- b) Partially unified model – where the Ministry of Foreign Affairs and the Ministry of Economy jointly establish a special department dealing with trade and investments
- c) Third agency model – the Ministry of Foreign Affairs does not deal with trade issues at all, whereas the independent bodies acting under the supervision of the Ministry of Foreign and European Affairs take over the affairs linked to trade
- d) Model of competition – the tasks of the Ministry of Foreign Affairs, as well as other Ministries' affairs overlap, without a clear-cut work division, not only of those related to trade and foreign politics, but also of those related to the participation in international organisations meetings
- e) Model of resignation – the Ministry of Foreign Affairs leaves the issues linked to trade and investments to other ministries.

The aforementioned economic diplomacy models classification determines the research subject: to study and explain the economic diplomacy model conducted in Poland and Bosnia and Herzegovina, and determine the effects of economic diplomacy measures.

The basic hypotheses which will be tested in the research arise from the defined research subject: *(H1) The economic diplomacy model conducted by the economic diplomacy actors in Poland is the partially unified model and (H2) The economic diplomacy model conducted by economic diplomacy actors in Bosnia and Herzegovina is the unified model of economic diplomacy.*

2. LITERATURE OVERVIEW

Bashkurti (2002) said that the establishment and application of the relevant model of economic diplomacy activities was important for the promotion of a country on the global market, strengthening of business cooperation, cooperation with domestic institutions and organisations. In the research conducted by Okano-Heijmansa (2011:19) about the turnover in the area of international relations, the author came to the conclusion that the approach of a country to economic diplomacy was the “key” to the development of foreign trade, attraction of investments and increase of export, but that those countries which increased and intensified their economic diplomacy activities, found new ways of conducting them or identified and abolished unnecessary and unsuccessful economic diplomacy activities were more successful in the said activities. Ruel and Zuidema (2012) conducted an empirical research on economic diplomacy efficiency exemplified by the Dutch embassies and consulates, and came to the conclusion that the most efficient embassies and consulates were those where the economic diplomacy structure/network was clearly set and well-organised and where most of the staff had a long-term experience, i.e. the teams were composed of people doing well-established activities for a longer time. Rose (2007), Yakop and Bergeijk (2009), Moons and Bergeijk (2013) conducted empirical research on the effect of diplomatic missions abroad on the volume of international trade, export and attraction of investments, and they proved the causal relationship between “more active” diplomatic missions and the increase of international trade and export. Rose proved a statistical increase of export for 6-8% on export markets where the diplomatic missions were efficient above the average, whereas Moons and Bergeijk (2013:23) proved that embassies had a significantly higher contribution to the international trade and investments increase than consulates and other foreign missions. Since the role of more intense activities of a country’s economic diplomacy is the creation of “added” economic value, and through it the ultimate and indirect achievement of economic growth and welfare of a country, Kostecki and Naray (2007) tried to establish a framework for the definition of numerically expressed “added” values achievable by a country’s economic diplomacy. Their focus was on the characteristics of the domestic and foreign market, economic diplomacy activities and economic diplomats’ profile as well as on the profile of companies making use of economic diplomacy services, the global business environment and the “domestic” institutional environment in which the economic diplomacy runs its affairs. Kostecky and Naray (Ibidem) claimed that the outputs of economic diplomacies could be better understood in their interaction with the institutional environment, and these are generally the new institutional economics arguments which incorporate the influence of institutions and institutional environment into economic growth theories. According to Bardhan (2005), institutional economics, which studies economic institutions, offers an answer with arguments to the dilemma about the simultaneous existence of natural resources and wealth on the one hand, and the lack of success in the efficient organisation of a country’s economic system on the other, which can lead to insufficient economic growth and underdevelopment instead of to the improvement of the citizens’ welfare. The solution to the dilemma lies in the efficiency of the institutional structure of the economic system. North (1990:107) claimed institutions were the basic determinant of long-term economic success, and in his claim one can detect the importance of the quality of public management in economic growth, especially the long-term one. Incentives give structure to the economy, and as the incentives structure is formed, it directs economic change toward

growth, stagnation or decline. In the literature about the new institutional economics (NIE) (North, 1990; 2003; Myhrman & Weingast, 1994; Coase, 1998; Torsten Persson, 2001; Acemoglu, 2004) the generally accepted standpoint is that institutions and institutional mechanisms are the missing tie in the explanation of growth rates and developmental paths of both developed and less developed countries in the world. Institutions have an important role in the augmentation of a society's functionality, especially economic efficiency. They are the constituent part of the social capital as the key factor of economic growth and economic success. Thus, some researchers have established in their econometric studies that there is a positive correlation among the numerous elements of public management quality and the long-term GDP growth rates (Mauro, 1995; Knack & Keefer, 1995; Rodrik, 1997; Evans & Rauch, 1999, etc.). Edison (2003) conducted empirical studies about the strength of the link between institutional quality and economic success in regional groups belonging to the least developed and the most developed countries in the world. The groups of countries with a higher institutional quality achieved more stable and higher GDP per capita increase rates. He concluded that adequate policies could be successfully conducted only if there was a functional institutional framework, while on the other hand weak institutions diminished the possibility for the conduction of policies thus disrupting their efficiency. Linked to the institutional infrastructure of economic diplomacy, Rana (2002:5) claimed that the reason for the lack of success of certain ministries which are holders of economic diplomacy of a country lies in the insufficiently developed institutional infrastructure of the remaining institutions, and such institutional environment does not then have the possibility to produce measures which would lead to economic diplomacy success and consequently to the generation of economic growth.

3. METHODOLOGY

The organisation and reach of a country's economic diplomacy can be observed by comparing it to the economic diplomacy systems of other countries. The comparative method includes the similarities and differences of a number of national models of carrying through and of the whole economic diplomacy system thus enabling causally valid conclusions to be derived from it. The country study includes the analysis and comparison of economic diplomacy systems of a country in transition – Poland, and of an undeveloped country – Bosnia and Herzegovina. Except from the critical analysis of the recent domestic and foreign scientific and professional literature on the area of the research subject, data were also collected through institutional bearers of economic diplomacy systems in certain countries. For instance, the data for the country study of the Polish economic diplomacy system were requested from the Polish embassy in the Republic of Croatia, the bilateral Polish-Croatian chamber of economy, and the Polish Agency for the Attraction of Foreign Investments – PAIIZ. Besides the mentioned comparison methods (country study), the theoretical part of the research encompassed the critical analysis of the recent domestic and foreign scientific and professional literature on the area of the research subject. The structure of the data for each country consists of general and economic data with an emphasis on macroeconomic indicators, the tax system, foreign trade exchange, the specificities of economic diplomacy development, organisation of the network, i.e. the economic diplomacy model, and the question of human potentials, i.e. the modality of staff recruitment and training in economic diplomacy. Using the comparative analysis method, i.e. the so called country study or case study of the Polish and Bosnian-Herzegovinian economic diplomacy models, the hypotheses will be tested.

4. COMPARATIVE ANALYSIS OF THE POLISH AND BOSNIAN-HERZEGOVINIAN ECONOMIC DIPLOMACY MODEL

Thanks to the accession to the European Union in 2004, Poland gained new economic and political opportunities which will enable it to reduce the economic growth backlog compared

to the richest countries. In line with that, three areas of activities were identified which led to the deep and effective reconstruction of the Polish economy: the important consolidation of the institutional and macroeconomic foundations of the Polish economy, cooperation with European Union countries, but also, in the period of its candidate status, the strategic management and access to various funds which the EU put at disposal.

	2015.	2016.	2017.	2018.	2019.
GDP (billions of €)	430	425,9	465,6	496,6	532
GDP per capita (€)	11 200	11 100	12 200	12 900	13 400
Real GDP growth (%)	3,8	3,0	4,6	3,5	4
Export (billions of €)	179,5	184,2	204,4	220,7	253,8
Import (billions of €)	177,2	180,3	206,8	225,7	234,0
Inflation (%)	-0,7	-0,2	1,6	2	2,2
Unemployment (%)	7,5	6,2	4,9	4,4	3,3
Direct foreign investments (billions of €)	15,1	16,7	7,4	11,3	-

Table 1: Macroeconomic indicators for Poland 2015 – 2019

(Source: Eurostat, EIU, GUS (Central Bureau of Statistics), Ministry of Economy of the Republic of Poland)

In 2018 Poland attracted around 11,3 billion Euro of direct foreign investment, while in the last few years Polish companies abroad have invested between 3 and 6 billion Euro a year, while south-east European countries are the target markets more often than before. Poland attracts foreign investment by founding and the activity of numerous economic zones, while the largest recorded investments have been made by the USA, Germany and Japan in the ICT sector, automobile industry and R&D sector. Investments in Poland are “work intensive” because they averagely amount to 88.6 work positions per investment which makes Poland third in Europe.¹

Tax type	Tax rate
Corporate tax	19%
Tax (corporate) after deduction	19%, 20%
Capital income tax	19%
Income tax	18%, 32%
Value added tax VAT	0%, 5%, 8%, 23%

Table 2: Basic information on the Polish tax system

(Source: Polish Ministry of Finance: <http://www.mf.gov.pl/ministerstwo-finansow>)

In Poland the importance of reduced tax rates was recognized primarily for the attraction of investments, so the corporate tax amounts to 19%. The reduced VAT rates in Poland are: 5% on certain food products and drinks, including unprocessed food and books, 8% on food products and drinks which are not encompassed by other tax rates, new residential buildings and construction services included in the programme of social housing, passenger transport and catering services.

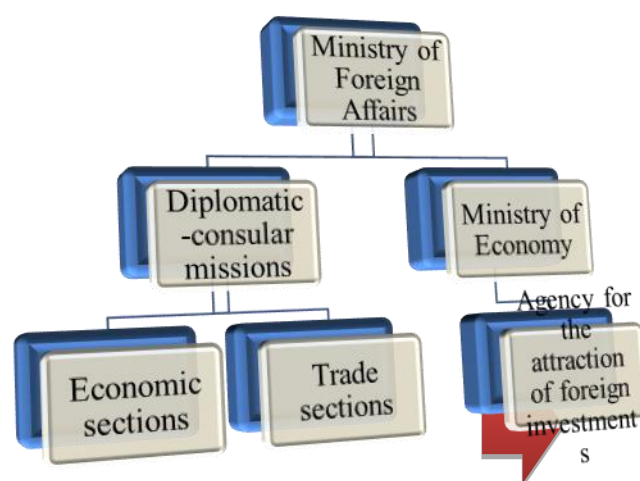
	2015.	2016.	2017.	2018.	2019.
EXPORT	179,5	184,2	204,4	220,7	253,8
IMPORT	177,2	180,3	206,8	225,7	234,0
BALANCE	2,3	3,9	-2,4	-5	19,8

Table 3: Polish foreign trade exchange 2015 – 2019 (billions of €)

(Source: GUS (Central Bureau of Statistics), Ministry of Economy of the Republic of Poland)

¹ Source: Polish Agency for Information and Foreign Investment: http://www.paiz.gov.pl/en?lang_id=12

The way foreign policy was conducted has changed to a great extent since 2006 because Poland aimed at strengthening its position in the European Union, ensuring safety and strengthening its status on the international scene. In the context of the new challenges, economic diplomacy got three tasks, namely cooperation with member states of the European Union, contribution to the consolidation of institutional and macroeconomic indicators of the Polish economy, and finding the solution to achieve economic safety with an emphasis on energy safety and environmental protection. In the operational sense, the economic diplomacy priorities were: the analysis of mechanisms necessary to strengthen competitiveness (analysis of other countries' economic policies, help to Polish companies, analysis of legal and financial solutions, identification of potential areas of economic cooperation), and the identification of new trade and investment possibilities. In line with the new strategic orientation, the foreign affairs portfolio was reformed (scheme 1.)



Scheme 1: Organisation of the Polish economic diplomacy network
(Source: Author's work)

The ministry of Foreign Affairs, in cooperation with the Ministry of Economy, defined in detail the conditions for creating the economic diplomacy in 2006, while the set goals and tasks of the Polish economic diplomacy have not undergone considerable changes since then, so the Polish Ministry of Foreign Affairs determined the promotion of economic interests and the expansion of the economy as the Polish foreign policy affairs priorities in 2012 and the ongoing five-year period. This will remain the dominant activity for Polish economic diplomats in more than 60 Polish diplomatic-consular missions around the world.² The basic tasks of the Polish economic diplomats are the analytical work in the area of economic politics, monitoring legal and financial solutions, direct interventions which will help Polish entrepreneurs, the suppression and reaction to disloyal competition and the identification of potential areas of economic cooperation, as well as the activity of analysing the modalities of strengthening the competitiveness of the Polish economy, and the identification of new trade and investment possibilities.³ The choice and recruitment of staff have a key role in the newly-formed reform of the Polish diplomatic network. The change especially relates to the policy of transparency and competitiveness, because the diplomatic profiles are open to all those who satisfy the educational and business criteria (profile and work experience). Great attention is devoted to diplomats' training in cooperation with the Polish Institute for International Relations, the Diplomatic Academy and the State School for Public Office.

² Source: Polish Ministry of Foreign Affairs: www.msz.gov.pl

³ Fotyga, A. minister of Polish foreign policy (2007.) Government information on Polish foreign policy, 15 May 2007.

Besides education, effort is put into empowering the budget at disposal, which should contribute to the diminution of the professionals' rotation and their leaving the diplomatic network in search for a better paid job. On the other hand, according to the data published by the Agency for Statistics of Bosnia and Herzegovina and the Central Bank of Bosnia and Herzegovina, its economy had a real growth of GDP of 2,8% in 2019. Economic growth was primarily caused by the diminution of the foreign trade deficit (the coverage of import by the export was 55%) which was a consequence of the export growth of 6.6% and import diminution of 0.5%.

	2015.	2016.	2017.	2018.	2019.
GDP, current prices (billions of €)	14,6	15	16,1	16,5	17,7
GDP per capita (€)	4155	4354	4572	4886	5043
Real GDP growth (%)	3,0	2,8	3,0	3,6	2,8
Export (billions of €)	4,6	5,0	5,7	6,1	5,9
Import (billions of €)	8,1	8,3	9,3	9,8	10,0
Inflation (%)	-1,0	-1,1	1,2	1,4	0,6
Unemployment (%)	27,7	25,4	20,5	18,4	15,7
Direct foreign investments (billions of €)	244	275	397	409	459

Table 4: Macroeconomic indicators for Bosnia and Herzegovina

(Source: Agency for Statistics of Bosnia and Herzegovina: <http://www.bhas.ba/>, Central Bank of Bosnia and Herzegovina: www.cbbh.ba)

The GDP structure is composed by 15.5% services, 26.2% industry, 8.2% agriculture. If businesses are analysed, a significant factor of economic growth in 2019 was the growth of industrial production and civil engineering. Industrial production registered the annual growth of 6.4%.

Tax type	Tax rate
Corporate tax	10%
Tax (corporate) after deduction	10%
Capital income tax	10% FBH, 8% RS
Income tax	10%
Value added tax VAT	17%
Real property transfer tax	5% FBH, 3% RS

Legend: FBH – Bosnia and Herzegovina Federation; RS – Republic of Srpska

Table 5: Basic information on the Bosnian-Herzegovinian tax system

(Source: Ministry of Finance of the Bosnia and Herzegovina Federation: <http://www.fmf.gov.ba/>)

The indirect taxes (VAT, excise duties and customs) are under the state authority, whereas the direct taxes and contributions are under the entity authority. The value added tax (VAT) is defined by a single rate of 17%, while certain public, health and medical services are exempt from VAT.⁴

Table following on the next page

⁴ Accessible on: Agency for the Advancement of Foreign Investments in Bosnia and Herzegovina – FIPA
http://www.fipa.gov.ba/publikacije_materijali/zakoni/default.aspx?id=317&langTag=bs-BA

	2015.	2016.	2017.	2018.	2019.
EXPORT	4,6	5,0	5,7	6,1	5,9
IMPORT	8,1	8,3	9,3	9,8	10,0
BALANCE	-3,5	-3,3	-3,6	-3,7	-4,1

Table 6: Foreign trade exchange for Bosnia and Herzegovina (in billion €)

(Source: Foreign trade chamber of Bosnia and Herzegovina:

<http://komorabih.ba/vanjskotrgovinska-razmjena-2/>)

Since 2002 economic diplomacy has been promoted as the priority of the Bosnian-Herzegovinian foreign politics. The Ministry of Foreign Affairs of Bosnia and Herzegovina sent a group of about 20 diplomats, ranked as ministers-counsellors and counsellors who acquired specialist knowledge in the area of economic diplomacy, to Washington, after which a part of the diplomats became economic counsellors in Bosnian-Herzegovinian embassies, while two diplomats started working in the Department for Economic Diplomacy in the Ministry of Foreign Affairs of Bosnia and Herzegovina which was established in 2003.⁵ After the war, the period of accepting help and partially rebuilding the country, the creation of a strong economic diplomacy concept stands as the highest-ranked priority of the Bosnian-Herzegovinian foreign policy. Currently, there are two departments in the Ministry of Foreign Affairs of Bosnia and Herzegovina dealing with economic diplomacy. The Department of Economic Diplomacy belongs to the Sector for Bilateral Relations in the organisation sense and has eight diplomats. In its work it combines the regional and functional approach in monitoring, analysing and promoting the bilateral relations of Bosnia and Herzegovina with other countries. The Department has a close cooperation with diplomatic missions and consular representations, and coordinates their activities. The main task of the Department of Economic Diplomacy is to perform activities which would attract foreign investments into the Bosnian-Herzegovinian economy, as well as open new markets for their entrepreneurs. The Department of Economic Diplomacy performs the analysis of economic information of the Bosnian-Herzegovinian diplomatic-consular missions which serves as the base for the creation of strategies for the presentation of Bosnia and Herzegovina in certain countries.⁶ The most important activities are the bilaterally oriented economic diplomacy activities focusing on specific markets and the situations in them, the establishment of bilateral economic cooperation and orientation toward B2B situations, i.e. actual projects, campaigns, products and services, as well as individual investors. Such an approach requires the engagement of significantly smaller resources, while the preparation for certain business activities and events is significantly shorter since less complex. Moreover, the possibility to monitor the whole process is significantly simpler. The Department of Economic Diplomacy has a close cooperation with the competent directorates of the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina, as well as with the Agency for the Promotion of Foreign Investments in Bosnia and Herzegovina (FIPA), the Foreign Trade Chamber of Bosnia and Herzegovina, and the Agency for the Promotion of Export of Bosnia and Herzegovina which conduct their activities as part of the chamber. The Department for the Economic Multilateral Cooperation and Reconstruction belongs to the Sector of Multilateral Cooperation and has seven diplomats. Its duty is the coordination of activities with multilateral financial organisations, economic forums, international organisations and specialised agencies. The Department mobilizes foreign donors and coordinates the Bosnian-Herzegovinian international aid. The concept of economic diplomacy of Bosnia and Herzegovina abroad is primarily based on the work of its diplomatic missions and consular representations supported by the work of honorary consuls and business clubs or business councils, as well as the Bosnian-Herzegovinian Foreign Trade Chamber's

⁵ Source: Ministry of Foreign Affairs of Bosnia and Herzegovina: http://www.mvp.gov.ba/ekonomska_oblast/?id=5440

⁶ Ibidem

representative bodies. Regarding human potentials, in 2012 a new personnel policy was introduced in the Ministry of Foreign Affairs of Bosnia and Herzegovina. In this sense, the diplomatic missions and consular representations in Bosnia and Herzegovina got adequate instructions and support from the central Ministry of Foreign Affairs of Bosnia and Herzegovina, in line with the new concept and modality of its implementation. A positive thing is that the Department for Economic Cooperation changed its way of running its business, namely, it changed from the reactive to the proactive approach, i.e. a turnover toward the systemic approach to this problem area was done. Prior to that, economic diplomacy came down to individual successes of Bosnian-Herzegovinian diplomats who had enough inclination, wish, initiative and strength to carry on serious activities in the field. However, what the whole Bosnian-Herzegovinian economic diplomacy network lacks is a higher level of technical equipment so as to conduct the concept of Bosnian-Herzegovinian economic diplomacy in practice. Furthermore, diplomatic missions and consular representations have the most important role in the concept of Bosnian-Herzegovinian economic diplomacy abroad, so it would be necessary to place economic counsellors there whose job would solely be economic diplomacy. They should have a quality insight into the economic situation of the receiving country, well-formed contacts, and the centre of their attention should be taken by information about economic sectors significant for Bosnian-Herzegovinian export, contacts with potential investors, legal norms relating to running a business into the receiving country, possible trade barriers, etc. The current situation is such that most of the diplomatic and consular missions of Bosnia and Herzegovina have two to three persons with a diplomatic status, but without clear-cut instructions for the conduction of economic diplomacy activities, so decisions about work positions should determine who in the diplomatic or consular mission is in charge of the economic diplomacy affairs. Honorary consuls could give special support to economic diplomacy in the field of business lobbying and networking. Based on the formerly conducted *case (country) studies* by the comparative method, and by the representation of similarities and differences in the national models of conduction and the whole economic diplomacy system, it is possible to extract causally valid conclusions which enable proving the hypotheses set in this paper: ***(H1) The economic diplomacy model conducted by the economic diplomacy actors in Poland is the partially unified model and (H2) The economic diplomacy model conducted by economic diplomacy actors in Bosnia and Herzegovina is the unified model of economic diplomacy.***

Country	Economic diplomacy model (Classification, Rana, 2000)	GDP per capita 2019 (euro)	Number of citizens (millions)	Economic diplomacy tradition	Main economic diplomacy actor	Quantitative measurement of economic diplomacy efficiency
Poland	Partially unified model	13,400	38,500	Since 2006	Ministry of Foreign Affairs and Agency for the Attraction of Foreign	NOT COMPLETELY
Bosnia and Herzegovina	Unified model	5,043	3.8	Since 2003	Investments Ministry of Foreign Affairs	NO

*Table 7: Comparative analysis of the chosen countries
(Source: Author's work)*

The conducted research and obtained data linked to the organisation of the Polish economic diplomacy network, and according to the classification of the economic diplomacy model (Rana, Ibidem), and also based on the conducted *country study*, Poland bases its economic diplomacy network on a partially unified model, which confirms the H1 hypothesis: *The economic diplomacy model conducted by the economic diplomacy actors in Poland is the partially unified model*. Namely, in line with the new strategic orientation of the Polish foreign policy, in 2006 the foreign affairs portfolio was reformed, and that was the first time that economic diplomacy appeared on the priority list. The Ministry of Foreign Affairs, in cooperation with the Ministry of Economy, defined in detail the conditions for the creation of economic diplomacy. The Department for Economic Diplomacy/Economic Cooperation was founded inside the Ministry of Foreign Affairs. At the same time, inside the diplomatic-consular missions special economic and trade sections were formed. The economic sections remained under the authority of the Ministry of Foreign Affairs, whereas the trade sections, although still part of the diplomatic-consular missions, passed to the authority of the Polish Agency for Trade and Investment, established in 2007 as part of the Ministry of Economy. Its primary goal was to offer support to Polish companies, as well as to promote export and the Polish economy abroad. A downfall of the Polish economic diplomacy is that the quantitative efficiency measurement of the whole network is still not completely covered. The Bosnian-Herzegovinian economic diplomacy model is a unified one due to the fact that in a unified model the Ministry of Foreign Affairs completely manages and unifies issues linked to foreign affairs and foreign trade, while the diplomatic missions and consular representations abroad perform diplomatic affairs and promote the commercial interests. The second basic hypothesis in the work was thus confirmed: **(H2) *The economic diplomacy model conducted by economic diplomacy actors in Bosnia and Herzegovina is the unified model of economic diplomacy.***

5. CONCLUSION

The functioning of the Polish economic diplomacy is conducted through the so called partially unified model of economic diplomacy, i.e. a model where the Ministry of Foreign Affairs and the Ministry of Trade or Economy jointly establish a special department dealing with trade and investments and working as part of diplomatic missions. Independent bodies acting under the authority of ministries in charge of trade take over the business linked to trade. Their representatives may work in the representations of the ministries of foreign affairs and cooperate with ambassadors or other diplomats, but in this model, their activities do not overlap. On the other hand, the Bosnian-Herzegovinian economic diplomacy model is an example of a unified model of economic diplomacy, since in it the Ministry of Foreign Affairs completely manages and unifies issues linked to foreign affairs and foreign trade, while the diplomatic missions and consular representations abroad perform diplomatic affairs and promote the commercial interests. It has to be emphasized that compared to Poland, Bosnia and Herzegovina has the least developed economic diplomacy network in the numerical and technical sense. However, this is understandable since Bosnia and Herzegovina is a country deeply “shaken” by the war and was until recently a receiver of international aid, while parts of this country will need a lot of time to recover.

LITERATURE:

1. Acemoglu, D., Johnson, S. and Robinson, J. (2004), “Institutions as the Fundamental Cause of Long-run Growth”. National Bureau of Economic Research Working Paper, No. 10481.
2. Bardhan, P. (2005), *Scarcity, Conflicts, and Cooperation: essays in the political and institutional economics of development*, Massachusetts Institute of Technology, SAD.

3. Bashkurti, L. (2003), „Diplomacy and the business community“. Diplomatic Academy year book. – 5, (1) str. 61-66
4. Coase, R (1998), The New Institutional Economics. American Economic Review, vol. 88, issue 2, 72-74
5. Edison, H. (2003), „Testing the Links: How Strong are the Links Between Institutional Quality and Economic Performance?“, Finance and Development, (40), 2, str. 35-37.
6. Evans, P, Rauch, James E. Source: American Sociological Review, Vol. 64, No. 5 (Oct., 1999), pp. 748-765
7. Janssen, M. C. J. (2013), „What to Do? Commercial Diplomacy Strategies MSc International Relations & Diplomacy“, Leiden University & the Netherlands Institute for international relations ‘Clingendael’
8. Knack, S. and Keefer P. (1995), “Institutions and Economic Performance: CrossCountry Tests Using Alternative Institutional Measures”. Economics and Politics, 7 (3), 207-227.
9. Kostecki, M., and Naray, O. (2007), Commercial diplomacy and international business (Den Haag: Netherlands Instituut voor Internationale Betrekkingen Clingendael, April 2007)
10. Mauro, P. (1995), “Corruption and Growth”. Quarterly Journal of Economics, 110 (3), 681-712.
11. Moons, S.J.V. & van Bergeijk, P.A.G. (2013), "A meta-analysis of economic diplomacy and its effect on international economic flows," ISS Working Papers - General Series 50074, International Institute of Social Studies of Erasmus University Rotterdam (ISS), The Hague.
12. Myhrman, J. y B. Weingast. ?Douglass C. North’s Contributions to Economics and Economic History?, Scandinavian Journal of Economics 96, 2, 1994, pp. 185-193
13. North, D.C. (1990), Institutions, Institutional Change and Economic Performance, osamnaesto izdanje, Cambridge University Press, SAD.
14. North, D. C. , (2003), Institucije, institucionalna promjena i ekonomska uspješnost, Masmedia, Zagreb
15. Okano-Heijmans, M. (2011), „Changes in Consular Assistance and the Emergence of Consular Diplomacy“, in Jan Melissen and Ana Mar Fernandez (eds), Consular Affairs and Diplomacy, Leiden and Boston: Martinus Nijhoff Publishers, str. 21-41
16. Rana, K. S. (2000), Inside Diplomacy, Chapter 4, Manas, New Delhi
17. Rana, K. S. (2002), "Bilateral Diplomacy", DiploProjects, Mediterranean Academy of Diplomatic Studies, Malta
18. Rodrik, D. (1997), “TFPG Controversies, Institutions, and Economic Performance in East Asia”. National Bureau of Economic Research Working Paper, No. 5914.
19. Rose, A.K. (2007), „The foreign service and foreign trade:embassies as export promotion“, World Economy 30, str. 22-38,
20. Ruel, H. J. M. and Visser, R. (2012), "Commercial diplomats as corporate entrepreneurs: explaining role behavior from an institutional perspective", International Journal of Diplomacy and Economy.
21. Ruëll, H. and Zuidema, L. (2012), The Effectiveness of Commercial Diplomacy. A Survey Among Dutch Embassies and Consulates. Discussion Paper in Diplomacy. Netherlands Institute for International Relations Clingendael.
22. Sadžak, M. (2011), Ekonomska diplomacija : kroskulturalni pristup. Zagreb, Sarajevo : Synopsis
23. Smith, C. (2009), L'Oréal chief puts brave face on crisis, The Wall Street Journal, September 26

24. Torsten, P., Tabellini, G. (2001), "Political Institutions and Policy Outcomes: What are the Stylized Facts?," Temi di discussione (Economic working papers) 412, Bank of Italy, Economic Research and International Relations Area.
25. Yakop, M. and Bergeijk, P. (2009), 'The weight of economic and commercial diplomacy', Working Paper International Institute of Social Studies, No. 478, The Hague: International Institute of Social Studies
26. Agencija za bankarstvo Federacije Bosne i Hercegovine: www.fba.ba
27. Agencija za statistiku BiH, Centralna banka BiH
28. Agencija za statistiku BIH: http://www.bhas.ba/index.php?option=com_publicacija&view=publikacija_pregled&ids=2&id=11&n=Nacionalni%20ra%C4%8Duni
29. Agencija za unapređenje stranih investicija u BiH – FIPA: http://www.fipa.gov.ba/publikacije_materijali/zakoni/default.aspx?id=317&langTag=bs-BA
30. Centralna banka Bosne i Hercegovine: www.cbbh.ba
31. Ekonomska diplomatija – izazov visokog prioriteta za Bosnu i Hercegovinu, 2013. Vanjskopolitička inicijativa BIH Friedrich Ebert Stiftung, Sarajevo,
32. Eurostat, EIU, GUS(Središnji statistički ured), Ministarstvo gospodarstva Republike Poljske
33. Eurostat, http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe_in_figures_-_Eurostat_yearbook
34. Fotyga, A. minister of Polish foreign policy (2007), Government information on Polish foreign policy, 15. svibnja 2007.
35. <http://komorabih.ba/wp-content/uploads/2013/05/6nacrt-strategije-rasta-izvoza-nov-11.pdf>,
36. Izvozno kreditna agencija BiH: <http://iga.gov.ba/ba/b4.php>
37. Ministarstvo državne riznice (Ministerstwo skarbu państwa - Ministry of treasury):
38. Ministarstvo državne riznice Poljske:
<http://www.msp.gov.pl/portal/en/43/Announcements.html>.
39. Ministarstvo financija Federacije Bosne i Hercegovine: <http://www.fmf.gov.ba/>
40. Ministarstvo financija Poljske: <http://www.mf.gov.pl/ministerstwo-finansow>
41. Ministarstvo financija: <http://www.mf.gov.pl/ministerstwo-finansow>
42. Ministarstvo gospodarstva Poljske: <http://www.mg.gov.pl>
43. Ministarstvo infrastrukture i razvoja: <http://www.mir.gov.pl/english/strony/default.aspx>
44. Ministarstvo vanjske trgovine i ekonomskih odnosa BiH: www.mvteo.gov.ba
45. Ministarstvo vanjskih poslova BiH: http://www.mvp.gov.ba/ekonomska_oblast/?id=5440
46. Poljska agencija za informiranje i strana ulaganja: <http://www.paiz.gov.pl>
47. Poljska gospodarska komora KIG: <http://www.kig.pl/>

SOME ASPECTS OF PROTECTION OF HUMAN RIGHTS IN HEALTH CARE

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ABSTRACT

The protection of human rights in health care or in the conduct of medical activities of today, is in focus of Croatian law today especially because of the subject of protection of the most important human values: life, health, personality, privacy and dignity. Healthcare in the Republic of Croatia has for a long time been in crisis in almost all areas. Problems in healthcare to a large extent have been inherited from the socialist area and deepened by war, privatisation, global economic crisis and so on. We have a lot of positive results of our healthcare system. But in this paper, only some significant negative phenomena will be mentioned such as, for example problems with out of date and quite slow system regulations, not passing system regulations (laws on rights, and obligations and responsibilities of patients, laws which would regulate access to, control and archiving of medical documentation and so on) or non-harmonisation of current regulations. Also, the problem of lack of healthcare workers in the system, long waiting lists and dysfunctional waiting list priorities. Finally, we will mention problem of insufficient informing of patients, patient dissatisfaction with the quality, accessibility and speed of healthcare service provision, undeveloped culture of care of one's own health. It is a well-known fact that various violations of human rights can have serious health consequences. Therefore, healthcare policies and programs and how they are created or implemented can promote or violate human rights.

Keywords: *healthcare, human rights, patients*

1. INTRODUCTION

Over fifty years ago, the fundamental act of the World Health Organisation (WHO) recognised that enjoying the highest possible standard of health is a fundamental human right. WHO's constitution states that health is the "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, Constitution of the World Health Organization, adopted by the International Health Conference). Since then, the right to the highest possible standard of health is contained in a range of international and regional treaties on human rights, as well as in numerous constitutional documents of national states. This international pact on economic, social and cultural rights as a guarantee of rights to health includes this central provision in a body of international laws on human rights: "The states party to this Pact recognise that everyone has the right to enjoy the highest possible standard of physical and mental health" (art. 12 of the Pact). International treaties also recognise a range of other human rights of central significance to health. This includes the right to an appropriate dwelling, accommodation, food, education, privacy, free from discrimination and torture. There are several links between health and human rights. It is a well-known fact that various violations of human rights can have serious health consequences. Therefore, healthcare policies and programs and how they are created or implemented can promote or violate human rights. In the discourse and practice in human rights, the right to health as a human core of the problem area of healthcare was and still is an area of dispute. Placed mainly within legal frameworks focussed on civil and political rights, it is often used in order to, in the context of connection to social and economic rights, demonstrate its misuse. It is a tricky area because this law is not internationally accepted everywhere as is the case civil and political rights, that is, it is accepted

under quite different conditions. Often the right to health is incorrently identified with access to healthcare. Even though this is to a ceratin extent correct, especially where social and economic inequalities in accessing healthcare is concerned, they should not be categorically equated. In practice, the right to health is often favoured, while the right to healthcare protection is considered too narrow. At the same time, the right to health does not seem too demanding because for some it means the right to permanent health which is an impossible standard. On the other hand, the right to healthcare is too narrow to include important factors such as safety condition of the surroundings or appropriate healthcare. Therefore, together with the right to health, as an umbrella concept, it includes various practical demands. Human rights are significant to numerous issues of state and status of health – in a wide range it problematises the issues from the prevention and cure of HIV / AIDS; through sexual and reproductive health, access to clean water and appropriate sanitary conditions; issues of medical confidentiality, access to education and information on health; access to drugs and their abuse; to the health of marginalised and vulnerable groups. However, human rights are also relevant for the promotion of health in the wider context for example in warfare, strategies for reducing poverty or international trade.

2. HEALTHCARE IN THE EUROPEAN UNION

As stated in the Preamble to the European Charter of Patients' Rights "despite their differences, national health systems within the European Union pose a risk to the rights of patients, consumers, users, family members, vulnerable populations and ordinary people". This is because the rights proclaimed in theory are often unattainable in practice. The reasons are often of a financial nature, but often the cause is inadequate legislation. Despite the existence of various instruments protecting patients' rights internationally (for example, the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, the European Charter of Patients' Rights, Directive 2011/24 / EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border health care (OJ L 88, 4.4.2011, p. 45–65)) responsibility for the development and implementation of rights guaranteed by international legal acts remains in the exclusive domain of the nation state (Mujović Zornić, 2004., p. 137). This Directive sets out the conditions under which a patient may travel to another EU country to receive safe and high-quality medical care and have the cost reimbursed by their own health insurance scheme. It also encourages cooperation between national healthcare systems. The reason the rules for cross-border healthcare needed clarifying is that they had been developed based on individual judgments of the Court of Justice of the European Union over a period of more than 10 years. The directive was brought forward specifically to clarify the rights to healthcare which derive from the Court's rulings based on Article 56. of the Treaty on the Functioning of the European Union and to enable these rights to be used in practice (<https://eur-lex.europa.eu/legal-content/en/LSU/?uri=CELEX%3A32011L0024>). The health systems in the Union are a central component of the Union's high levels of social protection, and contribute to social cohesion and social justice as well as to sustainable development (Mascherini, Manca, Hoskins, 2009.). They are also part of the wider framework of services of general interest. Therefore, protection mechanisms vary, from the enactment of special legislation on patients' rights to a relatively low level of legal protection. According Art. 4. Member States retain responsibility for providing safe, high quality, efficient and quantitatively adequate healthcare to citizens on their territory. Furthermore, the transposition of this Directive into national legislation and its application should not result in patients being encouraged to receive treatment outside their Member State of affiliation (Quinn, De Hert, 2011, p. 497 – 502.).

2.1. The European Charter of Patients' Rights

The European Charter of Patients' Rights (ECPR) presents basic patients' rights in health care. ECPR was drafted in collaboration with 12 citizens' organizations from different EU countries in 2002 (European Charter of Patients' Rights. https://ec.europa.eu/health/ph_overview/co_operation/mobility/docs/health_services_co108_en.pdf). The document lists 14 patients' rights: 1. Right to Preventive Measures; 2. Right of Access; 3. Right to Information; 4. Right to Consent; 5. Right to Free Choice; 6. Right to Privacy and Confidentiality; 7. Right to Respect of Patients' Time; 8. Right to the Observance of Quality Standards; 9. Right to Safety; 10. Right to Innovation; 11. Right to Avoid Unnecessary Suffering and Pain; 12. Right to Personalized Treatment; 13. Right to Complain; and 14. Right to Compensation (Mascherini M, Manca AR, Hoskins B. 2009. <https://publications.jrc.ec.europa.eu/repository/handle/JRC54065>). The 14 rights are an embodiment of fundamental rights and, as such, they must be recognised and respected in every country. They are correlated with duties and responsibilities that both citizens and health care stakeholders have to assume (https://ec.europa.eu/health/ph_overview/co_operation/mobility/docs/health_services_co108_en.pdf, p. 3.). These rights aim to guarantee a "high level of human health protection", as defined by Article 35 of the Charter of Fundamental Rights of the European Union, and assure high quality of services provided by the national health services in Europe. A recent analysis of the national legislature of the EU member states showed a varying degree of implementation of these 14 rights in national laws and regulations. The rights to information, consent, care quality, and prevention were more often covered by existing national laws compared to the rights to avoid pain, the right to innovation, and the right to respect patients' time.

2.1.1. Right to Information

Patients are often unaware of their rights, including the right to information on their condition and the right to access their medical records. Health care services, providers and professionals have to provide patient-tailored information, particularly taking into account the religious, ethnic or linguistic specificities of the patient (Čizmić, 2008, p. 227 – 275.). The health services have the duty to make all information easily accessible, removing bureaucratic obstacles, educating health care providers, preparing and distributing informational materials. A patient has the right of direct access to his or her clinical file and medical records, to photocopy them, to ask questions about their contents and to obtain the correction of any errors they might contain. A hospital patient has the right to information which is continuous and thorough; this might be guaranteed by a "tutor". Every individual has the right of direct access to information on scientific research, pharmaceutical care and technological innovations. This information can come from either public or private sources, provided that it meets the criteria of accuracy, reliability and transparency (https://ec.europa.eu/health/ph_overview/co_operation/mobility/docs/health_services_co108_en.pdf, p. 4.).

2.1.2. Right to Informed Consent

The right to informed consent is central to the right to health. The right of access to information guarantees the individual access to personal information concerning her/him, as well as medical information on her/his condition, except when this information could be harmful to her/his life or health. The government should take the necessary measures to guarantee the patient access to information about her health conditions, but also ensure that access to this information does not infringe on the patient's right to keep her/his information confidential (Vučemilo, Borovečki, 2014., p. 1 – 5.). The basic difference between consent and informed consent is the patients' knowledge behind the consent decision. Informed consent requires the patient to understand the diagnosis and uncertainties about it as well as the different treatment options (including doing nothing) and their advantages, disadvantages and achievable outcomes

(Selinger, 2009, p. 50 – 51.). The right to Information is stipulated under the constitutions of all participating countries, although this right is construed broadly, typically referring to protection of citizens from having personal health information collected and stored without consent, or to be informed about what information is being collected about them by the government (Karačić, Viđak, Marušić, 2021, p. 1 – 9.). Issues that arise concern the competency or legal capacity of the patient to consent, respect for personal autonomy, the sufficiency and completeness of information, and circumstances compelling limits on the need for informed consent. Health care providers and professionals must give the patient all information relative to a treatment or an operation to be undergone, including the associated risks and discomforts, side-effects and alternatives. This information must be given with enough advance time (at least 24 hours notice) to enable the patient to actively participate in the therapeutic choices regarding his or her state of health. Health care providers and professionals must use a language known to the patient and communicate in a way that is comprehensible to persons without a technical background. A patient has the right to refuse a treatment or a medical intervention and to change his or her mind during the treatment, refusing its continuation (https://ec.europa.eu/health/ph_overview/co_operation/mobility/docs/health_services_co108_en.pdf, p. 5.).

2.1.3. Right to Free Choice

The patient has the right to decide which diagnostic exams and therapies to undergo, and which primary care doctor, specialist or hospital to use (Čizmić, 2008, p. 227 – 275.). The health services have the duty to guarantee this right, providing patients with information on the various centres and doctors able to provide a certain treatment, and on the results of their activity. They must remove any kind of obstacle limiting exercise of this right.

2.2. E-health

E-health is, in many European countries, one of the health care areas that are in the fastest development, due to the endeavor to apply modern information and communication technologies for the purpose of meeting the needs of patients, health professionals and the health policy creators (Rynning, 2007., p. 105.). E-health potentials are virtually endless and can reach from the delivery of health information and health control over the Internet, thorough on-line consultations, issuing of drugs through electronic devices (Sjeničić, 2014, p. 52.). Digitization has become an integral part of the modern health system. Despite its many advantages, it also has a great disadvantage: it infers in the basic relationship between the patient and the doctor and reduces its significance (Čizmić, Boban, 2015, p. 67 - 103.). Also, due to growing administrative burdens that are not related to medical knowledge and extremely poor user experience in emerging IT solutions, doctors burn out and lose motivation to invest time and knowledge in therapeutic relationships with the patient (Čebašek Travník, 2021, p. 23 – 29). EU Regulation 2016/679 on the protection of individuals with regard to the processing of personal data, ensures that personal data can only be collected under strict conditions and for the purposes provided for by law (OJ L 119, 4.5.2016, p. 1–88.). The Regulation itself is an essential step for strengthening the fundamental rights of citizens in the digital age and is aimed at protecting privacy, with an emphasis on establishing a model of personal data protection - the most valuable part of the personality and the concept of individuality as opposed to global universality. From these facts, there is a need for thorough research and analysis of the protection of personal data from the security, legal and cultural aspects from the perspective of new models in the eHealth system (Boban, 2020, p. 270).

3. HEALTHCARE IN THE REPUBLIC OF CROATIA

Healthcare in the Republic of Croatia has for a long time been in crisis in almost all areas. Problems in healthcare to a large extent have been inherited from the socialist area and deepened by war, strong centralisation, privatisation, global economic crisis and so on. The Croatian Ministry of Health is responsible for health policy, including regulation and governance of health (Vončina L Arur A, Dorčić F, Pezelj-Duliba D., 2018. <https://openknowledge.worldbank.org/handle/10986/29181>.). The rights of patients in Croatia are generally protected by the Healthcare Act (Babić-Bosanac S, Dzakula A. 2006. p. 399-411.). In 2004, a special Act on the Protection of Patients' Rights (PRPA) was adopted as a result of the civil society initiative for legislative protection of patients' rights by the then newly founded Croatian Association for the Protection of the Patients' Rights (CAPR) (Statut). The Republic of Croatia adopted a special Law on the Protection of Patients' Rights in 2004, but the development of the healthcare sector constantly imposes the recognition of new and review of existing patients' rights. It is for these reasons that the new Croatian Law on the Protection of Patients' Rights, Duties and Responsibilities redefines existing rights (right to co-determination, right to be informed, right to refuse notification, right to privacy - right to dignity and privacy), and also regulates new rights. (the right to equality, the right to avoid unnecessary pain, the right to respect the patient's time and to provide health care within a reasonable time, and the right to complain). Special attention is paid to defining the process of effective protection of patients' rights and the standardization of impartial procedures that enable this protection, and the introduction of symmetry between the use of patients' rights and the fulfillment of duties and responsibilities of patients (Čizmić, 2008, p. 227 – 275). Finally, the aforementioned law transposes Directive 2011/24 / EU into the legal order of the Republic of Croatia, which obliges healthcare providers in the Republic of Croatia to provide all relevant information to enable cross-border patients to make informed choices, including information on treatment options, availability, quality and safety, health care, and to provide clear invoices and clear information on prices, as well as on the status of things with their approval or application, on their insurance coverage or other means of personal or group protection with regard to professional responsibility. Here the positive results of our healthcare system will not be mentioned, for example like transplantation, low rates of death among new-borns immunisation of the population and so on because we believe that a quality and effective healthcare system is the normal task of every government and is the inalienable right of the users of that system. Health care in the Republic of Croatia shares similar problems to health care systems in other EU member states. Therefore, we will mention only some significant negative phenomena such as problems with out of date and quite slow system regulations, not passing system regulations (laws on rights, and obligations and responsibilities of patients, laws which would regulate access to, control and archiving of medical documentation and so on) or non-harmonisation of current regulations. Also lack of healthcare workers in the system, both number and specialisation of (for example, family medicine doctors, anaesthetists, radiologists, internists, paediatricians, gynaecologists, surgeons, nurses, laboratory assistants and midwives), where the old structure is less and less favourable, together with, absurdly, a large number of unemployed healthcare workers. Also, we need to mention the problem that healthcare workers leaving the system mainly abroad or to other employers (pharmaceutical or private healthcare institutions) (Babić-Bosanac, Dzakula, 2006., p. 399 – 411.). Healthcare financing due to the lack of financial means with growing spending on healthcare, that is, because of spending from the GDP for healthcare, among the biggest in Europe, and particularly in relation to Eastern and Middle European countries. The problem of insufficient informing of patients, patient dissatisfaction with the quality, accessibility and speed of healthcare service provision, undeveloped culture of care of one's own health (non-quality nutrition, smoking, alcoholism, consumption of narcotics, obesity, insufficient physical activity, non-adherence to therapy, not

using means of protection, lack of hygiene and so on). The concept of informed consent was present in all Croatian laws that regulated patients' rights even before the adoption in 2004 of the Act on the Protection of Patients' Rights: both the 1993 Health Care Act and the Act on Protection of Persons Suffering from Mental Disorder contained some provisions to that effect. In the Act on the Protection of Patients' Rights, informed consent stems from the 269 - 302e right to physician-patient joint decisionmaking, which includes the right to be informed and the right to accept or refuse medical procedures. However, the actual implementation of this informed consent process in Croatian hospitals is experiencing many problems. One of the most actual problem is long waiting lists and dysfunctional waiting list priorities. Also, lack of quality and accessibility in healthcare protection (particularly in rural areas), lack of equipment or worn out equipment. The work of HZZO (establishing lists of medicines, fees for healthcare insurance policies, participation fees, medical treatment abroad), and, in particular, constant deficit of HZZO due to large and unsustainable and unpaid debts (Babić-Bosanac, Dzakula, 2006., p. 399 – 411.). Health insurance can be compulsory and voluntary. Compulsory health insurance includes insurance covering diseases and injuries not related to work, as well as insurance covering work-related injuries or diseases. It guarantees the right to health care and right to salary benefit for the period of temporary inability to work, as well as the right to transportation benefit relating to the use of health care services. Compulsory health insurance is to be provided for: insured persons and members of their families, persons who are to be included into compulsory health insurance (pensioners, vulnerable groups – poor people, unemployed), persons provided with entitlements deriving from compulsory health insurance in particular circumstances, as well as foreign citizens with whose countries an international agreement on social insurance has been signed (Arur; Dorčić; Voncina; Pezelj – Duliba, 2018.). Voluntary health insurance can be organized and carried out by the National Health Insurance Fund and legal entities dealing in insurance activities in accordance with the Health Insurance Law, as well as investment funds for the voluntary health insurance, in accordance with the special Act of Voluntary Health Insurance. Voluntary health insurance provides the insured persons the possibility of being insured against the risks of copayment for the cost of health care provided in the compulsory package of health services (health insurance complementary role). Besides that, persons not included in compulsory health insurance can take voluntary health insurance (alternative role of health insurance, solely within the competence of private insurers for now), as well as persons who want a wider range and standard of health care than compulsory health insurance can provide (additional health insurance) (Arur; Dorčić; Voncina; Pezelj – Duliba, 2018.). We need to mention also small participation of private insurance companies in financing healthcare costs. Croatian citizens have the option to obtain health services within private health care providers which are not CHIF contracted partners, either through direct payment or through supplemental insurance which is covering the payment. The Health Insurance Act provides mandatory insurance based on the principles of solidarity and reciprocity, whose primary aim is the provision of accessible, high-quality services to patients, including patient's rights and safety (Džakula A, Sagan A, Pavić N, Lončarek K, Sekelj-Kauzlarić K., 2014., p. 1-162.). To be fully efficient and meet all the expectations and needs of demand, a health care system must consider key challenges: ensuring equal access, reducing waiting times, exploiting available resources better, providing continuous care by coordinating activities, ensuring patient safety, creating a coordinated legal framework, and providing quality services (Ostojić, R., Bilas, V., Franc, S., 2012., p. 708.). Furthermore, the protection of human rights in healthcare or carrying out of medical activity, because of the existence of a range of open questions, is very current in Croatian law today. Normative frameworks for the legal protection of various patient and healthcare worker rights by their very nature are often of a blanket nature, are very often out of step, with many unclear and ununified healthcare regulations. Fundamental patient rights healthcare workers' obligations are thus normed by the Healthcare Protection Act, Patient

Rights Protection Act, Physician Act, Dental Medicine Act, Medical-biochemical Activity Act, Taking and Transplanting Human Body Parts for Medical Purposes Act and so on (Bodnaruk; Čizmić; Hrabač; Huseinagić, 2011.). We are witnesses to legislation, in the protection of these rights, in their application are often linked to the inconsistent provisions of these Acts.

4. CONCLUSION

Healthcare in the Republic of Croatia for a long time already is in crisis and in almost all areas. Problems in healthcare to a large extent have been inherited from the time of socialism and worsened from the period of war, strong centralisation, privatisation, global economic crisis and so on. It is clear that in such a situation there is not and cannot be appropriately regulated human rights in healthcare. Qualitative health care implies the organisation of health resources in a most efficient way, in order to satisfy patients' needs for the safe treatment. Safe health care in the most basic level of quality (Sjeničić, 2017, p. 223.). Also, we need to mention that progressive technological development has greatly contributed to medicine which with its application perfects and reaches endless new knowledge. The development of healthcare to a large extent depends on the development of computer technology which is manifested in advancement in the system of e-health telemedicine and robotics which opens up new issues in relation to the protection of personal data and privacy of patients as a fundamental human right (Boban, 2020, p. 269 – 302). Croatia is attempting to harmonise its regulatory framework necessary for managing the healthcare sector but there are still special challenges before us. That in particular relates to problems of organisation and human rights management within healthcare; the question of translating patient legal rights to actually improve the position of patients in the system of healthcare; improving system transparency by opening new research of differing aspects of human rights within the healthcare system; the keep to keep financial consolidation of the system, strengthen financial responsibility of subjects within the system; determine future configurations of healthcare system and its subsystems (hospital system); strengthening and better and more rational use of human resources within the system; ensuring various services, etc. (Babić-Bosanac, Dzakula, 2006., p. 399 – 411.). The protection of human rights and organisation of healthcare as a segment of dynamic discourse on human rights represents parts of an overall civilization effort of state and society for the human pursuit of happiness to be achieved in real life. This perspective of course is not the only one which purports access to social justice in relation to human wealth and health. In a range of "movements" which have characterised the appearance and strengthening of the modern state of wealth there are many ideas which are also linked to the concept of health and healthcare and so on. The fact of how this right is recognised in many international, regional and national legal acts and instruments best bears witness to the importance of the right to health. The right to health like other rights is not absolute: it is impossible to offer protection from all possible causes of human diseases. It is only the right of everyone, without discrimination to enjoy various services, objects and goods, as well as appropriate living conditions necessary for maintaining health for as long as possible. The right to health includes not only healthcare services, but conditions which determine our health including access to safe drinking water, adequate sanitary and living conditions, suitable food, healthy working and environmental conditions as well as access to education and information concerning health. Croatian situation can be described as a work in progress; a lot has been done, but more needs to be done in the future.

LITERATURE:

1. Arur, A.; Dorčić, F.; Voncina, L.; Pezelj – Duliba, D. (2018), Universal Health Coverage in Croatia: Reforms to Revitalize Primary Health Care, UNICO Studies Series Izd. 29., Universal Health Coverage Studies Series World Bank e-Library

2. Babić-Bosanac, S., Dzakula, A. (2006), Patients' rights in the Republic of Croatia. *Eur J Health Law*;13(4): p. 399 - 411.
3. Boban, M. (2020), E- zdravlje: zaštita osobnih podataka u novim uvjetima, *Hrestomatija medicinskoga prava*, Elektronski vir, urednika Kraljić, S., Čizmić, J., 1. izd., El. učbenik. Maribor: Univerzitetna založba Univerze, p. 269 – 302.
4. Bodnaruk, S.; Čizmić, J.; Hrabač, B.; Huseinagić, S. (2011), *Komentari zdravstvenih zakona: Zakon o zdravstvenoj zaštiti, Zakon o pravima, obavezama i odgovornostima pacijenata, Zakon o apotekarstoj djelatnosti*. Knjiga 1., Sarajevo: Privredna štampa
5. The Constitution of the World Health Organization, opened for signature July 22, 1946, 62 Stat. 2679, 14 U.N.T.S. 186.
6. Čebašek Travnik, Z. (2021), Intrusion of Digitalization Into the Doctor – Patient Relationship, 28th Conference Medicine, Law & Society the globalization of medicine in the 21st century, S. Kraljić, J. Reberšek Gorišek & V. Rijavec (eds.) p. 23 – 29.
7. Čizmić, J. (2008), Pravo pacijenata na obavještenost, s posebnim osvrtom na zaštitu tajnosti podataka o zdravstvenom stanju pacijenta, *Zbornik Pravnog fakulteta Sveučilišta u Rijeci*, vol. 29 no. 1; p. 227 – 275.
8. Čizmić, J.; Boban, M. (2015), Utjecaj novih tehnologija na zaštitu tajnosti podataka i informacijsku sigurnost, *Pravo na pristup informacijama i zaštita osobnih podataka Split*, Hrvatska, p. 67 - 103.
9. Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border healthcare, OJ L 88, 4.4.2011, p. 45–65, Special edition in Croatian: Chapter 15 Volume 014 P. 165 – 185.
10. Džakula A, Sagan A, Pavić N, Lončarek K, Sekelj-Kauzlarić K. (2014), Croatia: health system review. *Health Syst Transit*,16(3): p. 1-162.
11. 11.European Charter of Patients' Rights. https://ec.europa.eu/health/ph_overview/co_operation/mobility/docs/health_services_co108_en.pdf. Accessed 18. 8. 2021.
12. Karačić, J., Viđak, M., Marušić, A. (2021), Reporting Violations of European Charter of Patients' Rights: Analysis of Patient Complaints in Croatia, p. 1 – 9.
13. Mascherini, M., Manca, AR., Hoskins, B., The characterization of Active Citizenship in Europe. 2009. <https://publications.jrc.ec.europa.eu/repository/handle/JRC54065>. Accessed 12. 8. 2021.
14. Mujović Zornić, H. (2004), Perspektive medicinskog prava u svjetlosti Evropske konvencije o ljudskim pravima i biomedicini, *zbornik radova "Aktualnosti građanskog i trgovačkog zakonodavstva i pravne prakse"*, Neum – Mostar, p. 137.
15. Ostojić, R., Bilas, V., Franc, S., (2012), Challenges For Health Care Development in Croatia, *Coll. Antropol. Vol. 36. no. 3*: p. 707–716. Statut Hrvatske Udruga za promicanje prava pacijenata. 2015. <https://pravapacijenata.hr/wp-content/uploads/2017/01/statut2015.pdf>. Accessed 15 Dec 2020.
16. Quinn, P., De Hert, P. (2011), The Patients' Rights Directive (2011/24/EU) – Providing (some) rights to EU residents seeking healthcare in other Member States, *Computer Law & Security Review*, 27(5): p. 497 – 502.
17. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) OJ L 119, 4.5.2016, p. 1–88.
18. Rynning, E. (2007), Public Trust and Privacy in Shared Electronic Health Records, *European Journal of Health Law*, vol. 14., no. 5., p. 105.
19. Selinger, P. C. (2009), The right to consent: Is it absolute?, *British Journal of Medical Practitioners*, Vol. 2., No. 2., p. 50 – 54.

20. Sjeničić, M. (2014), E-documentation and crossborder healthcare, *Medicina in pravo, sodbene dileme III*, Maribor, p. 51 – 61.
21. Sjeničić, M. (2017), Patients' Safety as Parameter of Health Care Quality, 26th Conference Medicine, Law & Society: safety of patients and health care professionals (March 23rd – 24th, 2017, Maribor, Slovenia), S. Kraljić, J. Reberšek Gorišek & V. Rijavec, p. 214 – 224.
22. Stroetmann KA, Jones T, Dobrev A, Stroetmann V, E-health is it worth it. The economic benefits of implemented ehealth solutions at ten European countries, accessed 20.8.2021. Available from: URL: http://ec.europa.eu/information_society/activities/health/docs/publications/ehealthimpactsept2006.pdf.
23. Vončina L., Arur A, Dorčić F, Pezelj-Duliba D. Universal Health Coverage in Croatia: Reforms to Revitalize Primary Health Care. Universal Health Coverage Studies Series. 2018. Washington, US. <https://openknowledge.worldbank.org/handle/10986/29181>. Accessed 25. 8. 2021.
24. Vučemilo, L., Borovečki, A., (2014), Informed Consent in Croatia, A Work in Progress, Special Section: Bioethics Beyond Borders, *Cambridge Quarterly of Healthcare Ethics* 23(3), p. 1-5.
25. WHO, Constitution of the World Health Organization, adopted by the International Health Conference, New York, June 19 to July 22, 1946, and signed on 22 July 1946 by the representatives of 61 states. World Health Organization, 1946.
26. Patient Rights Protection Act, Official Gazette, no. 169/04, 37/08.

FRANCHISING IN THE DIGITAL ERA – WHAT LIES AHEAD

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ABSTRACT

Technological development and the use of the Internet have grown into substantial power in distributing goods and services. Different companies took the ride on the wave of change and decided to improve their business using different available e-tools. Among those companies are also various companies using franchising to grow and expand their businesses geographically. To use the available e-tools for franchise system benefits, franchisors need to enforce rules on how their franchisees use these tools. Thus, we need to consider implementing "digital franchising" into the franchise system to cooperate between franchisees and franchisors when their relationship is transferred into the digital space area. The franchising relationship's critical rule is the contract. Changing the franchising into digital franchising is also necessary to investigate the digital era's franchising contract changes and reflect the competition's legal regulation. The paper's main topic is examining the digital environment in the modern global and competitive economy and its influence on franchising changes. Paper presents the current development of e-business (including e-marketing and e-business activities) and changes of the franchising relationship to digital franchising. The paper analyzes how digital business processes influence franchising's legal regulation regarding competition, e-commerce, data protection, geo-blocking, and related concepts. Paper investigates current regulation of franchising in EU and comments the needed changes due to the development in technology and business. In the last part of the paper, findings are presented, and further research proposals about this critical topic for franchising are suggested.

Keywords: digital environment, e-business, digital franchising, competition law

1. INTRODUCTION

Franchising is present in its current form since the middle of the 20th century when Ray Kroc became an exclusive master franchisee for McDonalds'. It has become a business model that enables existing companies to grow and future entrepreneurs to start new ventures more easily (Erceg, 2019: 399). Franchising as a business model can be reviewed from an economic and legal standpoint. Thus, in academic papers, one can find franchising definitions presented by economists (Weber, 2013: 20) and lawyers (Emmerson, 1990). Franchising offers numerous advantages to entrepreneurs that grow their business by selling the franchise locations as

franchisors (Murray, 2006: 15) or to entrepreneurs starting new ventures as franchisees (Shane, 2005: 79-80). Due to its popularity, franchising is regulated either by pure franchising laws, foreign trade laws, investments regulations, anti-trust regulations, or not regulation. In the EU, franchising is regulated within Article 101 of the Treaty on the Functioning of the European Union and the Vertical Restraints Block Exemption. Franchising has a significant influence on the national economies. Thus, it should be viewed as a method of distributing goods and services to the end customer and as an alternative way of forming capital (Erceg, 2013). The franchise business model contributes to the modernization of business by transferring knowledge, competencies, and technology. Simultaneously, it serves as a tool to increase brand competitiveness and develop consumers and their needs. Implementing information and communication technology in everyday business activities united under e-business has dramatically changed the way consumers buy products. Consumers have taken advantage of the opportunities provided by e-business (online ordering, electronic payment, customized delivery) primarily to save the time they would lose just by going to a physical store. Businesses recognized the potential of e-business but turned to implement business cycles in franchise business models to avoid negative aspects of business such as overcrowding with relevant and irrelevant content leading to customer loss. World globalization and technology advancement, especially in the e-business area, brought changes into the world's economic functioning and influenced franchising. Thus, the paper aims to study worldwide changes regarding the franchising business model, from competition laws regulating franchising to geo-blocking buyers, intellectual rights protection, and data protection. In the first part, the paper presents the current development of e-business worldwide. The second part of the paper gives an insight into digital franchising. In the third part, the paper analyses the current legal regulation of franchising regarding competition law and examines potential issues due to franchising's transformation toward digital franchising. In the last part of the paper, conclusions and further research proposals are given.

2. E-BUSINESS

The use of Internet-based technology to perform downstream and upstream business operations in the value chain can be referred to as e-business (Zhu & Kraemer, 2005: 63). With the implementation and general acceptance of E-business, business activities have changed significantly, and particular emphasis is placed on the opportunities provided by technology implementation to develop business processes. From its inception until today, e-business is changing and evolving rapidly, thus strengthening general globalization. Most business entities have fundamentally changed their business processes, strategies, activities, hierarchical and organizational structures due to the advent of technology and implementation in business. These changes have enabled the digital transformation of the entire business. They have brought openness and change in organizational culture, development of research and development capacity, the use of new and open innovations. The practical implementation of these processes is critical for digital transformation, sustainable economies, and the development of big data and business analytics ecosystems. Business entities must adapt and change how public and private institutions in the ecosystem (and the rest of the actors) engage, cooperate, and collaborate to achieve digital transformation (Pappas et al., 2018: 485). Digital transformation is not just about technology, moving to work with internet marketing techniques and tools, or creating mobile applications. Digital transformation means delivering digitally enabled products to target markets. Combining big data from modern innovations (such as smartphones) with limited services (such as water and energy utilities) is one solution to enhance digital transformation (George, Haas & Pentland, 2014: 321). Techniques of modern e-business are implemented in every segment of today's business entity. Those companies that fail to develop an effective digital strategy and maximize the impact of digitalization risk remain behind and

the competition. E-business is transforming industries in entirely new ways - fundamental improvements in personalization, efficiency, and security. By the end of 2021, a modern business will become so digital that 20% of all activities will include e-business techniques and tools (Chaffey, 2021). Mobile applications and payments, intelligent agents, and digital ecosystems will make it a part of our everyday lives. The digital transformation has contributed to the development of digital marketing. Social changes require an individualized approach to consumers instead of the current mass or so-called traditional approach. To keep up with the rapid growth of the industry, business entities must adjust their market strategy. Some of the goals that bring about these changes and adjustments are increasing value, sales, website traffic, engagement, and customer loyalty. Using different internet marketing techniques and tools, companies can reach targeted consumers differently, regardless of different variables. A particular channel of franchise businesses chooses separately about the type of products and services they offer and whom they want to provide. Modern consumers today have at their disposal several platforms, techniques, and tools that they can use in communication with a business entity. Businesses are challenged on how to choose the most optimal channel and send a communication message. In most cases, business entities turn to established models of communication (Digimedia, 2019):

- content optimization,
- advertising on social networks,
- e-mail marketing,
- native marketing,
- influence marketing,
- inbound marketing,
- online PR.

By the above models, we can conclude that critical content is distributed, and more and more businesses are turning to content marketing. Content marketing is a strategic marketing approach to create and distribute valuable, relevant, and consistent content to attract and retain a clearly defined audience and ultimately drive profitable customer actions. Well-designed content marketing is marketing content that the audience wants to see, actively search for and share with others (Arbona, 2018). Content marketing is currently one of the fastest-growing marketing techniques and tools visible by creating content that uses several formats: Blogs, presentations, guidelines, DYS video, vlog, e-book, webinar, and the like. More and more businesses are turning to user-generated content (user-generated content). User-generated content (UGC) is a vital tool for users to express themselves and engage with one another online (Boyd & Ellison, 2007: 214). Today's consumers are gathered in groups, and business entities are turning to new content collection models to gather the information that can help them further develop and refine their products. By purchasing a franchise, a business entity does not just gain the know-how to run a business. It already receives processed information on how individuals experience this business entity, depending on different variables (both demographic and geographical), primarily thanks to users' content. In today's e-commerce, user-generated content is standard, and its rapid growth has produced some of the most popular digital brands (Krishnamurthy & Dou, 2008: 1). The key elements of investing in content lie in the fact that consumers have become immune to stimuli from the environment, i.e., marketing communication. Marketing communications are how companies inform, persuade, and remind consumers - directly or indirectly about the products and brands they sell. The average consumer is exposed daily to many sales messages and a small number of ads from the above mass. Only a few leave a sensory impression that can motivate the consumer to act. For this reason, businesses turn to unconventional channels of communication with consumers to create models of communication that are resistant to AdBlockers, reduce noise in the communication

channel, and reach their consumers to ensure trust in the communication messages they send. In addition to enabling the purchase of business models, the franchise business model also enables marketing knowledge. It is up to franchisors to choose the most efficient channel that will enable them to communicate effectively with consumers in the digital age.

3. FRANCHISING IN DIGITAL ERAS

Disruptive technologies increase companies' productivity by increasing business value, streamlining management, and improving production processes (Gerus, 2019: 92). Following this, the investment attractiveness and profit of the company grow. Unlike conventional commercial facilities automation, digital transformation changes business structures, sales strategies, and management systems, creating new products and services that unite them into entire industries. Recently we are witnessing the arrival of the so-called digital franchising, which is developing the standard franchise system using modern digital technologies. The term digital franchising means an agreement on joint activities between a company and a dealer, the rights of which include using a trademark, marketing activities, technologies, and advertising opportunities of the franchisor to deduce a certain percentage of sales (Soloviev & Milovanova, 2019). The term encompasses a profound transformation of products using cutting-edge technology. These include the Internet of Things, artificial intelligence, blockchain, and everything that substantially impacts transforming the economy and society's relations. The digital franchising model is characterized by cooperation between the franchisor and the franchisee when the rights to use and represent the franchisor's company in the intercontinental digital space are transferred (Sitnicki, 2018: 214). In this model, the franchisor allows franchise use of its digital network and digital products following the contract. In this way, digital franchising allows relations in cyberspace and develops into new and yet not examined forms. If digital and traditional franchising is compared, differences are seen in ten criteria (Figure 1).



*Figure 1: Ten criteria of differences between traditional and digital franchising
(Source: Sitnicki, 2018: 214)*

Differences in criteria are mainly present in different time frames for managerial decisions implementation and formation methods for essential organizational and financial resources. Current globalization processes imply that the digitalization of procedures in franchising is the development innovation priority. It suggests that franchise subjects' efficient operation is possible by identifying alternative competitive enhancement strategies considering digital trends, focusing on the digital technologies' quick implementation into franchising systems' operations.

Thus, digital enhancement is representing a significant force for franchising development. Studies (Gladilina et al., 2019) have shown that several local or global factors drive transformation from traditional to digital franchising. (Table 1).

Local influence	Global influence
Awareness of customer needs	
<ul style="list-style-type: none"> - Resource availability for identifying prospects and assessing their unsatisfied needs. - Skill development for in-depth research, preeminent ethnographic and qualitative field studies. - Customer attraction and engagement with them as partners in the innovative process; 	<ul style="list-style-type: none"> - Apply analytical tools and technologies to gather information on specific markets and transform the findings into an actionable business vision. - Quantitative analysis and establishment of a clear understanding of the market size and expected behavior;
Staff and innovation culture	
<ul style="list-style-type: none"> - Delegation of responsibility for decision-making powers to local franchisees in fast-growing markets. - Assurance that local executives of franchisees have powers to decide on staff recruitment. - Ability to develop and promote new product ideas or services to meet local needs. - Potential to establish pay and compensation schemes for local teams to ensure they are motivated to assess the market's size and growth rates. - Careful identification of local partner franchisees at each stage of the value chain. - Consideration of local customer needs and assurance that prices and other aspects of the business model are adequate. 	<ul style="list-style-type: none"> - Active focus on the development of culture and values being global in their scope. - Development of global thinking and ability to deal with uncertainty and integrate different views. - Understanding of interrelations between different regions and implications of decision-making in one region for the others. - The establishment of clear rules, particularly in risk management and framework compliance. - Operation of global supply chains and customer relations management systems. - They were deciding whether aspects of the franchise network should serve localization or support purposes.

*Table 1: Drivers to digital franchising
(Source: Gladilina et al., 2019: 3894)*

Traditional franchising faces a survive-or-die issue, but probably traditional franchising will not endure the digital transformation. This could be seen already during the COVID-19 pandemic when the traditional franchise system embraced the digital tools to survive the crisis. So, we have a McDonald's (2020) example of starting deliveries and online orders. We have a local Croatian franchise system, Surf'n'fries testing automated wending machines for frying potatoes (Rihelj, 2020), barista bot in Costa Coffee shops (Chan, 2020), self-driving cars in China for KFC (Entrepreneur, 2020), etc. The franchise system management's primary concern needs to be transformed, and different vigorous prospects should be leveraged. This should result in creating a competitive advantage. Therefore, digital technology and business transformation will influence the franchisors and franchisees to change their relations toward innovations, leadership, efficiency, responsibility, and competence.

This should create a positive result for included companies (both franchisors and franchisees) and, finally, the society (Gladilina, 2019: 3896). As a result of research, Sitnicki (2018: 219) compared the traditional model and digital model of franchising, and the differences are presented in Table 2.

Criteria	Traditional franchising model	Digital franchising model
Network construction costs	Significant, permanent	Moderate
Interaction speed	Slow, limited by the distance and capabilities of communication tools	Instant, due to the complete automation of business processes, maintenance, briefing, and interaction
Level of management flexibility	Low	High
Renewal	Slow, with a high probability of adaptation of individual modules and procedures, regional features	Fast and at the same time, all network partners
The possibility of expanding the network	Limited by material resources	Global, intercontinental
Financial control	Complicated	Automatic reporting and control of all transactions of franchisees
Brand management	Centralized slow	Centralized dynamic
Rate of return	Moderate	High
Speed of informing about new services	Operational	Instant
The need for operational management	In some instances	Absent

*Table 2: Drivers to digital franchising
(Source: Sitnicki, 2018: 219)*

Table 2 shows the significant distinctions between the digital and traditional franchising models. These distinctions correspond to the current transition trend of business procedures and information flows into the digital environment. The digital franchising model permits acquiring additional control over franchisees and enhancing business processes' efficacy by reducing financial costs and administration time. The reduction of the costs is something which every company is looking for. Several digital tools can have a significant impact on franchising: (i) the Internet of Things can help with improving business processes of franchise systems and to work with digital images of the franchisee; (ii) Big Data can help with collecting and processing information for retaining customers and can be used for increasing advertising tools effectiveness; (iii) artificial intelligence is a new tool to be used in digital franchising and can increase customers' experience (Gerus, 2019: 94). On the other side, digital tools in franchising can be used for business technology and process duplication, creating online stores and e-commerce, and multilevel network marketing (Soloviev & Milovanova, 2019: 2). Digital franchising means that companies will have to change their business models, influencing the relationships. Change to digital franchising will result in a "new" franchise contract to reflect business process differences (de Koning, 2019: 233). To avoid possible conflicts, both parties will have to define their roles, appropriately modify franchise contracts, and clearly define procedures regarding e-commerce.

4. LEGAL SIDE OF DIGITAL FRANCHISING

A franchising agreement holds the vital element of the franchise relationships, intellectual property licensing. That, among others, includes design, trademark, know-how for using and distributing goods and services. The agreements often contain a different combination of vertical restraints regarding which products can be distributed or sold (i.e., quality requirements, customer groups, exclusivity, assortment, and restrictions regarding internet sale) (de Koning, 2020). Due to their system standards, franchisors have explicit viewpoints on retail prices and discount policy or want to obtain and swap customer and sales information relating to sales operations for improving their sales and marketing strategies. On the other side, franchisees often must comply with different contractual non-compete clauses. Some of these clauses are valid during the contractual period, while others are valid for a certain period after the contract termination. It is worth noting that some of the post-contract clauses are connected to the geographic area as well. Such a clause can and most probably will raise concerns regarding competition laws and especially in European Union. The primary source for the European Union competition law is Article 101 of the Treaty on the Functioning of the European Union (TFEU) (European Union, 2012). It applies, among others, to franchising agreements. The main elements of the infringement, according to Article 101, are concerted practices or contracts that have as their consequence or object competition distortion or influence inter-member countries trade (Attard, 2014: 12). The European Commission issued a block exemption for franchise agreements (European Commission, 1988) in 1985. This block exemption was substituted with a block exemption which applies for all "vertical agreements" (franchise agreement was also included). The second and revised block exemption was published in June 2020 (European Commission, 2010a), and this is a current regulation applying to franchise agreements. The current vertical block exemption regulation is supplemented by guidelines (European Commission, 2010b)¹ that detail the Commission's policy concerning aspects of the exemption block regulation, and they have substantial significance. This regulation will remain in force until May 31, 2022. There are already discussions about possible changes in the regulation regarding the digitalization of business and its impact on franchising. This is needed since the current approach to franchising at the EU level does not consider the challenges franchisors and franchisees face regarding e-commerce (Wiewiorowska – Domagalska, 2016). Abell et al. (2016) concluded that *EU competition law places franchise chains at a disadvantage compared to corporate chains, thereby preventing franchisors and franchisees, mainly SMEs and individuals, from competing effectively with big businesses*. Besides this block exemption, the European Commission issued two documents, a Notice on Agreements of Minor Importance (European Commission, 2014) and a Recommendation in relation to Small and Medium Sized Businesses (SMEs) (European Commission, 2003). Those documents' primary purpose is to remove agreements in which the SMEs with minor market share are contractual parties from the competition law scrutiny. This is important since most franchising agreements within the EU have contractual parties (franchisees and franchisors) who are SMEs or have less than 15 percent market share (Attard et al., 2014: 12). The franchising agreement is thoroughly reviewed by EU Competition law. The only exemptions are *intercompany agreements, franchisees integrated into the franchisor's undertaking, and activities that are not economic activities* (de Koning, 2020b). Thus, the franchisor is not permitted to apply procedures that are not permitted under EU competition law, such as market sharing, imposing an indirect or direct ban on internet sales, horizontal or vertical price-fixing, and prohibiting passive sales (de Koning, 2020a). The EU Competition law derives the difference between so-called "active" sales where the seller is actively looking for a buyer and so-called "passive" sales. The seller answers the voluntary inquiry from the buyer (Attard et al., 2014: 15).

¹ Guidelines on Vertical Restraints (Text with EEA relevance) [2010], OJ C 130

This raises issues since the Internet is considered an active sale since the vertical block exemption regulation does not distinguish the Internet as active or passive. Use of the Internet, data protection, geo-blocking of internet sales are just some of the issues that should be considered in the future with the new regulation.

4.1. What lies ahead in the legal regulation of digital franchising?

Different academic papers are looking into issues connecting franchising and the digitalization of business processes in recent years. (Table 3)

Author's	Topic's
Florian and Lindsey, 2002	Impact of the Internet on the international franchising
Abell, Fielder, and Singh, 2014 Damoska Sekuloska and Erceg, 2018	Smart contracts, Bitcoin, and franchising – how it will become an essential part of franchising contracts
Chan, 2005; Mehta, 2005; van Neck, 2005; Ward and Manvell, 2005; Zeifang, 2005; Antonson and Fernlund, 2006; Krawczyk, 2006; Plave and Tsimmerman, 2006; Mullock and Maldoff, 2017; Tyre, Newton and Vilmenay, 2018	E-commerce and data protection issues in franchising
Le Strat, 2018	Geo-blocking and its influence on franchising operations
Mergelina, Karp and Pearce, 2015	Enroachment issues regarding Internet sales and competition law
Mazepov, 2020	Improvement of franchising legal regulation in the digital economy

Table 3: Digital franchising issues and legal regulation

The previous table shows that digital tools significantly impact franchising's legal perspective and that it is part of academic studies. Different papers looked upon different legal topics which are part of the franchising relationship. Studies are mainly concerned with the arrival of e-commerce and its impact on data protection issues. Recently some studies have examined problems with geo-blocking of internet sales concerning the competition law. Finally, this has brought studies questioning the need to improve legal franchising regulation due to the digital economy's transformation and, consequently, to digital franchising. One of the topics is the relationship between digital franchising and competition law is Regulation 330/2010. Current regulation has several problems with the digitalization of the business processes in the franchising business model. The first problem is that it does not meet the current market demands (e-commerce, digitalization, consumer data protection), strengthening the franchisor's position regarding the non-competition clause and the purchasing obligations (Abell, 2016). Furthermore, the authors state that new franchising regulations related to the digitalization of business should be presented. This is needed since there is a lack of recommendations regarding direct and indirect competition by the franchisors related and un-related to digital business procedures against franchisees. Based on current EU competition, the law franchisor cannot impose an absolute ban on online sales to its franchisees, making it possible for franchisees to sell through their website (de Koning, 2020b). This brings franchises and franchisors into a specific competition position regarding the franchisees' market area. Researchers (Abell et al., 2016) propose a new franchising regulation in which franchisors could enforce pricing policy, like the corporate chains, since it reinforces branding and more efficient methods for franchising

digital platforms control. Second is needed since franchisees do not comply with the franchisor's brand standards when using it on the Internet. Furthermore, additional attempts should be initiated to establish internet seller's quality requirements for preventing unfair competitive advantage. As one potential answer to the transfer to digital franchising concerning the competition and consumer protection law, a Regulation on promoting fairness and transparency for business users of online intermediation services² was brought. It provides procedures for social media relations, internet platforms, and search engines with corporate and business website users (de Koning, 2020a), and its primary goal is to create a fair, sustainable, predictable, and trusted online business environment (de Koning, 2020b). Besides competition law and what franchisor can and cannot directly or indirectly (choice of website language, bad credit, card, maximum sales online, automatic re-routing to the website of the local franchisee, etc.) (Attard et al., 2014: 26) prohibit, another essential item is customer data protection and who might use customers' data collected by franchisees. Due to the franchisors' standpoint that both e-commerce with the competition issues and customer data are not part of the franchising system, the whole franchising system formula should be adapted to include the new digital tools (Abell, 2016). For the franchising system's success, Abell et al. (2016) concluded that franchisors should have a higher level of flexibility and control over digital tools and the Internet, but this should be per the current or updated competition regulation. It is expected that the first draft of the new Vertical Block Exemption Regulation will be published in June 2021 and will be put into further consultation with stakeholders. New Regulations should come into force on May 31, 2022. It is expected that the regulation will answer how to transform franchising into digital franchising considering the competition regulation.

5. CONCLUSION

The digital transformation is visible in almost all industries and sectors. It can be applied to all business levels, including the franchise business model. It has led to significant changes in the approach to franchise customers and end consumers. The digital transformation is visible through increased customer care awareness, which was significantly affected by the coronavirus pandemic. Consumers increasingly turn to business models based on socially responsible business, which almost every franchise has in its business doctrine. Changes in a business environment to e-commerce and omni-channels of doing business for franchising brings changes. The most significant change is that franchising agreements will need to be revised to address these business procedure developments. The franchising agreements will need to clarify the included parties' responsibilities and roles in the new digital world. Franchising agreements will need to address different profit-sharing methods, responsibilities, and roles for collecting and processing customer data. They will need to comply with increased data protection laws and competition laws on vertical restraints and horizontal data sharing (if the franchisor is also active on the retail level). To prevent possible disputes, franchisors and franchisees must describe their positions, accurately qualify their contracts, and make exact provisions regarding e-commerce and omnichannel presence. SMEs in franchising need the legal protection of block exemption rules to ensure their businesses' stability and continuity in the face of potential distortions of competition. A level playing field between SMEs and online platforms that can trade from different tax regimes is essential. The development of the Internet in sales to end customers has opened the way to new online businesses. Many of these activities escape regulation and challenge businesses built on material investment to bring customer choice and service, sustainable job creation, and traceable financial revenue. Franchising has successfully integrated omnichannel retail or services, and EU competition rules must support offline business formats' survival.

² Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services (Text with EEA relevance), [2019], OJ L 186

The future Block Exemption should address new sales channels, such as marketplaces and platforms, which can undermine franchisor and franchisee business models that invest in local communities. In the new regulation, notions of active and passive sales should be clarified. A supplier should be permitted to restrict sales of one of its distributors outside the exclusive territory granted to it. Furthermore, franchisees should have written confirmation of the right to sell online to protect the franchisor's know-how. This paper raises questions for further research concerning franchising with different digital business procedures that stay and should be appropriately examined. One possible research direction is to investigate how the new Regulation will consider the online franchising system's online processes and how this will influence competition regulation.

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LITERATURE:

1. Abell, M. (2011). The Regulation of Franchising around the World. *International Journal of Franchising Law*, 9 (3), pp. 3-20.
2. Abell, M. (2016). *Legal perspective of the regulatory framework and challenges for franchising in the EU*. Brussels: European Parliament, DG-For Internal Policies: Policy Department A: Economic and Scientific Policy, Retrieved 15.05.2021 from [https://www.europarl.europa.eu/RegData/etudes/STUD/2016/587317/IPOL_STU\(2016\)587317_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2016/587317/IPOL_STU(2016)587317_EN.pdf)
3. Abell, M., Broadhurst, N., Bueno Diaz, O., De La Bursi-Franssen, J., Chopra, C., Delberghe, C., Hendrickx, L., Hoogstraaten, P., Wiewiorowska – Domagalska, A. (2016). *Proceedings of the Workshop on Relations between franchisors and franchisees: regulatory framework and current challenges*, Brussels: European Parliament, DG-For Internal Policies: Policy Department A: Economic and Scientific Policy. Retrieved 15.05.2021 from [http://www.europarl.europa.eu/RegData/etudes/STUD/2016/595340/IPOL_STU\(2016\)595340_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/595340/IPOL_STU(2016)595340_EN.pdf)
4. Abell, M., Fielder, S., Singh, M. (2014). Bitcoin and international franchising. *International Journal of Franchising Law*, 12 (4), pp. 33-40.
5. Antonsson, G., Fernlund, A. (2006). Franchising: E-commerce and data protection issues in Sweden. *International Journal of Franchising Law*, 4 (1), pp. 26-30.
6. Arbona - Što je content marketing? (2018). Retrieved 20.05.2021 from <https://www.arbona.hr/ostalo/cesta-pitanja/optimizacija-za-trazilice/sto-je-to-content-marketing/1746>.
7. Attard, C., Lindsey, M., Metzloff, K., Pratt, J. (2014). Internet issues in international franchising. *International Journal of Franchising Law*, 12(5), pp 11-42.
8. Boyd, D. M., Ellison, N. B. (2001). Social network sites: Definition, history, and scholarship. *Journal of computer-mediated Communication*, 13 (1), pp. 210-230.
9. Chaffey, D. (2021). *2021 digital marketing trends: 25 practical recommendations to implement*. Retrieved 26.5.2021 from <https://www.smartinsights.com/digital-marketing-strategy/digital-marketing-trends-innovation>.
10. Chan, M. (2020). *Costa baristabot replaces briggos*. Retrieved 10.05.2021. from <https://bartalks.net/costa-baristabot-replaces-briggos/>.

11. Chan, V. (2006). Franchisors on the world wide web data protection and e-commerce issues in Hong Kong and PRC. *International Journal of Franchising Law*, 3 (3), pp. 15-18.
12. Damoska Sekuloska, J., Erceg, A., *Employment of the Smart Contracts in the Practicing of the Franchising Business Model*. In Marina, N. & Vasilev, R. (eds.) *Proceedings of 1st International Conference "Applied Computer Technologies"*, University of Information Science and Technology "St. Paul the Apostle" – Ohrid, Macedonia & Technical University of Varna, Bulgaria, 2018, pp. 47-53.
13. de Koning, M. (2019). Fashion and Luxury Product Franchising in the European Digital Landscape. *Franchise Law Journal*, 39 (2), pp. 215-233.
14. de Koning, M. (2020a). Competition Laws in Franchising. Lexology. Retrieved 03.05.2021. from <https://www.lexology.com/library/detail.aspx?g=56cb9eb2-7a13-4487-81cb-600b278b6670>.
15. de Koning, M. (2020b). Franchising in EU Competition Law. Lexology. Retrieved 03.05.2021 from <https://www.lexology.com/library/detail.aspx?g=500ddb51-85e6-42c5-bdeb-0d0e221e24cd>.
16. Digimedia: Što sve uključuje digitalni marketing. (2019). Retrieved 20.5.2021. from <https://www.dimedia.hr/sto-sve-ukljucuje-digitalni-marketing>.
17. Emerson, R. (1990). Franchising and The Collective Rights of Franchisees. *Vanderbilt Law Review*, 43, pp. 1523-1532.
18. Entrepreneur staff (2020). *KFC Turned to Self-Driving Cars in China to Deliver Fried Chicken While Limiting Human Contact*. Retrieved 11.5.2021. from <https://www.entrepreneur.com/article/360486>
19. Erceg, A. (2013). Teorijski okvir ekonomski perspektive franšize. *Pravni vjesnik*, 29 (1), pp. 137-159.
20. Erceg, A. (2019). Franchising in Balkan area: a review. *Ekonomski vjesnik / Econviews*, 32 (2), pp. 389-403.
21. European Commission (1988). *Commission Regulation (EEC) No 4087/88 of November 30, 1988, on the application of Article 85 (3) of the Treaty to categories of franchise agreements*, OJ L 359.
22. European Commission (2003). *Commission Recommendation of May 6, 2003*, OJ L 124/36
23. European Commission (2010a). *Commission Regulation (EU) No 330/2010 of April 20, 2010, on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices (Text with EEA relevance)*, OJ L 102.
24. European Commission (2010b). *Guidelines on Vertical Restraints (Text with EEA relevance)*, OJ C 130.
25. European Commission (2014). *Communication from the Commission — Notice on agreements of minor importance which do not appreciably restrict competition under Article 101(1) of the Treaty on the Functioning of the European Union (De Minimis Notice)*, OJ C 291.
26. European Parliament (2019). *Regulation (EU) 2019/1150 of the European Parliament and of the Council of June 20, 2019, on promoting fairness and transparency for business users of online intermediation services (Text with EEA relevance)*, OJ L 186.
27. European Union (2012). *Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union*, OJ C 326.
28. Floriani, B., Lindsey, M. K. (2002). The continuing impact of the Internet on international franchising. *Business Law International*, 1, pp. 86-142.
29. George, G., Haas, M. R., & Pentland, A. (2014). Big data and management. *Academy of Management Journal*, 57 (2), pp. 321-326.

30. Gerus, K.A. (2019). Development prospects of digital franchising in modern economy. *Международный научно-исследовательский журнал*, 81 (3), pp. 91-94.
31. Gladilina, I. P., Kurbanov, S. A., Maximov, D. A., Dobrova, E. D., Dobrova, K.B. (2019). Digital Franchising and Entrepreneurship: Effects of Digital Technology on the Relations of Business Process Participants. *International Journal of Innovative Technology and Exploring Engineering*, 9 (1), pp. 3892-3896.
32. Krawczyk, A. (2006). E-commerce and data protection issues and their impact on franchising under Polish law. *International Journal of Franchising Law*, 4 (1), pp. 14-19.
33. Krishnamurthy, S., Dou, W. (2008). Note from special issue editors: Advertising with user-generated content: A framework and research agenda. *Journal of Interactive Advertising*, 8 (2), pp. 1-4.
34. Le Strat, A. (2018). Eu geo-blocking regulation: Practical steps for franchise businesses. *International Journal of Franchising Law*, 16 (2), pp. 4-6.
35. Mazepov, P.E. (2020). Improving the legal regulation of franchising in the digital economy. *Law and Politics*, 3, pp. 40-55.
36. McDonald's (2020). *Besplatna dostava McDonald's proizvoda na Pauzi*. Retrieved 11.05.2021. from <https://mcdonalds.hr/o-nama/novosti/besplatna-dostava-mcdonalds-proizvoda-na-pauzi/>.
37. Mehta, P. (2005). Franchising data protection and e-commerce in India. *International Journal of Franchising Law*, 3 (4), pp. 23-30.
38. Mergelina, R., Karp, E. H., Pearce, T. P. (2015). Enroachment issues around the world. *International Journal of Franchising Law*, 13 (1), pp. 3-26.
39. Mullock, J., Maldoff, G. (2017). Data protection and international franchising. *International Journal of Franchising Law*, 15 (1), pp. 11-16.
40. Murray, I. (2006). *How to Choose A Franchise*. London: Express Newspapers
41. Pappas, I. O., Mikalef, P., Giannakos, M. N., Krogstie, J., Lekakos, G. (2018). Big data and business analytics ecosystems: paving the way towards digital transformation and sustainable societies. *Information Systems and e-Business Management*, 16, pp. 479-491.
42. Plave, L., Tsimmerman, I. (2006). Franchising: Data protection and e-commerce issues in the United States. *International Journal of Franchising Law*, 4 (2), pp. 3-26
43. Rihelj, G. (2020). *Surfn'fries samouslužni aparati za krumpiriće kao game changer u QSR segment*. Retrieved 12.05.2021 from <https://hrturizam.hr/surfnfries-vending-machine/>.
44. Shane, A. S. (2005). *From Ice Cream to the Internet: Using Franchising to Drive the Growth and Profits of Your Company*. USA: Prentice-Hall
45. Sitnicki, M. (2018). Franchising model of commercialization of Scientific libraries' services at research universities. *Baltic Journal of Economic Studies*, 4 (2), pp. 215-233.
46. Soloviev, V. I., Milovanova, M. S. (2019). *Digital franchising as a special business type with digital transformation of the society*. Retrieved 12.5.2021 from <https://economic-theory.com/images/PDF/2019/43/digital-franchising.pdf>.
47. Tyre, K., Newton, N., Vilmenay, D. (2018). Franchising in Africa: Growth in the industry and data privacy and protection issues. *International Journal of Franchising Law*, 16 (2), pp. 7-13.
48. van Neck, R. (2005). Netherlands: E-commerce and data protection laws and their impact on franchising. *International Journal of Franchising Law*, 3 (3), pp. 24-28.
49. Ward, P., Roy, T., Manvell, A. (2005). Franchising in Australia e-commerce and data protection issues. *International Journal of Franchising Law*, 3 (2), pp. 12-22.
50. Weber, R. A. (2013). *An Introduction to Franchising*, London: Palgrave Macmillan

51. Wiewiorowska – Domagalska, A. (2016). *Franchising – Study*. Brussels: European Parliament, DG-For Internal Policies: Policy Department A: Economic and Scientific Policy, Retrieved 15.5.2021 from [https://www.europarl.europa.eu/RegData/etudes/STUD/2016/578978/IPOL_STU\(2016\)578978_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2016/578978/IPOL_STU(2016)578978_EN.pdf).
52. Zeifang, G. (2005). E-commerce and data protection issues and their impact on franchising under German law. *International Journal of Franchising Law*, 3 (2), pp. 27-33.
53. Zhu, K., Kraemer, K. L. (2005). Post-adoption variations in usage and value of e-business by organizations: cross-country evidence from the retail industry. *Information systems research*, 16 (1), pp. 61-84.

CHANGING THE WAY YOUNG PEOPLE PERCEIVE INNOVATIVE ENTREPRENEURSHIP AND PROPOSALS FOR ITS STIMULATION

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ABSTRACT

This research proposes a developed format of a survey of young people about innovative youth entrepreneurship. It provides mechanisms used for the development of youth start-up movement. Based on the interpretation of the obtained results from the respondents, certain proposals were defined to solve the identified problematic issues and improve measures of stimulating innovative youth entrepreneurship in the country.

Keywords: *Innovative youth entrepreneurship, start-up, Development of business models, Mechanisms of innovative development*

1. INTRODUCTION

Development of innovation potential of a country is the most important condition to increase its competitiveness on a global market, develop a stable and modern material and technological infrastructure and intellectual capital. A fundamental stage in this process is a generation of innovative ideas based on a detailed analysis of the problematic matter and identification of their relevance considering the peculiarities of a region, country, economic and geopolitical characteristics, social and economic situation. Innovative ideas should meet the needs of potential users making it possible to solve the arising problematic matters, improve certain activities of business entities and other organization. The priority goal in the country's innovation development is to involve young people in the process of implementing their own initiatives for the benefit of their region and country.

2. CHANGING THE WAY YOUNG PEOPLE PERCEIVE INNOVATIVE ENTREPRENEURSHIP AND PROPOSALS FOR ITS STIMULATION

To implement the entrepreneurial initiatives, including those of young people, the Republic of Belarus creates favourable conditions like financial incentives, communication infrastructure and solution of organizational matters (Fig. 1).

Figure following on the next page

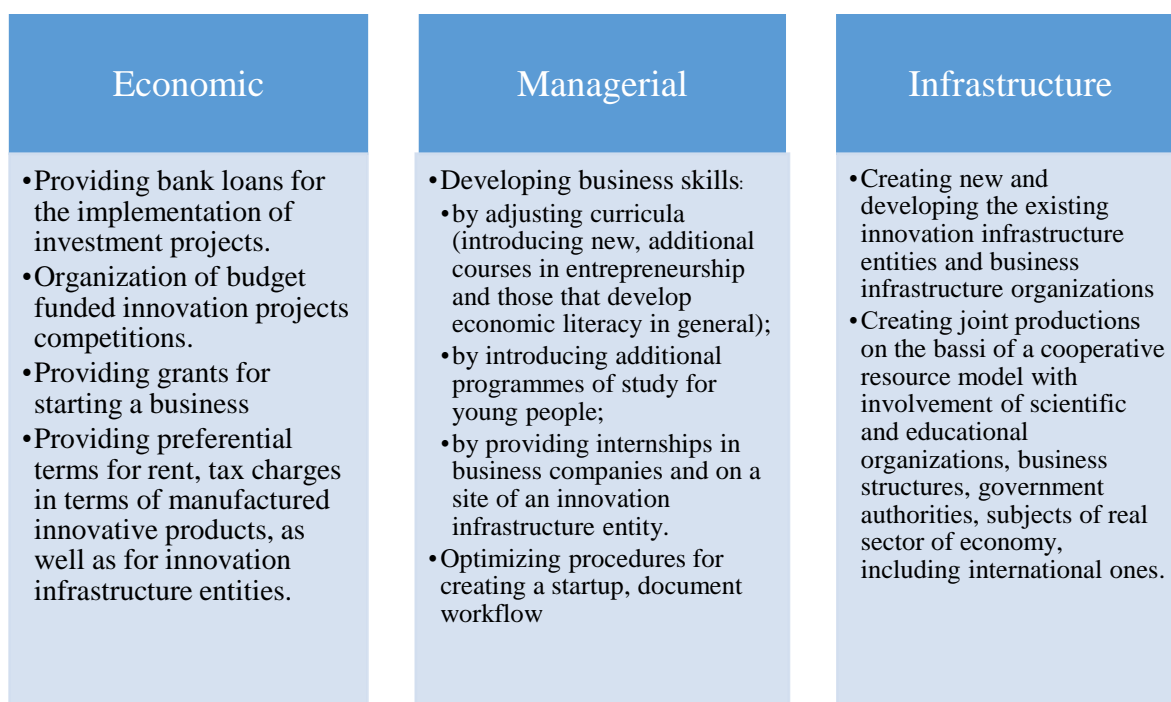


Figure 1: Mechanisms of innovative youth entrepreneurship development

In the international “Doing Business” ranking (2021a) of the World Bank in 2020 the Republic of Belarus ranked 49th with the result of 74,3 points (in 2019 - 74,4 points). To compare, Bulgaria ranked 72nd (71,8 points), Russia – 78,2 (77,4 points), China – 77,9 (74 points), Germany – 79,7 (79,3 points) (Fig. 2).

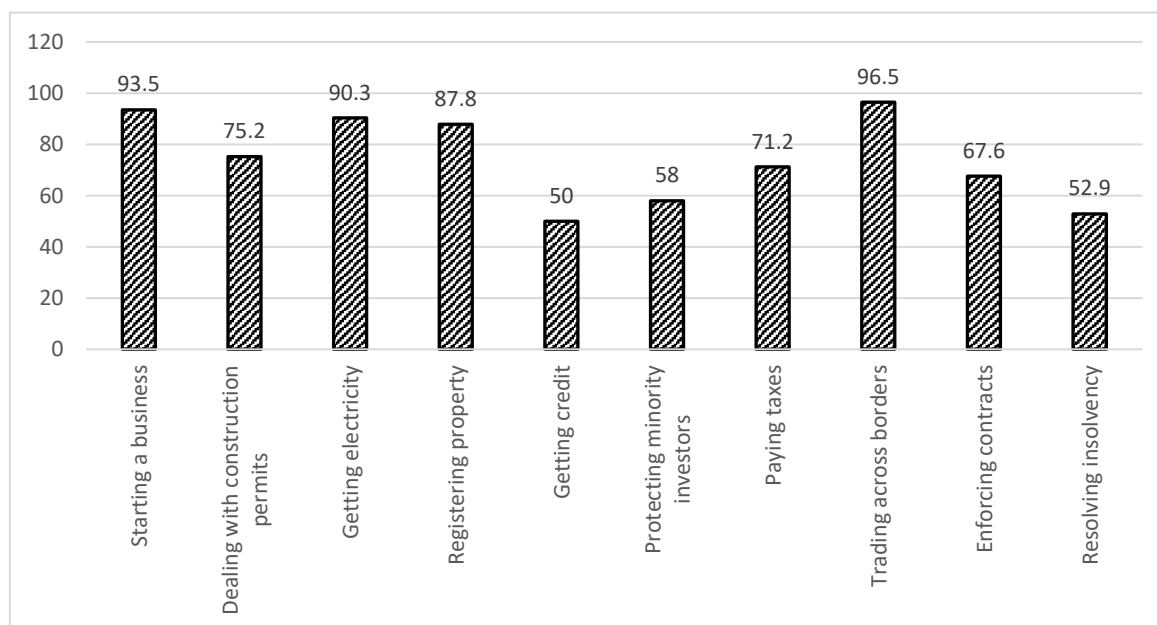


Figure 2: Measures of business regulations in the Republic of Belarus in 2020 by main indicators, % (2021a)

For the development of the start-up movement in the country, the Minister for economic affairs of the Republic of Belarus each year accepts a plan for holding start-up events with a monthly breakdown (2021b) (since 2021 such plans are developed separately by each region).

The Republic of Belarus, like any other developing country, pays special attention to the development of an effective and dynamic innovation infrastructure that creates favourable conditions for innovation start-ups, introducing the country on a global scale, increasing export potential, solving employment-related issues and increasing wages. This approach is particularly relevant for initiative young people. In order to define main factors that influence stimulation of youth entrepreneurship, problematic issues in this field and necessary incentives, an international survey for young people was prepared named “Factors influencing youth entrepreneurship development” (2021c). The following are some of the questions that were included in the survey:

- Do you wish to start your own business?
- Is the planned business directly related to your profession?
- In which area do you plan to start your business?
- What type of activity does your planned business correspond to?
- What reasons (motives) influenced your decision to start your own business?
- Does (did) your programme of study in university include courses related to entrepreneurship?
- What knowledge (skills, competences) about starting and running your own business, on your opinion, is insufficient in your educational institution (in order to add them to the curriculum)?
- Do you have an experience of running your own business?
- What average monthly income do you think is optimal for your business?
- What issues did you face at the stage of opening and in the process of running your business (if you have such experience)?
- What motivation for starting your own business describes you the best?

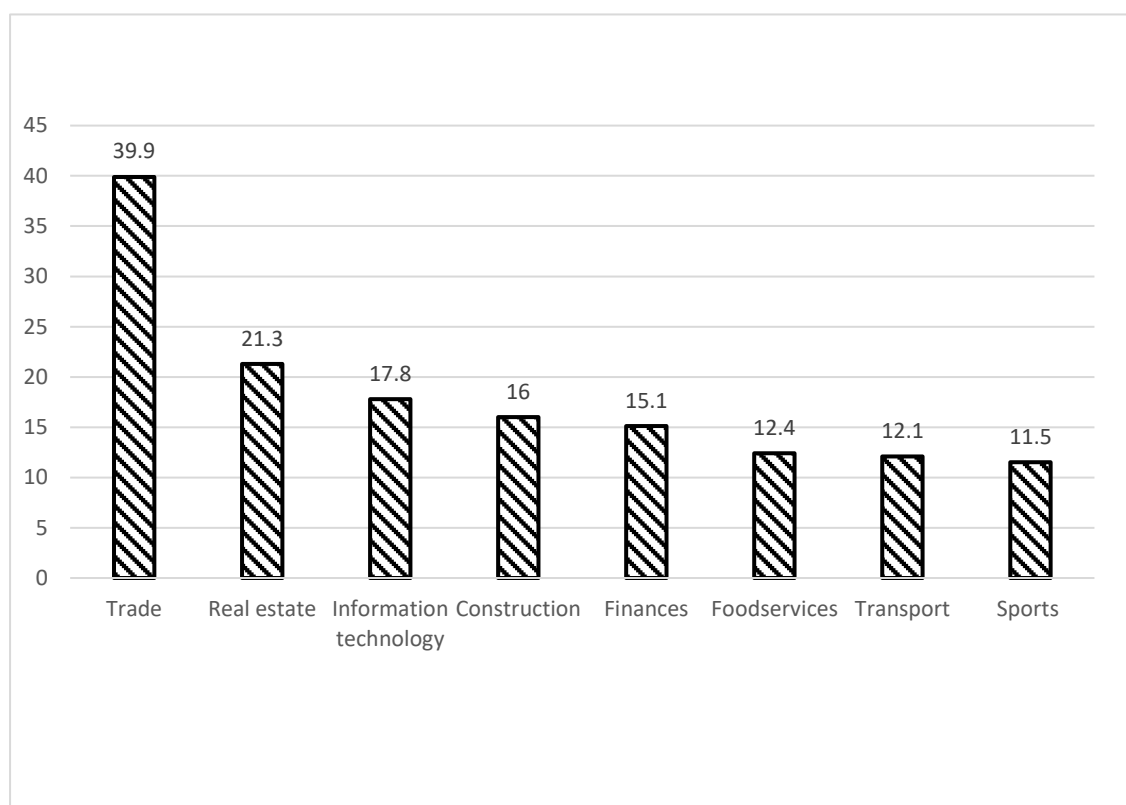


Figure 3: Distribution of the respondents' answers regarding the priority areas for their potential business, %

Analysis of the obtained results of the international survey for young people led to the following conclusions (Terziev, Klimuk, 2021d; 2021e; 2021f; 2021g):

- The majority (72,7% of the respondents) wish to start their own business (answers “yes” and “rather yes”), which indicates their desire to work “for themselves” by realizing their own initiatives, to control production and management processes and to bear responsibility and risks from a start-up;
- For 74% of the respondents the planned business is not related to their main profession, which shows poor responsibility, poor planning of a future career, a low level of career guidance (students should learn about their future profession in practice, not just based on theoretical preferences and opportunities.);
- The priority areas for running business according to the respondents are trade (39,9%), real estate (21,3%) and information technology (17,8%) (Fig. 3), which indicates a low level of innovative entrepreneurship among young people, which correspond to technologies of V and VI wave of innovation.
- The most popular types of activities chosen by the respondents were advertising and information services (30,5%), educational services (14,5%) and software development (11,5%), which is 56,5% of all suggested options of types of activities (Fig. 4). Such choice is determined by:
 - problematic issues on the market not directly related to the production (provision) of goods (services), but to their promotion on the market;
 - the growing demand of the population for self-development, development of professional, social and personal competences influenced by the current global epidemiological situation;
 - digital transformation of the main and supporting processes in all sectors of the socio-economic system.

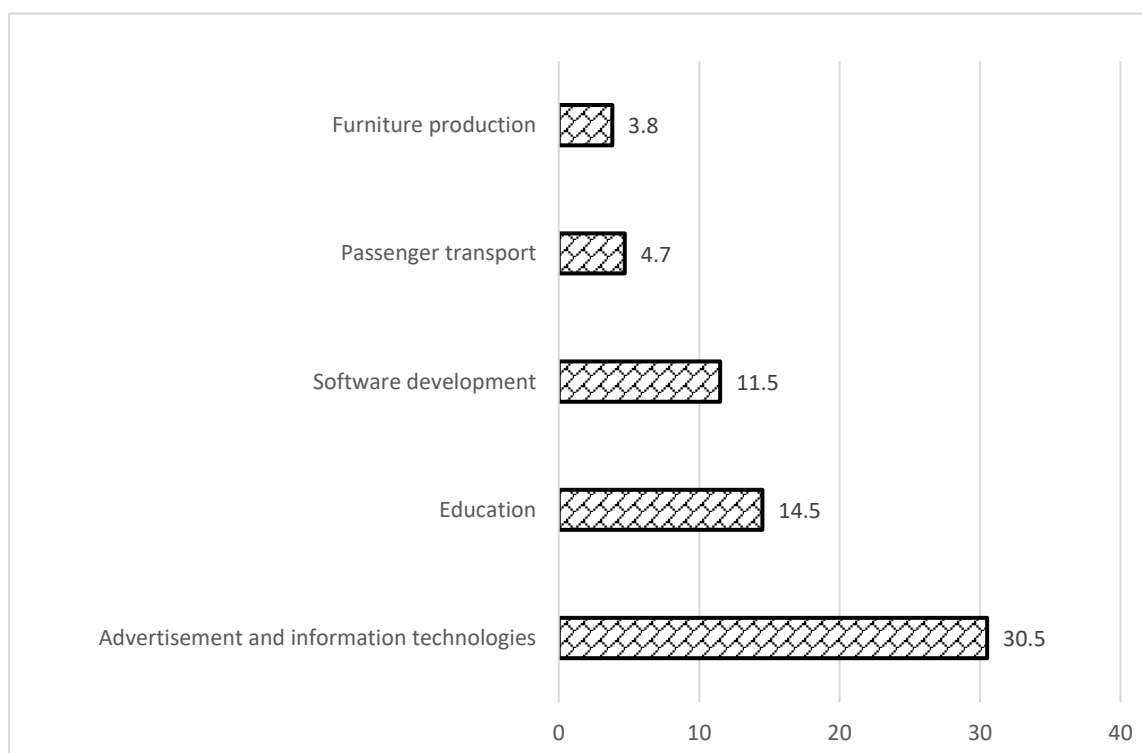


Figure 4: Distribution of the respondents' answers regarding the most popular types of activities for their business, %

- The major motivations for starting own business include: insufficient income, inability to realize one's initiative at the main place of work, which indicates a relatively low level of remuneration of the future professions of young people, a high level of youth initiative while solving problematic issues in economic and social spheres of a region (country);
- The young people tend to believe that university programmes of study lack courses (optional courses) in entrepreneurship (39,1% of the respondents noted that their curriculum does not (did not) include courses that provide relevant knowledge and 41,4% of the respondents answered that they had only 1-2 such courses, thus 80,5% of the respondents consider the university courses to be inconsistent with the modern conditions of the development of business environments for the implementation of their own initiatives;
- When asked about "insufficient" competences, 52,1% of the respondents pointed out the lack of practical activities to develop entrepreneurial skills, 48,5% of the respondents have insufficient knowledge (skills) about how to promote products (services) (Fig. 5). This is confirmed by their answers to the previous question about the need to update university programmes of study and add courses that provide necessary skills and the need to adjust curricula (by implementing "flexible" curricula when organizing a round table with representatives of the real sector of the economy, scientific and educational organizations, the business community, government bodies and public organizations).

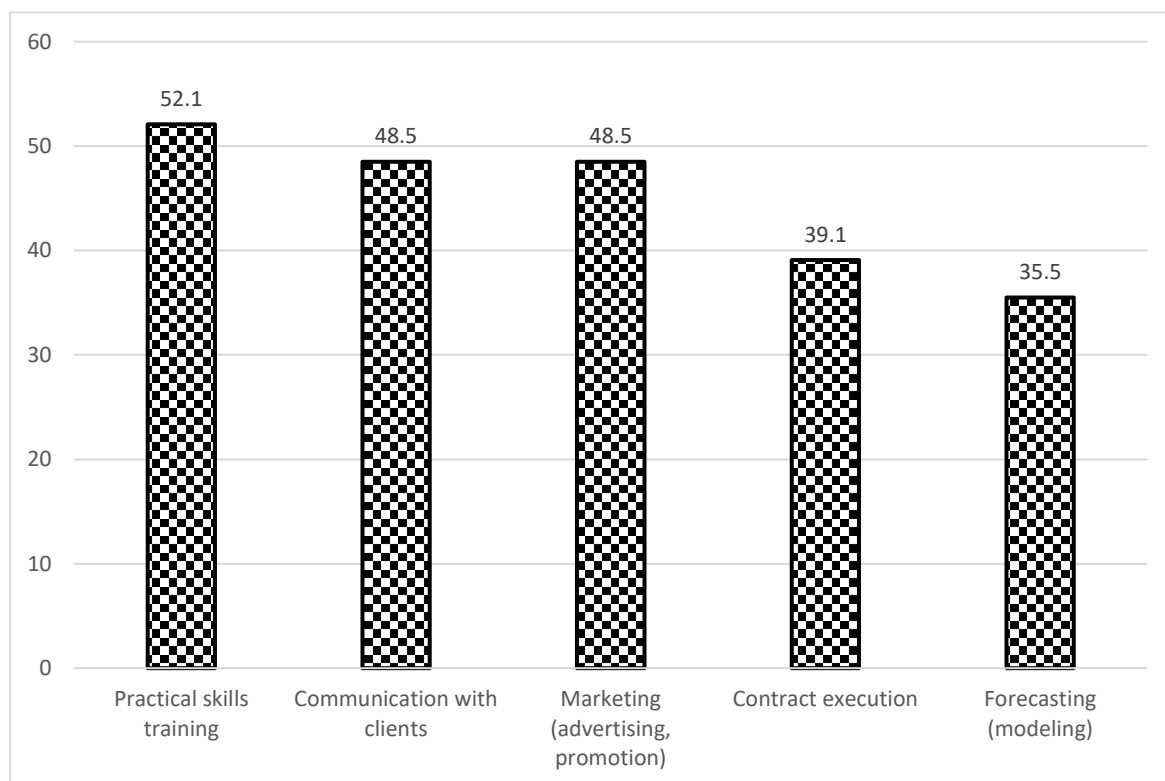


Figure 5: Distribution of the respondents' answers regarding the "insufficient" competences during university courses of studying, %

- Those young people who have already tried themselves as entrepreneurs (14,8% of all the respondents (4)) find that the main issues while starting and then running their own business included the lack of knowledge about the procedures for starting a business (27,5%), insufficient initial funding (27,5%) and the availability of similar products on the market (23,1%) (Fig. 6). This once again indicates the poor innovation level of the goods (services) offered, lack of the practical skills needed to implement entrepreneurial procedures, insufficient economic benefit and investment funds.

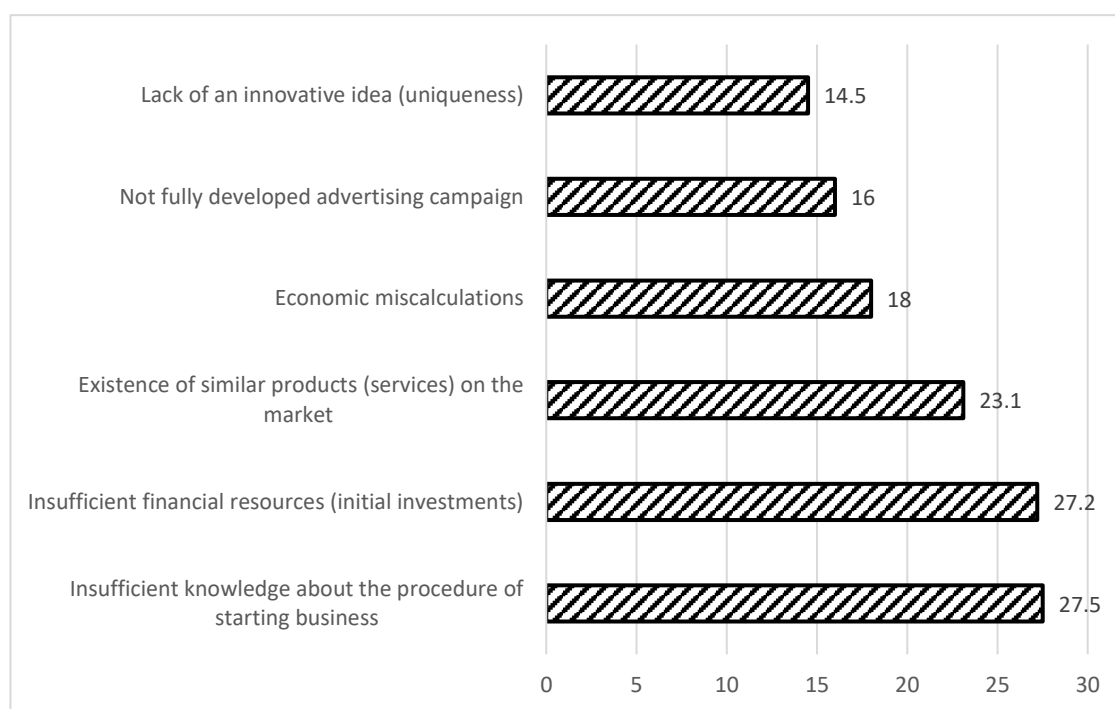


Figure 6: Distribution of the respondents' answers regarding the problematic issues when starting and then running own business by young people who have such experience, %

- The main motivations for starting own business by young people, on the basis of the survey, include: income growth (financial independence), realization of their own innovative ideas, collaboration with creative teams, willingness to try something new (maximum score "5") (Fig. 7), which indicates two priorities when starting one's own start-up – financial interest and creative approach (innovation) to solving problematic issues (business ideas).

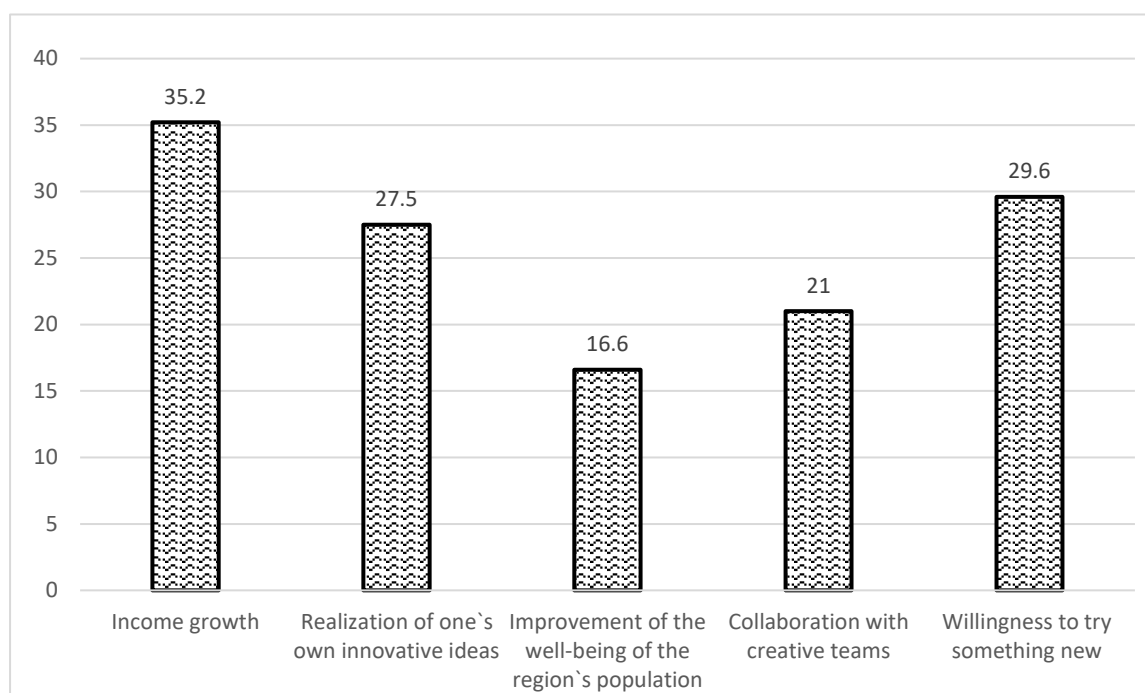


Figure 7: Distribution of the respondents' answers by main motivations for initiating their own start-ups, %

The results of the survey and the analysis of the respondents' answers helped define the ways to improve economic and administrative mechanisms to stimulate youth entrepreneurship:

- adjusting state (regional) programmes for the development of entrepreneurship, small and medium-sized enterprises (subsidy procedure, grant programmes, venture capital financing, taxation and other preferences);
- adapting educational programmes to modern needs of young people and market requirements;
- attracting representatives of the real sector of the economy and business to educational process, practical training of future entrepreneurs, approving in real conditions the developed business models for the implementation of youth initiatives.
- developing innovation business infrastructure on the basis of international partnerships.
- Interpretation of the research results enables us to develop a number of practical recommendations (Fig. 8).

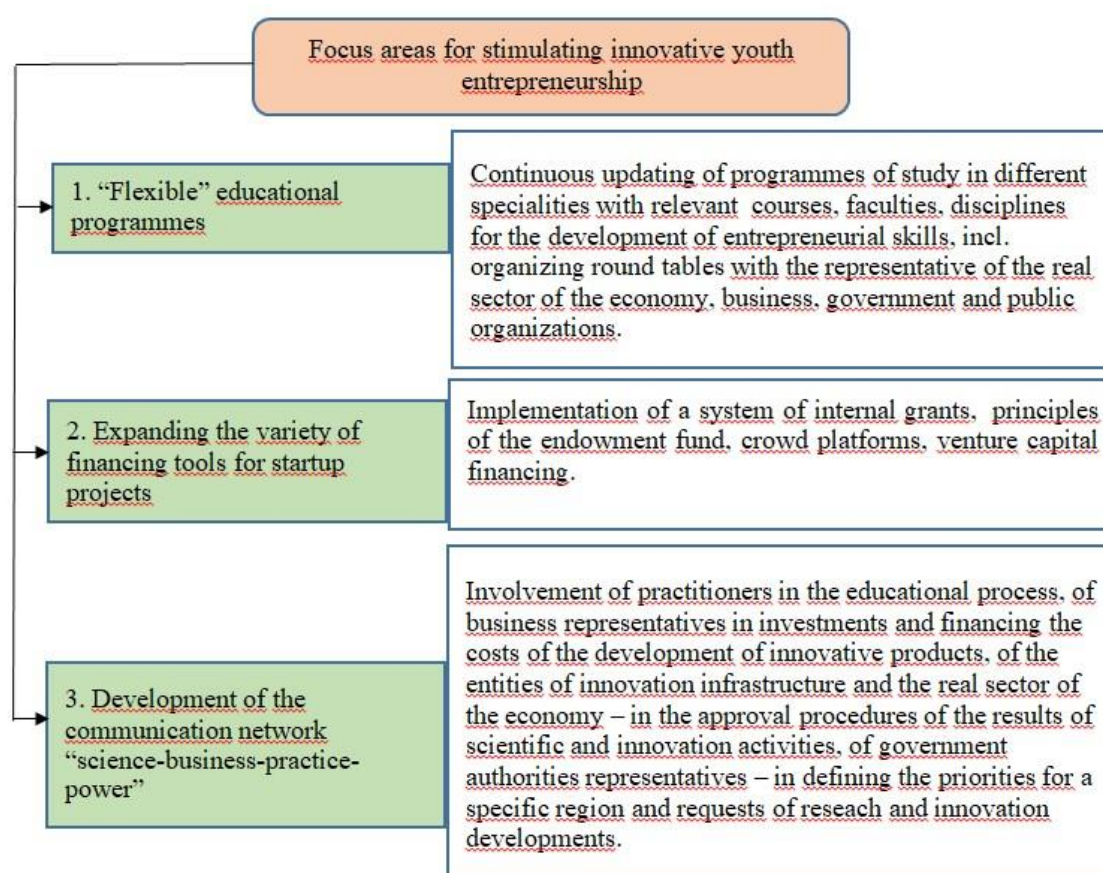


Figure 8: Focus areas for stimulating innovative youth entrepreneurship

3. CONCLUSION

Development of the economic and administrative mechanisms for stimulation of youth entrepreneurship would help:

- Develop a cooperative network of scientific and education organizations, business structures, government authorities, public organizations ensuring the consistency of the implementation of an innovative idea until its promotion on and outside the regional market;
- Create new innovation start-ups in the region expanding the variety of goods (services) offered to the population;

- Create additional jobs, which will increase the employment rate of the population of the region;
- Ensure additional income for the local (republican) budget based on the tax deductions;
- Develop business skills of young people on generating, promoting and implementing innovative ideas in the practical spheres of the region, country.

LITERATURE:

1. *International ranking of the World Bank "Doing Business" for measuring business regulations*, (2021a), <https://russian.doingbusiness.org>, (03.2021).
2. *Ministry of Economy of the Republic of Belarus*. (2021b). http://www.economy.gov.by/ru/plan_startap-ru, (03.2021).
3. <https://forms.gle/a3pGsZ5d1SiBDx3BA>. (2021c), (03.2021).
4. Terziev, V., Klimuk, V. (2021d). *Methodological concepts for modernization of industrial enterprises in the concept of postindustrial development*. // 65th International Scientific Conference on Economic and Social Development – Online Conference, 19 February, 2021, Economic and Social Development (Book of Proceedings), Cakovec, Croatia, 2021, pp.1-5, ISSN 1849-7535.
5. Terziev, V., Klimuk, V. (2021e). *Strategic of models of post-industrial development of industrial enterprises in terms of the concept of national security*. // 65th International Scientific Conference on Economic and Social Development – Online Conference, 19 February, 2021, Economic and Social Development (Book of Proceedings), Cakovec, Croatia, 2021, pp.180-186, ISSN 1849-7535.
6. Terziev, V., Klimuk, V. (2021f). *Modelling the forms of international scientific and educational cooperation*. // 20th RSEP International Economics, Finance & Business Conference – Virtual/Online 17-18 February 2021, Holiday Inn Vienna City, Vienna, Austria, Review of Socio-Economic Perspectives RSEP, Ankara, Turkey, 2021, pp. 151-156, ISBN: 978-605-06961-8-9.
7. Terziev, V., Klimuk, V. (2021g). *Directions for modernization of innovative youth startup design in Belarus*. // 20th RSEP International Economics, Finance & Business Conference – Virtual/Online 17-18 February 2021, Holiday Inn Vienna City, Vienna, Austria, Review of Socio-Economic Perspectives RSEP, Ankara, Turkey, 2021, pp. 157-162, ISBN: 978-605-06961-8-9.

THE NEED TO IMPLEMENT NEW SKILLS IN THE TOURISM SECTOR

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ABSTRACT

The aim of this paper is to determine whether there is a gap between what vocational education institutions in this sector provide, in terms of knowledge and skills, and the knowledge and skills that are really sought after in tourism by employers. For shaping and presenting the results of the research, the usual qualitative and appropriate quantitative (statistical) scientific research methods and a survey questionnaire are used to collect information and data on the subject of this research. The results of the online survey (which was distributed to employers in the tourism sector in Istria County) indicate the need to improve skills in innovation and creativity, communication skills, problem solving skills, human resource management skills, and moreover point out that new employees lack responsibility, commitment and teamwork (they coincide with the views of theorists). The applied research methodology indicates that education and training systems do not sufficiently meet the needs of the labor market, so the evolution of labor requires their improvement in the use of digitalization in education, development of soft skills (creativity, innovation and empathy) and key technological competencies lifelong learning.

Keywords: tourism sector, skills, employers, educational institutions

1. INTRODUCTION

The adaptability of the workforce, and transformation of its skills through education, training and work, is crucial in today's business environment. According to the recommendations of the International Labor Organization, companies should invest in lifelong learning that enables people to acquire new skills, reorient as well as provide access to constant professional development. Governments, workers and employers, as well as educational institutions, have equal responsibilities in building effective and appropriately financed lifelong learning process. The UNWTO paper "The Future of Work and Skills Development in Tourism" explores (among other topics) how technology, and in particular robotics / automation, affects the sector. Looking at the 2030 scenario, some studies have shown that it will affect not only developed economies but also developing ones in terms of jobs that involve direct interaction with customers such as hotel and travel agencies, workers, entertainment or service workers and workers that make and serve coffee (barista). The paper furthermore shows that customer focus, creativity and innovation are considered to be key competencies in the future of work in the tourism sector. Tourism is one of the fastest growing economic sectors in the world and also the biggest job-creator. It directly accounts for 6% of employment in the G20 economies (UNWTO, 2018¹). Considering the category of employees in accommodation and food services as defined by the ILO (in exchange of the term tourism), there is clear evidence that the tourism sector has made a key contribution to employment in the G20 economies in recent years, especially after the global economic crisis. Nevertheless, the capacity of tourism sector to create jobs and its role in entrepreneurship is often underestimated. Despite its potential for job creation is been long ago recognized, as well as its immense importance for national and

regional economies, employment has been recognized as one of the least studied aspects of tourism. Tourism in Croatia is seen as the key to development, prosperity and well-being, and is thus becoming the main driver of socio-economic development through the creation of jobs and companies, export revenues and infrastructure development. Besides Europe, as traditionally the most popular holiday destination, other regions are emerging, so it is clear that both policy makers and employers will have to work together on proactive policies related to planning and meeting future skills needs. Therefore, this paper will explore the future required skills in tourism at the international level and through a survey questionnaire at the local level.

2. RESEARCH PROBLEM

Frequent change in the tourism market and technology innovation affect not only tourism products and services, but also jobs in tourism and therefore demand timely identification of the knowledge and skills employees need to possess; as well as a new approach to educating students who need to acquire that knowledge and skills. In addition, there is a significant lack of skills and knowledge foresight. Tourism education faces challenges such as wide range of jobs in tourism, but also the diversity of employers. Large companies, tourism giants such as the Valamar Riviera in Poreč may allow a certain degree of specialization, but small and medium-sized companies are in need of employees with the ability to hold multiple careers at the same time or at least have the ability to manage multiple responsibilities at once. Staffing in the tourism and hospitality industry is a complex process and has various limiting factors. One of these is the seasonality or seasonal concentration of tourist activities, so employers are not able to guarantee year-round full-time employment (unlike some other sectors) and the employee turnover rate is high, so the reasons for the lack of skilled labor should be sought. This is precisely why talent is leaking into other sectors. Furthermore, the perception of the jobs in the sector in the public is relatively negative, in terms of poorly paid and temporary jobs that are seen as a transition into something else; mainly because it is rather easy to find a job in the sector. The above-stated, together with unclear criteria for career development opportunities and working unsocial hours, creates poor image and status of tourism jobs. Consequently, unskilled employees with different educational backgrounds, other than tourism, are increasingly employed in the sector.

3. FUTURE SKILLS NEEDS IN THE TOURISM SECTOR

Labour and human resource management is becoming an increasingly important task in the management of modern business systems, especially those in tourism where human resources play a dominant role. In order to be able to provide guests with a better service, we need to develop professional training system of human resources in tourism and monitor new trends in supply and demand in the tourism market. The reason why education and professional development play a very important role in the process of human resource management in tourism because tourism services (products) are based on a high share of quality human labor. Management and service quality in accommodation facilities, restaurants and other facilities determine the quality of the tourist service. The report of the World Economic Forum "Future of Jobs Report 2018" states that 54% of all employees will have to upgrade by 2022 their knowledge, skills and abilities that are today considered as important. The changes brought before us by the fourth industrial revolution (e.g. developments in genetics, artificial intelligence, nanotechnology, 3D printing and biotechnology, smart systems - houses, factories, networks or cities) require proactive adaptation not only of job providers, but also of each of us, since such major developmental steps also mean that most occupations (and matching skills and knowledge) are undergoing a thorough transformation. Mostly soft skills, like creativity, analytical thinking, innovation, active learning, emotional intelligence, critical thinking and analysis are highlighted, among a few others, as new skills that will impact business in the

future (World Economic Forum, 2018). "Skill is the rapid and accurate execution of a complex sequence of learned actions that allows an individual to perform a particular activity more easily and successfully; it is acquired through exercise." Skills are divided into hard and soft. Although management 'hard' skills such as accounting, finance and marketing are key skill sets for managers in the hospitality and tourism industry, soft skills are crucial because most interactions with people require some level of soft skills and can guarantee business success. in dealing with people (Bahtijarević-Šiber et al., 2008). The G20 tourism ministers asked the World Tourism Organization (UNWTO) in June 2019 to prepare a report on the future of work and skills development in tourism. As early as October 16, 2019, the UNWTO drafted a policy paper: The Future of Work and Skills Development in Tourism. This document was to be discussed by ministers at their meeting scheduled for the end of 2020 in Saudi Arabia (however the meeting was postponed to May 4, 2021 - Rome, Italy) (UNWTO, 2018). This document takes into account the policies needed to improve the contribution of tourism to the 2030 Agenda for Sustainable Development, which sets out 17 sustainable development goals (SDGs), as well as the UNWTO Global Code of Ethics for Tourism approved by the UN General Assembly in 2001 and the ILO Guidelines on decent work and socially responsible tourism adopted in 2017, as well as the ILO Centenary Declaration for the Future of Work (ILO, 2017). Interest in improving skills, employees, but also the overall job opportunities for the tourism sector is becoming increasingly important today, so many authors and institutions are engaged in finding the top skills you need to succeed in the modern workplace. Bejaković and Mrnjavac wrote about the need to improve skills due to the mismatch between supply and demand of different skills at the sectoral, regional and occupational level (Bejaković & Mrnjavac, 2014). Laškarin Azić Marina wrote about managing relations with guests in the hospitality industry and realized that the guest satisfaction is significantly affected by the sense of satisfaction of employees. It follows that personal communication is the only way in which an individual's feelings and intentions are honestly conveyed (Laškarin Azić, 2018). While the source Detail2Recruitment determined the necessary skills for all employees in the tourism sector, from which 8 were selected in this paper:

- 1) Teamwork
- 2) Flexibility
- 3) Attention to detail
- 4) Time management
- 5) Communication skills
- 6) Interpersonal skills
- 7) Problem-solving skills
- 8) Hazard Awareness (Detail2Recruitment, 2020)

Almost every job in the hospitality industry involves teamwork. Therefore, horizontal (between colleagues) and vertical (between employees and their superiors) cooperation is required to ensure guest satisfaction. So, for example, in the kitchen team members have to work together to make sure food is prepared on time and in accordance with the exact standards. Without effective teamwork, customers will not experience the quality service they expect. Not only do most catering staff work long and difficult shifts, but they also have to work during the holidays. Among others, Christmas and New Year are usually the most profitable times of the year for the hospitality companies. Therefore, staff must remain flexible with their personal plans to ensure that they can work and be available as needed during a busy period as mentioned above. However, working in these shifts has certain benefits. Most companies offer incentives such as cash bonuses or additional holidays that the staff can use throughout the next year. Hospitality is judged by the customers, so everything must be at the highest level of service in order to guarantee successful business. Attention to detail must be an integral part of the job.

Observing details in business is very important in order to provide excellent and complete customer service. Time management is important since tasks need to be completed in a timely manner, which means that all services will be provided at the appropriate time. Therefore, the guest will not have to wait long for the service. Communication skills significantly affect customer satisfaction and communication skills are crucial in ensuring that customers are happy. Interpersonal skills are essential in customer service and are practiced on a daily basis. Interpersonal skills are acquired by interacting with the people around you; skills such as empathy, listening, patience, tolerance, creative thinking and negotiation. Staff in the tourism sector face multiple issues and problems every day. The ability to 'think fast on your feet' is learned quickly. Problem solving is also necessary for time management. Thinking about ways to shorten the time of doing your current job leaves more time to deal with more complex tasks. This allows the guest to be more fully served, which certainly makes him more satisfied. Awareness of workplace hazards is a vital skill when working in a potentially hazardous area for both the employee and the employer. All staff should comply with health and safety regulations. Many employers make it possible to acquire knowledge about hazards in the workplace. In 2018, Liz Burton identified 8 necessary skills in tourism that should be pursued through career development. These are the following skills:

- 1) Communication
- 2) Resilience
- 3) Initiative
- 4) Multitasking
- 5) Adaptability
- 6) Attention to detail
- 7) Cultural awareness
- 8) Compliance training (Burton, 2018⁵)

Clear and professional communication through your speech, writing, and body language is essential to good customer service in tourism and catering sector, whether oriented towards customers or one's team. Stress resistance requires everyone to learn how to stay optimistic and productive despite difficulties. Resilience is important not only to make things easier for yourself, but also to maintain a professional image because customers and colleagues respect those who can remain calm and constructive when facing difficulties. An employee with initiative is one that is ready to react quickly and find a way to better meet any additional needs of customers. Individuals are able to perform multiple tasks at the same time, but then overstrain (or burnout) can occur and therefore the work they perform can lead to negative results. Therefore, it is necessary to practice this skill in order to use time rationally and to make sure that the staff efforts have positive results. In the tourism sector, there is often unpredictability regarding work shifts, working hours and customer preferences. Therefore, one should be able to adapt to unpredictability, and thus become resistant to change. Attention to detail involves maximising your time to make everything the best it can be by noticing even the smallest flaws. In tourism and hospitality sector, staff meet colleagues, but also customers of different qualifications, abilities, beliefs, nationalities and religions, which means that you must be culturally aware and adaptable. It is essential that employees are educated about food hygiene, space and safety at work. This includes, again, attention to detail, plus a commitment to safety, the ability to work well as part of a team, and the ability to work quickly and calmly in a high-pressure environment. Alison Doyle also analyzed the required skills of employees in jobs in the tourism sector. The most common jobs were front office workers, housekeeping and restaurant staff, managers, event planners and technical staff. In doing so, it established the skills that employers require of candidates for employment in the hospitality industry.

These skills are:

- 1) Food and beverage preparation skills
- 2) Creative problem-solving
- 3) Attention to detail
- 4) Teamwork
- 5) Process safety knowledge (Doyle, 2019)

The knowledge required for food and beverage preparation and serving requires specific skills of the trade, attention to detail, teamwork and successful interpersonal communication. Due to frequent and unexpected problems in business, it is necessary to be able to solve problems creatively. Attention to detail with as little forgetting as possible in the hospitality business should lead to a strong work ethic through the complete satisfaction of the guest by providing him with healthy food and fast service. Teamwork is often important, as is a strong work ethic. Hospitality management requires skills, some of which are business specific other that are important in any management context. Through teamwork, each individual achieves better results than in classic conditions outside of the team. Thus, teamwork achieves group results that, as a rule, exceed individual ones. This is certainly visible in the relationship between chefs, waiters, bartenders, housekeepers, which leads to better service and greater guest satisfaction. The commitment to safety includes knowledge from safe use of cleaning chemicals to basic electrical repairs and carpentry. The knowledge about health protection and safety at work is essential in the tourism and hospitality sector. All of the above mentioned authors who researched future skill needs in the tourism sector mostly have common results. Among the required future skills they all point out skills like teamwork, communication, time management, attention to detail and knowledge of safety at work. These researches have encouraged the authors of this paper to conduct a research on the future skill needs in the tourism sector of the Istrian County.

4. RESEARCH ON EMPLOYERS' ATTITUDES TOWARDS THE NECESSARY EXIT COMPETENCIES OF HIGH SCHOOL STUDENTS IN TOURISM IN THE ISTRIA COUNTRY

Although it is generally accepted that there is a gap between supply and demand for skills on the labour market in Croatia, there is no thorough and credible analysis that would systematically examine how the education system responds to labour market needs.

4.1. Research methodology

The measurement tool of the research is an online questionnaire on the Survey monkey platform, which provided insight into the knowledge, skills and qualifications that employers characterize as necessary to perform various jobs in tourism. There were no satisfactory answers to the survey questionnaire at the very beginning. A satisfactory number of completed questionnaires could not be collected even after repeated requests to participate in the survey. Therefore, it was necessary to personally visit the employers with the printed version, which required a lot of time. It is important to state that some, mostly large, companies did not respond or did not express their willingness to participate in the questionnaire and referred to the General Data Protection Regulation, despite being guaranteed that the results would be published anonymously and cumulatively after processing. Quantitative analysis included the answers from the survey questionnaire, which the respondents filled in anonymously.

4.2. Description of the research sample

The survey was conducted in October and November 2019. The planned research sample, the respondents in the research, are three groups of employers (small, medium, large) in the tourism

of the Istrian County. The survey questionnaire was sent to the addresses of the managements of all major hotel companies in Istria, hotels, restaurants, cafes, travel agencies, rural tourism, amusement parks; a total of more than a hundred of them. Therefore, employers of different sizes and ownership structures were contacted, but of the same business activities, equally from, as they called it in the Agency for Vocational and Adult Education, the subsector of Tourism and Hospitality and the subsector of Catering. The survey was finally completed by 35 different employers across the Istria County. According to the results, 13 respondents or 37.1% were from the accommodation sector. Of these, 12 or 34.3% are catering facilities, while the smallest number of respondents are travel agencies, 10 or 28.6%. The largest number of respondents comes from companies that have been operating for between three and five years (13 or 37.1%).

4.3. Research results

In order to assess the level of required skills in new employees or those who work for the employer up to 2 years, a scale with five options was used where 1=very low; 2=low; 3=good; 4=excellent and 5=N/A; where 3 is the arithmetic mean. Thus, for those occupations that the respondents give an average grade greater than 3, the skill levels will be at the appropriate level. The score for improvement in specific skill areas is shown in Table 1.

Table 1: Descriptive statistics to assess the importance of improvements in certain areas of skills in new employees and employees working up to 2 years

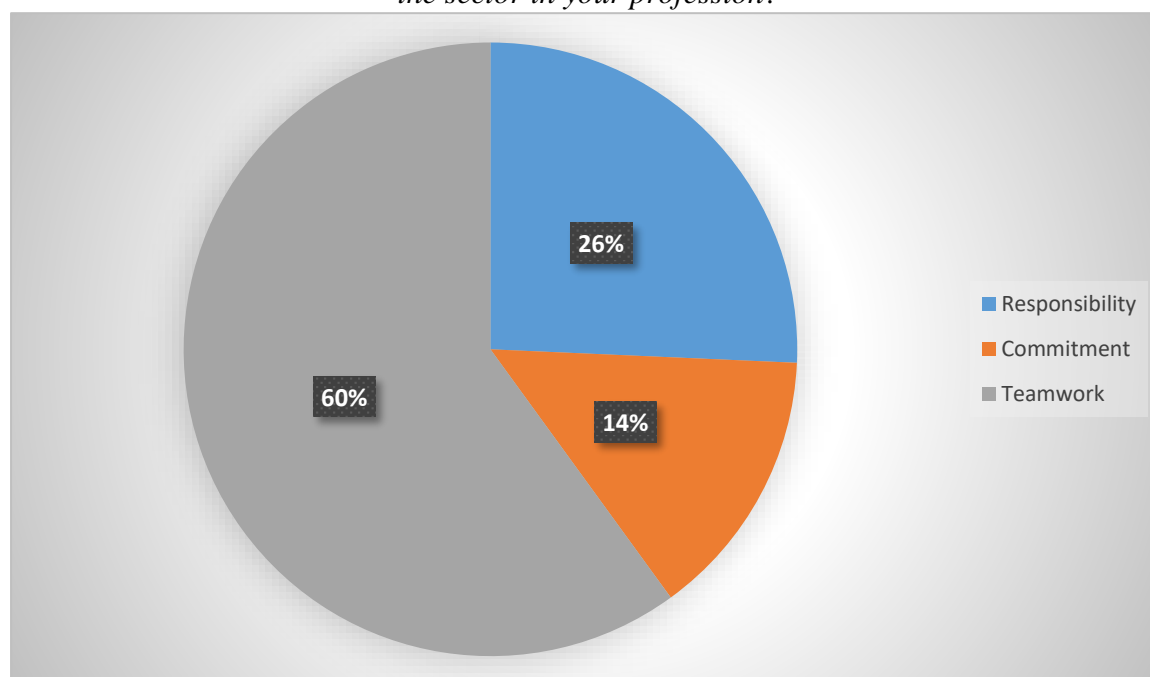
Required skills improvement in the area of:	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
Accounting, budgeting and financial management	3.63	4.00	3	.808	2	5
Administrative affairs	3.37	3.00	3	.547	2	4
Croatian cultural heritage	3.34	4.00	4	.764	2	4
Business management	3.43	3.00	3	.917	2	5
Customer service	3.09	3.00	3	.373	3	5
Entrepreneurship	3.23	3.00	3	.942	2	5
Environmental awareness	3.4	3.00	3	.736	2	5
Foreign language skills	3.54	4.00	4	.505	3	4
Management	3.34	3.00	3	.725	3	5
Health and safety	3.4	3.00	3	.775	3	5
Innovation and creativity	4.11	4.00	5	.932	2	5
IT Business	3.54	3.00	3	.657	3	5
Human resources management	3.66	3.00	3	.938	2	5
Communication	4.03	4.00	4a	.822	3	5
Organisation	3.43	3.00	3	.502	3	4
Problem solving	3.77	4.00	3	.843	3	5
Procurement	3.06	3.00	3	.236	3	4
New products development	3.46	3.00	3	.780	2	5
Quality management	3.14	3.00	3	.912	2	5
Sales and marketing promotions	3.29	3.00	3	.519	3	5
Demonstrating initiative	3.37	3.00	3	.646	2	5
Teamwork	3.46	3.00	3	.980	2	5
Telephone sales	4.26	4.00	5	.780	3	5
Web design and maintenance	3.49	3.00	3	.612	3	5
Business writing	3.00	3.00	3	0.000	3	3
Other, not listed						

Note: Number of respondents (N: 35 and all the answers are valid, there are no insufficient ones)

Source: Prepared by the authors according to the conducted survey

According to the results, respondents consider very important improvements in the areas of telephone sales (4.26), innovation and creativity (4.11), communication skills (4.03), problem solving skills (3.77), human resources management (3.66). The lowest average score was given to improvements in writing skills (3), median and mode values have the same results as mean. The most important soft skills that the respondents consider insufficient are explored below. These skills are shown in Figure 1.

Figure 1: What soft skills and knowledge current employees and job applicants most lack in the sector in your profession?



Source: Prepared by the authors according to the conducted survey

Respondents believe that new applicants and new employees lack teamwork skills the most (21 respondents or 60%). For 9 of them or 25.7% it is responsibility, while 5 or 14.3% of them think it is commitment they lack the most.

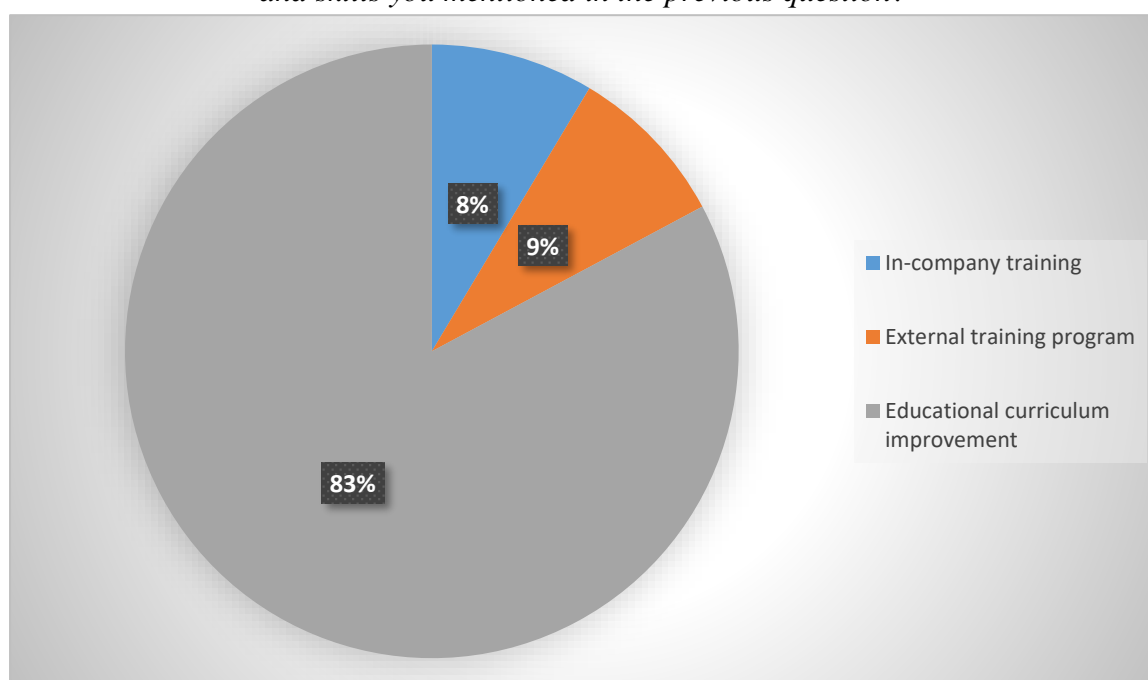
Table 2: Reasons why it is hard to fill vacancies

Why was it difficult to fill the vacancies? Please select answers that apply to your sector.					
		Frequency	Percent	Valid percent	Cumulative percent
Valid	Lack of candidates willing to work for the offered salary	5	14.3	14.3	14.3
	The job includes shift work and unsocial hours	5	14.3	14.3	28.6
	Lack of candidates with the required knowledge of a foreign language	5	14.3	14.3	42.9
	Negative image of the sector / occupation	5	14.3	14.3	57.1
	Seasonal work	7	20.0	20.0	77.1
	I'm not sure what I need	8	22.9	22.9	100.0
	Total	35	100.0	100.0	
Total		35	100.0		

Source: Prepared by the authors according to the conducted survey

The respondents stated that the reasons why it was difficult to find qualified employees are: seasonal work (7 or 20%), lack of candidates willing to work for the offered salary (job includes shift work and unsocial hours, lack of candidates with required foreign knowledge language, poor image of the sector (5 or 14.3%), the majority of respondents (8 and 22.9%) did not state the reasons. Training is needed to reduce the deficit in the required skills. Figure 2 shows the types of training that would improve existing skills.

Figure 2: In your opinion, what kind of training is needed to reduce the deficit in knowledge and skills you mentioned in the previous question?



Source: Prepared by the authors according to the conducted survey

For most respondents (29 or 82.9% of them) improved curricula are necessary to reduce the deficit in knowledge and skills. This indicates that general education subjects should not be isolated, set and inflexible, nor equal in every sector and every school. The 15% autonomy of vocational education institutions defined so far under the Vocational Education Act may well be applied to general education curricula. The methods used by employers to train employees are shown in Table 3.

Table 3: Training methods used by the company

Which, if any, of the following training and professional development methods has your company used in the last two years?					
		Frequency	Percent	Valid percent	Cumulative percent
Valid	Informal workshops and seminars	1	2.9	2.9	2.9
	Mentoring / apprenticeship	28	80.0	80.0	82.9
	In-company training	6	17.1	17.1	100.0
	Total	35	100.0	100.0	
Total		35	100.0		

Source: Prepared by the authors according to the conducted survey

The largest number of respondents, 28 or 80% of them, used mentoring as a training method.

When asked about the importance of certain skills while employing, the employers stated: professional development (3.89), knowledge of foreign languages (3.86), personality and enthusiasm (3.857), education for tourism (3.68), communication skills (3.54).

4.4. Recommendations for matching tourism supply and demand for skills

This research was conducted to determine whether there are any skill mismatches and shortages in certain occupations in the tourism and hospitality sector, with the aim to help planning future educational programs and their outcomes. In the analysis, it was necessary to take into account the natural outflow of employees (retirement), the current issue of emigration, but much more important to define development needs; given that it is possible that some programs which show redundancies today may not be sufficient for the future needs due to some external environment developments impacting upon business. Human resource planning should significantly affect enrolment numbers and the types of education programs, but also the specific learning outcomes of each of the program. The harmonization of future needs and current qualifications should be part of the process of knowledge development for the needs of regional development and should be included in the development strategies of individual counties. Education of students for jobs in crafting according to the Unified Model of Education, which schools have largely abandoned in recent years, provides twice as many hours of practical vocational training in comparison to the currently more popular "school model" and guarantees that at least 70% of the fund of practical training is in-company based. In school year 2018/2019, the Ministry of Economy, Entrepreneurship and Crafts made a decision on scholarships for students who are educated in crafts according to the Unified Model of Education, with support in the amount of 18,000.00 HRK per year per student. What is more, the Ministry also financially encourages craftsmen to participate as mentors in the education of students in crafts, transfer their valuable knowledge to them and prepare them for the world of work (funds are provided from the European Social Fund) (Ministry of Economy, Entrepreneurship and Crafts, 2019). This model would ensure that students are taught by competent people from the world of work and the interaction between the business sector and vocational education would be improved. Then, it would prevent situations where students do not possess the skills needed to work independently in the profession upon completion of vocational education. This would increase the employability of students, ie the system of vocational education and training would better respond to the demands of the labour market. However, what does not suit schools in this model is that the need for teaching staff is reduced, but also the need for additional investment in school equipment. In addition to the acquisition of professional and social skills, this model also contributes to the acquisition of entrepreneurial skills, which is also highlighted in this paper as necessary for future workers in the tourism industry. The creators of the education system reform in Croatia, including vocational education, recognized the need to introduce entrepreneurship in schools, so it was introduced as one of the separate cross-curricular topics in all subjects from the school year 2019/2020. Cross-curricular topics are achieved by interconnecting educational topics between all subjects, and the Recommendation for Key Competences for Lifelong Learning by the European Council states that competencies adopted through seven cross-curricular topics, including entrepreneurship, relate to broader cross-curricular objectives and they represent a link from teaching to lifelong learning (European Commission, 2018). The reform of vocational education with regard to the establishment of Regional Centres of Competence (among other in the tourism sector) is somewhat in line with the direction started by the Unified Model of Education. Tourism, Hospitality and Trade School Pula was named the Regional Centre of Competence in Hospitality and Tourism of Istria. These centres should ensure the quality of practical vocational training in the tourism and hospitality education programs and increase students' access to quality work-based learning. Students would thus acquire the skills most in demand in the labour market.

Especially if we keep in mind that the requirements for skills in the labour market are constantly changing, so it is difficult to predict which ones will be most in demand in the years to come. This research highlights some skills the new employees lack and these are in the field of: telephone sales, innovation and creativity, communication, problem solving, human resource management, responsibility, commitment and teamwork. This means that they did not adopt these skills at school through mostly frontal instruction. It is difficult to measure skills that the employers need. In addition, students leaving the VET institutions in the sector are not the only people looking for jobs in hospitality, tourism and / or catering. Nevertheless, each branch of economic activity depends to a large extent on the available human resources and therefore development policies must be based on an analysis of existing human resources. When analyzing competencies and educational outcomes of the existing curricula, these should be compared to the analysis of in-demand competencies, in order to find out how to change educational outcomes in line with the needs of the economy (Agency for Vocational Education and Training and Adult Education, 2012).

5. CONCLUSION

In the 21st century business, education is becoming a fundamental factor of development. In this regard, various forms of education and training are being developed to ensure the matching of skills demand and supply on the labour market. However, this research shows that the employers face difficulties in finding competent human capital that could adequately cope with the challenges in the modern tourism sector. In addition to formal education, tourism employees are expected to continuously train and learn new skills in order to adequately respond to the challenges they face. The vocational education system has a key role in responding to the challenges of the frequent emergence of new technologies and the demand for new competencies, but also in developing human talents with the aim of achieving economic growth, employment and sustainable development. Therefore, vocational education system cannot exist and function independently and must be synchronized with the needs of individuals, with the labour market and even higher education and society as a whole. Developed countries have recognized the importance of aligning the education system with the needs of the labour market at all levels. Furthermore, they understand that maintaining or developing qualifications that provide outdated competencies, that are no longer needed in the labour market, is a waste of time and money. Such an outcome represents a loss for the trainee who has lost time in acquiring competencies with which he is not competitive in the labour market and for the employer since the employee does not have the right competencies and what is more it is a loss for the state which pays for it all. That is why it is necessary not only to raise awareness of the need to develop mechanisms that will reduce the gap between education and labour market needs, but also to take concrete measures as soon as possible. The premise of this research is that the system of tourism vocational education is not sufficiently directed towards the creation of market-competitive employees to perform tourism activities in the County of Istria. The research proved that the hospitality and tourism curricula date back to 1998. Namely, the requirements in terms of competencies today are much different from those required twenty years ago; technology has an increasing role in jobs in tourism, and entrepreneurial and social competencies are necessary to ensure the adaptability of employees in tourism. The 1998 curricula did not foresee that. High schools provide students with knowledge that consists of facts, concepts, ideas, and theories, but do not sufficiently teach them the skills with which they would be able to use the acquired knowledge in order to achieve results. These skills are acquired through project work, through quality practical vocational training in the real workplace for which they should be adequately paid. The research shows that 71.4% of surveyed employers regularly offer students work placement, however, students sometimes claim that this practical training is not of good quality.

What is more, there are cases when they do not attend practical training, but the employer confirms with his signature that the students fulfilled their obligations. Training centres as such do not really exist, and one step towards that is the establishment of regional centres of competence, and it is to be hoped that by putting them into operation in full profile, it will be possible to approach this problem in a completely different way. The Centre of Competence in the tourism and hospitality sector for the Istrian County in Pula, along with five others (in Zabok, Split, Osijek, Opatija and Dubrovnik) it should become the backbone of quality vocational education for employees in the tourism sector in our country. The survey results show that the new tourism employees' skills that most need improvements are innovation and creativity skills, communication and problem-solving skills, as well as responsibility, commitment and teamwork. Furthermore, the survey points out that the employers believe that in addition to the shortcomings in general competencies, improvements are necessary in practical knowledge. Not only improvements in the field of catering or food hygiene, but also in advertising and sales, event or conference management (jobs created by the 21st century developments). This is another indicator of how the level of vocational knowledge and skills that students acquire upon completion of secondary education is not matched with the real needs of the labour market in the tourism sector, thus confirming the aim of the research. Another evidence is that all respondents agreed that it has become increasingly difficult to fill positions with qualified staff. The research shows that employers in the sector highly value candidates who have put effort in their training process, who speak foreign languages and who have been educated for the job they apply for. Besides these, enthusiasm and communication skills are most in demand by the employers. International surveys of in-demand skills in the tourism sector have highlighted almost identical skills as the respondents in this survey. This confirms that the skills gap is global, but also that the employers in the County follow global trends to deliver excellent service quality.

LITERATURE:

1. Agency for Vocational Education and Training and Adult Education (2012). *Turizam i ugostiteljstvo: Profil sektora*.
<https://www.asoo.hr/UserDocsImages/projekti/kvalifikacije/ishodi/planiranje%20kv/turizam.pdf>
2. Bahtijarević-Šiber, F., Sikavica, P. & Pološki Vokić, N. (2008). *Suvremeni menadžment: vještine, sustavi i izazovi*. Školska knjiga.
3. Bejaković, P. & Mrnjavac, Ž. (2014). Skill Mismatches and Anticipation of the Future Labour Market Need: Case of Croatia. *Zagreb International Review of Economics & Business*, 17(1), 47-68.
4. Burton, L. (2018.). *Top 8 Skills for a Successful Career in Hospitality*. High Speed Training.
<https://www.highspeedtraining.co.uk/hub/top-hospitality-skills>
5. Detail2Recruitment. (2020). Top 10 skills all hospitality employees have.
<https://www.detail2recruitment.com/news/article/293>
6. Doyle, A. (2019). *The balance careers, Important Hospitality Skills for Resumes & Cover Letters*. The Balance Careers. <https://www.thebalancecareers.com/hospitality-industry-skills-2062407>
7. European Commission (2018). *Proposal for a Council Recommendation on Key Competences for Lifelong Learning*.
<https://ec.europa.eu/transparency/regdoc/rep/1/2018/HR/COM-2018-24-F1-HR-MAIN-PART-1.PDF>
8. ILO (2017). *ILO guidelines on decent work and socially responsible tourism*.
https://www.ilo.org/sector/activities/sectoral-meetings/WCMS_546337/lang--en/index.htm

9. Laškarin Ažić, M. (2018). *Upravljanje odnosima s gostima u turizmu i ugostiteljstvu*. University of Rijeka, Faculty of Tourism and Hospitality Management.
10. Ministry of Economy, Entrepreneurship and Crafts (2019). *Projekt Stipendiranje učenika u obrtničkim zanimanjima za 2019. godinu*.
<https://www.mingo.hr/public/Projekt%20Stipendiranje%20u%C4%8Denika%20u%20obrti%C4%8Dkim%20zanimanjima%20pdf.pdf>
11. UNWTO (2018). *The Future of Work and Skills Development in Tourism*.
<https://www.e-unwto.org/doi/pdf/10.18111/9789284421213>
12. World Economic Forum (2018). *The Future of Jobs Report 2018*.
<https://www.weforum.org/reports/the-future-of-jobs-report-2018>

THE IMPACT OF SOCIAL NETWORKS IN PLANNING TRAVEL AND IN SELECTING A HOTEL, RESTAURANT AND OTHER HOSPITALITY SERVICES

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ABSTRACT

Considering the daily growing numbers of social network users, the purpose of this research is to explain the role of social networks in planning travel and in selecting a hotel, restaurant and other hospitality services. The study focuses on establishing a connection between social networks and decision making in the selection of a tourist destination or in the evaluation of hospitality services. A questionnaire was developed using the Google Docs platform and was distributed online via Facebook. The results indicate that travel planning as well as booking hospitality services is mostly made based on information published on social networks. Typically, it is younger people who use social networks daily. The study also confirms that people are more prone to believe other people (reviews, recommendations) although they clearly do so with a grain of salt, because every person has their own different opinions and expectations. The contribution of this paper is seen in the systematization of theoretical aspects and studies relating to the impact of social networks on travel planning and the selection of a hotel and other hospitality services. The contribution of the paper from an empirical aspect is that it establishes, by testing the set research questions, whether recommendations and reviews actually have an impact on the decision-making process in selecting a hotel, restaurant and other hospitality services. The results obtained are also important for social networks, whose purpose is no longer to only enable interaction among users but also to serve as advertising space for various types of industries that can profit from it.

Keywords: *Hospitality services, Online users, Social networks, Travel planning*

1. INTRODUCTION

Globalization and technological development have enabled the growth of new communication platforms and new ways of connecting users. Networking and integration have become ways of life, and never before has access to information been so fast and so easy. Daily, social networks are seeing ever-growing numbers of users and are becoming an inevitable means of advertising for any business entity. Social networks have also become an interesting aspect in the tourism business because they enable tourists to thoroughly search for information about destinations they wish to visit, while providing the suppliers of tourism products and services a platform for promoting their businesses. Promoting products via social networks yields positive results, because social media sites help people to make final decisions regarding a destination based on the experiences and comments of others. The connection between social networks and tourism is corroborated by the fact that via social networks tourists can get all the information they need to organize a trip or select a hotel, restaurant or other hospitality services in the tourist destination they wish to visit. Travel planning is a complex process, consisting of numerous decisions that need to be made, which in turn depend on numerous sources of information.

The way tourists look for travel information, however, has changed due to the dominating role of the Internet in today's society (Arsal, Backman & Baldwin, 2008). The development of social media and information & communication technologies has brought about important changes in the behavioral models of tourists as well as in the way users search, assess, produce, purchase and consume information, products and services (Bizirgianni & Dionysopoulou, 2013). Social networks enable users to communicate, interact and connect with service suppliers and also with other users. In addition, mobile technology has transformed the space and time in which users use information (Cokarić, Lončarić & Perišić Prodan, 2019). These technological changes have brought about important changes in the role of users, transforming them from passive recipients of information into active creators of information. Tourists are now actively involved in creating and sharing content on social networks, and this is sure to affect destinations, hotels, restaurants and other tourism providers. In tourism and hospitality, the online comments and reviews of social network users have an influence on other users and have become a vital factor in decision making. Therefore, the main objective of this paper is to investigate the effects that social networks have on planning travel and on selecting a hotel, restaurant and other hospitality services. The study aims to identify the social networks that users prefer, the frequency of social network usage, and whether the reviews and ratings of other users have a direct influence on organizing travel or on booking a hotel, restaurant or other hospitality services. This paper consists of five chapters. After the introduction, the second chapter provides an overview of previous studies on the use of social networks in planning travel and in selecting a hotel, restaurant and other hospitality services in a destination. The third chapter explains the research methodology, and the fourth chapter analyzes and interprets the results of research on the habits and preferences of social network users in the process of organizing travel and booking accommodation and other tourism services. The last chapter, Conclusions, presents basic observations on the role of social networks in organizing travel and booking tourism services, identifies the study's limitations, and suggests directions for future research.

2. LITERATURE BACKGROUND

The impact of social networks on planning travel is an interesting topic that has been studied by numerous tourism researchers for many years (Ye, Law, & Gu, 2009; Cox, Burgess, Sellitto, & Buultjens, 2009; Fotis, Buhalis, & Rossides, 2011; Simms, & Gretzel, 2013; Kim, Rasouli, & Timmermans, 2017; Maness, 2020; Plaut, & Shach-Pinsly, 2020). Social networks and other emergent forms of online communications are having enormous impact on travel planning. Social network sites and photo/video sharing sites have become more popular, serving as websites for trip planning. Looking at the comments and materials posted by other travelers has become one of the most important online activities during the online planning process. Due to the increasing adoption of smartphones, the availability of the Internet anytime and anywhere has a profound impact on travelers' information search and planning behavior (Xiang, & Gretzel, 2010). Now many tourists are postponing certain decisions (such as finding a restaurant or other hospitality services in a destination) which they used to make prior to departure. In addition to using social media sites to search for and purchase primary travel products such as lodging and airline tickets, travel planning is increasingly changing to include products that are central to the tourist experience. These include products such as museum and art gallery tickets, tickets to events, restaurant reservations, shopping, dining, etc. (Xiang, Magnini, & Fesenmaier, 2015; Gračan, Barkidžija Sotošek, & Seric Honovic, 2021). Online user-generated reviews about travel destinations, hotels, and tourism services have become important sources of information for travelers (Pan, MacLaurin, & Crotts, 2007; Narangajavana Kaosiri, Callarisa Fiol, Moliner Tena, Rodríguez Artola, & Sánchez García, 2017; Ye, Law, Gu, & Chen, 2011). More and more guests are sharing their experiences and opinions with other users, with online reviews posted on social networks influencing travel decisions, as Arsal, Backman and Baldwin (2008) have

found. The results of this study show that guests consider the opinions and ratings of others as reliable sources of information, when in doubt which choice to make. The posts of local residents have greater influence with regard to food and beverage recommendations, safety concerns at the destination, and travel itinerary refinements (including things to do and places to see), while experienced travelers are more influential in accommodation recommendations, transportation, monetary issues like exchanging money and how much money to carry during the travel, destination information including tourist hassle at a specific destination, and itinerary advice. Gretzel and Yoo (2008) observed that readers find the reviews of travelers to be more up-to-date, enjoyable, and reliable than information provided by travel service providers. A study conducted by Ye, Law, Gu, & Chen (2011) highlights the importance of online reviews to business performance in tourism, with a 10% increase in traveler review ratings boosting online bookings by more than 5%. Some studies have found that social networks are mostly used during the travel information search phase of the planning process (Cox, Burgess, Sellitto, & Buultjens, 2009), while other studies show that social networks are used predominantly during the post-trip stage for sharing experiences and photos with friends and/or other travelers (Fotis, Buhalis, & Rossides, 2011). A review of the above literature suggests that social networks are used in all phases of the travel planning process (before, during, and after a trip), albeit to differing extents and purposes. Almost every study indicates that content on social networks helps users create certain expectations of the trip, and influences their decision making regarding the selection of a tourist destination and all its associated services/facilities. Such studies, however, are lacking in Croatia; hence, this paper represents a modest contribution to addressing that issue.

3. METHODOLOGY

To study the connection between social networks and decision-making in the selection of a tourist destination and in selecting a hotel, restaurant, and other hospitality services, research was conducted on a convenience sample of 78 respondents. The questionnaire survey method was applied. The questionnaire was designed using the Google Docs platform and was distributed online, via Facebook. It consisted of nine or ten questions, depending on the screening question used to identify respondents who use social media when planning travel. The screening question was followed by two sections of questions. The first section, comprising four additional questions, targeted respondents who use social networks to plan their travel and aimed to identify their habits and preferences in using social networks when planning travel. The second section consisted of three additional questions for those respondents who gave a negative reply to the screening question. Those questions were used to gather data on habits and preferences in using social networks of the respondents who do not use social media sites to plan travel but perhaps use them to select a hotel, restaurant or other hospitality services within the destination. Data were collected from 3 April to 3 May 2017. The papers by Anđelić & Grmuša (2017), Ayeh, Au, & Law (2013), Confente, & Vigolo (2018), Fotis, Buhalis & Rossides (2011), Mariani, Styven, & Ayeh (2019) and Pabel & Prideaux (2016) were used as reference studies for the framework of this research.

4. RESULTS

The questionnaire was filled out by 78 persons, of which 82.05% were female, and 17.95%, male. The ages of the people taking part in the survey ranged from 20 to 66 years of age. Most of the respondents (35.90% of the total number) were aged 21 to 30, with the lowest number of respondents being under 20 years old (2.56%) or 60 and over (8.97%). With regard to educational background, most of the respondents hold undergraduate degrees (52.56%), followed by respondents with secondary school qualification (19.23%), and respondents with graduate degrees (15.38%).

Respondents with 2-year college degrees account for 8.97% of the sample, while the least number of respondents have doctoral degrees (8.85%).

Sociodemographic characteristics	Respondents	
	Frequency	Percentage (%)
Age		
Under 20	2	2.56
21-30	28	35.90
31-40	15	19.23
41-50	14	17.95
51-60	12	15.38
Over 61	7	8.97
Gender		
Female	64	82.05
Male	14	19.95
Education level		
Secondary school	15	19.23
College degree	7	8.97
Undergraduate degree	41	52.56
Graduate degree	12	15.38
Postgraduate degree	3	3.85

*Table 1: Sociodemographic characteristics of the sample (N=78)
(Source: Authors' research)*

Although all respondents have an account with a social media site, the study shows that they are the most active on Facebook (96.15%), followed by Instagram (67.95%) and YouTube (66.67%). The least number of respondents use Twitter (5.13%) and LinkedIn (7.69%). To the question of how long they have been using social networks, the majority (80.77%) reported using social networks for more than 5 years, while 10.26% of respondents have been social media users for 3 to 5 years; 7.69%, for 1 to 3 years, and 1.28%, for less than a year, being new members of social networks. With regard to the amount of time they spend daily on social networks, most of the respondents reported spending 3 hours or more (55.13%), while 20.51% of respondents spend 1 to 2 hours daily on social media sites, and 14.10%, 2 – 3 hours daily. Fewest of the respondents (10.26%) spend less than 1 hour daily on social networks. These data can be linked to the age of the respondents, as most of the respondents belong to the younger age groups for whom social media sites are an inevitable part of their daily lives.

Table following on the next page

Characteristics of social network users	Respondents	
	Frequency	Percentage (%)
Social network users		
Facebook	75	96.15
Twitter	4	5.13
Instagram	53	67.95
LinkedIn	6	7.69
YouTube	52	66.67
Other	2	2.56
Length of use of social networks		
Less than one year	1	1.28
1-3 years	6	7.69
3-5 years	8	10.26
5 or more years	63	80.77
Daily activity on social networks		
Less than one hour	8	10.26
1-2 hour	16	20.51
2-3 hour	11	14.10
3 or more hours	43	55.13
Frequency of out-of-town trips per year		
Once a year	28	35.90
2-3 times	25	32.05
4-6 times	15	19.23
7-9 times	10	12.82

Table 2: Characteristics of social network users (N=78)
(Source: Authors' research)

The aim of the next questions was to understand whether respondents who are frequent travelers (at least three times a year) use social networks in organizing their travel. Based on Table 3, the following conclusions can be drawn. Most of the frequent travelers use social networks when planning travel and only 17.86% of frequent travelers do not. Even more interesting is the fact that most of the respondents who do not travel often (64%) also use social networks when planning travel. The above suggests that most people, regardless of how frequently they travel, tend to use social media sites in planning their trips.

		Frequency of trips Percentage (%)		
		yes	no	total
Frequency of use of social networks Percentage (%)	yes	82.14	64.00	35.90
	no	17.86	36.00	64.10
	total	70.51	29.49	

Table 3: Frequency of using social media in planning travel and frequency of trips
(Source: Authors' research)

The next part of the questionnaire is divided into two sections. To the question, "Do you use social networks when planning your trip?", 35.90% of respondents gave a positive reply, which was the condition for going on to answer the additional four questions in the first section. Of the respondents using social media sites in travel planning, the most use Facebook (90.91%) while somewhat fewer use Instagram (63.64%). YouTube and Twitter are not used as much, while none of the respondents use LinkedIn in travel planning. Other social networks (Booking.com and TripAdvisor) are used by 27.27% of the respondents. To the question, "Do you use social networks to help you choose a hotel, restaurant or other hospitality services in

the destination?", as many as 41 respondents out of 55 (74.55%) replied that they do. The below table shows that the respondents largely use social networks in planning travel and in selecting a hotel, restaurant, and other hospitality services, considering that all variables have scores higher than 3. Social networks are most often used in selecting hotel accommodation (4.28) and booking airline tickets (4.25) and are used the least often in booking tickets to museums and art galleries (3.12), and booking seats in bars, coffee shops, etc. (3.11).

Reasons for using social networks	Mean scores (MS*)
Hotel reservation	4.28
Private accommodation	3.52
Other types of accommodation	3.16
Airline tickets	4.25
Tickets for other types of transportation	3.15
Museum and art gallery tickets	3.12
Tickets for events	3.35
Restaurant reservations	4.01
Booking seats in bars, coffee shops, etc.	3.11
(*) MS based on 5-point Likert scales where 1=I never use them, and 5= I use them very often.	

*Table 4: Reasons for using social networks in planning travel
(Source: Authors' research)*

To the question, "Do you trust the comments posted by other social media users, that is, guests?", 20% of respondents replied with a simple "Yes", 5.45% with a simple "No", while the remaining 74.55% of respondents gave an explanation to their opinions. Below are some of the responses.

- "Yes, if most of the other users share a similar opinion and if they give a concrete example of a certain situation they have experienced, that is, if they make a good case."
- "For the type of service I am checking out, I look to see how many people have given that particular service a positive review."
- "Yes, because if there are several similar reviews about a specific hospitality facility, there is a greater possibility that the reviews are true."
- "Yes, I believe the reviews of other users are a relatively true depiction of a hospitality facility's quality."
- "It all depends on the comments. If they happen to be realistic and concise, then yes. I don't trust reviews that are overly negative or overly positive."
- "I can't say that I trust them completely; however, other people's experiences can help me to decide whether the service I am looking for is provided by a specific restaurant/hotel/coffee shop."
- "Yes, although I believe them to be the customer's subjective opinion; one customer may have a nice experience, while another may have a bad experience, unfortunately."

The above stated suggests that most people use social networks to find out about a specific hospitality facility, that is, to learn the opinions of other social media users about the service that they consumed. While social media users do not have absolute trust in the reviews of others, the reviews definitely help them to make their own decisions. Although users do not base their decisions exclusively on the positive or negative comments of others, but rather take the comments with a grain of salt, reviews can help them in deciding whether or not to undertake specific action. The analysis of responses to the question, "Do you find social networks helpful in choosing a hotel, restaurant or other hospitality services, and do they make it easier for you

to plan a trip? Please explain why.”, shows that while a large share of respondents find social networks helpful in making a choice, their final judgement definitely is not based solely on social media sites. Social media sites are largely used by the respondents to find suitable accommodation, and should they have any questions, they can simply get in touch with other users or with a hotel, for, example, which makes it so much easier for them to get additional information. Social networks can also be very useful to users in keeping track of current offerings, in better visualizing a certain place, etc. Clearly, not all respondents share the same opinion, and some respondents do not find social networks to be of use to them or helpful. Below of some of the responses to the posed question.

- *“I find them helpful, because I get all the important information I need and I can see whether any bargains are being offered for that period which I could take advantage of.”*
- *“Sometimes, when I need to make a choice, since the hospitality facilities advertise via networks and they catch my attention, but they [social networks] do not make it easier for me to organize a trip.”*
- *“Yes, recommendations are most certainly important; I can ask about and learn all the details to avoid any nasty surprises when I arrive at the destination.”*
- *“Yes, in the case when all the reviews of a certain restaurant or hotel are negative. Then I will be sure not to decide to go there. If the reviews are equally positive and negative, they will not influence my decision.”*
- *“Yes, one feels more certain when reading something written by ordinary people, and not just the hospitality facility’s official website.”*
- *“They make it easier to find good hotels, restaurants, images, reviews, etc.”*

Although opinions obviously differ, social networks are clearly a great help due to the speed and ease of access to information. Although, in a way, they provide a sense of security, a certain amount of caution is always recommended and people should carefully research what interests them. The responses to questions in the second section were then analyzed. Of the total number of respondents who filled out the questionnaire, 29.49% stated that they do not use social networks when organizing a trip. Base on this response, they were asked to answer three questions. The first question in the second section was “Do you use social networks to help you choose a hotel, restaurant or other hospitality services?”. Out of 23 respondents, 52.17% stated that they do. The next question was “Are social networks a great help to you when choosing a hotel, restaurant or other hospitality services?”. The responses to the second question were similar to those to the first question; 47.83% of respondents responded that social networks are a great help to them when choosing a hotel, restaurant or other hospitality services, while the remaining 52.17% reported that they are not. Responses to the question “Do you trust the comments posted by other social media users, that is, guests? Please explain your response.” differ considerably. A short and simple “Yes” was given by 13.04% of respondents, the same percentage of respondents gave a short “No”, and the remaining 73.91% of respondents explained their opinions. The responses to this question are as follows.

- *“I don’t always trust them because sometimes they are not objective.”*
- *“Yes. I was there personally.”*
- *“No, I like to see at first hand the quality of a hospitality facility.”*
- *“Not really. Everyone has their own opinion... Not everyone likes the same thing.”*
- *“No, because each person has their own opinion about a rendered service.”*
- *“Sometimes I read them but the decision is mine... In most cases I trust my instincts.”*

The above suggests that the respondents who do not use social networks when planning trips, do not especially rely on social networks. They tend to use social networks to find information about what interests them but beyond that, social networks do not inspire a lot of trust, and the respondents are more inclined to trust their own instincts and prefer to see at first hand the quality of a service.

5. CONCLUSION

The results of the conducted study indicate that travel planning and booking hospitality services is mostly carried out based on information posted on social networks. People of all ages are active on social media sites, in particular, younger people who use them almost all day long. Social network users do not necessarily need to rely on the words of companies but instead can see the responses of previous users. People tend to trust other people, albeit with a dose of caution, given that each of us has different attitudes and expectations. It can be concluded that most people, regardless of their frequency of travel, use social networks in travel planning. The contribution of this paper can be seen in the systematization of theoretical aspects and studies linked to the effect of social networks on travel planning, and the selection of hotels and other hospitality services. The paper's empirical contribution is based on the analysis of the set research questions to determine whether recommendations and reviews influence the decision-making process when selecting a hotel, restaurant or other hospitality services. While conducting research, certain limitations emerged. One limitation is the study's time frame of one month, which prevented the collections of a larger number of questionnaires. Another limitation is the fact that most of the questionnaires were filled out by women, making it impossible to establish the effect of social networks in travel planning and selecting a hotel, restaurant or other hospitality service on men, to the same extent as on women. The next limitation is the size of the sample, as well as the method of questionnaire distribution which was carried out exclusively via Facebook. The above limitations do not take away from the quality of the study but rather suggest directions for improving future research.

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LITERATURE:

1. Anđelić, V., & Grmuša, T. (2017). Društvene mreže kao medij promocije turističkih odredišta kod mladih. *Media, Culture and Public Relations*, 8(2), pp. 182-193. Retrived 12.02.2020 from <https://hrcak.srce.hr/199663>
2. Aarsal, I., Backman, S., & Baldwin, E. (2008). Influence of an online travel community on travel decisions. In P. O'Connor, W. Höpken, & U. Gretzel (eds.), *Information and communication technologies in tourism* 2008, pp. 82-93, Vienna, Austria: Springer Verlag.
3. Ayeh, J.K., Au, N., & Law, R. (2013). Predicting the intention to use consumer-generated media for travel planning. *Tourism Management*, 35, pp. 132-143.
4. Bizirgianni, I., & Dionysopoulou, P. (2013). The Influence of Tourist Trends of Youth Tourism through Social Media (SM) & Information and Communication Technologies (ICTs). *Procedia – Social and Behavioral Sciences*, 73, pp. 652-660.
5. Confente, I., & Vigolo, V. (2018). Online travel behaviour across cohorts: The impact of social influences and attitude on hotel booking intention. *International Journal of Tourism Research*, pp. 1-11.

6. Cokarić, D., Lončarić, D., & Perišić Prodan, M. (2019). Uloga društvenih mreža u kreiranju doživljaja gostiju u restoranima. *Zbornika radova Veleučilišta u Šibeniku*, No. 3-4, pp. 7-22.
7. Cox, C., Burgess, S., Sellitto, C., & Buultjens, J. (2009). The Role of User-Generated Content in Tourists' Travel Planning Behavior. *Journal of Hospitality Marketing & Management*, 18(8), pp. 743-764.
8. Fotis, J., Buhalis, D., & Rossides, N. (2011). Social Media Impact on Holiday Travel Planning. *International Journal of Online Marketing*, 1(4), pp. 1-19.
9. Gračan, Barkidija Sotošek, & Seric Honovic (2021). Analysis of Tourism Motives and Preferences Characteristics of Generation Y., In Djukec, D., Klopota, I., Burilovic, L. (eds.), *Book of Proceedings, 7th ITEM Conference - "Innovation, Technology, Education and Management" and 67th International Scientific Conference on Economic and Social Development*, pp. 171-176, Varazdin, Croatia: Varazdin Development and Entrepreneurship Agency; Koprivnica, Croatia: University North; Warsaw, Poland: Faculty of Management University of Warsaw; Morocco: Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat; Cakovec, Croatia: Polytechnic of Medimurje in Cakovec; Zagreb, Croatia: Croatian Chamber of Economy.
10. Gretzel, U., & Yoo, K. (2008). Use and impact of online travel reviews. In P. O'Connor, W. Höpken, & U. Gretzel (eds.), *Information and communication technologies in tourism 2008*, pp. 35-46, New York: Springer-Verlag.
11. Kim, J., Rasouli, S., & Timmermans, H.J.P. (2017). Social networks, social influence and activity-travel behaviour: a review of models and empirical evidence. *Transport Reviews*, 38(4), pp. 499-523.
12. Maness, M. (2020). Choice modeling perspectives on the use of interpersonal social networks and social interactions in activity and travel behavior. In K.G. Goulias and A.W. Davis, (eds.), *Mapping the Travel Behavior Genome*, Elsevier, pp. 399-411.
13. Mariani, M., Ek Styven, M., & Ayeh, J. K. (2019). Using Facebook for travel decision-making: an international study of antecedents. *International Journal of Contemporary Hospitality Management*, 32(2), pp. 1021-1044.
14. Narangajavana Kaosiri, Y., Callarisa Fiol, L.J., Moliner Tena, M.Á., Rodríguez Artola, R.M., & Sánchez García, J. (2017). User-Generated Content Sources in Social Media: A New Approach to Explore Tourist Satisfaction. *Journal of Travel Research*.
15. Pabel, A., & Prideaux, B. (2016). Social media use in pre-trip planning by tourists visiting a small regional leisure destination. *Journal of Vacation Marketing*, 22(4), pp. 335-348.
16. Pan, B., MacLaurin, T., & Crofts, J. (2007). Travel blogs and the implications for destination marketing. *Journal of Travel Research*, 46(1), pp. 35-45.
17. Plaut, P.O., & Shach-Pinsly, D. (Eds.), (2020), *Digital Social Networks and Travel Behaviour in Urban Environments*. London and New York: Routledge.
18. Simms, A., & Gretzel, U. (2013). Planning a vacation using social media: Influences of demographic, psychographic, and trip-related characteristics. ENTER 2013 Conference on Information and Communication Technologies in Tourism, Vol. 4, *e-Review of Tourism Research (eRTR)*. Retrived 25.02.2020 from http://agrilife.org/ertr/files/2013/03/enter2013_submission_15.pdf
19. Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. *Tourism Management*, 31(2), pp. 179-188.
20. Xiang, Z., Magnini, V.P., & Fesenmaier, D.R. (2015). Information technology and consumer behavior in travel and tourism: Insights from travel planning using the internet. *Journal of Retailing and Consumer Services*, 22, pp. 244-249.
21. Ye, Q., Law, R., & Gu, B. (2009). The impact of online user reviews on hotel room sales. *International Journal of Hospitality Management*, 28(1), pp. 180-182.

22. Ye, Q., Law, R., Gu, B., & Chen, W. (2011). The influence of user-generated content on traveler behavior: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human Behavior*, 27(2), pp. 634-639.

ENTREPRENEURIAL FINANCING IN THE REPUBLIC OF CROATIA

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ABSTRACT

The topic of this research paper emphasizes and analyzes the key differences between entrepreneurial finance and corporate finance. The goal of the research paper is to identify different sources of financing and their application in the Republic of Croatia. Considering the different stages that the venture will go through, the comparative analysis highlights the essential characteristics of entrepreneurial financing versus corporate financing from the aspect of funding sources and the aspect of the funding process. Based on the field research, the main characteristics of entrepreneurial and corporate financing in the Republic of Croatia are presented. Main findings show that corporate finance is driven by the idea of preserving and increasing the value of companies based on the selection of efficient projects, while entrepreneurial finance relies on trust and willingness to take greater risks and enter uncertainty, because the value has yet to be created. The conclusion leads to the understanding the trends in entrepreneurial sources of financing in the Republic of Croatia as they are in the beginning, because of ignorance, tradition and investment climate. The research results show that majority of Croatian companies do not seek for the opportunity to be listed officially on the Stock Exchange market, because the primary goal of majority is to earn enough to make good living and ensure their families. The contribution of this research paper can be seen in clarification, definition and identification of differences between entrepreneurial finance and corporate finance and its application in the Republic of Croatia

Keywords: *funding sources, funding process, entrepreneurial finance, corporate finance*

1. INTRODUCTION

Entrepreneurial finance is a contemporary topic around the world, both among practitioner entrepreneurs and among researchers, in academic society. With the fall of the Berlin Wall, layered globalization processes of privatization of state property, liberalization of trade relations, deregulation of many activities have started, and the free market and free enterprise have become fundamental for the development of the economy. Many people became entrepreneurs overnight. Mostly out of necessity, because they lost their jobs, and only a small part about those who always wanted to or had previous experience. In countries with a developed market economy, specific sources and financing models are offered for each of the stages of the development of the enterprise, while in countries with a bank centric financial system the sources of financing are very narrow and bank loans are more difficult to access (Šonje, 2005). There are four primary areas of entrepreneurial finance (Denis, 2003): alternative sources of capital, financial contracting issues, public policy and the dynamics of private equity returns. For many holders of entrepreneurial ideas and clear visions, funding is a key problem. This is especially characterized by countries of European, continental law and traditions, and less by Anglo-Saxon countries. The fundamental difference is that financial systems in the European tradition are bank-centric while Anglo-Saxon are focused on the capital market. However, over the past three decades, many new entrepreneurship financing practices have already been known in European practice. The subject of research in this paper is the determination of key differences between entrepreneurial and corporate ways of financing a business. The aim is to establish the main differences between them, both in sources and in financing processes.

Considering the stages of development of the entrepreneurial venture, the comparative analysis highlighted the essential characteristics of entrepreneurial versus corporate financing. Based on field research, there are presented main characteristics of entrepreneurial and corporate financing in the Republic of Croatia.

2. STAGES OF DEVELOPMENT OF ENTREPRENEURIAL VENTURES AND SOURCES OF FINANCING

Small and medium-sized enterprises (SMEs) represent an important part of any economy. In 2019, SMEs in Croatia achieved a share of 60.3% in total revenue, 74.3% in employment and 53% in Croatia exports¹. These figures show that small and medium-sized enterprises are very important, and therefore they care about helping them in the very launch and development, to maintain themselves in the market and to be competitive. Each entrepreneurial venture goes through different stages of development. According to the development stages of the entrepreneurial venture, the sources of financing of investment activities can be classified as follows (Benjamin & Margulis, 2005):

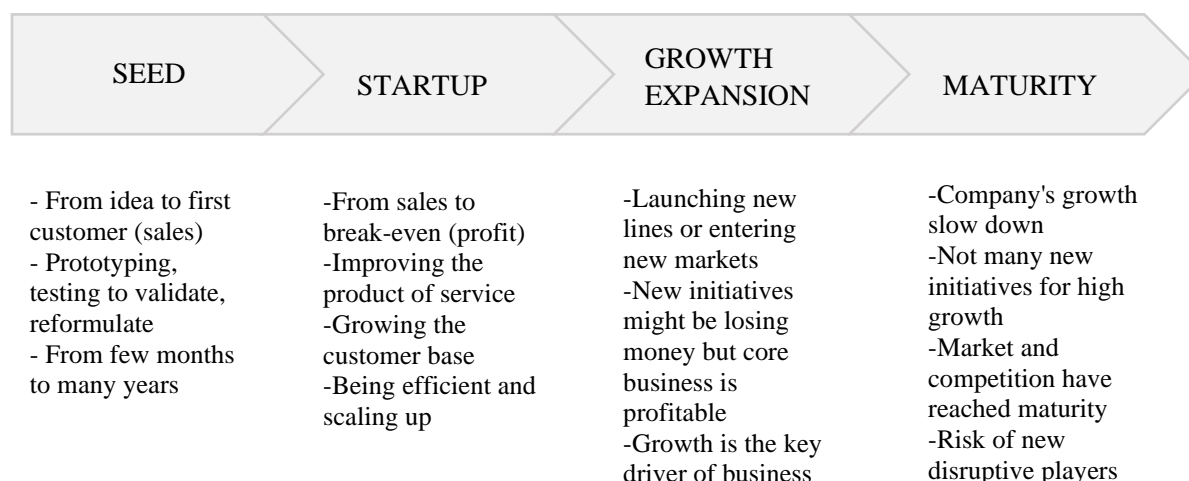
- *Seed phase* - financing allows research, evaluation and development of the initial concept before starting a business, i.e. by means of a business.
- *Start-up phase* - this phase is usually financed from the so-called "3F" source (founder, family, friends) as well as some of the types of risk funds may also appear (venture capital), larger companies (corporate investment) that recognize the link to their business strategy in start-ups. If these are relatively smaller amounts, business angels also appear. All listed sources are classified as equity. (Private equity). During start-up phase financing includes product development and initial marketing; some of the types of risky funds or larger companies that find a connection with their business strategy and goals may also appear, as well as business angels.
- *Expansion phase* - financing of the development and growth (expansion) of the enterprise, refers to the period from the realization of the point of coverage or the period of realization of profitability. It is quite common for banks to be involved at this stage of the development of an entrepreneurial venture.
- *Replacement capital phase* - purchase of shares by another investor or financing to reduce debt positions. At this stage, there may also be a change in ownership structure (buyout), i.e. a change in ownership structure. Financing to acquire a significant equity interest or majority control over a particular undertaking. This is a typical investment in mature enterprises. At this stage, the founder (and business angel) can exit ownership positions completely or retain a certain share.

When the necessary investments in seed capital and the necessary investments in the early stages of the development of the enterprise cannot be satisfied from their own, family and/or friendly capital, and the interest of small and medium-sized enterprises is not "on the radar" of venture capital funds, a place opens up to informal investors – business angels. Such companies are said to have good potential and perspective but are located in Equity Gap (Dominiguez, 1974; Cartwright & Orpen, 1997; Bushrod, 2003). In the literature, four phases are usually stated: seed phase, start-up phase, growth phase, and maturity phase (Alemany & Andreoli, 2018, p. 13; Benjamin & Margulis, 2005; Cvijanović et al., 2008, p.119). As shown in Figure 1 the first phase of entrepreneurial venture includes the time from entrepreneurial idea to sales of the first product, i.e. delivery of the service to the first customer. In the second phase, which lasts from finding the first customer to traffic that provides a point of cover (revenues equal to expenditure), entrepreneurs strive to improve the product or service and expand the customer

¹ Report on small and medium-sized enterprises in Croatia – 2020. / <http://www.cepor.hr/wp-content/uploads/2021/01/Izvjesce-2020-HR-web.pdf> (25.08.2021.)

base. In the growth phase, to achieve a certain market share, entrepreneurs also launch new products or enter new markets. This may also bring new problems due to possible failures, but the main activity still needs to be profitable. In the fourth phase of maturity, entrepreneurs face new risks, as growth slows, market shares are solidified, but there is a risk of new disruptive competitors. This means that due to lower costs or the quality that the new competitor and the new competitor can reach, there may also be a significant loss of market share.

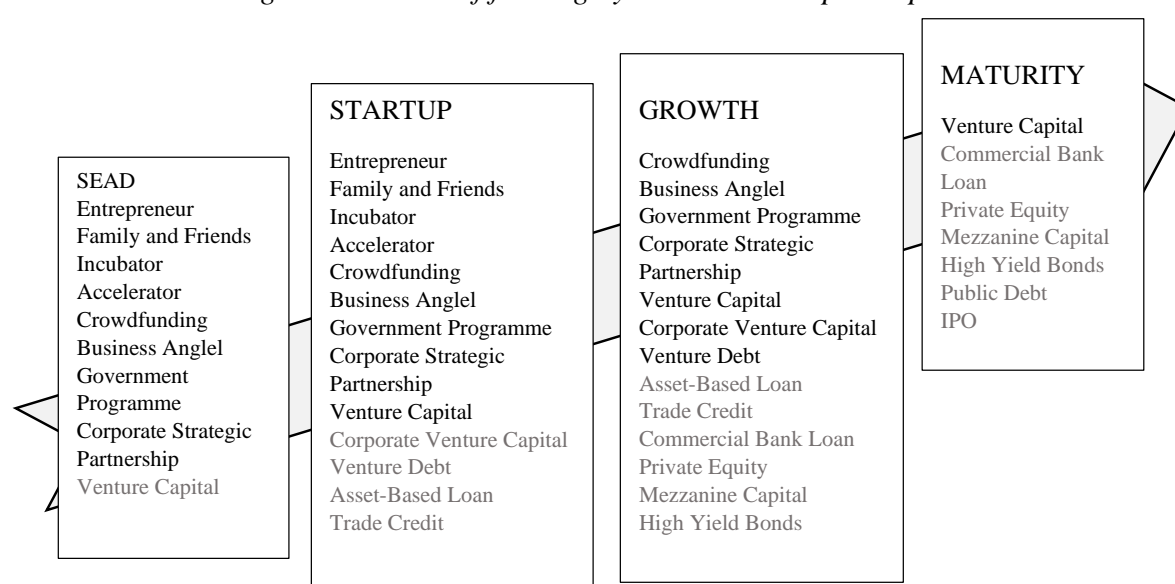
Figure 1: Stages of venture development



Source: Alemany, L.; Andreoli, J.J. (2018). Entrepreneurial finance: the art and science of growing ventures, Cambridge University Press, ISBN 978—953-55940-2-4, Cambridge, p. 13

As shown in Figure 2, in the first phase of an entrepreneurial venture, those who believe most in the realization of entrepreneurial vision (entrepreneur, family, and friends) appear as the source of financing, i.e. those who want to help and participate in making it come to life and who achieves some other goals of their own (incubators, accelerators, crowdfunding, government program, strategic partners, venture capital).

Figure 2: Source of funding by venture development phase



Source: Alemany, L.; Andreoli, J.J. (2018). Entrepreneurial finance: the art and science of growing ventures, Cambridge University Press, ISBN 978—953-55940-2-4, Cambridge, p. 17

Namely, there is a different exposure and investment experience among the listed holders of funding sources. What needs to be noted, that in the second phase (start-up phase) banks also appear, i.e. different sources of credit (asset-based loan, trade credit) as well as corporate venture capital and venture debt. Therefore, even those who are very skeptical by the nature of their work, take certain risks and show a willingness to participate in finance young enterprises. In the third phase, in addition to commercial loans, private equity and other hybrid financial instruments (mezzanine capital), obligatory persons also appear as a possible source of financing (high yield bonds). Thus, the willingness to take risks is expanding and the sources of financing are increasing at the growth stage as well as in the fourth, stage of maturity of the entrepreneurial venture, where a wider circle of investors such as shareholders and bondholders are involved (public debt, initial public offering). In view of the stages of the company's lifespan and the associated risks, different sources of financing are available to entrepreneurs (Leach & Melicher, 2012, p. 234). How much a company achieves sustainable growth is so many more who are interested in participating and sharing earnings. After the survival of childhood diseases and the growing prospect of successful growth and internationalization of business, the company is increasingly attractive target for various investors, such as corporations.

3. KEY DIFFERENCES BETWEEN ENTREPRENEURIAL AND CORPORATE FINANCE

Corporate finance is focused on existing businesses and they worry about how it secures those good returns on their investments. It can be said that 'ensuring value growth for its shareholders is a mantra for those who decide on corporate finance (Alemany & Andreoli, 2018, p. 10). Thus, the situation is such that there is already some value of the enterprise and that it should be preserved and increased. By contrast, entrepreneurial finance is focused on entrepreneurs who have yet to raise funds to test a particular entrepreneurial idea, create value and only ensure sustainability (Alemany & Andreoli, 2018, p. 11). One of the key differences between entrepreneurial and corporate finance is that in entrepreneurial finance there are no historical data and business results contained in the reports on the subject that could be relied on the projection of future cash flows of companies. By contrast, business finances can also affect historical data (Alemany & Andreoli, 2018, p. 11). In the process of evaluating investment projects in corporate finance, using capital budgeting criteria, as a rule, any investment project whose net present value is negative or whose internal profitability rate is less than the cost of capital (Orsag, 2015) will be rejected. While in entrepreneurial finance it is not possible to calculate this, on the one hand, and the other hand, based on experience, it can be argued that in some ventures and the first few years it can be a business with a loss, because the company has yet to position itself and achieve market share, to survive. Corporate finance is based on a very important concept, that investors are driven by rational decisions. When it comes to entrepreneurial finances, there is almost always a dose of adventure, because the entrepreneur believes in the success or is driven by some other emotional reasons to try to achieve the impossible. So, he's willing to take far more and greater risks. Table 1 shows the fundamental differences between entrepreneurial and corporate finance in terms of the source of financing and the financing process (funding process, growth and harvesting).

Table following on the next page

Table 1: Key characteristic of entrepreneurial finance versus corporate finance

Topic	Entrepreneurial finance	Corporate finance
Funding sources	<ul style="list-style-type: none"> • Friends and Family • Crowdfunding • Incubators/accelerators • Business Angels • Venture capital • Private equity 	<ul style="list-style-type: none"> • Banks • Capital markets
Funding process	<ul style="list-style-type: none"> • Deal sourcing and Screening • Financial plan • Valuation • Term sheet 	<ul style="list-style-type: none"> • Standard due diligence • Financial plan • Collateral to back loan
Growth	<ul style="list-style-type: none"> • Monitoring & key metrics • Corporate Governance • Protecting knowledge • Private Equity 	<ul style="list-style-type: none"> • Capital budgeting • Mergers & acquisitions • Private Equity • Initial public offering (IPO)
Harvesting	<ul style="list-style-type: none"> • Exiting (selling) Initial public offering (IPO) 	<ul style="list-style-type: none"> • Dividends

Source: Alemany, L.; Andreoli, J.J. (2018). Entrepreneurial finance: the art and science of growing ventures, Cambridge University Press, ISBN 978—953-55940-2-4, Cambridge, p. 12

From the above characteristics and comparisons, regarding the source and financing process it is clear that for both forms of financing many characteristics are common, but it is also necessary to recognize the key differences on the basis of which entrepreneurial or corporate finance is discussed with merit. Whether it is their sources of financing or the process of obtaining, restoring and controlling the financing. However, numerous studies have found that companies suffer from a lack of not only financial capital (equity gap) but also need a number of different advice and knowledge that are often more important than financial capital (Murray, 1994; Gladstone & Gladstone, 2002). Many companies with growth potential collapsed because they chronically lacked certain specialist knowledge, which they could not provide so called “Competence gap”. In order to bridge this gap (gaps), business angels appear as an adequate response, and it becomes their investments (Metric, 2007). For solving so called “merger gap” (or Matching gap) (Wetzel, 1983; Svendsen, 2002) different systems were established over time together with supply-demand mergers, such as business angel networks, eban.org in the EU and crane.hr in the Republic of Croatia.

4. ENTREPRENEURIAL AND CORPORATE FINANCING IN THE REPUBLIC OF CROATIA

In the Republic of Croatia, with traditional forms of financing such as personal savings, help from relatives and friends (3F's - family, friends, fools), and credit, leasing, and factoring deals are developed. Also, at the end of the last century, informal sources of financing of small and medium-sized entrepreneurship such as business angels (Rončević & Kolaković, 2008) began to operate in Croatia. The Association of Business Angels in Croatia (CRANE) was founded in 2008. Many venture capital funds have been operating in Croatia since the 1990s, so the Association of Croatian Private Equity and Venture Capital Association (CVCA) was established (crane.hr). In addition to the listed sources of financing for the development of small and medium-sized entrepreneurship in Croatia, it is necessary to highlight incubators and accelerators (Seedcamp), of which there is an increasing number. The State has also provided funds through various agencies (HAMAG-BICRO) to finance various forms of entrepreneurship on more favorable terms than banking ones, and as the issuer of the necessary

guarantees when entrepreneurs apply for bank loans. Of the newer sources, both in the world and in Croatia, crowdfunding (Bago & Pilipović, 2016) and the first Croatian platform CroInvest should be highlighted. Based on this year's survey in Croatia, 51.9 percent of respondents were not familiar with the more fundamental differences between entrepreneurial and corporate finances. Among the funding sources offered (cited above) as much as 87.3 percent cited loans as the most famous form of corporate financing, with the fewest respondents cited factoring and venture capital. Over 90 percent of respondents said they did not know how incubators and accelerators work, or the crowdfunding system. Among those in employment, they stated that 87.8% use loans, and 51.2% use leasing. Other sources are listed with a very small share. The selected results of the 2008 survey will be provided for comparison with the above results of the study in Croatia entitled '*Business angels as an alternative model of SME financing*' (Ronević & Kolaković, 2008). The survey was conducted among respondents employed in the SMEs. In 75 percent of cases, companies financed themselves from their own funds, and 45 percent from loans, 9 percent of leasing, and 36 percent highlighted customers as the main source of funding, 10 percent of suppliers, 2 percent of relatives and friends and only 1 percent of venture capital. According to the survey conducted in 2008, respondents generally stated that they were not familiar with alternative sources of funding such as business angels or venture capital funds. Likewise, respondents replied that business owners are afraid for their own authority if they shared ownership with new (different) private equity sources of funding. Furthermore, in the same survey conducted in 2008, the findings show the characteristic that Croatian entrepreneurs do not have a vision of their companies to be listed on the stock exchange in the near future, or that through mergers and acquisitions (inorganic growth) they would ensure the growth of enterprises. On the contrary, in large part they seek to achieve business stability that will ensure a 'normal life for them and their family'. Therefore, it is more difficult to explain why the development of informal capital markets in Croatia is slower, i. e. to locate where the brakes of development are located. With the accession of the Republic of Croatia to the European Union, the activities of various investment funds and strategic partnerships have been lively, however, due to the COVID-19 pandemic and disruptions in global supply chains, these processes are quiet and very slow. In addition to the above, in the framework of the research for the purposes of this paper, at Croatian universities they mainly study business finance, and very rarely entrepreneurial finances, which are eventually submitted in postgraduate studies. Considering the above, there is a hope that the development of entrepreneurial finances in the Republic of Croatia will create a new incentive for the development of entrepreneurship (in for-profit and non-profit organizations; corporate and social entrepreneurship) and will enable the necessary growth of living standards in Croatia. The development of an informal capital market will also accelerate the development of the formal capital market (Zagreb Stock Exchange), i.e. the financial market and as a 'missing link'.

5. CONCLUSION

The significant differences between entrepreneurial and corporate finance are reflected in their sources and financing processes. While corporate finance is driven by the idea of preserving and increasing the value of companies based on the selection of efficient projects, entrepreneurial finance relies on trust and willingness to take greater risks and enter uncertainty, because the value has yet to be created. As the company emerges from one and enters the second phase of the development of an entrepreneurial venture, so is the circle of those who want to participate in the formation of something new, which has already proven itself somewhat. Among investors, given the willingness and risk-taking, there are more who appear as sources of financing in entrepreneurial finance, and those who are more conservative are more those who are sources of financing in established companies, corporate finance.

Based on the conducted research this year in Croatia, it can be stated that there are different sources of financing, as well as corporate and entrepreneurial. Unfortunately, entrepreneurial sources of financing are in the beginning, because of ignorance and because of tradition and investment climate. The research results show that majority of Croatian companies do not seek for the opportunity to be listed official on the Stock Exchange market, but they intend more to have enough earnings to satisfy their personal and family needs. There is also lack of trust in different forms of financing except bank funds, self funding and family/friends funding, because of fears that the other sources such as private equity sources might be a threat in the future and compromise the authority of the owners. The conclusion can be drawn in terms of need to understand the economic, social and cultural setup in the Republic of Croatia when it comes to establishment and funding of SMEs and private entrepreneurship, considering the time to accept changes in the rapid entrepreneurial market and different sources of financing. The recommendation can be given in the direction of education with increasing the entrepreneurial awareness and knowledge of the advantages offered by different sources of financing and the great deal can be achieved through more intensive inclusion of entrepreneurial financing in the higher education institutions such as Universities and Business schools in the Republic of Croatia. Further research should focus on current issues related to sources of financing in the perspective of Covid-19 pandemic and its consequences but also the opportunities arising from the experience during the pandemic.

LITERATURE:

1. Alemany, L.; Andreoli, J.J. (2018). *Entrepreneurial finance: the art and science of growing ventures*, Cambridge University Press, ISBN 978—953-55940-2-4, Cambridge
2. Bago, A.; Pilipović, O. (2016). Crowdfunding, *Proceedings of polytechnic of Šibenik*, No. 3-4, Zlatović, D. (editor), p. 23-36, ISSN, Šibenik, November 2016.
3. Benjamin, G. & Margulis, J. (2005). *Angel Capital*, John Wiley & Sons, Inc., Hoboken, New Jersey, ISBN 0-471-69063-5.
4. Bushrod, L. (2002). Regional VC funds come into action. *European Venture Capital Journal*, March 1, 16-21.
5. Bushrod, L. (2003). Bridging the Equity Gap. *European Venture Capital Journal*, March 1, 10-15.
6. Cartwright, D. & Orpen, J. (1997). *Venture Capital Trust: Filling the Equity Gap*. *UK Venture Capital Journal*, November/December, No. 85.
7. Cvijanović, V. et al. (2008). *Financiranje malih i srednjih poduzeća*, Binoza press d.o.o., Zagreb.
8. Denis, D. J. (2004). *Entrepreneurial finance: an overview of the issues and evidence*, *Journal of Corporate Finance*, 10 (2004) 301-326.
9. Dominiguez, J.R. (1974). *Venture Capital*. Lexington, MA: Lexington Books.
10. Gladstone, D. & Gladstone, L. (2002). *Venture Capital Handbook – An Entrepreneur's Guide to Raising Venture Capital*. Upper Saddle River, NJ: Prentice Hall.
11. J. Chris Leach, Ronald W. Melicher (2012). *Entrepreneurial Finance*, 4th Edition, South-Western, Cengage Learning.
12. Metric, A. (2007). *Venture capital and the finance of innovation*. John Wiley&Sons, Inc. Hoboken, New Jersey. ISBN 13 978-0-470-07428-2.
13. Murray, G. (1994). The Second „Equity Gap“: Exit Problems for Seed and Early Stage Venture Capitalists and Their Investee Companies. *International Small Business Journal*, Jul-Sep 1994, Vol. 12, Issue 4.
14. Orsag, S. (2015). *Poslovne finacije*, HUFA & Avantis, ISBN 978-1-108-43185-9, Zagreb.
15. Report on small and medium-sized enterprises in Croatia – 2020. / <http://www.cepor.hr/wp-content/uploads/2021/01/Izvjescje-2020-HR-web.pdf> (25.08.2021.)

16. Rončević, A., Migoč, M. (2016) Poslovni anđeli – alternativni izvori financiranja poduzeća i ideja // Računovodstvo i financije, LXII (2016), 11; 121-123.
17. Rončević, A.; Kolaković, M. (2008). Business angels as an alternative model of SME financing, Proceedings of 1st International Conference "Vallis aurea" Focus on: Regional Development, Katalinic, B. (editor), p. 0841-0845, ISBN 978-953-98762-7-0, Požega, September, Polytechnic of Požega, Croatia & DAAAM International Vienna, Austria, Požega-Vienna.
18. Šonje, V. (2005). Veza koja nedostaje. Arhivanalitika, Zagreb, ISBN 953-99883-1-4.
19. Wetzel, W. (1983). Angels and Informal Risk Capital. Sloan Management Review, Summer.
19. Svendsen, S. (2002). Entrepreneur-Business Angel Relationships – Shaping of expectations prior to matchmaking. European Academy of Management EURAM, Stockholm.

CHALLENGING TRAJECTORY FROM TEACHER-CENTERED TEACHING TO STUDENT-CENTERED LEARNING IN GLOBALISATION, ECONOMICS AND MANAGEMENT COURSES: CASES OF ALBANIA, CROATIA AND SERBIA

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ABSTRACT

Until recently, traditional teacher-centered (ex-cathedra) teaching methods have predominantly been used at all education levels in Southeast European countries. The implementation of Bologna process in the higher education system was expected to change the teaching methods and consequently, reinforce the interaction in the classroom that, according to numerous global surveys, leads to significantly better learning environment and learning outcomes. Innovative teaching methods serve not only to educate, but to inspire and motivate students to engage in learning. The roots of student-oriented approaches are aligned with the growing popularity of critical pedagogy and students' beliefs that they 'shouldn't be fed with a fish but taught how to fish'. In Europe, learner-centered education was fully taken into account at the Leuven Ministerial Conference in 2009, i.e. ten years after the Bologna Declaration that set the ground for the deep reforms of the European higher education. Despite the (nominal) implementation of the Bologna process in South-eastern Europe, it is rather obvious that both the methods and the results still lag behind Western European countries and US. This research is based on three case studies of the simultaneous implementation of student-centered learning in following courses: Globalization and Albania, a country in transition (taught in Albania), Economic policy (taught in Croatia), and Intercultural management (taught in Serbia). They were delivered after all three course instructors completed the training for conducting Student Centered Discussion Courses and implemented the methods. The training was guided by Interactivity Foundation in Washington, DC within the faculty development program. Following constructivist theories of learning, new teaching method was introduced in the existing courses where previously traditional methods were mostly used, i.e. students were expected to be passive learners and listeners, rather than active players. Developing positive classroom climate supposed to serve as a cohesion factor so that students understand the importance of becoming active participants in the teaching situation. In addition to the strengths and weaknesses observed both by teachers-facilitators and students (anonymous surveys were used), this comparative study presents the lessons learned in the teaching method transformation process. It also highlights the common denominators in all three countries that, despite the differences at the institutional and course level, can most likely be attributed to a very similar legacy of the national higher education systems.

Besides the information on the syllabi of the courses, the cases presented also include general and specific learning outcomes and the differences depending on the teaching methods, quality assurance mechanisms and evaluation techniques, clear notion on the changes introduced and results achieved. Furthermore, both lecturers' and the students' evaluation are presented and compared. In addition, the impact of the courses for the future professions of the students is discussed as well, in terms of both knowledge and skills acquired and improved. As already known, student-centered learning is not refrained to certain methodology only, its main leverage is considered to be the cultural shift in the institution applying it. Thus, this study contextualises its findings and as such provides the recommendations that could have broader resonance for the higher education institutions undergoing the transition from teacher to student-centered learning, or from traditional to 21st century classroom.

Keywords: higher education, student-centered learning, Albania, Croatia, Serbia

1. INTRODUCTION

The international benchmarks indicate insufficient quality of higher education systems in South Eastern European countries, Albania, Serbia and Croatia among them. The findings mentioned include both the global rankings of the universities and surveys exploring the perception on various higher education – related issues (like business executives survey in the Global Competitiveness Report published by WEF, 2019). This study was developed after all three authors completed Junior Faculty Development Programme at The George Washington University, Washington, DC and during that period they became certified facilitators for the implementation of Student-Centered Discussion courses. This methodology was developed by Interactivity Foundation (IF), based on the idea that students can gain valuable set of skills by learning to facilitate and take part in collaborative discussion teams (IF Education, 2019). Some of the findings of the facilitators' discussions are published in a separate publication (Notturmo et al, 2010). Main cell of this process is a discussion group where one student serves as facilitator of the discussion, while others are active participants. Discussion should not evolve into debate, as in this non-competitive classroom, teamwork is appreciated, and the role of each student is to help others in developing their own ideas. During this process, professor should be coach, mentor and supporter, responsible for improving discussion quality and students' progress. First, professor acts as 'facilitator-demonstrator' or a role model until students learn how to facilitate on their own. Professor should also be 'discussion context-setter', although, in actual implementation cases main context was usually pre-settled and based on course syllabuses. Grading is one of the most traditional professors' duties and it cannot be excused in this methodology, so professor is also 'discussion evaluator'; he/she makes notes during the discussion process, describing performances and possible area of improvements accordingly (Byrd Jr. and Goodney Lea, 2008). To avoid misperception that in learner-centered environments (since focus is on the learner responsibility and activities) professors have reduced roles, it is important to emphasize that student-centered teacher's engagement is significantly higher compared to those in traditional classrooms. Upon arrival to their home countries, authors implemented new learning approach in their classrooms, aligning original methodology with institutional, program and course requirements. Further details are provided in the separate case studies. After thorough elaboration and discussion of the process in all three countries, the conclusions are provided.

2. SCL IMPLEMENTATION IN ALBANIA

2.1. General overview

Student-centered methodology was introduced at Faculty of Economics, Tirana University during Spring semester 2011, within the course Globalization and Albania, a country in

transition. Forty-two classes, with 20 students per class were delivered, making use of the teaching methods that professor learned during the IF program.

2.2. Course specification

The long-term impact of the course has been to provide the students with sufficient skills to make possible individual choices about which policy possibilities might be worthwhile to pursue. The overall intention of the course curriculum was to introduce the students to the following topics: a historical overview of the emergence of globalization and the specifics of this problem in a comparative perspective; the development of the Albanian economy after the '90s; the years of the democratic system in Albania; the economic issues of this period; the analyses of the European integration of the country; the reasons behind future growth or poverty; and the perspectives of international economic relationships of Albania in the framework of globalization processes.

2.3. SCL Implementation process

Course started by informing students about course content, outcomes and assessment methods and they responded with positive attitude and openness toward new methods of learning. Students received four steps orientation on how to run facilitation process: 1) how to develop the concerns; 2) how to develop policy possibilities; 3) how to develop practical consequences and 4) how to develop possible implementations solutions and their effects on individuals, groups, institutions and/or society. After observing professor facilitations for the first 4 sessions, students were oriented to choose one aspect of globalization that economists are interested in examining: trade flows, or capital flows. The followed procedure consisted of the description of the current policy debate on the issue under discussion, the arguments offered in favor of the issue and against it, the trends observed over the last 50 years or over shorter periods of history. The students had to use economic theory and history to support the argument. They managed to analyze the main economic indexes in the structure of international economic relationships, to understand the tensions and debates in today's world economy, to acquire skills to moderate the discussions among their peers and to compile presentations of the summaries of the discussions. During the office hours professor advised students on the literature and help them to choose the topic for the discussion they would facilitate. Students were also provided with useful database as a resource for their discussions and this led to a more qualitative preparation. Majority of students succeeded in facilitating at least two discussions on the given topics and being note-takers twice during the discussion sessions. Note-takers took detailed notes of the discussion and sent them to the facilitator within the day of the discussion to help the latter prepare the summary of the discussion. These notes were not only sent out to the lecturer and students who attended this course but also to the students of other groups as they had expressed their interest in learning about the procedure and the way the students were involved in the discussion process. Assessment system supported SCL classroom and professor evaluated students for their attendance and participation in the discussion process with 20%, presentation of readings for class discussion 10%, their first facilitation session 10%, their second facilitation session 20%, the mid-term examination 10%, and the final examination 30%. Finally, as it resulted from the grading scheme, the average result of all the students was 71-80%, very uncommon compared to other courses (satisfactory level is 51-60%).

2.4. Final conclusions, results and recommendations

A special aspect of the course was its organization based on the three principles: creation of a student-oriented environment, lecturer-led discussions, and student-centered/facilitated discussions. Course had exploratory nature as students explored and developed possibilities on their own.

This led to the improvement of their discussion skills and their ability to think creatively about possibilities. Moreover, students developed critical and analytical skills, which they consider very helpful for their future endeavors. One of the key elements was creating an environment (not so common in the teaching process in Albania) where students became able to analyze development of modern trends of international economic relationships; place of Albania, a transition country in the new global environment and Albania's perspectives in a globalized economy (rather than passively memorizing and reproducing book facts). The IF methods proved to be particularly effective for students who at the beginning were not likely to speak in a class discussion. The challenge of facilitating a discussion gave them a special role to play and well-defined way how to speak up and require suggestions from their peers. These students had not been familiar with this method and lacked self-confidence until they saw their friends facilitate and were encouraged to do their assignment afterwards. Students suggested that other courses should be conducted in the same way as it has also contributed to the improvement of their skills in writing essays and giving their arguments on different topics, as well as preparing presentations. One of the students said: *'When professor introduced the goal of the course and explained to us what method is going to be used I really got alarmed because in other courses whenever a lecturer asked us something I never ever voiced my ideas as I thought I would give a wrong idea. However, when professor assigned us what we had to do, how we had to do and oriented us with the questions I felt more confident. Now I think I am not so withdrawn, and I can utter my ideas and suggestions'*. Student-centered discussion method was also introduced to other faculties, they were invited to visit and participate in the classes in order to learn new approach but also to provide further feedbacks, improvement suggestions or ways how method could be implemented in different courses. Visiting professors also agreed that observed procedure was highly helpful in developing students' discussion skills. Finally, it should be emphasized that in order to organize a course using the SC discussion method, professor needs to be well prepared, really committed to his/her teaching, set extra time to orient the students, and learn to appreciate students' efforts.

3. SCL IMPLEMENTATION IN CROATIA

3.1. General overview

Economic policy course was for the first time taught in English in 2010/2011. This mandatory, sophomore level course was aimed for both domestic and foreign students enrolled to Faculty of Law, University of Zagreb. That was also the first time ever that this course was held in some foreign language. It helped in attracting foreign students, enabling Croatian students to absorb expert knowledge in English and helping them to pursue their studies abroad. At a strategic level, this is one of the ways Faculty follows the requirements of the Bologna process and helps to increase the mobility of the students. Considering that all the students were law students and that in their 1st year they had a course in Political Economy, this course was aimed at deepening their knowledge and understanding and preparing them to discuss the economic issues and connect them with their future profession.

3.2. Course specification

This one semester, 8 credits course presents a survey of the principles of economics and economic policy issues followed by major up-to-date events in the domestic and global economy. Students are supposed to acquire the knowledge on the fundamentals of economics and economic policy and be able to apply it on transition and developed countries. Students should be capable of expressing their views on the events on the political and economic scene in Croatia and in the world, and at the same time, present their opinions clearly and discuss those with their fellow students in an open and respectful way.

Course general and specific learning outcomes were: To describe the main economic indicators and be able to explain the relations among them, as well as the meaning of certain trends; To understand the pros and cons of various ways of implementing economic policy; To be able to judge country's economic performance compared with other countries in the region and globally; To be able to discuss economic doctrines and the ways they influenced contemporary thinking; To be well informed on the current events in the domestic and global economy and be equipped to critically assess them; To be able to moderate the discussion among their fellow students and summarize the discussions. Lectures and learning activities were organized through presentations and multi-media; Q&A sessions; lecturer-led discussions; student-centered discussions – facilitations; guest speakers from academia, business sector, public administration and NGOs.

3.3. SCL Implementation process

The facilitation approach was slightly modified when compared to its initial methodology. This was due to the adjustments to the education system and principles, and easier introduction to the students. The main modifications were made concerning recommended readings for the sessions, introducing guest lecturers as quasi facilitators and help of the lecturer in facilitating the sessions. However, the main ideas of openness of the discussion, value added through creative exchange of ideas, and innovativeness in finding solutions to the concerns was rather enhanced than diminished by these slight modifications of the implementation of facilitation methodology. The group consisted of seven students and all of them were happy to share their thoughts and ideas, especially when it came to their “personal favorites” among the topics/areas of concern. In addition to the course required textbook and articles (Samuelson, P & Nordhaus, W: Economics. McGraw-Hill/Irwin: 18th edition. 2004; Dujšin, U. & Vedriš, M: Ekonomska politika u RH, Dokumenti - Clanci - Analize, Pravni fakultet Zagreb, 2009), students were also requested to read one of the following media on a regular basis: The Economist, The Wall Street Journal or The Financial Times. Schedule of the main readings was created and shared with students as shown below:

Table 1: Schedule of the main readings

1st week	Introduction; The Doctrines of the Economic Policy - part I
2nd week	Doctrines of the Economic Policy - part II
3rd week	Ch 1 The Fundamentals of Economics; Ch 2 Markets and Government in a Modern Economy; Ch 3 Basic Elements of Supply and Demand
4th week	Ch 9 Competition and Its Polar Case of Monopoly; Ch 12 How Markets Determine Incomes
5th week	Ch 14 Land and Capital; App 14 Markets and Economic Efficiency; Ch 15 Comparative Advantage and Protectionism
6th week	Ch 17 Promoting More Efficient Markets; Ch 18 Protecting the Environment
7th week	Ch 20 Overview of Macroeconomics; Transition Economics: Eastern Europe
8th week	Ch 28 The Challenge of Economic Development; Third World Countries and Their Development Challenges
9th week	Ch 30 Open-Economy Macroeconomics
10th week	Ch 34 Policies for Growth and Stability
11th week	Wrap-up session

The facilitation sessions followed the main readings in certain weeks. Based on the readings received in advance students were better informed and prepared for exploration of the area of concern. Approximately a quarter of the course was to the facilitation sessions. The aim of the discussions was to exchange previously gained ideas on certain topics and to develop the conceptual possibilities for addressing/resolving the selected areas of concern.

Several areas were discussed in the class and some possibilities developed:

- Croatia and European Union – the way ahead
- Development traps for developing countries – selected subtopics: food, education and overall institutional development
- Economics and other social science disciplines – necessary interactions and the implications
 - Law and economics – the inevitable linkages
- Role of the government in the economics: interventionism versus liberalism

According to the evaluation of the students and lecturer's evaluation, students significantly improved their discussion skills, their ability to express themselves, to listen to other members of the team, and have an idea of incorporating the new findings into their future classes and in their future profession.

3.4. Final conclusions, results and recommendations:

Quality assurance and monitoring of the Success of the Course were done through real time and ex post feedback by the students, monitoring by the Head of the Chair of Economic Sciences and external evaluation (at the School and at the University level). According to the final evaluation of the course involving many criteria (discussion, overall quality of teaching, presentation of the students, relevance of the readings, organization of the course, interest of material, facilities, overall evaluation), the course received very high numeric grades (on the scale 1-5, 90% of the grades were 4 and 5). In the second (descriptive) part of the evaluation questionnaire, students were asked to evaluate and describe their achievements and progress in the course. This part included: presentation skills, readiness for the discussion, knowledge of economics, English, etc. They were also asked to state main advantages and disadvantages of the course, give additional comments on the course, as well as provide suggestions for the next year. As for the students' comments on the areas connected with facilitation sessions:

- The areas of concern and recommended readings got very high grades – because of its relevance, connectedness with the real world, applicability and eye-opening attractiveness.
- Furthermore, the students were very happy with the overall quality of the discussion, but also their own self-judgement on the improvement of the discussion skills showed they made significant progress (same impression in the lecturer's evaluation of the students). The additional reason why they appreciated discussion that much was the fact that during their study they have very few occasions of participating in it and it is recognized as an important skill for the job market.
- The way students held the presentations and led the discussion got also good comments and showed the students' satisfaction. They also stated that they feel more confident both in discussing and presenting some topic in public and doing it English (it is at least a triple win!).
- In terms of knowledge of economics, students believe that besides upgrading it, they were also provided with fresh insights that made them think in different ways and enhanced group synergy.
- Regarding the presentations held and discussions initiated by the guest lecturers, students believe that they benefited a lot having a chance to talk to insiders and discuss with them being at the equal level (versus ex cathedra approach).
- Class atmosphere was described by superlatives only: the most comfortable, the most enthusiastic, the most supporting...

This evaluation was made before the final exam in which students invariably showed impressive level of competence especially when compared to their fellow students who took the same course in Croatian that is implemented in large group in a traditional way of teaching.

Not to be biased, it is also important to note that most of the students that selected Economic policy course in English, are among the top students in their generation. Regarding the impact of this course on the future profession of these Law students, connecting several disciplines (economics, law, sociology, psychology, and politics) throughout the whole course was of a great importance for the students. It made them understand the 'big picture', think and rethink in a holistic way, share their thoughts, questions and ideas with others, and in long term contributed to a great extent to them as proper intellectuals. In practical terms, students felt ready to apply the newly acquired knowledge (that largely emerged through the discussion) immediately. That 'quick win' works very motivating for them. And during the course it encouraged them additionally to actively take part in the following discussions. Professor was happy to see how fast students accepted the discussion process and even happier to monitor their outputs, progress and above all satisfaction with the knowledge and skills acquired. Instead of a final thought, here are some of the comments / suggestions of the students about the same class being offered in the next semester/academic year:

- Keep it going!
- Keep up the great work!
- Add more hours! (This is usually an extremely rare comment by the students, it is usually the opposite.)
- More homework as a preparation for the class (Again an uncommon comment by the students).

4. SCL IMPLEMENTATION IN SERBIA

4.1. General overview

During the Winter semester 2012, student—centered classroom was introduced as a pilot model at Faculty of Geoeconomics, Megatrend university, Belgrade. Being among very few private academic institutions back then in Serbia¹, Faculty was open and highly supportive toward any new practices that might improve teaching excellence/student satisfaction ratio. Looking at the list of undergraduate level courses that professor was teaching, Intercultural Management was recognized as best to serve the purpose, based on following criteria and premises:

- 1) it is offered in seventh semester (4th or final year of studies); assumption was that senior level students are better prepared to take responsibilities, compared to freshmen or sophomores. Brandes and Ginnis (1986) stated that student-centered learner is one hundred percent responsible for his own behavior, participation and progress, while according to Aaronsohn (1996) taking responsibility is one of the main students' roles in SC classrooms as new responsibilities build their self-confidence and support critical thinking process.
- 2) Traditionally high demand indicated course 'popularity'; Course content (exploring various business cultures) was attractive to diverse students' profiles, regardless of their majors. Diversity enhances learner-centered classroom quality, especially when it comes to discussion sessions, as interacting with people with different ideas requires better preparation and open mind for new perspectives and viewpoints.
- 3) In class activities and class participation already existed as one of the main in-semester course grading rubrics, so this assessment served as basis in later course organization.

Twenty two out of 26 enrolled students were regular with almost zero absence rate during the 15 weeks course duration. Week one served as introductory week and using the role play model, professor was announced as facilitator while students were assigned as active participants and lifelong learners.

¹According to the *National report of Serbia on the implementation of the Bologna process* in 2004/2005 there were only five universities in the private sector with the total enrollment of 9649 students, compared to 176339 students enrolled in public universities (UNESCO, 2006).

Interested about the concept, students raised their first concern - how is this approach going to affect their marks. Once it was explained that they can earn majority of final grade through active participation and good class preparation, while having freedom to choose and facilitate topics of their own interest, positive shift was observed, grade seekers started behaving as knowledge seekers.

4.2. Course specification

Course aim was to present Intercultural management as a combination of functions, skills and strategies that are necessary for conducting (successful) business beyond national borders. Specified knowledge about business practices in selected regions or countries in the world was must. Course objectives were specified as: Understanding different regional and national cultures, cultural dimensions and interdependence between management strategies and national cultures; Creating awareness of how respecting cultural differences may serve as a tool for improving intercultural and business communication, building trust, strengthening business relationships and delivering tangible results in the global business arena. Numeral scale grading system was as follows: 55-64%, passing level, grade 6; 65-74%, grade 7; 75-84%, grade 8; 85-94%, grade 9 and 95-100%, grade 10. As course load required 3/4 of lectures and 1/4 of exercises, all exercise classes were used for implementation of discussion sessions.

4.3. SCL Implementation process

To avoid repetitions, same method implementation procedure (as explained in Croatian and Albanian case) was followed, having in mind that all three professors passed the same professional development and certification program and followed IF Discussion Process basics (Interactivity Foundation, 2009). Still, in order to satisfy course requirements, some modifications were necessary. According to original IF procedure, small groups (up to eight members) are preferable as they contribute to truly collaborative discussion (Interactivity Foundation, 2011). With 26 students attending the course, this was overcome by changing group dynamics and using time management charts. Aspects like different levels of students' pre-knowledge, their capabilities, different backgrounds and life experiences, were taken in consideration and students were assigned with different roles - they performed in couples or collaborated in small or bigger groups, depending on the topic. Nevertheless, preparation process, reading tasks and active discussion facilitation/participation have remained unchanged.

4.4. Final conclusions, results and recommendations

Shifting away from long established teaching practices and abandoning memorization as common learning style, main question imposed - what the student-centered classroom benefits are and whether student-centered approach fits domestic values and preferences. Trying to provide unbiased conclusions, course was double evaluated, both internally and externally. Internal evaluation had two dimensions: continuous feedback sessions, where students were encouraged to share their thoughts, ideas, comments and concerns about the course and post course self-assessment in the form of five-point Likert scale questionnaire. External evaluation is standardized quality assurance procedure meant for all program courses and it was done through University's Quality control center. Most relevant and indicative statement from external assessment, scored with grade 5 on a scale from 0-5, was: 'Professor encourages students to participate in classes.' Although judging from this perspective, supporting students to take ownership of their learning sounds as common and usual practice, decade ago Serbian education system was still more traditional than progressive while ex-cathedra or lecturing was preferable teaching method to many educators. In-class evaluation also brought very good results: 85% of students agreed that discussion sessions contributed to their knowledge and understanding of the course materials and 92% agreed that course improved their critical and

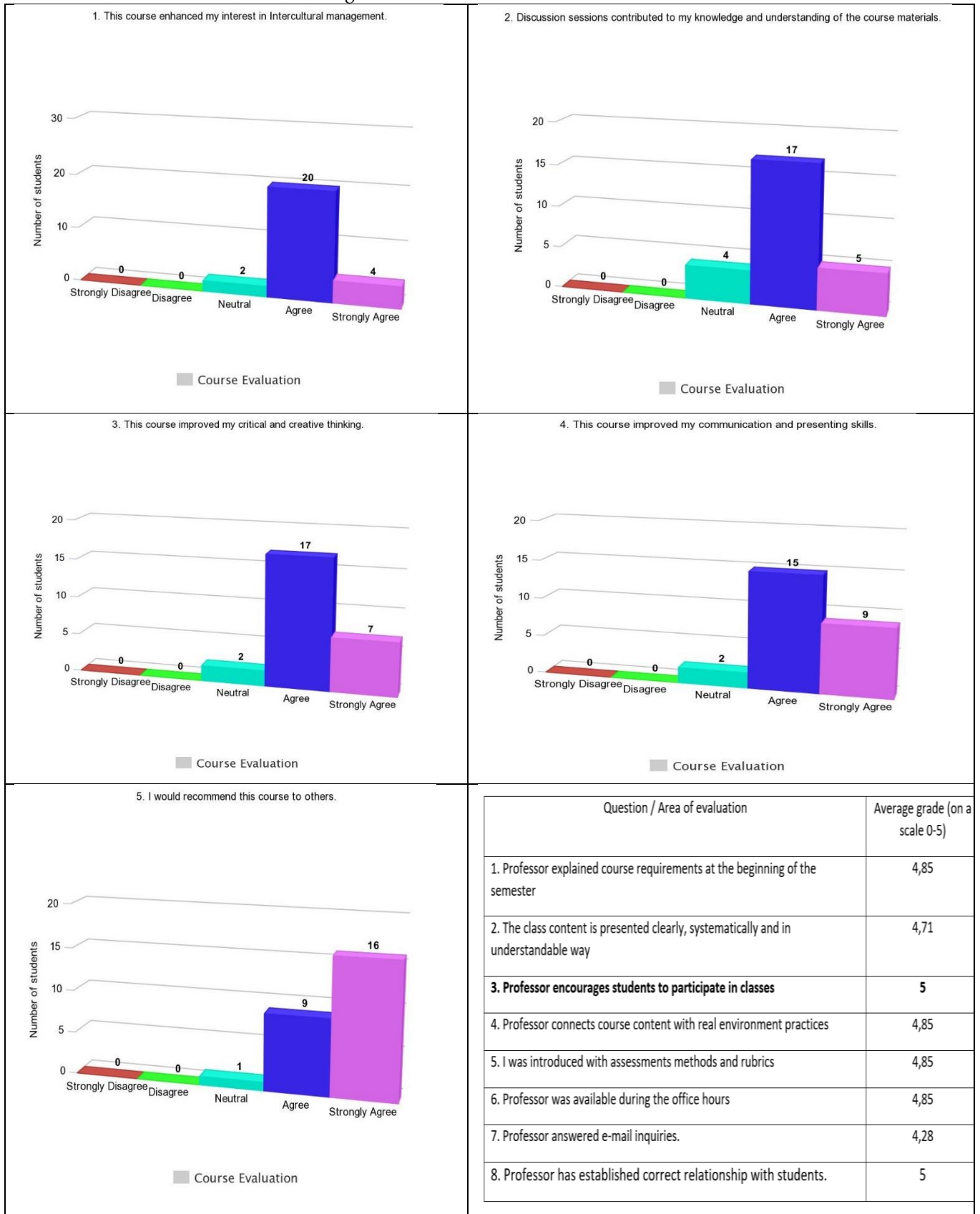
creative thinking same as their communication and presenting skills (detailed evaluation results could be seen in figure below). Further benefits were also observed and grouped in three categories:

- 1) Students' benefits: enhanced course interest and learning motivation; improvements in hard and soft skills; building self-confidence and reducing stage fright.
- 2) Professor/Facilitator benefits: professional development, pedagogical improvements, enhancing teaching-research nexus.
- 3) Course benefits: curriculum development, better connection between course topics and course learning outcomes, continuously updated course materials and case examples.

What was recognized as main process limitation or obstacle is lack of adequate literature in Serbian Language (program was accredited, and all courses were delivered in Serbian). Although there was available Serbian language textbook that satisfies course content (Jovanovic, M. and Langovic Milicevic, A., Intercultural challenges of globalization, Megatrend university, Belgrade, 2009), that textbook wasn't sufficient for reading preparations. Considering that there were no prerequisites courses specified in Intercultural Management syllabus (Business English for example), fact that students were capable to use English language literature to do reading preparations was actually matter of luck and their own good will. To finalize conclusions, implementing new teaching approach was definitely worth the effort with many proven positives achieved, but doing that on a one course level is rather trial then institutional change. To gain real benefits on all five levels (students, professors, course, program, institution) systematic approach is needed and it encompasses overall curriculum modernization, adjustments in grading system and last, but the most important, continuous professional development programs for faculty and staff.

Figure following on the next page

Figure 1: Course evaluation results



5. CONCLUSION

Student-centered teaching methods are invariably known for better learning outcomes than teacher-centered methods. Yet, despite their efficiency and (nominal) inclination towards their use, they are still underrepresented in Southeast European countries. This fact is usually connected with the socialist legacy in the education system that was mainly based on *ex cathedra* teaching. This research is based on primary data, i. e. three case studies of the simultaneous implementation of student-centered learning in following courses: Globalization and Albania, a country in transition (taught in Albania), Economic policy (taught in Croatia), and Intercultural management (taught in Serbia). The course instructors were trained for the student-centred facilitation method during their fellowship in the USA. Several common denominators can be identified in the case studies presented. First, both students and teachers noted significant improvement in the students' knowledge and skills level; their progress in the discussion, analytical and critical thinking skills was particularly emphasised. Second, despite their initial hesitation, majority of students were actively involved and committed in executing their discussion tasks. Consequently, the course marks were above average and the students' feedback and course evaluation was exceptional. Third, due to the change of the teaching methods and continuous upgrade and update of learning materials, this method requires more preparation for the teacher comparing to traditional teaching methods. Still, the whole process is very rewarding. Fourth, the 'spillover effects' to the other courses are expected but require more research, mentoring and support at the institutional level. Fifth, in line with many other knowledge transfer methods, the importance of the reputable Western institution and experience shall be stressed. Further research could include 'control groups' being thought the same courses by teacher-centered methods. In addition, the longitudinal monitoring of the student-centered methods in the courses explored could result in interesting observations and lessons learned. Finally, a large-scale research on the transition of the teaching methods in postsocialist societies would be highly relevant and would contribute to the evidence-based education policies.

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LITERATURE:

1. Aaronsohn., E. (1996). Going against the grain: Supporting the student-centered teacher. Thousand Oaks, CA: Corwin Press.
2. Brandes, D. and Ginnis, P. (1986) A Guide to Student Centred Learning. (Oxford, Blackwell) p. 12
3. Byrd Jr., J. and Goodney Lea, S. (2008) Guidebook for Student-Centered Classroom Discussions, at: <https://www.interactivityfoundation.org/wp-content/uploads/2009/12/Guidebook-for-Student-Centered-Classroom-Discussions.pdf>
4. Gagnon, G. W., & Collay, M. (2001). Designing for learning: Six elements in constructivist classrooms. Thousand Oaks, CA: Corwin Press.
5. IF Education (2019): <https://www.interactivityfoundation.org/if-discussions/classroom-discussions/>
6. Interactivity Foundation (2009): <https://www.interactivityfoundation.org/wp-content/uploads/2009/12/Public-Discussion-paper.pdf>
7. Interactivity Foundation (2011): <https://www.interactivityfoundation.org/a-brief-description-of-the-interactivity-foundation-discussion-process/>

8. Kezar, A. (2017). Foreword. In C. Haras, S. C. Taylor, M. D. Sorcinelli & L. von Hoene (Eds.). Institutional commitment to teaching excellence: Assessing the impacts and outcomes of faculty development. Washington, DC: American Council on Education.
9. Levesque-Bristol, C., Maybee, C., Carleton Parker, C., Zywicki, C., Connor, C., & Flierl, M. (2019). Shifting culture: Professional development through academic course transformation. *Change: The Magazine of Higher Learning*, 51(1), 35-41.
10. Marlowe, B. A., & Page, M. L. (1998). Creating and sustaining the constructivist classroom. Thousand Oaks, CA: Corwin Press.
11. Notturmo, M. and Notturmo, I. (Eds), Bakaradze, E., Bezovski, Z., Grabova, P., Hasaj, A., Jurcic, A., Kalemi, M., Natsvlishvili, I., Šimić, R. (2010). Special Report on Teaching Methods: Policy Possibilities for Public Discussion. Interactivity Foundation. Parkersburg, WV.
12. UNESCO (2006): http://www.ibe.unesco.org/fileadmin/user_upload/archive/Countries/WDE/2006/CENTRAL_and_EASTERN_EUROPE/Serbia/Serbia.htm
13. Vedriš, Mladen; Dujšin, Uroš; Šimić Banović, Ružica (2017). Uloga kolegija Ekonomska politika u obrazovanju pravnika: Iskustva Bolonjskog sustava obrazovanja na Pravnom fakultetu Sveučilišta u Zagrebu (The role of the Economic policy course in the education of future lawyers: Bologna process implementation at the Faculty of Law, University of Zagreb). *Pravnik*, 51, 127-138.
14. WEF – World Economic Forum (2019). The Global Competitiveness Report 2019. http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
15. Weimer, M. (2002). Learner-centered teaching: Five key changes to practice. San Francisco: Jossey-Bass Publishers.

DOES PERSONALITY INFLUENCE INTEREST IN BIKE-SHARING?

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ABSTRACT

Although the use of shared services is very popular in various areas, there are still reasons that discourage certain groups of people from using them. Knowing these reasons is a key element in influencing their consumer behaviour, which can lead to increased interest in these services, specifically in this paper bike-sharing and bring benefits to consumers but also to society as a whole. One of the factors which could strongly influence interest in bike-sharing is personnel characteristics. This article aims to indicate whether personnel characteristics influence the interest of young people in using bike-sharing services. The research focused on students from Croatia, Slovakia and Romania aged 16 to 24. It aimed to young consumers as their travel behaviour and their approach to usage of sustainable services can significantly contribute to reducing emissions and protection of the environment in the future. Mini-IPIP scales containing Five Big factors of personality were used to define the personnel characteristics of respondents and multinomial logistic regression was used to identify factors influencing interest in bike-sharing. The model's results confirmed the influence of neuroticism and openness on interest in bike-sharing on specific interest categories. Young people who are moderately neurotic are more likely to certainly not use bike-sharing services and young people with low openness are more likely to use bike-sharing probably than certainly.

Keywords: *Bike-sharing, Customers, Interests, Preferences, Young consumers*

1. INTRODUCTION

Bicycle/cycling as a means of transport is one of the prevalent and commonly used modes of transport for relatively short trips. Between its significant benefit belong the transport cost reduction and effectiveness in case of commute to work/destination without waiting in traffic jams. Other advantages of cycling are the decreasing transport emissions, the positive impact on user's mental and physical health and spending time with friends and family. Likewise, the cycling club culture is widespread mainly in Netherlands, Denmark and Sweden. Copenhagenize Index or Global Bicycle Cities Index 2019 provide a list of the best bike-friendly cities (small, medium and large) around the globe. According to the older EU's data from 2000, many households are bike owners (for instance, in Norway 70%, in Switzerland 69%), and bicycle usage is more important mainly in the youngest age categories (EU Mobility and Transport, online, 2021). The newest data show that fewer women take up cycling than men, that youth who use bikes have a lower risk of being overweight or that Barcelona's bicycle-sharing program has reduced annual CO₂ emissions by more than 9 thousand metric tons. (bicycle-guider, online, 2021). All these facts approve a positive externality of cycling in economic, societal and environmental attitudes. Bike-sharing is a short-term rental of bicycles in a particular area with or without dock stations available anytime and anywhere (Bergantino et al., 2021). The Bike-Sharing World Map currently estimates 9.1 million bike-share bikes in the world (online, 2021).

It is also characterized by the fact that bicycles are rented using a mobile application, which unlocks, and locks rented bicycles and provides real-time information about bicycles availability. Thanks to the ICT novelties, software applications, algorithms, online and virtual tools (Xu et al., 2020; Chang et al., 2019; Korecko et al., 2021) bike-sharing has become an easily accessible active mode of transport in several cities across all continents (Radzimski and Dziecielski, 2021; Böcker and Anderson, 2020). The positive economic impact of bike-sharing (Matinez et al., 2019) relates to several factors, like innovative business models (Long and Waes, 2021; Gao and Li, 2020; Durisova and Kucharcikova, 2014), value management and creation for all stakeholders (Winslow and Mont, 2019; Potkanova and Durisova, 2017, 2016) and effective marketing with mindful customer targeting which is tailored to specific needs and expectations (Morton, 2018). Knowledge of these unique customer's habitual behaviours bring great value in future demand predictions (Westland et al., 2019). In addition to health benefits, bike-sharing creates a possibility for sustainable travel and contributes to the formation of sustainable cities (Zhang et al., 2021; Radzimski and Dziecielski, 2021). Understanding consumer behaviour in bike-sharing, identifying the determinants that contribute to its use and, conversely, those that discourage customers from purchasing this service is important for increasing its use and shaping more and more sustainable transport and the world. Several studies have been conducted on the factors influencing the use of bike-sharing. However, most of them dealt with the influence of socio-demographic characteristics such as age, gender, race, education, and occupation (Lee et al., 2021; Reilly et al., 2020; Fisham et al., 2015; Ricci, 2015; Buck et al., 2013). Although several studies agree that bike-sharing users are mostly highly educated young men with high income living in a city (Böcker and Anderson, 2020), some have identified as bike-sharing users predominantly young women without access to a car or bicycle, who cycle mainly for practical reasons (Buck et al., 2013). Other research focused on preferences, skills, the relationship between bike-sharing and other means of transport, external factors such as weather, distance to a city centre infrastructure or accessibility to docking stations (Kim and Cho, 2021; Bielinski et al., 2021; Eren and Uz, 2020; Duran-Rodas et al., 2019; Hosford and Winters, 2018; Nikitas, 2018; Fishman et al., 2014). Only a few findings consider attitudes or personality traits as determinants of interest in shared transport services (Böcker and Anderson, 2020; Efthymiou et al., 2013). The personality trait can be defined as a behavioural pattern of people and approach to daily activities and problems (Kumaranyake, 2017). The personality traits influence the decision making of people, and in the context of individualism in modern society, they are becoming more and more important (Kajonius and Johnson, 2019). Instruments such as International Personality Item Pool (IPIP) scales provide the possibility to identify people's personalities and connect them with their consumer behaviour. They have been used in different research areas and also in transport and consumer behaviour studies (Verma and Chandra, 2018; Skippon et al., 2016; Holman and Havarneanu, 2015). Our research aims were to find whether personal characteristics identified based on the mini-IPIP scale influence interest of young people in bike-sharing. The research focused on young people, as it is their future consumer behaviour in the field of transport that can significantly influence society's transport behaviour and at the same time protect the environment. If new forms of transport that are inexpensive and associated with technology are not acceptable and used by young people, in that case, it is not easy to motivate other people to use them.

2. METHODOLOGY

The data used in this research were obtained by survey aimed at young people's interest in using shared transport services and their preferences. The survey was conducted from December 2020 to March 2021 among university students in Slovakia, Croatia and Romania. Data were collected using an online questionnaire.

The respondents were supposed to answer questions related to their typical daily travel, transport preferences, their interest in using shared services, in this case, bike-sharing and personality. For the purpose of this article, questions related to personality and interest in using bike-sharing are analysed. To find the interest in using bike-sharing, we asked respondents if they would use bike-sharing if it was available in their city. They could choose the answer from a 5-point scale in which 1 meant „Certainly no“ and 5 meant „Certainly yes“. To identify the personality of respondents, we chose Mini-IPIP scales. It consists of 20 items defining the Big Five personality factors: extraversion, agreeableness, conscientiousness, neuroticism, and openness (Donnellan et al., 2006, John & Srivastava, 1999). Respondents were asked to indicate an accuracy (1 – very inaccurate, 5 – very accurate) for each item. Based on the identified accuracy, the respondents were then divided into average, above-average and below-average groups for each of the five determined personality factors. These groups then entered as an input into the model identifying the influence of personality on the interest in bike-sharing. 396 respondents participated in the survey. However, after clearing the data, 299 respondents' answers were further analysed. Figure 1 shows a structure of the sample based on gender and country of residence. It can be seen, that from the gender point of view, the sample is almost balance. The research contains data from 159 males (53%) and 140 females (47%). Regarding country of residence, 178 respondents (60%) were from Slovakia, 77 respondents (26%) from Romania and 44 (15%) from Croatia. As the research focused only on young people, all respondents are between 16 and 24 years old.

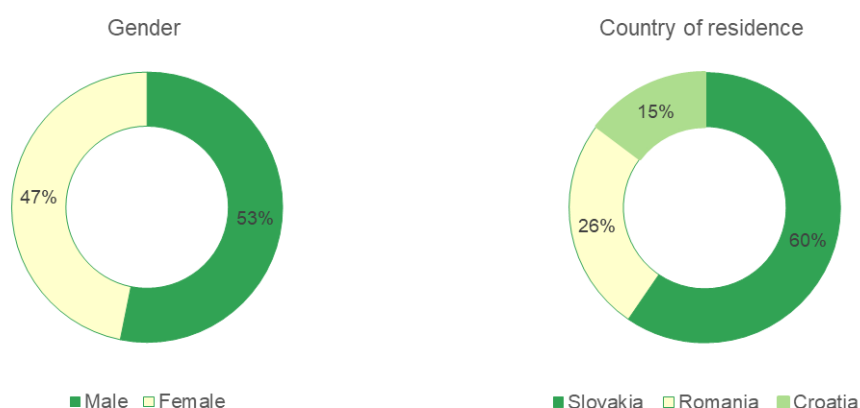


Figure 1: Structure of the sample based on gender and country of residence (N = 299)

To identify determinants that significantly influence the interest of young people in bike-sharing, we decided to use the multinomial logistic regression model. It is a special case of generalised linear models which can be applied to analyse categorical data (El-Habil, 2012). The purpose of the model is to determine whether it is possible to estimate the interest of young people in bike-sharing based on their personality characteristics. Therefore, the dependent variable was categorical variable interest in bike-sharing. The independent variables are five personality factors containing three values – low, average and high. Before creating the model, the variance inflation factor (VIF) index was used to identify mutually correlated variables. Based on the results of the VIF procedure, no variables were identified as correlated.

3. RESULTS

3.1. Descriptive analysis

The research addresses interest of young people in use of bike-sharing services and influence of personality characteristics on it. Figure 2 shows that almost 51 % of respondents would probably or certainly would use bike-sharing in case it is accessible in their city.

It can be seen that up to 27 % respondents could not decide and 65 respondents (22%) would probably or certainly would not use bike-sharing.

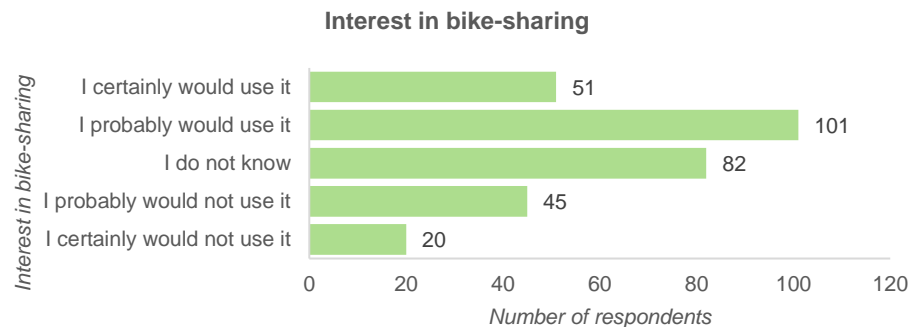


Figure 2: Interest of young people in bike-sharing

The personality of respondents were identified based on 20 items from the mini-IPIP scale. The respondents were asked to mark on 5-point scale whether the statement is inaccurate (1) or accurate (5). Figure 3 shows means of the statements accuracy according to the respondents and their interest in bike-sharing. It can be seen, that young people who are less interested in bike-sharing are more introverted. They have lower mean for "I am the life of the party" and higher means for "Don't talk a lot" and "Keep in the background". Another finding is that young people who certainly would not use bike-sharing have the lowest average for "Get chores done right away". The mean of "Do not have a good imagination" is also very low for the respondents who are not interested in bike-sharing. Although some of the items appear to affect young people's interest in bike-sharing, based on the the Spearman correlation coefficient, the statistically significant dependence between mini-IPIP scale items and interest in bike-sharing has not been confirmed at the significance level of $\alpha = 0.05$.

Interest in bike-sharing

	I certainly would not use it	I probably would not use it	I do not know	I probably would use it	I certainly would use it
<i>IPIP Items</i>					
I am the life of the party.	2.50	2.67	3.12	2.85	3.06
Don't talk a lot.	2.75	2.96	2.71	2.87	2.51
Talk to a lot of different people at parties.	3.00	3.29	3.53	3.47	3.53
Keep in the background.	3.26	3.22	2.89	2.89	2.78
Sympathize with others' feelings.	3.65	3.98	3.80	4.06	4.06
I am not interested in other people's problems.	2.15	2.33	2.55	2.18	2.33
Feel others' emotions.	3.95	3.93	4.07	3.87	4.22
I am not really interested in others.	2.50	2.31	2.45	2.24	2.10
Get chores done right away.	2.26	3.07	2.96	3.10	2.82
Often forget to put things back in their proper place.	2.50	2.60	2.28	2.44	2.59
Like order.	3.75	3.49	3.77	3.96	3.78
Make a mess of things.	2.45	2.61	2.40	2.43	2.22
Have frequent mood swings.	2.90	3.64	3.24	3.58	3.35
I am relaxed most of the time.	4.16	3.84	4.02	3.73	3.94
Get upset easily.	2.75	3.58	2.95	3.29	2.98
Seldom feel blue.	2.85	2.84	2.94	2.78	2.71
Have a vivid imagination.	4.00	3.89	4.11	3.81	4.10
I am not interested in abstract ideas.	2.37	2.27	2.56	2.49	2.33
Have difficulty understanding abstract ideas.	2.32	2.40	2.51	2.51	2.27
Do not have a good imagination.	1.53	2.16	2.05	2.23	1.96

Figure 3: Means of accuracy with the mini-IPIP items based on their interest in bike-sharing

The respondents were based on their answers about accuracy of the statements divided into three groups (low, average, high) for every personality factor. The share of the respondents in every group based on their interest in bike-sharing is presented in table 1. It can be seen, that for the factor extraversion, the share of people who belong to low extraversion group is the highest in the category “I certainly would not use bike-sharing” and it decrease for categories in which people are more interested in bike-sharing. For agreeableness factor, the lowest share of young people belonging to low agreeableness group is for interest “I certainly would use bike-sharing”. Based on this, it could be said that people who are more interested in other people are also more interested in using bike-sharing. Higher interest in other people, contributing to the happiness of other may also involve an interest in the common good, including the protection of the environment, which can be hidden reason to bike-share. In case of conscientiousness, it is possible to see an even distribution for the categories “I do not know”, “I probably would use it” and “I certainly would use it”. Young people who are decided to not use bike-sharing belong mostly to group with low conscientiousness, which means that they do not spend a lot of time by planning and preparing, they procrastinate important tasks and do not pay attention to details. Regarding neuroticism, 95 % of respondents who certainly would not use bike-sharing belong to low or average group of neuroticism while in the other categories of interest it is more evenly distributed. For the last personality factor openness, it can be seen, that the share of people with low openness decrease by growing interest in bike-sharing, but for the average and high openness no trend was identified.

<i>Interest in bike-sharing</i>	I certainly would not use it	I probably would not use it	I do not know	I probably would use it	I certainly would use it
Sample size	20	45	82	101	51
<i>Personality factors</i>					
Extraversion - Low (%)	50.0	42.2	20.7	28.7	25.5
Extraversion - Average (%)	20.0	26.7	42.7	37.6	31.4
Extraversion - High (%)	30.0	31.1	36.6	33.7	43.1
Agreeableness - Low (%)	30.0	26.7	28.0	22.8	15.7
Agreeableness - Average (%)	45.0	33.3	39.0	39.6	41.2
Agreeableness - High (%)	25.0	40.0	32.9	37.6	43.1
Conscientiousness - Low (%)	45.0	37.8	32.9	28.7	31.4
Conscientiousness - Average (%)	30.0	42.2	32.9	35.6	35.3
Conscientiousness - High (%)	25.0	20.0	34.1	35.6	33.3
Neuroticism - Low (%)	40.0	17.8	40.2	24.8	33.3
Neuroticism - Average (%)	55.0	44.4	42.7	44.6	35.3
Neuroticism - High (%)	5.0	37.8	17.1	30.7	31.4
Openness - Low (%)	30.0	26.7	28.1	41.6	21.6
Openness - Average (%)	30.0	46.7	45.1	31.7	41.2
Openness - High (%)	40.0	26.7	26.8	26.7	37.3

Table 1: Percentage of respondents based on interest in bike-sharing and groups of personality factors

3.2. Model of young people interest in bike-sharing based on their personality

The multinomial logistic regression model was created to identify influence of personality factors on interest in bike-sharing. Table 1 shows the model's goodness of fit. The p-value for Pearson chi-square statistics is .660 and for Deviance .979. These results are not statistically significant at the significant level 0.05, which means that the model fits the data well.

	Chi-Square	df	Sig.
Pearson	454.844	468	.660
Deviance	408.018	468	.979

Table 2: Goodness of fit of the multinomial logistic regression model

The estimation results of the model are presented in Table 3. Only personality factors neuroticism and openness were identified as significant. Based on the results it can be seen, that it is more likely that young people would decided to choose “I certainly would not use bike-sharing” than “I certainly would use bike-sharing” if they belong to group with average (Exp (B) = 9.962, $p = .039$) neuroticism values. It means that young people who are moderately neurotic are more likely to be not interested in bike-sharing than young people who are more neurotic (have mood swings, get upset easily). The second finding is, that if young people belong to group with low openness compared to high, they are more likely to choose that they would probably use bike-sharing than certainly use it (Exp (B) = 2.787, $p = .033$).

Table following on the next page

<i>Interest in bike-sharing a</i>		<i>B</i>	<i>Std. Error</i>	<i>Wald</i>	<i>df</i>	<i>Sig.</i>	<i>Exp(B)</i>
I certainly would not use it	Intercept	-3.446	1.263	7.448	1	.006	
	Extraversion - Low	.727	.675	1.161	1	.281	2.070
	Extraversion - Average	-.595	.784	.577	1	.448	.551
	Extraversion - High	0b			0		
	Agreeableness - Low	1.020	.863	1.398	1	.237	2.773
	Agreeableness - Average	.540	.704	.587	1	.443	1.715
	Agreeableness - High	0b			0		
	Conscientiousness - Low	.344	.696	.244	1	.621	1.410
	Conscientiousness - Average	.262	.725	.130	1	.718	1.299
	Conscientiousness - High	0b			0		
	Neuroticism - Low	2.111	1.135	3.459	1	.063	8.255
	Neuroticism - Average	2.299	1.112	4.273	1	.039	9.962
	Neuroticism - High	0b			0		
	Openness - Low	-.046	.720	.004	1	.949	.955
	Openness - Average	-.451	.671	.452	1	.502	.637
I probably would not use it	AAverage						
	Openness - High	0b			0		
	Intercept	-1.098	.657	2.794	1	.095	
	Extraversion - Low	.914	.546	2.807	1	.094	2.494
	Extraversion - Average	.195	.557	.122	1	.727	1.215
	Extraversion - High	0b			0		
	Agreeableness - Low	.165	.649	.065	1	.799	1.180
	Agreeableness - Average	-.448	.519	.745	1	.388	.639
	Agreeableness - High	0b			0		
	Conscientiousness - Low	.606	.568	1.138	1	.286	1.833
	Conscientiousness - Average	.686	.543	1.595	1	.207	1.985
	Conscientiousness - High	0b			0		
	Neuroticism - Low	-.876	.572	2.346	1	.126	.416
	Neuroticism - Average	.036	.493	.005	1	.942	1.037
	Neuroticism - High	0b			0		
I do not know	Openness - Low	.666	.601	1.231	1	.267	1.947
	Openness - Average	.697	.505	1.908	1	.167	2.008
	AAverage						
	Openness - High	0b			0		
	Intercept	-.442	.551	.643	1	.423	
	Extraversion - Low	-.180	.492	.134	1	.714	.835
	Extraversion - Average	.234	.446	.275	1	.600	1.263
	Extraversion - High	0b			0		
	Agreeableness - Low	.688	.570	1.459	1	.227	1.990
	Agreeableness - Average	.109	.442	.061	1	.805	1.115
	Agreeableness - High	0b			0		
	Conscientiousness - Low	-.131	.462	.081	1	.776	.877
	Conscientiousness - Average	-.034	.446	.006	1	.939	.967
	Conscientiousness - High	0b			0		
	Neuroticism - Low	.646	.487	1.760	1	.185	1.907
I probably would use it	Neuroticism - Average	.717	.475	2.277	1	.131	2.048
	Neuroticism - High	0b			0		
	Openness - Low	.314	.512	.376	1	.540	1.369
	Openness - Average	.314	.432	.529	1	.467	1.369
	AAverage						
	Openness - High	0b			0		
	Intercept	.290	.503	.334	1	.564	
	Extraversion - Low	.357	.466	.586	1	.444	1.428
	Extraversion - Average	.300	.438	.470	1	.493	1.350
	Extraversion - High	0b			0		
	Agreeableness - Low	.152	.557	.074	1	.786	1.164
	Agreeableness - Average	-.089	.424	.044	1	.834	.915
	Agreeableness - High	0b			0		
	Conscientiousness - Low	-.343	.450	.581	1	.446	.710
	Conscientiousness - Average	-.058	.425	.019	1	.891	.943
	Conscientiousness - High	0b			0		
	Neuroticism - Low	-.399	.458	.759	1	.384	.671
	Neuroticism - Average	.169	.427	.156	1	.693	1.184
	Neuroticism - High	0b			0		
	Openness - Low	1.025	.480	4.560	1	.033	2.787
	Openness - Average	.149	.423	.124	1	.725	1.161
	Openness - High	0b			0		

a. The reference category is: I certainly would use it.

Table 3: Multinomial logistic regression model of young people interest in bike-sharing based on their personality

Based on the descriptive analysis and multinomial logistic regression model it can be stated, that:

- although it was possible to see certain relationships between the means of mini-IPIP items and the interest in the use of bike-sharing, the dependence was not confirmed based on statistical verification.
- from the Big Five personality factors only neuroticism and openness have significant impact on interest in bike-sharing.
- neuroticism was identified as statistically significant factor for interest “I would certainly not use it”.
- openness was identified as statistically significant for interest category “I would probably use it”.

The created model confirmed the partial influence of personality on the interest in using bike-sharing. However, the results of the model may be affected by research limitations. As the implementation of the survey was influenced by the ongoing Covid-19 pandemic and the survey had to be conducted online, it was not possible to address the respondents directly, which affected the sample size. Due to the lower sample, the model results must be interpreted cautiously and may not represent all young people. Another limitation may be the chosen mini-IPIP scale. Although the aim was to identify the influence of personality characteristics on the interest in bike-sharing, the chosen scale may not have reflected the characteristics that affect consumer behaviour in transport.

4. CONCLUSION

The research was focused on personality impact on interest in bike-sharing. To identify respondents' personalities, the international personality item pool, specifically the mini-IPIP scale, was part of the questions in the survey. Based on the descriptive analysis, it was found that half of the respondents would probably or certainly use bike-sharing if it was available in their city, and most of the other respondents were not decided. From the analysis of individual mini-IPIP items, it can be seen that young people who are not interested in bike-sharing (whether definitely or probably) achieved different average values for most extraversion items than those interested in this service. In addition, based on these results, it can be seen that the average accuracy of the assertion aimed at finishing the tasks is lowest in people who have no interest in bike-sharing. Although the average values of the accuracy of statements for different interest's categories differ, no statistically significant has been confirmed. The influence of the Big Five factors of personality (extraversion, agreeableness, conscientiousness, neuroticism, and openness) and the interest in bike-sharing was examined by creating a multinomial regression model. The model's results revealed the influence of neuroticism and openness on interest in bike-sharing on specific interest categories. Young people who are moderately neurotic are more likely to not use bike-sharing services at all compared to certain use of these services. Regarding openness, young people with low openness are more likely to use bike-sharing probably than to be firmly determined to use it. Therefore, it is necessary to find a way to motivate even people who are not willing to try new things to try bike-sharing. If people try this service, they are very likely to want to use it again in the future (Bergantino et al., 2021). This research analysed the influence of Five Big personality factors on interest in bike-sharing, but in further research, the new IPIP scale reflecting personal characteristics considering consumer behaviour in transport could be created. It could also analyse the influence of habits, attitudes and preferences on bike-sharing and other shared transport services.

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LITERATURE:

1. Bielinski, T., Kwapisz, A., Wazna A. (2021). Electric bike-sharing services mode substitution for driving, public transit, and cycling. *Transportation Research Part D: Transport and Environment*, 96, 102883.
2. Bicycle guider, (online) 2021. <https://www.bicycle-guider.com/bike-facts-stats/>
3. Bile Share Map (online). 2021. <https://bikesharemap.com>
4. Bergantino, A. S., Intini, M., Tangari, L. (2021). Influencing factors for potential bike-sharing users: an empirical analysis during the COVID-19 pandemic. *Research in Transportation Economics*, 86, 101028.
5. Böcker, L., Anderson, E. (2020). Interest-adoption discrepancies, mechanisms of mediation and socio-spatial inclusiveness in bike-sharing: The case of nine urban regions in Norway, *Transportation Research Part A*, 140, 266-277.
6. Buck, D., Vuehler, R., Happ, P., Rawls, B., Chubg, P., Borecki, N., (2013). Are Bikeshare Users Different from Regular Cyclists? A First Look at Short-Term Users, 3 Annual Members, and Area Cyclists in the Washington, DC Regio *Transportation Research Record Journal of the Transportation Research Board* 2387(-1):112-119 DOI:10.3141/2387-13
7. Chang, PC., Wu, JL., Xu, YH., Zhang, M., Lu, XY. (2019). Bike sharing demand prediction using artificial immune system and artificial neural network. *Soft Computing*. 23 (2), pp. 613-626. DOI:10.1007/s00500-017-2909-8
8. Donnellan, M. B., Oswald, F. L., Baird, B. M., Lucas, R. E. (2006). The Mini-IPIP scales: Tiny-yet-effective measures of the Big Five factors of personality. *Psychological Assessment*, 18, 192-203.
9. Duran- Rodas, D., Chaniotakis, E., Antoniou C. (2019). Built Environment Factors Affecting Bike Sharing Ridership: Data-Driven Approach for multiple Cities, *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2673 (12), pp.55-68 DOI:10.1177/0361198119849908
10. Durisova, M., Kucharcikova A., (2014). The Quantitative Expression of factors which affect the cost of Transport Enterprise, *Transport Means –Proceedings of the International conference*, pp. 190-193
11. Efthymiou, D., Antoniou, C. Waddell. P., (2013). Factors affecting the adoption of vehicle sharing systems by young drivers. *Transport Policy*, 29 (2013), pp. 64-73
12. El-Habil, A. M. (2012). An Application on Multinomial Logistic Regression Model. *Pakistan Journal of Statistics and Operation Research*, Vol. 8, No. 2, pp 271-291.
13. Eren, E., Uz, V. E. (2020). A Review on Bike-Sharing: the Factors Affecting Bike-Sharing Demand. *Sustainable Cities and Society*, 54, 101882.
14. EU Mobility and Transport, (online) (2021). https://ec.europa.eu/transport/road_safety/specialist/knowledge/pedestrians/pedestrians_and_cyclists_unprotected_road_users/walking_and_cycling_as_transport_modes_en#_1.2.2_Cycling_as
15. Fishman, E., Washington, S., Haworth, N., Mazzei, A. (2014). Barriers to bikesharing: an analysis from Melbourne and Brisbane. *Journal of Transport Geography*, 41, 325-337.
16. Gao, P., Li, J.Y., (2020). Understanding sustainable business model: A framework and a case study of the bike –sharing industry. *Journal of Cleaner Production*. 267. DOI: 10.1016/j.clepro.2020.12229

17. Holman, A. C., Havârneanu, C. E. (2015). The Romanian version of the multidimensional driving style inventory: Psychometric properties and cultural specificities. *Transportation Research Part F: Traffic Psychology and Behaviour*, 35, 45-59.
18. Hosford, K., Winters, M. (2018). Who Are Public Bicycle Share Programs Serving? An Evaluation of the Equity of Spatial Access to Bicycle Share Service Areas in Canadian Cities. *Transportation Research Record: Journal of the Transportation Research Board*, 2672, 36.
19. John, O. P., Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research*. 2nd ed., pp. 102–138). New York: Guilford Press
20. Kajonius, P.J., Johnson, J.A. (2019). Assessing the Structure of the Five Factor Model of Personality (IPI –NEO-120) in the Public Domain. *European Journal of Psychology*. Vol.15, pp. 206-275 DOI: 10.5964/ejop.v15i2.1671
21. Kim, M., Cho, G. (2021). Analysis on bike-share ridership for origin-destination pairs: Effects of public transit route characteristics and land-use patterns. *Journal of Transport Geography*, 93, 103047.
22. Korecko, S., Hudak, M., Sobota, B., Sivy, M., Pleva, M., Steingartner, W., (2021). Experimental Performance Evaluation of Enhanced User Interaction Components for Web - Based Collaborative Extended Reality. *Applied Sciences –Basel*. 11(9) DOI: 10.3390/app11093811
23. Kumaranayake, R., (2017). Review of the studies on personality Traits. *International Journal of Applied Research*. 2017; 3(11):38-45
24. Lee, S., Smart, M.J., Golub, A. (2021). Difference in travel behavior between immigrants in the u.s. and us born residents: The immigrant effect for car-sharing, ride-sharing, and bike-sharing services, *Transportation Research Interdisciplinary Perspectives*, 9, 100296.
25. Long, T.B., van Waes, A., (2021) When bike sharing business models go bad: Incorporating responsibility into business model innovation. *Journal of Cleaner Production*., Vol 279. <https://doi.org/10.1016/j.jclepro.2021.126679>
26. Martinez, S., Tapia, A., Bernardo, V., Ricart, J.E., Planas, M.R., (2019) The Economic impact of bike sharing in European cities.<https://dx.doi.org/10.15581/018.ST-505>
27. Morton, C. (2018). Appraising the market for bicycle sharing schemes>Perceived service quality, satisfaction and behavioural intention in London. *Case studies on Transportation Policy* 6 (1) pp. 102-111. DOI 10.1016/j.cstp.2017.11.003
28. Nikitas, A. (2018). Understanding bike-sharing acceptability and expected usage patterns in the context of a small city novel to the concept: A story of ‘Greek Drama’. *Transp. Res. Part F Traffic Psychol. Behav.* 2 018,56, 306–321
29. Potkanova, T., Durisova, M. (2016). Structure creation of value management making provision for stakeholders in business practice. 12th Annual International Bata Conference for Ph.D. students and young researchers (DOKBAT) pp. 315-325 DOI: 10.7441/dokbat.2016.33
30. Potkanova, T., Durisova, M. (2017). Specificities identification of value management of companies providing transport services. 12th International Scientific Conference young scientists on sustainable, modern and safe transport. Vol. 192 pp. 725-730 DOI: 10.1016/j.proeng.2017.06.125
31. Radzimski, A., Dziecielski, M. (2021). Exploring the relationship between bike-sharing and public transport in Poznań, Poland. *Transportation Research Part A: Policy and Practice*, 145, 189-202.
32. Reilly, KH., Wang, SM., Crossa, A. (2020). Gender disparities in New York City bike share usage *International Journal of sustainable transportation* Dec. 2020 DOI:10.1080/15568318.2020.1861393

33. Skippon, S. M., Kinnear, N., Lloyd, L., Stannard, J. (2016). How experience of use influences mass-market drivers' willingness to consider a battery electric vehicle: A randomized controlled trial. *Transportation Research Part A*, 92, 26-42.
34. Xu, TT., Han, GJ., Qi, XY., Du JX., Lin, C., Shu, L., (2020). A Hybrid Machine Learning Model for Demand Prediction of Edge – Computing-Based Bike Sharing System Using Internet of Things, *IEEE Internet of Things Journal*. 7 (8), pp. 7345-7356, DOI: 10.1109/JIOT.2020.2983089
35. Verma, V. K., Chandra, B. (2018). An application of Theory of Planned Behavior to predict young Indian consumers' green hotel visit intention. *Journal of Cleaner Production*, 172, 1152-1162.
36. Westland, J.C., Mou, J., Yin, D.F., (2018). Demand cycles and marketing segmentation in bicycle sharing. *Information processing & Management* 56 (4) pp. 1592-1604 DOI:10.1016./j.ipm.2018.09.006
37. Winslow J, Mont O. (2019). Bicycle Sharing: Sustainable Value Creation and Institutionalisation Strategies in Barcelona. *Sustainability*. 2019; 11(3):728. <https://doi.org/10.3390/su11030728>
38. Zhang, X., Shen, Y., Zhao, J. (2021). The mobility pattern of dockless bike sharing: A four-month study in Singapore. *Transportation Research Part D: Transport and Environment*, 98, 102961.

EXPANSION OF EUROHERC INSURANCE INC. ON THE EUROPEAN UNION MARKET - CASE STUDY

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ABSTRACT

Euroherc Insurance Inc. as the leading non-life insurance company in the Croatia has decided to expand its business to the European Union market. In 2015, it entered the Austrian market. The choice of this market is related to the structure of the market, the fact that many people from Croatia live and work in Austria, and the openness to competitive business. On the Austrian market, Company focused on car insurance services. The choice of strategy proved to be good, as Euroherc Insurance in 2019 achieved a premium growth of 14% and developed its business through 1 branch, 4 business offices and 50 sales points in Austria.

Keywords: *Euroherc Insurance, European Union, insurance market, non-life insurance*

1. INTRODUCTION

The insurance market in Croatia is regulated by the Insurance Act, Act on Compulsory Insurance within the Transport Sector and relating subordinate legislation (HANFA, 2020). With the economy opening in the 1990s, opportunities in the insurance market in Croatia changed. The ideal conditions that lead to economic efficiency and greater choice to meet the needs and desires of insurance market participants are perfect information of all market participants, a sufficient number of buyers and sellers of insurance, freedom to enter and exit the market of product homogeneity. Deviations from all the above conditions are called imperfect insurance market (Andrijanić, 2002). Information asymmetry is related to the fact that one part has incomplete information in relation to the other part, which means that insurance buyers are in a less favorable information position compared to insurance sellers (Ćurak and Jakovčević, 2007). The growing appearance of foreign insurance companies and the number of competitors in the field of insurance intermediation have led to the need for more comprehensive and precise regulation of insurance in Croatia. Given the changes, Croatian insurance companies, including Euroherc Insurance Inc. (Euroherc) are looking for the opportunity to enter European markets. Euroherc is the leading non-life insurance company in Croatia. Due to the large number of business customers operating in Austria, in 2015 Euroherc decided to expand its business to the Austrian market by gradually opening branches in accordance with market research and potential customers. The fact that in 2020 Euroherc had 50 sales points in Austria with headquarters in Vienna, indicates that their expansion into the European Union (EU) market, more precisely the Austrian market, was very successful and targeted. This paper presents current indicators of the expansion of Euroherc to the EU market.

2. BUSSINES ACTIVITIES OF EUROHERC INSURANCE INC.

Euroherc is one of the fastest growing insurance companies in Croatia. In the environment of the insurer, it stands out due to the fact that its shareholders are simultaneously engaged in various management, professional and other activities in the Company (Euroherc, 2020). It is a quality that gives the Company stability in business, preferring long-term over short-term interests. The key function of Euroherc is sales. In order for a company to successfully sell insurance services, it must treat the sales function as part of integral marketing. Therefore, it is necessary to plan and create such insurance services that will, with their quality, price, availability, meet the needs of potential policyholders, customers (Barbir, 2004). Sales follows a differentiation strategy by offering customers different types of insurance services. The main activity of the company, i.e. the service of the company is the provision of various forms of insurance such as personal accident insurance, property insurance, goods in transit insurance, travel insurance, liability insurance. For more details on forms of insurance one can find in Euroherc (2020). Enterprise architecture is a concept that encompasses the elements from which the enterprise is built and the interrelationships of the elements themselves. As part of the company's architecture, process architecture represents the highest level of company design, responsible is for the horizontal implementation of business activities and focused on informal communication and coordination between functions in the organization (Bosilj Vukšić, Hernaus and Kovačić, 2008). Business processes in a company can be key and supportive. Key business processes are central, they are the basis of the organization's operations and the basis of its profit. These processes are focused on meeting the needs of consumers, the operation of the course of basic activities that are important for the realization of the company in the market and for its financial sustainability. The key business processes in Euroherc are sales processes of all forms of insurance. This process brings revenue to the organization. Although not all forms of insurance in the insurance sector bring the same amount of income, all departments of the sales sector are important for the realization of companies in the market and meeting the needs of company users. Based on realized premiums, the sale of car insurance is a key process in the sales sector. The task of support processes is to support key processes in the company. These are common tasks such as secretariat, human resources, information and financial affairs. In Euroherc, these are the finance and IT departments and the claims department. The finance and accounting department is responsible for billing services, managing company finances, issuing financial reports, and controlling and auditing operations. The claims sector is a sales support process that processes compensation for adverse events for contracted policies. The IT and professional affairs sector deals with IT support for sales and other sectors of society, actuarial affairs, market research, marketing, general and legal business, and human resources. Key and supportive business processes are in constant communication and relationship in order to provide the client with the best possible service and realize all his rights obtained by contracting an insurance policy, but also to exercise the rights acquired by the company by contracting an insurance policy (Euroherc, 2020). Euroherc's business philosophy is focused on motivating and developing human resources as the most important driver of business efficiency. Working conditions in the Company are the basis of the functionality of each employee, so organizations and management use various methods of employee motivation in order to improve their work and job satisfaction. At the level of all sectors, trainings and weekly and monthly meetings are constantly conducted in order to monitor the implementation of the plan and analysis of the business situation. In this way, management obtains direct information from operating operations (Tipurić, 2008). The modern system of insurance companies is very complex given that there is increasing competition in the market, and the ratio of the potential market to the insurance offer is very small.

To improve their sales, a number of insurance companies are opting to restructure their organizational structure and adopt new business organization models (such as virtual or networked) to optimize business costs. However, apart from cost optimization, the greatest importance of the development of a modern organization, including insurance organizations, is represented by people. Human resources are the foundation of every organization, so for the purpose of successful business, as much investment as possible in their development and motivation is needed. Given that the departments within the joint sales achieve the set goals and projects of the company, it can be concluded that the high intensity of teamwork and cooperation (Euroherc, 2020).

3. EXPANSION OF EUROHERC INSURANCE INC. ON THE EUROPEAN UNION MARKET

On the business of Euroherc the greatest impact has the economic environment. The recent economic crisis has shown that the demand for insurance is falling due to economic problems. Legislation and technology have an important impact on the development of insurance, but not as significant as the financial literacy of the population. Financial literacy affects the demand for insurance as people become aware of the importance of insurance. The long-term risks of operating in the insurance market are hidden in unfavorable demographic trends in the EU, which in the long run may have adverse effects on GDP growth, disposable income and the volume of economic activity (Euroherc, 2020). Euroherc achieves profitability by constant investments in the development of employees, the network of insurance sales branches, the development of the distribution channel and by creating new products on the insurance market in accordance with the needs of the market. Modern equipped branches with 520 sales points of Euroherc in Croatia and 50 points of sale in Austria are an indicator of continuous, conscientious and wise investment in its own capacities, infrastructure and employees. This has contributed that Euroherc is one of the leading non-life insurance companies, accessible to a large number of citizens. Given the approach of choosing and developing of a strategy for entering a new market, it is important to begin by determining the economic, social, political, legal and technological possibilities of entering the Austrian market. In the analysis, Euroherc was guided by the following potentials of the Austrian market (Euroherc, 2020):

- among the 12 richest countries in the world in terms of GDP per capita
- GDP 74.1 billion \$ (2015)
- GDP per capita 3,439 \$ (2015)
- 8,611,088 inhabitants (2015) - 49% M and 51% F
- 82,531 km² (2015)
- languages: German 88%, Turkish 2%, Serbian 2%, Croatian 1.6% (official in Burgenland), others 5.3% (Slovenian and Hungarian)

In addition to good political and economic preconditions, Austria is a country to which Croatia is culturally and historically related. On the other hand, a large number of Croats live in Austria or prefer it as a business partner market. The total premium of the insurance market in Austria is increasing. When Euroherc entered the Austrian market, the premium growth was 1.6%, while the insurance premium calculated by Austrian insurers in 2015 amounted to EUR 17.4 billion (Euroherc, 2020). Such indicators are certainly good for further expansion and strengthening of the position on the Austrian market.

Figure following on the next page

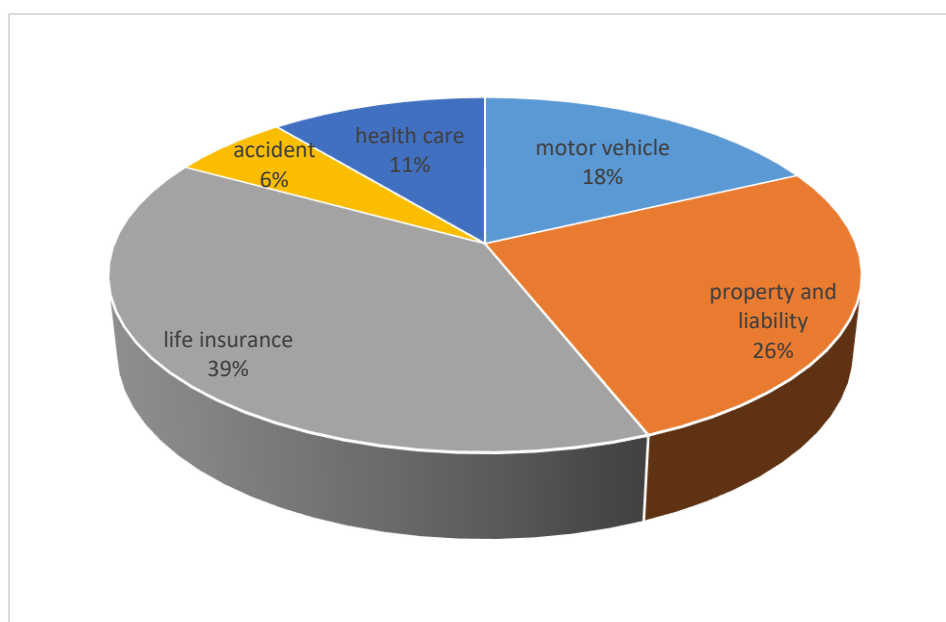


Figure 1: Overview of the insurance market in Austria before Euroherc entered the Austrian market

(Source: report of Euroherc Insurance Inc., 2015)

Indemnity insurance dominates with a share of 50% of the total market (Figure 1). Non-life insurance accounts about 50% of the total insurance market in Austria. Within indemnity insurance, the market is divided into motor vehicle insurance, property insurance and accident insurance. Property insurance has a share of 26.2%. If the market is viewed from the position of a competitor, in 2015 Euroherc estimated that entering the Austrian market would mean expanding in an already known competitive environment. In 2015, 47 insurance companies were active in Austria. The top five insurers held 25% of the market, while the top 10 insurers held 72% of the market (Euroherc, 2020). Uniqua insurance has the largest share in the insurance market, followed by Generali and Wiener (report of Euroherc Insurance Inc., 2015). All these insurance companies also operate on the Croatian market, so Euroherc knows their business policy. Knowledge of competitors is very important in order to adapt to the new market and working conditions. Leading insurance companies on the Austrian market also have a very high share in non-life insurance premiums, which is a key process and target market of Euroherc. Euroherc was aware of the strength of competition by entering the Austrian market. After competitors analyzing, it is important to determine what the competitive powers of customers are. In 2015, Euroherc made a comprehensive analysis of the Austrian insurance market.

Segmenting the market, it was found that in 2015 in Austria were (Euroherc, 2015):

- 6.5 million registered vehicles, of which 4.7 million are passenger cars (72%)
- the number of registered vehicles grew annually 1-2%
- 550 personal vehicles per 1,000 inhabitants
- the number of newly registered vehicles (new and used vehicles registered for the first time) in 2015 amounted to about 1.4 million, which is an increase of 0.8% compared to 2014.
- in the structure of newly registered vehicles in 2015, the trend of a higher share of used vehicles continued, accounting for 70% of newly registered vehicles (30% new vehicles)

Given the very high level of motorization of the market, it is important to establish a proper distribution network. By entering a new market, it is much easier to stick to a partnership that already knows the market and has a developed distribution channel.

In the entering process to the new market, insurance companies often recruit "domicile" insurance intermediaries who know consumer behavior and market trends. In order to select an adequate distribution channel, Euroherc investigated the strength of distribution by entering the Austrian market. According to the Austrian Insurance Agency, in 2015 the following were registered in Austria (Euroherc, 2015):

- 4,060 brokers (intermediaries)
- 7,322 insurance agents

The difference between brokers and agents is that brokers act independently on the market on behalf of buyers and represent (sell) different insurances, i.e. insurances of different insurance companies. Unlike brokers, agents act on behalf of the insurance company with which they have a cooperation agreement. The largest number of insurance companies in Austria use their own distribution network. The reason for this is a very clearly defined business strategy that is focused on sales channels and strengthening competitiveness, and the need to retain customers and potential customers. Insurance liberalization in Europe has led insurance companies to constantly look for new, more flexible sales channels, so it's no surprise that insurance companies are turning to less centralized distribution channels such as brokers and agents who communicate with large numbers of insurance users and are motivated to sell because they work for commission on sold insurance. Euroherc has a very strongly developed own network of insurance sales, but entering a new market, they opted for a combined distribution model: their own network - agents and brokers. In this way, Euroherc has ensured a rapid penetration of a new market, as evidenced by the existing network (from 2020) which includes 4 branches and 50 sales points throughout Austria. After market research and identification of business opportunities in the Austrian market Euroherc insurance had to go through the procedural phase of the registration work in the insurance market in Austria. This procedure begins with a HANFA cross-border business license and ends with the nostrification of the Austrian Insurance Agency and the official registration of companies in Austria. Following the registration and procedural conditions of legal business, Euroherc has developed a strategy and conceived the organizational structure of Euroherc in Austria. In the beginning, an organizational structure has been set up which defines organizational units, and thus the activities of work units and the tasks of each organizational unit. Each organizational unit was initially given the task of adapting the existing products of Euroherc on Austrian market in line with their key business (Euroherc, 2020):

- Insurance terms and prices - Sales
- Claims forms
- Financial and tax documentation - Finance
- Development of custom IT programs / interfaces - IT
- Development of a distribution plan for our products - Sales
- Development of a marketing plan
- Personnel staffing
- Translation of complete documentation

After researching the market, Euroherc initially focused on motor insurance where he has extensive experience, and a large number of people from Croatia who work and live in Austria recognize Euroherc as a leader in the field of motor insurance. The share of Euroherc in Austria in 2019 increased by 32% compared to 2018. On the other hand, the company has expanded its network of business and services, and survived in a market traditionally dominated by domestic insurance companies. Euroherc has shown that entering a new market does not have to be a problem or a failure if a good market analysis and a clear business strategy are made.

A competitive advantage has been created by the successful implementation of a differentiation strategy based on competitive positioning that enables the creation and exploitation of a unique position of companies in the market (Euroherc, 2020). The strategy of differentiation is focused on the design or adaptation of business activities and assortment by which the company can, in a better way, differ from its competition. Differentiation should offer customers something unique and especially valuable to them that other providers cannot offer them (Porter 1985). Economically, it is an attempt to create a kind of quasi-monopoly in which pricing policy will not be based solely on costs. The purpose of differentiation is to create customer preferences and loyalty in order to reduce their sensitivity to price differences between the industrial products offered (Hofer and Schendel, 1978). Regardless of what factors of differentiation a company has or seeks to build, the perception of the customer that he is offered something particularly valuable is the basis of successful differentiation. The differentiation strategy is based on customer perceptions rather than the actual difference between competitors (Porter 1985). Euroherc has prepared a Solvency and Financial Statement Report for 2019 in accordance with Insurance Act and Commission Delegated Regulation (EU) 2015/35. The values stated in the Report are harmonized with the reporting forms submitted to HANFA. In 2019, the Company generated 1,355,098 thousand HRK of revenue, of which 1,278,989 thousand HRK relates to gross written premium (95%). The Company's expenses amounted to 1,223,153 thousand HRK, of which 43% relates to expenses for insured cases. The Company's profit amounts to 131,945 thousand HRK. Up to 31 December 2019, a total written premium of 1,279 million HRK was contracted, which is 160 million HRK or 14% more than in the previous business year. In mid-2017, the company expanded its operations to the territory of the Austria, where in 2019 it earned a gross written premium of 33 million €.

Euroherc	Gross written premium			
	2018.	2019.	2019./2018.	
Total	1,118,862	1,278,989	160,127	114%
Croatian market	933,041	1,032,946	99,905	111%
Austrian market	185,821	246,043	60,222	132%

*Table 1: Realized written gross premium
(Source: authors' according to Euroherc (2020))*

Table 1 shows the realized gross written premium expressed in thousands of HRK. According to gross written non-life insurance premium, Euroherc ranks second in Croatia, while it is in third place in terms of gross premiums written. The Company's share in the non-life insurance premium amounts to 17.1%, which represents an increase of 14.31% compared to 2018, while the share in the total gross written premium increased from 11.35% realized in 2018 to 12.13% achieved in 2019. In the structure of the Company's premium income, the largest share of 52% relates to motor third party liability insurance, followed by road vehicle insurance - comprehensive insurance with a 22% share, and accident insurance with a 9% share. In the structure of the Company's premium income realized in the Austria, liability insurance for the use of motor vehicles is also dominant with a 65.48% or 161 million HRK and road vehicle insurance - comprehensive insurance participates with 24.9%. In 2019, expenses for insured cases amounted to 530 million HRK net, of which 220,317 claims were settled and 587 million HRK was set aside for payments for settled claims. Reinsurance participates in liquidated claims in the amount of 1.9 million HRK. Characteristics of the reporting period Changes that the Company considers significant in the reporting period:

- significant growth in premium income in the Austrian market
- territorial expansion in the Austrian market
- revenue from traffic offices in Austria

- completion of the office building in Klagenfurt, Austria
- planned completion of the office building in Salzburg, Austria in 2020
- increase in capital by making a profit in the business year

From year to year, Euroherc further strengthens its position by constantly investing in its employees, innovative approach to potential customers and regular customers, which is the reason for stable position in the domestic market, and thus in the Austrian market. At the end, it can be concluded that choosing the Austrian market to expand Euroherc's business was a good choice to enter the EU market, but also to increase its business potential.

4. CONCLUSION

Euroherc Insurance Inc. is focused on the excellence of the organization functioning from the segment of organizational structure and the possibility of creating a balance of the market and the desire to make a profit. Euroherc has the dimension of an international company that operates outside the borders of Croatia, primarily in Bosnia and Herzegovina and through its partners in the region, mostly Austria. The main service of the company is the provision of various forms of insurance, such as personal accident insurance, property insurance, goods in transit insurance, travel insurance, liability insurance. The company achieves profitability by constant investments in the development of employees, the network of branches of insurance delivery, the development of the distribution channel and creating new products on the insurance market in accordance with market needs. In order to further strengthen its market position in the EU market, in 2015 Euroherc decided to enter the Austrian market. The choice of this market is related to the structure of the market, the fact that many people from Croatia and Bosnia and Herzegovina live and work in Austria, and the popularity competition that is present in the Croatian market. On the other hand, Austria is one of the most stable political and economic countries in Europe, with high purchasing power and stable GDP, low levels of corruption and crime, and a market that is open to competitive business. Taking into account advantages, but also the challenges of the Austrian market, Euroherc has compiled a strategy of focusing on the client, whereby in the Austrian market they have focused exclusively on the motor vehicle insurance. Such a focused approach has enabled them to quickly differentiate themselves as an insurance company that will provide fast and quality service in the field of car insurance. On the other hand, the strong competition present in the Austrian market has traditionally created customer loyalty for certain categories of insurance (life, property), which for Euroherc would be a large investment project with a small return in money. The choice of strategy turned out to be good because Euroherc achieved a premium growth of 14% in 2019, developed its business through 1 branch, 4 business offices and 50 sales points in Austria. Example of Euroherc shows that a good analysis of the market and the choice of strategy has great chance of survival on the international market.

LITERATURE:

1. Andrijanić, I., Klasić, S. (2002). Tehnika osiguranja i reosiguranja. Zagreb: Mikrorad.
2. Barbir, V. (2004). Čimbenici uspješnosti prodaje usluga osiguranja. Ekonomski pregled, Vol. 55 No. 9-10, pp. 815-839.
3. Bosilj Vukšić, V., Hernaus, T., Kovačić, A. (2008). Upravljanje poslovnim procesima: organizacijski i informacijski pristup. Zagreb: Školska knjiga.
4. Ćurak, M., Jakovčević, D. (2007). Osiguranja i rizici. Zagreb: RRIF.
5. Euroherc (2020). Retrieved 20.12.2020. from <https://www.euroherc.hr/>.
6. Euroherc (2015). Report of Euroherc Insurance Inc.
7. HANFA (2020). Tržište osiguranja. Retrieved 20.12.2020. from <https://www.hanfa.hr/trziste-osiguranja/>.

8. Hofer, C. W., Schendel, D. (1978). Strategy Formulation: Analytical Concepts. West Publishing Company.
9. Porter, M. E. (1985). Competitive Advantage. New York: Free Press.
10. Tipurić, D., Markulin, G. (2002). Strateški savezi: suradnjom poduzeća do konkurentske prednosti. Zagreb: Sinergija.

LONG TERM CARE (LTC) IN CROATIA; NURSING HOME CARE COST ANALYSIS

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ABSTRACT

In 2002, Croatia opened long term care to the private sector. Therefore, the state ownership rights of nursing homes were transferred to the cities and municipalities with the right of subvention of their operation. Like many EU member states, Croatia has been facing a process of depopulation for many years. The share of elderly people over 65, according to the Central Bureau of Statistics (DZS, 2019), is 20,78% of the total population of the Republic of Croatia, or 848 thousand people. According to the available data from the Ministry of Labor, Pension System, Family and Social Policy (MROSP), the current accommodation capacity of institutional homes for the elderly in the Republic of Croatia is 10,980 beds, of which 98.5% are owned by the counties and the rest is owned by the state of Croatia. On the other hand, the waiting list on December 31, 2019, according to the same source, is 7,466 users. Given the abovementioned data, the current capacity of the institutional form of accommodation in the Republic of Croatia is sufficient to accommodate 59% of all persons in need. This paper presents one model of financing and operating of new private elderly care home. Analysis implies that, with all the optimization of business, it is not possible to provide price for the end users less than 7.875 HRK (1.050 EUR). Presently, Republic of Croatia is facing challenging time trying to fulfill the demand and lack of beds in long term care sector. New model of financing and subsidizing of the private sector will be crucial to meet the market needs.

Keywords: *Croatia, elderly home, private sector, long term care, depopulation*

1. INTRODUCTION

There are many definitions of what long term care is, and all typically describe the need for care for a particular group of people. As described by National Institute of Aging, it involves a variety of services designed to meet a person's health or personal care needs during a short or a long period of time. These services help people live as independently and safely as possible when they can no longer perform everyday activities on their own. Long-term care can be formal - in institutions such as homes for the elderly or extra-institutional - and informal. The demand for long-term care is highly age-dependent; in most OECD countries, one in five long-term care recipients is under the age of 65, while approximately half of the beneficiaries are over the age of 80. Croatia has been facing a process of depopulation for many years.

Only a small number of the Croatian population over the age of 65 are placed in homes for the elderly, while the EU average is around 5%. The responsibility of the family for the welfare of the elderly is also enshrined in the Constitution of the Republic of Croatia, where it is said that children are obliged to take care of old and infirm parents. According to the available data from the Ministry of Labor, Pension System, Family and Social Policy (MROSP), the current accommodation capacity of institutional homes for the elderly in the Republic of Croatia is 10,980 beds, 98.5% of which are owned by the counties and the rest is owned by the state of Croatia. On the other hand, according to the same source, there were 7,466 users on the waiting list on December 31, 2019. Due to the growing pressure on the population and the growing role in society, this topic deserves an interdisciplinary approach to expanding existing traditional models of care for the elderly, researching new forms of housing, and developing personalized services with knowledge from abroad. Demographic trends affect all spheres of human life with numerous challenges to the pension and health care system within social welfare. There is also pressure on each country's budgets and fiscal system, with growing labor shortages, numerous migrations and reduced fertility rates. Older people are perceived in modern societies as a burden of society, and the social problem is related to the diversity of their needs. In addition to the analysis of current accommodation capacities for the elderly and the existing legal framework for the protection of their rights, the aim of this paper is to show the heterogeneity of the system of different service providers as well as the amount of subsidized funds provided by the home country.

2. THEORETICAL ASPECTS OF CARING FOR THE ELDERLY

The concept of social assistance includes transfers in cash or in kind, which are not based on insurance, and institutional care for people who cannot take care of themselves or cannot pay for such care in full (Šućur, 2003). The key factor influencing future government expenditure on long-term care is the number of elderly (65+) and especially very old (80+) people, and demographic trends show that the Croatian population is aging rapidly (Bažun, 2016).

2.1. Social Care

In Croatia, social assistance and social welfare are covered by the same system. Social welfare is close to social assistance in that the provision of welfare services, as well as social assistance benefits, is based on a needs-test and means-test. In addition, both social assistance and social welfare represent small and residual systems in social policy (Šućur, 2003). These systems are more flexible than social security systems, although their function is complementary to insurance schemes: they provide basic security to those who fall out or are not covered by the social security network (Šućur, 2003). For that part of social assistance called social welfare, the term „personal social services” is still used in some countries or languages. They, as C. Jones (1985) points out, are a “micro” goal of social policy.

2.2. Financing the construction of nursing homes

Due to the growing popularity of informal forms of care, it is assumed that in the future there will be increasing pressure on the offer of the state, private sector or other organizations that provide such forms of service. A very important issue will be the development of appropriate models of public, private or public-private financing of the provision of these services, but also raising the cost efficiency of the provision of care services in order to rationalize rising costs (OECD, 2011). Apart from the accelerated aging trend in state and decentralized homes, the costs of state allocation for the social sector are also influenced by other factors, such as: the number of dependent persons in care, the ratio of formal and informal care, the number of institutional care providers and care costs per beneficiary.

The European Commission has predicted that the share of long-term care expenditure in Croatia's GDP will increase from 0.4% to 1% or 1.7% by 2060 if one considers the coverage of care costs in formal or informal institutions or through cash benefits (Bažun, 2016). The decentralization of the state housing system began in 2002, when all founding rights were transferred to local (regional) self-government units and the City of Zagreb. This opened the possibility for the private for-profit and non-profit sector to enter the social welfare sector (Government, 2011). Despite the growing number of homes in the private sector, in 2014, 70% of users were accommodated in state homes, out of a total of 15,488. There were 13,000 people/users interested in accommodation in state homes, and a total of almost 70,000 requests for accommodation (Bažun, 2016). This information should be taken with a grain of salt as some users show interest in two or more homes at the same time. In practice, there are cases when potential users who are registered on the waiting list withdraw from the list when their accommodation is approved. It should also be taken into account that, as a rule, beneficiaries usually choose to apply on the list of enrollment in those state and decentralized homes that are close to their place of residence. Thus, in some LGUs the number of requests greatly exceeds the available accommodation capacities in their homes for the elderly, while other LGUs record a significant number of vacancies. It is important to emphasize that this predominantly refers to state and decentralized homes, while the relative availability of accommodation capacities of private providers is significantly higher. Namely, the capacities of state-owned homes increased from 2004 to 2014 by only 426 places, while the capacities of private accommodation increased by as much as 2,552 places in the same period (Bažun, 2016). Of course, the services of private providers are not equally available to everyone due to significant income inequalities between potential beneficiaries and their families. The average price of accommodation in a state home is around HRK 3,000, while the prices in the homes of other founders can be significantly higher (Central State Portal, 2015). Accommodation in private homes is actually the most expensive form of institutional care from the perspective of users since the formation of the price of accommodation in private homes is based on capital and operating costs of their business (e.g. construction, plot, home management, labor and unit costs of care and accommodation). In contrast, the final prices of accommodation in state and decentralized homes include the cost of capital investment and land acquisition. Therefore, in order to achieve the sustainability of their business, the work of these homes is co-financed by public funds that reach up to 50% of their regular income. County homes cover the difference between operating revenues and expenditures from county budgets, while state homes are financed directly from the state budget. Subsidizing public founders' homes for the elderly can be implemented in two ways, through transfers of funds intended for the operation of homes and through subsidizing socially vulnerable groups of the elderly who are not financially able to pay the full price of accommodation, including accommodation in private homes.

3. COMPARATIVE ANALYSIS OF THE CARING SYSTEM FOR THE ELDERLY IN THE EU

Depopulation and population aging are two effects of change that have certainly been affected by reduced fertility rates and longer population life expectancy. The reason should certainly be sought in secondary factors, such as the wars in recent decades, which affected the fertility rate and economic activity of the Member States. The share of European population is declining, as can be seen from the comparison that in 1950 the European population accounted for 22% of the total world population, in 2008 12% and in 2050 this number is projected to be only 7% of the total world nations. (OECD, 2019). Two side effects of the aging process are also evident: an increasing proportion of women in the elderly population and an increasing proportion of the elderly over 80 years of age. There is also an evident preference for the accommodation of a public founder in the EU countries.

3.1. Demographic data in the EU

According to the data of the UN Population Foundation (UNFPA), published in a report entitled "Aging in the 21st Century: Success and Challenge", the world will reach one billion people aged 60 and over in the next ten years and will need to be better prepared for demographic aging. In its strategic documents: Europe 2020, Investing in Social Europe, Towards Social Investment for Growth and Cohesion - including the implementation of the European Social Fund for the period 2014-2020, the European Union has set, among other things, objectives, guidelines and priorities for action in the purpose of reducing the negative consequences of population ageing.

3.2. Home for the elderly – description of the situation in the EU

As for the long-term care and nursing of the elderly, the most well-known form is certainly institutional. It is more prevalent in older EU member states than in the newer ones, while in the United Kingdom the most widespread part of care is within family homes. A significant share of spending on long-term services is covered by state or compulsory insurance systems. Total government / compulsory spending on long-term training (including health and social components) averaged 1.7% of GDP in OECD countries in 2017. With 3.7% of GDP, the Netherlands spent the most, followed by Norway (3.3%) and Sweden (3.2%). In these countries, public spending on the long-term exchange rate was approximately twice the OECD average. At the other end of the scale, Hungary, Estonia, Poland and Latvia all allocated less than 0.5% of their GDP to the provision of LTC services. (OECD, 2017).

4. CARE SYSTEM FOR THE ELDERLY IN THE REPUBLIC OF CROATIA

In recent decades, aging has been one of the most important trends in the demographic structure of both EU countries and Croatia. In homes for the elderly, the quality of care has two dimensions: quality of life and certain life habits, as well as comprehensive health care. Given the nature of ownership, there are several types of homes for the elderly: 1) homes founded by the Republic of Croatia, 2) decentralized homes - these are homes for which the founding rights of the Republic of Croatia have been transferred to counties and the City of Zagreb, 3) homes of other founders - religious communities, companies, associations and other domestic and foreign or natural persons, the so-called. private homes, and 4) family homes (accommodation providers for 5-20 adult users) which occupy as much as 49% of the market. The most price-competitive, public homes (state and decentralized) do not show the cost of capital investments in compensation and are significantly subsidized by the state. As a potential solution to the existing lack of institutional accommodation on the market and the lower income power of older people who would use this accommodation could be a public-private partnership, as a novelty in the current practice of social welfare.

4.1. Demographic developments in the Republic of Croatia

In order to enable the elderly, who are recognized in the social welfare system as a particularly vulnerable user group, the right to a dignified old age and lasting social inclusion, the Social Welfare Strategy for the Elderly in the Republic of Croatia for the period from 2014 to 2016 was adopted. The Social Welfare Strategy for the Elderly in the Republic of Croatia for the period from 2017 to 2020 (Official Gazette 150/11, 119/14 and 93/16) is currently in force, which was supposed to enable service providers for the elderly access to European Union funds for expansion beyond institutional services. The strategy aimed to: improve the legislative framework, inform and raise awareness of the rights of the elderly, and expand and improve community services. According to the Central Bureau of Statistics, in 2019 there were 4,065,253 people living in Croatia, of which women made up 51.52% of the total population.

The number of elderly people over 65 years of age made up 20.78% of the population of Croatia, and it is evident that our country belongs to the countries with a large share of elderly people. The share of older people over 65 is dominated by women, which is logical given the longer life expectancy of women and their advantages in the total population. "When the share of the elderly population in the population is higher than 8%, it is an indicator that a population has entered demographic age" (Ivo Nejašmić, Aleksandar Toskić, Hrvatski geografski glasnik, 75/1, 89-110, 2013). Life expectancy has also been extended so that according to data for those born in 2019 it will be as shown: women 81.6 years, men 75.4 years (CBS, 2019), which makes an average of 78.5 life expectancy. In the last 61 years, life expectancy has increased by 17.3 years for women and 15.5 years for men. In the scientific literature dealing with care for the elderly, people are divided into several age groups: younger older age 65-74 years, middle-aged 75-84 years and old age 85 years and older.

4.2. Care for the elderly in the Republic of Croatia

With regard to the Republic of Croatia, homes for the elderly are public institutions whose establishment is prescribed by the Social Welfare Act (OG 157/13, 152/14, 99/15, 52/16, 16/17, 130/17, 98/19). Their function is primarily to provide long-term accommodation services outside their own family (institutional care). Homes can also provide other services, such as full-time or half-day services, organized housing, professional help for/in the family, and help and care at home. 84,051 inhabitants in the category between 65 and 74 live in single households, which is 24.23% of the total observed. The majority of them are women (77.50%). The largest number of single households in relation to the total population of this age category is present in the oldest age group and makes up 30.9%. 2.86% live within institutional households and in institutions for the elderly 2.36% of the population between 65 and 74 years, with a share of women of 75.55%.

4.3. Financing of nursing homes – public founders

In the context of homes for the elderly, the implementation of social policy is also visible through the subsidy of public providers of institutional forms of accommodation for the elderly. In addition, the state, through its social program, co-finances users accommodated in the homes of the public provider. Table 1 below confirms that in 2021 it is planned to inject financially into homes for the elderly of public founders, since their business is completely unsustainable without co-financing of local (regional) self-government units and the State Budget.

Table following on the next page

Sisak-Moslavina County	9.135.664
Karlovac County	3.468.203
Varaždin County	4.410.766
Koprivnica- Križevci County	6.227.245
Bjelovar-Bilogora County	4.613.851
Primorsko-Goranska County	12.355.367
Lika- Senj County	6.643.565
Požega-Slavonia County	8.331.798
Brod-Posavina County	6.860.716
Zadar County	7.311.034
Osijek-Baranja County	17.510.888
Šibenik-Knin County	8.848.748
Vukovar-Srijem County	9.770.574
Split-Dalmatia County	23.194.075
Istria County	18.174.544
Dubrovnik-Neretva County	10.775.790
Međimurje County	5.553.069
City of Zagreb	15.923.095
Total	179.108.992

Table 1: Minimum financial standards, criteria and benchmarks for decentralized financing of homes for the elderly in 2021

(Source: Annual statistical report on homes and social welfare beneficiaries 2018)

Table 1 shows that at the state level it is necessary to co-finance the operation of homes for the elderly in the amount of HRK 179,108,992, which concludes that the operation of public providers of institutional care is unprofitable. However, it should be emphasized that state-owned homes do not reflect the cost of capital investment in compensation and are significantly subsidized by the state. This results in significantly lower prices for customers. Table 2 calculates the level of subsidization of individual homes by the state, lack of capital costs in calculating the price for the user, but also the difference in quality management and other characteristics of each home (capacity, facility age, etc.).

Elderly care home	Revenues from the competent budget for financing operations	Total revenues	Share
Buzet	2.147.681	5.062.614	42%
Centar Zagreb	3.969.598	18.300.335	22%
Čakovec	4.916.120	12.702.835	39%
Dubrovnik	4.300.021	12.366.159	35%
Koprivnica	5.682.858	13.572.952	42%
Ksaver	3.841.233	14.177.133	27%
Lošinj	2.308.695	6.380.988	36%
Mali Kartec	1.449.170	8.344.457	17%
Osijek	6.017.199	15.979.905	38%
Požega	3.688.769	10.107.023	36%
Rijeka Kantrida	5.298.684	25.293.903	21%
TOTAL	43.620.028	142.288.304	31%

Table 2: Structure of co-financing homes for the elderly, 2018

(Source: Annual statistical report on homes and social welfare beneficiaries 2018)

The prices of state-owned and decentralized homes are significantly lower and range, on average, from around 2,000 to 6,000 kunas, but these are mostly older capacities with a lower level of standards. In newer homes, of which there are a few, one can find homes with a minimum price of 7,500 up to 12,000 kuna in apartment accommodation. The cost of newer state-owned and decentralized homes must be significantly higher as it includes capital construction and maintenance costs that are significant in the final price structure. Therefore, if operating costs were not yet co-financed by the county or local government, prices in such homes would be 30% to 40% higher and would reach the upper limit of HRK 15,000. This is exactly the situation in private homes whose prices generally range from 5,000 to 16,000 kunas, which mostly depends on the quality of accommodation, location, type of rooms and the specifics of users (mobile or immobile person, Alzheimer's patient, etc.). It is important to mention family homes, which in the last ten years, precisely because of the lack of capacity in state and decentralized homes, but also insufficient capacity of private homes, have become an informal solution to the problem of care for the elderly. However, recent tragic events related to fire outbreaks as well as health care problems have pointed to serious problems with the standards of such facilities that exist solely due to lack of capacity in higher standard homes, low income of the population, but also a general lack of alternative solutions. Therefore, in the future, the effect of moving the elderly population from such family homes to facilities of a higher standard of health care and nursing can be expected. Accommodation prices in most family homes can be compared to state and decentralized homes, but there are immeasurable differences in care standards as well as the satisfaction of users and their families.

4.4. Public – private partnership as model for financing nursing homes

In the Republic of Croatia, public-private partnership is defined as defined by Eurostat. So, this is a model that is mainly applied to those public projects that do not generate revenue from end users but from the budget of the client. Eurostat did not "ban" the generation of revenue from end users, but it has limited it in such a way that the majority of revenue should come from the budget. In Croatia, there is no minimum budget revenue, so PPP is also considered when 20% is charged from the budget, and 80% from the end users. In this respect, PPP applies to nursing homes, for example, when the city wants to encourage investors to reduce the cost of beds paid from the budget it contributes to reducing prices for end users. Otherwise, the model of building rights (not concessions) should always be applied to homes for the elderly in cases when the city / state wants to keep the land in its ownership. No model of public-private partnership in the field of institutional care for the elderly has yet been implemented in Croatia. There are many problems of this form and certainly the most important is the high cost of investment (documentation related to contractual relations). In practice, nursing home investors invest in land acquisition, operational management, maintenance, with the payment of high tax liabilities. Under a public-private partnership, a public partner can cede land for use to a private individual, exempt it from tax levies, and provide a desirable environment for investment. The private partner is obliged to design, finance, build and manage the facility, which is created as an age-friendly facility. Private investors of such facilities want to provide the quality and standard of their facilities and thus be recognizable and different from the existing competition in the market, which of course is reflected in the final price paid by users of such services.

5. INVESTMENT STUDY - NEW PRIVATE NURSING HOME

The investment study in a home for the elderly was performed based on an insight into the project documentation which plans to build a facility with a capacity of 151 users, within the ground floor, two floors and attic with a gross area of about 5,280 m². Also, a residential building with 28 apartments with a gross area of 1,734 m² is planned for older people who can still live independently, but feel safer with the proximity of a building such as a home for the

elderly that can provide them with all necessary care. It is also planned to build a multipurpose hall as a separate building with accompanying technical premises with a gross area of 335.1 m². In addition to accommodation, daily care is planned, which includes the employment of about 50 employees, mostly nurses and medical staff, but also all other necessary employees from doctors, social workers, physiotherapists and others. The study presents an analysis of the justification for investing in the construction of a home for the elderly, which, based on the basic building and an additional facility for assisted living, has an accommodation capacity of 207 users. The key advantage of a home for the elderly stems from the experience and knowledge of investors based on the long-standing practice of building and managing homes for the elderly. Consequently, the quality of construction, built-in project functionality and architectural solutions and management knowledge, enable the construction and management of the home at the level of quality and standards that do not yet exist in the Republic of Croatia. As part of the market analysis, it was found that the quality of life of users and management standards are not even close to those predicted in the new home. On the other hand, taking into account the relatively low standard and low income opportunities of the elderly and the citizens of Croatia as a whole, the investor managed to offer acceptable prices of accommodation and related services for customers. The capital value structure of the project is synthesized in five basic items: land, construction, equipment, construction-related costs such as design and supervision, and other costs that are mainly related to intercalary interest and project management. The total expected capital value of the project is approximately HRK 68.3 million, of which slightly less than HRK 1 million relates to intercalary interest. Here, in order to reduce liquidity risk, it is assumed that the accrued intercalary interest is added to the loan principal at the end of the construction period and amortized together with the nominal principal. In the event that the lender does not accept this proposal, the intercalary interest will be financed from the principal of the loan or additional own sources of financing. The dynamics of investing the capital value of the project is shown in an additional summary table 3:

Description	HRK	2021.	2022.
Land	869.463	869.463	
Building costs	49.526.957	19.810.783	29.716.174
Equipment	7.561.927		7.561.927
Dependent costs	5.740.500	2.870.250	2.870.250
Other	4.599.318	3.219.523	1.379.795
TOTAL	68.298.165	26.770.018	41.528.147

Table 3: Dynamics of investment of capital value of the project
(Source: Written by the author)

One of the assumptions of this analysis of the project implementation feasibility is the assumption related to the remaining value of the project after the expiration of the planning horizon of 20 operational years. In this sense, a table of the remaining value of the project was prepared:

Description	HRK	Reduction	Residue value
Land	869.463	150%	2.173.658
Building costs	49.526.957	-40%	29.716.174
Equipment	7.561.927	-60%	3.024.771
Dependent building costs	5.740.500	-80%	148.100
Other costs	4.599.318	-90%	459.932
TOTAL	66.634.716	-47,69%	36.522.634

Table 4: Projection of the value of the project after the expiration of the planning horizon
(Source: Written by the author)

It is estimated that the land will be worth approximately 150% more than today's value expressed at constant prices. Due to reduced functionality, the building will be worth 60% of today's value, while items related to equipment and other dependent construction costs will be reduced between 80% and 90%. The result of these assumptions is that the remainder of the project value after the planning horizon expires would be worth 52% less. The stated amount is projected as revenue of the last year of the planning horizon.

5.1. Investment structure of financing and depreciation of loans and fixed assets

The projection of the home business for the elderly was prepared with the assumption of a share of debt of 70% in total sources of financing. In relation to debt amortization, the amortization method of equal annuities was applied. In relation to asset depreciation, the depreciation rate is optimized with respect to the indicator of the financial rate of return on own sources of financing - FRR (Kp). The project would be financed by owner and investors (stakeholders) capital. Owner capital would be obtained in the form of subscribed capital, while others' would be in the form of a long-term loan. Information on each source of funding is given in Table 5:

Description	Share	Regular interest rate	Intercalary interest rate	Deadline	Income tax rate	WACC
Subscribed capital	30%	10%	0%		10%	3%
Subordinated loan	0%	0%	0%		10%	
Parent loan	70%	70%	3%	15	10%	1,89%
Liquidity loan			0%		10%	
TOTAL	100%	100%				4,89%

*Table 5: Structure of funding sources
(Source: Written by the author)*

The projection was prepared on the basis of a share of debt of 70% and equity sources of financing (equity, subscribed capital) of 30% of the total capital value of the project. The expected rate of return FRR (Kp) of own funding sources is 8% and investors will be satisfied if, after the risk, this return is achieved. The interest rate on the parent loan is 3% per annum with the same value of the intercalary interest rate.

Description	HRK/bed/day
Food	26,70
Maintenance and replacement of worn materials	1,41
Energy	8,99
Communications	0,61
Waste management	1,37
Water and sewage	1,20
Other operating expenses	9,00

*Table 6: Unit price structure of operating costs
(Source: Authors research results and cost data of analyzed homes)*

In terms of sales prices, it is expected that part of the capacity (approximately 20%, i.e. about 30 beds) would be leased on a long-term basis to representatives of several local governments for their needs of housing citizens from their administrative area.

They would pay the full price to the institution, and charge the user the price in accordance with the public policies that these units pursue with regard to social care for the elderly. The weighted average selling price is approximately 7 875 kunas (1 050 €) per month. In case of satisfactory demand, the price for cities and municipalities could be reduced at the expense of the price for the open market. The capacity utilization projection is shown in Table 7.

Description	Operating year				
	2022.	2023.	2024.	2025.	2026.
Total capacity	100%	100%	100%	100%	100%
Used capacity	70%	87%	99%	99%	99%
Total number of beds	151	151	151	151	151
Used number of beds	106	131	149	149	149

Table 7: Projection of expected capacity utilization
(Source: Written by the author)

Additional analysis through 4 scoring models, observing the company itself, and then the entire business, confirms the correctness of the investment in the above ratios. These scoring models prove that through analysis the project shows positive business with 95% accuracy.

Model	2022.	2023.	2024.	2025.	2026.	2027.
Alpha model	424.17	424.17	424.17	424.17	526.39	526.39
Altman Z-score model	474.95	474.95	478.81	481.98	486.30	486.30
Chesser model	435.37	435.37	435.37	439.84	521.06	521.06
Zmijewski model	486.15	486.15	486.15	500.65	516.32	516.32

Table 8: Scoring models total
(Source: Written by the author)

The table below shows that the project has been generating negative cash flows since 2021. until 2024 (preparation and implementation of the project and operational start-up) which will cover with own funds while in the remaining years of loan repayment the cash flow is positive.

Table following on the next page

	2021.	2022.	2023.	2024.	2025.	2026.	2027.
Total income	0	1.050.207,00	4.218.971,00	6.530.767,00	8.089.318,00	8.098.095,00	8.107.002,00
Business income	0	1.050.207,00	4.218.971,00	6.530.767,00	8.089.318,00	8.098.095,00	8.107.002,00
Other income							
Total expenses	352.757,36	3.098.832,79	8.100.586,46	8.324.550,30	8.445.015,26	7.874.241,08	6.355.281,42
Material costs		320.080,00	1.284.717,00	1.601.094,00	1.816.957,00	1.816.957,00	1.816.957,00
Gross salary		188.015,00	754.127,00	754.127,00	754.127,00	754.127,00	754.127,00
Interest rate	352.757,36	1.413.050,79	1.350.798,86	1.258.385,70	1.162.987,66	1.064.833,92	963.735,57
Amortization		1.163.464,00	4.653.854,60	4.653.854,60	4.653.854,60	4.181.234,16	2.763.372,85
Other expenses		14.223,00	57.089,00	57.089,00	57.089,00	57.089,00	57.089,00
Gross profits	-352.757,36	-2.048.625,79	-3.881.615,46	-1.793.783,30	-355.697,26	223.853,91	1.751.720,57
Profit tax	0	0,00	0,00	0,00	0,00	40.293,72	315.309,79
Net profit	-352.757,36	-2.048.625,79	-3.881.615,46	-1.793.783,30	-355.697,26	183.560,19	1.436.410,79
Costs without depreciation and loan	0	522.318,00	2.095.933,00	2.412.310,00	2.628.173,00	2.628.173,00	2.628.173,00

Table 9: Project evaluation
(Source: Written by the author)

5.2. Economic and financial analysis of the project

The project is economically viable and profitable, the internal rate of return is 3.74%, the net present value is HRK 2,419,575, and the return on investment is expected in the 13th year of the project. Sensitivity analysis shows that it is possible to reduce revenue by 1% while increasing costs by the same percentage while maintaining the economic viability of the project. Looking at identical projects of homes for the elderly in the Republic of Croatia and comparing the data with these results, it can be concluded that half of the companies from this risk group have a collection period of 69 days, and days of stocking 48 days or less. The average net return on assets for this group is 5.7% while the value of net return on equity is 15.5%. Most companies in this group of activities have the value of EBIT (earnings before interest and taxes) HRK 9,526 and less. That it is a profitable activity is shown by the fact that 97% of companies in the same activity regularly settle their obligations.

Table following on the next page

Coefficient	2022.	2023.	2024.	2025.	2026.	2027.
Cost-effectiveness of financing	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cost-effectiveness of extraordinary activities						
Cost-effectiveness of business activities	0.6679	0.6689	0.9839	1	1	1
Economy of regular business	0.4598	0.5450	0.8059	0.9919	1	1,01
Economy of total business	0.4598	0.5450	0.8059	0.9919	1	1,01
Current liquidity ratio	0.3405	0.4518	0.4281	2	5,06	7,8
Current liquidity ratio 2	0.0000	0.0000	0.0000	0.0000	3,04	5,88
Acceleration coefficient liquidity	0.3405	0.4518	0.4281	1,87	5,06	7,8
Financial stability ratio	1	1	1,01	0.9940	0.9723	0.9480
Capital liability ratio	0.0145	0.05	0.0955	0.02772	0.0250	0.0262
Current assets to total assets	0.0014	0.0060	0.0098	0.0129	0.0343	0.0592
-						
Net working capital	184.121,00	463.373,00	773.786,00	330.770,00	1.437.944,00	2.535.519,00
Self-financing ratio	0.2859	0.2481	0.2384	0.2548	0.2706	0.2900
Indebtedness ratio	0.7141	0.7519	0.7616	0.7452	0.7294	0.7100
Cash flow to current liabilities	0.0000	0.0000	0.0000	0.0000	3	2,9949
Cash flow to liabilities	0	0	0	0	0.0284	0.0322
Degree of coverage I.	0.2863	0.2496	0.2408	0.2581	0.2803	0.3083
Degree of coverage II.	0.9973	0.9926	0.9868	1	1,0285	1,0549
Return on equity	0.0000	0.0054	0.0085	0.0060	0.0004	0.0013
Return on unvested property	0.0000	0.0013	0.0020	0.0015	0.0001	0.0004
Retained earnings on assets	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

*Table 10: Indicators of economy, liquidity and indebtedness of operations
(Source: Written by the author)*

The average value of the current liquidity ratio is 1.5. Half of the companies from this risk group have a net working capital of HRK 42,310 and less. The average value of the indebtedness ratio for this group of risky companies is 0.6. The average value of the ratio of liabilities and capital for this group of companies is 1.59 and they have a value of the ratio of liabilities and capital of 1 and less. The analysis of the transaction was conducted on the basis of conservative assumptions for which there is a high probability of reality. It is a complex transaction carried out through two business entities, one of which is outside the VAT and PD system, and the other in the system. The activity of social care for the elderly is carried out by an institution that records business according to the accounting rules of a non-profit company, while the investment activity is carried out by an investment company that records business according to company accounting principles. The difference in the price of the institution represents the income from renting the building of the investment company less VAT.

From the obtained results it is possible to conclude the following:

- 1) The selling price that meets the stated output sizes is 7,875 kn (1,050 €);
- 2) The rate of return on own sources of financing FRR (Kp) is 8.50%, which is slightly higher than the marginal rate of return set by investors (8%), so according to this criterion, the project is also acceptable to investors;
- 3) The profitability rate of the FRR (C) project, calculated at the expected values (E), is 6.19% and is lower than the average weighted cost of the funding source of 4.12%, so the project is justified by this criterion;
- 4) The capacity utilization rate until 2024 according to projections will be 100%;

- 5) There is a significant possibility to increase the capital investment to keep the project justified: 30% can be increased capitally to make the project, according to the criterion of the value of the rate of return on the project, remain justified;
- 6) The probability that the rate of return on a project will be higher than the weighted average cost of funding is approximately 99%;
- 7) The probability that the rate of return on FRR's own sources of funding (K_p) will be between 6% and 9% is 90%;
- 8) For the liquid operation of the project in the overall planning horizon it will be necessary to provide sources for liquidity financing. This need would arise if all the risks described above materialized. It is estimated that it would be good to count on this type of resource worth HRK 1 million for a period of 3 years (approximately 1.5% of the project value).

6. CONCLUSION

The involvement of the private sector in the field of care for the elderly is characterized by better service, greater comfort in accommodation, increased medical staff, but also a higher price, which makes its availability unattainable for many users. On the other hand, accommodation within a public nursing home is very popular in terms of price and results in demand that far exceeds supply. Such a price is defined by the fact that construction costs are fully financed from the budget as well as high state subsidies of the operational part itself since without financial support, the viability of such homes would not be sustainable. On the other hand, the situation that the actual costs of construction, maintenance and management of homes for the elderly are mainly borne by the state, in a situation of budgetary constraints, results in the absence of construction of new homes. Therefore, models of connecting the public and private sectors in the field of care for the elderly should be considered in such a way that the private sector bears all risks of construction, management, and introduces more innovative and quality solutions, while the public sector subsidizes users by making land available without claims, to release the utility contribution and the payment of surtax, and to additionally co-finance the fee paid by the beneficiaries. Such a way would enable the renovation of dilapidated facilities and the construction of new ones, and the state could introduce a better systematization of user subsidies, in a way that only helps with the costs of the most socially vulnerable, regardless of the provider of institutional accommodation. The paper presents a case of investing in a new home for the elderly according to real market conditions. The above analysis shows that the cost of accommodating users in a home for the elderly with satisfactory standards of quality and care is higher than 1.050 EUR. Due to the weaker purchasing power of older people in need, public sector assistance in overcoming the price barrier is desirable. In this way, within its social policy, the public sector could satisfy its role of caring for the elderly, and the private could return on investment and make a profit. The future brings many challenges, among which accommodation and care for the elderly is one of the most important. If the public sector ignores the possibility of partnering with a partner from the private sector, Croatia will face an even larger list of interested users, public homes of questionable quality and stability, and private facilities of this kind will continue to be known as the last and least desirable option for older users.

LITERATURE:

1. Bađun, M. (2015). *Neformalna dugotrajna skrb za starije i nemoćne osobe*, Newsletter, Povremeno glasilo Instituta za javne financije (100), retrieved from: <https://doi.org/10.3326/nlh.2015.100>
2. Bettio, F., i Verashchagina, A. (2010). *Long term care for elderly: Provisions and providers in 33 European countries*. European Commission, retrieved from: http://ec.europa.eu/justice/gender-equality/files/elderly_care_en.pdf

3. Comondore, V.R., Devereaux, P.J., Zhou, Q., Stone, S.B., Busse, J.W. et al (2009), *Quality of care in for-profit and not-for-profit nursing homes: Systematic review and meta-analysis*, BMJ, Vol. 339, No. 2732., retrieved from: <https://www.bmj.com/content/339/bmj.b2732>
4. Čulo Rešetar, I. (2014)., *Zaštita prava starijih osoba u Europi: trenutno stanje, nedostaci i izazovi*, Pravni fakultet Sveučilišta u Osijeku, retrieved from: <https://hrcak.srce.hr/130840>
5. Despot Lučanin, J. (2003.). *Iskustvo starenja, doprinos teoriji starenja*. Zagreb: Naklada Slap, 238 str
6. Dionne, William J.; Guishard, D. (2020). *Public/Private Partnerships Extend Community-based Organization's Longevity*, University of Pennsylvania, retrieved from: https://repository.upenn.edu/cgi/viewcontent.cgi?article=1685&context=prc_papers
7. Državni zavod za statistiku, 2020., *Procjena stanovništva u 2019.*, Zagreb, 2020., retrieved from: https://www.dzs.hr/Hrv_Eng/publication/2020/07-01-03_01_2020.htm
8. Economics Help, 2019., *Healthcare; Private vs. Public sector*, retrieved from: <https://www.economicshelp.org/blog/1777/economics/health-care-arguments/>
9. European Commission. (2015). Eurostat., retrieved from: <http://ec.europa.eu/eurostat/web/population-demography-migration-projections/population-data/mail-tables>
10. European Commision, *Joint Report on Health Care and Long-Term Care Systems & Fiscal Sustainability*, Country Documents 2019 Update Economic and Financial Affairs Economic Policy Committee ISSN 2443-8014 (online) INSTITUTIONAL PAPER 105 | JUNE 2019, retrieved from: https://ec.europa.eu/info/sites/info/files/economy-finance/ip105_en.pdf
11. European Social Network (2008). *Services for older people in Europe*, ESN, retrieved from: https://ec.europa.eu/health/sites/health/files/mental_health/docs/services_older.pdf
12. Eurostat statistical books, Ageing Europe, 2019 edition: *Looking at the lives of older people in EU*, retrieved from: <https://ec.europa.eu/eurostat/documents/3217494/10166544/KS-02-19%E2%80%91EN-N.pdf/c701972f-6b4e-b432-57d2-91898ca94893>
13. Eurostat, (2018.), *Ageing Europe – statistic on health and disability*, retrieved from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Ageing_Europe_statistics_on_health_and_disability#Life_expectancy_and_healthy_life_years_among_older_people
14. Eurostat, 2017., *People in the EU - statistics on housing conditions*, retrieved from: <https://ec.europa.eu/eurostat/statistics-explained/pdfscache/41898.pdf>
15. Eurostat, *Population structure and ageing*, 2019, retrieved from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population_structure_and_ageing&oldid=502987
16. Godišnje statističko izvješće o primijenjenim pravima socijalne skrbi, pravnoj zaštiti djece, mladih, braka, obitelji i osoba lišenih poslovne sposobnosti, te zaštiti tjelesno ili mentalno oštećenih osoba u Republici Hrvatskoj u 2018. godini, Ministarstvo za demografiju, obitelj, mlade i socijalnu politiku, 2019., retrieved from: <https://mrosp.gov.hr/UserDocsImages/dokumenti/MDOMSP%20dokumenti/Godisnje%20statisticko%20izvjesce%20u%20Republici%20Hrvatskoj%20u%202018.%20godini.pdf>
17. Goričanec, I. (2019). *Usporedba institucijske skrbi za osobe starije dobi u zemljama Europe*, Sveučilište Sjever, retrieved from: <https://repozitorij.unin.hr/islandora/object/unin%3A2812/datastream/PDF/view>
18. Gulija, B., (2004.): *Javno-privatno partnerstvo*, IMO EDC Euroscope dodatak, god. 13., br. 73, str. 1-4.
19. Herrera, A., etc. (2003). *European Study of Long-Term Care Expenditure*, PSSRU, LSE Health and Social Care, London School of Economics (United Kingdom), retrieved from: https://ec.europa.eu/employment_social/soc-prot/healthcare/ltc_study_en.pdf

20. *Hrvatska enciklopedija, mrežno izdanje*. Leksikografski zavod Miroslav Krleža, 2020, retrieved from: <https://www.enciklopedija.hr/>
21. Hrvatski geografski glasnik, 75/1, 89-110, 2013., *Ageing of the population in Croatia—the current situation and perspectives*, retrieved from: https://hrcak.srce.hr/index.php?id_clanak_jezik=155906&show=clanak
22. Jaklin, L. i Klačmer Čalopa, M., (2012)., *Pregled modela financiranja javnih potreba i kapitalna ulaganja jedinica lokalne samouprave*, Fakultet organizacije i informatike Varaždin, retrieved from: <https://hrcak.srce.hr/83436>
23. Jedvaj, S., Štambuk, A., Rusac, S., (2014.), *Demografsko starenje stanovništva i skrb za starije osobe u Hrvatskoj*, Zagreb, dostupno na: <https://hrcak.srce.hr/177570>
24. Koružnjak, B. (2003). *Stanovanje za starije – interdisciplinarni pristup u formiranju općeg modela stanovanja za starije osobe*. Prostor, 11 (1), 1-8., retrieved from: <http://hrcak.srce.hr/10785>
25. Lovreković, M., & Leutar, Z. (2010). *Kvaliteta života osoba u domovima za starije i nemoćne osobe u Zagrebu*. Socijalna ekologija, 19 (1), 55-79. retrieved from: <http://hrcak.srce.hr/54571>
26. Ministarstvo socijalne politike i mladih. (2013a). *Katalog prava i usluga – starije i nemoćne osobe*. Zagreb: MSPM., retrieved from: <http://www.mspm.hr/istaknute-teme/osobe-s-inva41>
27. Ministarstvo socijalne politike i mladih. (2015). *Godišnje statističko izvješće o zaposlenicima u ustanovama socijalne skrbi u 2014. Godini*. Zagreb: MSPM., retrieved from: <http://www.mspm.hr/pristup-informacijama/statisticka-izvjesca-1765/statisticka-izvjesca-za-2014-godinu/2292>
28. Ministarstvo socijalne politike i mladih. (2013). *Strateški plan Ministarstva socijalne politike i mladih za razdoblje od 2014. do 2016.godine*. Zagreb: MSPM., retrieved from: <http://www.mspm.hr>
29. Molinuevo, D., Anderson, R. (2017). *Care homes for older Europeans: Public, for-profit and non-profit providers*, Eurofond, retrieved from: https://www.alzheimer-europe.org/var/plain_site/storage/original/application/f5253c2c572b6e0c28b45922149d2289.pdf
30. Puljiz, V.; Bežovan, G.; Matković, T.; Šućur, Z.; Zrinščak, S. (2008): *Socijalna politika Hrvatske*, Pravni fakultet Sveučilišta u Zagrebu, Zagreb, retrieved from: <https://hrcak.srce.hr/52017>
31. ResearchGate, (2019.), *Retirement Village Development for the Elderly: applying the concept of Public-Private Partnership*, retrieved from: https://www.researchgate.net/publication/334669232_Retirement_Village_Development_for_the_Elderly_applying_the_concept_of_Public-Private_Partnership/link/5d6769d0458515b5b420e994/download
32. Središnji državni portal (2020). *Sustav Mirovinskog osiguranja*, Zagreb., retrieved from: <https://gov.hr/moja-uprava/rad/mirovine/sustav-mirovinskog-osiguranja/212>
33. OECD, 2015., *The future of health and long-term care spending*, retrieved from: <https://www.oecd.org/economy/growth/The-future-of-health-and-long-term-care-spending-OECD-Journal-Economic-Studies-2014.pdf>
34. OECD, 2018., *The Long View: Scenarios for the world economy to 2060*, retrieved from: <https://www.oecd.org/economy/growth/scenarios-for-the-world-economy-to-2060.htm>
35. OECD, 2019., *Life expectancy at 65*, dostupno na: <https://data.oecd.org/healthstat/life-expectancy-at-65.htm>
36. Persoli, A., (2010.): *Javno-privatno partnerstvo u funkciji zadovoljavanja javnih potreba*, Hrvatska i komparativna javna uprava: časopis za teoriju i praksu javne uprave, Zagreb, br.4.

37. Pravilnik o minimalnim uvjetima za pružanje socijalnih usluga, NN 40/2014, Ministarstvo socijalne politike i mladih, retrieved from:
https://narodne-novine.nn.hr/clanci/sluzbeni/2014_03_40_712.html
38. Statistički ljetopis Republike Hrvatske, 2011., Zagreb, 2011., retrieved from:
https://www.dzs.hr/Hrv_Eng/ljetopis/2011/SLJH2011.pdf
39. Statistički ljetopis Republike Hrvatske, 2018., Zagreb, 2018., retrieved from:
https://www.dzs.hr/Hrv_Eng/ljetopis/2018/sljh2018.pdf
40. Strategija borbe protiv siromaštva i socijalne isključenosti u Republici Hrvatskoj (2014.-2020.), Zagreb, 2014., retrieved from:
<https://vlada.gov.hr/UserDocsImages/ZPPI/Strategije/Strategija%20borbe%20protiv%20siroma%C5%A1tva.pdf>
41. Strategija socijalne skrbi za starije osobe u Republici Hrvatskoj za razdoblje od 2017. do 2020. godine, na temelju članka 31. stavka 2. Zakona o Vladi Republike Hrvatske (»Narodne novine«, br. 150/11, 119/14 i 93/16), retrieved from:
https://stampar.hr/sites/default/files/Arhiva/strategija_socijalne_skrbi_za_starije_osobe_u_rh_za_razdoblje_od_2017.-2020._g.pdf
42. UNFPA., 2012., *Ageing in the Twenty-First Century*, UNFPA and HelpAge International, retrieved from: <https://www.unfpa.org/publications/ageing-twenty-first-century>
43. Uredba o provedbi projekata JPP-a (NN 88/12 i NN15/15), 2015., Vlada Republike Hrvatske, retrieved from:
https://narodne-novine.nn.hr/clanci/sluzbeni/full/2015_02_15_280.html
44. Vlada Republike Hrvatske, n.d., *Strategija razvitka republike Hrvatske „Hrvatska u 21. stoljeću“* – Strategija razvitka mirovinskog sustava i sustava socijalne skrbi, retrieved from:
https://narodne-novine.nn.hr/clanci/sluzbeni/2003_06_97_1230.html
45. Zakon o javno-privatnom partnerstvu, pročišćeni tekst zakona, NN 78/12, 152/14, 114/18, 2019., retrieved from: <https://www.zakon.hr/z/198/Zakon-o-javno-privatnom-partnerstvu>
46. Zakona o lokalnoj i područnoj (regionalnoj) samoupravi („Narodne novine“, broj 33/01, 60/01- vjerodostojno tumačenje, 129/05, 109/07, 125/08 i 36/09), 2013., retrieved from:
https://narodne-novine.nn.hr/clanci/sluzbeni/2013_02_19_323.html
47. Zakon o socijalnoj skrbi (Narodne novine, broj 157/13. 152/14, 99/15, 52/16 i 16/17), retrieved from: <https://www.zakon.hr/z/222/Zakon-o-socijalnoj-skrbi>

THE APPLICATION OF MULTIMEDIA AND WEB 2.0 TECHNOLOGIES IN COMMUNICATING AND INTERPRETING A CULTURAL TOURISM PRODUCT

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ABSTRACT

The purpose of this paper is to determine the extent to which museums as cultural institutions in the Republic of Croatia apply digital technologies and multimedia content for the interpretation of their museum material and the creation of new cultural and tourist experiences, but also the level of Web 2.0. technologies in presenting the same and communicating with visitors. Several methods of scientific research have been applied in the processing of the described problems, especially the method of documentation analysis, the inductive-deductive method, the method of analysis and synthesis, and the method of description and compilation. Questionnaires have been applied as a method for determining the factual situation, as well as insight and analysis of the available documentation on the websites of all museums registered in the Register of Public and Private Museums in the Republic of Croatia. The research found that almost all museums use their own websites to they present their offer. To be able to enhance their communication with their visitors, the museums also have a profile on at least one social network. The awareness of the benefits of multimedia and its positive effects on the visitors is one of the reasons why museums use them to interpret their permanent exhibitions and through them convey their messages to the public, despite the fact that the web sites themselves contain somewhat less multimedia content. The aim is to enrich the visitors' experience by creating unique events, to attract guests, to provide information about the museum as well as for educational purposes. In addition to the positive effects of multimedia and web 2.0 applications technologies, museums are also aware of its negative aspects, such as the lack of social contact, the possible rejection of visitors who are reluctant to use digital technologies and the distraction from the real exhibit.

Keywords: *multimedia, Web 2.0. technologies, cultural tourism, museums*

1. INTRODUCTION

The application of digital technologies opens new possibilities for the interpretation of cultural tourist resources that can be multimedia presented and communicated in an online environment without space or time limitations, which can significantly affect the quality of interpretation of the tourist offer (Vidak and Bosnić, 2017). It gives us a greater opportunity to evoke emotions in visitors and provide a unique tourist experience by a better interaction and communication which increases the overall visitor satisfaction.

This paper discusses the application of multimedia and Web 2.0. technologies on the example of museums as cultural institutions that participate in creating the offer of cultural tourism. According to the Dictionary of Tourism, cultural tourism is "a form of tourism in which the interest in the demand for objects and contents of a cultural character prevails" (Vukonić and Čavlek, 2001, p. 86). The Action Plan for the Development of Cultural Tourism verifies the technical definition of cultural tourism according to which the term cultural tourism encompasses "visits to cultural and historical sites, museums and galleries, music and stage events and performances, festivals, sacred heritage sites, creative workshops and thematic routes and roads" (Tomljenović and Boranić Živoder 2015, p.7). The demand for cultural tourism offers in Croatia already exists and is most pronounced for tours of cultural and historical buildings and visits to museums and galleries (Tomljenović and Boranić Živoder, 2015). According to TOMAS Hrvatska 2019 research, culture and art take the sixth place (behind the sea, nature, city breaks, touring, sports and recreation) among the most important motives for tourists to come to the Adriatic, but also to Continental Croatia. If we analyze the activities of tourists during their stay in the desired destination, visits to museums and galleries are among the 10 main activities of tourists on vacation. This is particularly applies to Continental Croatia where tourists, "much more than average, spend their time in museums, galleries, exhibitions and visiting national parks/protected areas" (Marušić et.al., 2020, p.39). Consequently, museums may be considered as cultural tourist attractions significant for the further development of Croatian tourism. From this aspect it is necessary to determine the extent to which museums follow modern trends related to digitalization and multimedia as well as the application of Web 2.0. technologies.

2. THEORETICAL CONSIDERATIONS

According to International Council of Museums (ICOM, 2007), museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment. Also, it includes live museums. The above definition of a museum shall be applied without any limitation arising from the nature of the governing body, the territorial character, the functional structure, or the orientation of the collections of the institution concerned. In addition to institutions designated as 'museums' the following qualify as museums for the purposes of this definition: 1. natural, archaeological and ethnographic monuments and sites and historical monuments and sites of a museum nature that acquire, conserve and communicate material evidence of people and their environment; 2. institutions holding collections of and displaying live specimens of plants and animals, such as botanical and zoological gardens, aquaria and vivaria; 3. science centers and planetaria; 4. non-profit art exhibition galleries; 5. nature reserves; conservation institutes and exhibition galleries permanently maintained by libraries and archives centers; natural parks; 6. International or national or regional or local museum organizations, ministries or departments or public agencies responsible for museums as per the definition given under this article; 7. non-profit institutions or organizations undertaking conservation research, education, training, documentation, and other activities relating to museums and museology; 8. cultural centers and other entities that facilitate the preservation, continuation, and management of tangible or intangible heritage resources (living heritage and digital creative activity); and 9. such other institutions as the Executive Council, after seeking the advice of the Advisory Committee, considers as having some or all of the characteristics of a museum, or as supporting museums and professional museum personnel through museological research, education or training (<http://uis.unesco.org/en/glossary-term/museum>).

Modern museum is a complicated mechanism, made from several elements, with diverse goals and methods of work (Mosio, 2002). According to Croatian Museum Law, museum is a public institution or organizational unit of a public institution that permanently performs museum activity as a public museum and an institution, association, cooperative, foundation, company or their organizational unit and craftsman who permanently performs museum activity as private museums, in the service of society and its development, open to the public, and in accordance with the conditions prescribed by this law (NN 110/2015). Museums are also “places of protection, research and interpretation, places of memory, strongholds of knowledge, places of creativity and community development, places of lifelong learning, places of urban development, places of pleasure and enjoyment, places of prestige and intellectual exchange” (Klarić, Laszlo and Nevidal, 2011, p.8). Considering the above, museums can be considered important cultural tourist resources which, if the needs and preferences of tourist visitors are met, can grow into significant tourist attractions of cultural tourism of a particular tourist destination. In relation to tourism, museum institutions can be viewed from several different aspects. Museums can be places of primary interest for tourist visitors, and from this aspect they are considered as stakeholders in cultural tourism, but also pre-tours and post-tours of the congress industry, urban tourism, historical tourism, heritage tourism, archeological tourism, traditional tourism, science tourism and educational tourism. On the other hand, museums can be viewed as a stage, a stage-inspiring environment for events, congresses, gatherings and seminars, but also in the role of a generator of new tourist visitors (Klarić, Laszlo and Nevidal, 2011). In this context, the business strategies of museums in European cities are increasingly turning exactly towards the needs and preferences of tourists. So, “major arts exhibitions are now an important source of tourist flows in many cities, and the organisation of ‘blockbuster exhibitions’ has become an important part of the cultural tourism strategies of many museums” (Richards, 2014, p.3). Generally speaking, today museum needs reforms, such as new shapes of work and new approach as better answer to expectations of audience. That means challenge to modern museum, how to merge new shapes and new technics to represent collection of unique structure of museum. According to Klarić, Laszlo and Nevidal (2011) the main goal of the museum is to provide help to visitors in exploring some of the segments of cultural and natural heritage that the museum contains in its collections, encourage them to think about it and to refer them to explore other sites in the city. Without the above mentioned, an exhibition, event, publication, website does not make much sense. A museum can encourage visitors to find meaning in things or topics they see, hear and feel in a museum. It is important to arouse the curiosity of visitors, which is a prerequisite to recollect memories and to motivate them to experience more. Thus, the basic goal is the experience of identity and everything that is created for visitors in the museum, regardless of which medium is used, which concept of presentation of the object is chosen, which topics are covered. Everything should be subordinated to the wishes and possibilities of various types of visitors. “Museums of today are regarded not only as providers of knowledge but also as tourist attractions that have to supply their visitors with experiences. To become successful tourist attractions, museums have to get involved in the tourism industry like every other commercial attraction, which means they have to adapt to a touristic mode of production in the same way as they earlier adapted to societal changes” (van Aalst and Boogaarts, 2002; McPherson, 2006; Pred, 1991 cited in Johanson and Olsen, 2010, p.1). In order to successfully integrate into the tourism market, it is necessary, among other things, to rely on innovation and creativity in the interpretation of tangible and intangible heritage that will result in new experiences and emotions for tourism visitors. It is also stated in accordance with the main qualitative drivers of cultural tourism that might be summarized as (Richards, 2014, p. 3):

- “Growing interest in popular culture, or the ‘everyday culture’ of the destination.
- Growing consumption of intangible heritage alongside museums and monuments.

- Growing role for the arts in cultural tourism.
- Increased linkage between tourism and creativity, and the growth of ‘creative tourism’.
- Growing omnivorousness of cultural consumption”.

Quality interpretations that include appropriate equipment of the space, participation of tourists in the product itself, educational content, but also the introduction of catering and trade facilities, through which local / regional products can be placed can encourage tourist activity, and thus prolong their stays and consumption (Tomljenović and Boranić Živoder, 2015). One of the key roles in the interpretation of museum collections and exhibits is played by the application of multimedia and WEB 2.0. technology that enables the establishment of an interactive relationship between users and information systems, the activation of all the senses and opens the possibility of multimedia communication of cultural heritage without spatial and temporal limitations. “The environment in which it all takes place today became multimedia (lat. Comprised out of multiple media, which occurs through multiple media) (Riječnik hrvatskog jezika, 2000, p.621) environment and everyday life is enriched by content that includes text, image, sound, video, animation and interpretation (elements of multimedia content)” (Vidak and Bosnić, 2017, p.1117). According to Antoš (2000, p.34), “multimedia in museums has important documentary, educational and scientific value”. “It includes interactive multimedia, hypermedia, image display programs, digital video, computer graphics, virtual reality, and computer-controlled interactive screens. Multimedia installations in museum galleries and spaces can range from just one interactive video kiosk in a separate exhibition to a fully integrated exhibition and a technologically designed information space” (Antoš, 2004, p.32-33). In connection with the above, Antoš (2000, 2004) emphasizes that museums are also developing an interpretive type of multimedia that serves educational purposes, such as the presentation of exhibitions or museums through programs that display permanent museum exhibits. Multimedia interpretive systems can provide a wider range of information on exhibition topics and enrich the visitor experience. Furthermore, through the information kiosk, multimedia has the function of attracting visitors, offering them information about the museum, orientation in space, showing where the individual objects are in the exhibition. Visits to museums are also enhanced by multimedia systems such as virtual reality, which emphasize the narrative content, ie. the experiential nature of visits to museums. An example of a means to encourage involvement in the museum experience is the invitation to visitors to use multimedia to play an active role in the exhibition. An interesting way to use multimedia, especially for younger users, are educational programs with games for visitors that enable competition in knowledge, with prizes and acknowledgments. The advantage of multimedia stems from the possibility of creating digital catalogs as a database with basic documentation and images of all exhibits, but also the fact that technology today can take over the function of real guides (example of the use of holograms). The use of multimedia must certainly be appropriate for visitors, it must communicate the value of cultural heritage and make the exhibition interesting. “Information technologies can also help museums in the presentation of their collections. The forms of presentation can be quite different – from producing high-quality digital copies of fragile works (e.g., documents or graphic works), which can be displayed as part of permanent exhibitions, to creating virtual exhibitions shown online and providing access to museum collections for remote users, and solving the issue of expanding the museum’s audience through attracting Internet users” (Tolstaya et.al., 2014, p.5). “Web 2.0 technologies enable audiences to access and interpret museum information in their own time and on their own terms and to add their personal stories and memories to this body of knowledge, liberating collections from their academic and institutional context in the traditional museum space”(Verboom, Arora, 2015, p.8 cited in Richani, Papaioannou and Banou, 2016, p.1).

Museums communicate with visitors and general public mainly through websites, social networks and mobile applications. "At the beginning, museum websites were mostly used as brochures to invite the public to visit, to promote new exhibitions and inform about collections and activities. Later on, photographs of museum artifacts started to be included in museum websites along with some information" (Walker, 2008 cited in Richani, Papaioannou and Banou, 2016, p.2). "Currently, almost all museums have or seek to have their own websites, and many of them extensively use social networks for promotion and providing information about their activities to a wider audience" (Tolstaya et.al., 2014, p.5). "The best examples of museum websites show that the website becomes an alternative opportunity to get acquainted with the museum and its collections for the users for whom it is hard or impossible to come to the museum (disabled people, users from other cities or countries, etc.). In this regard, it is especially important to include the maximum number of digital images of museum objects on the website, which can result not only in a growing number of virtual visitors (i.e., those visiting the museum online), but also in new opportunities for cooperation between museums" (Tolstaya et.al., 2014, p.7). In the last decade, museums have begun to use the benefits of social networks more intensively. "Social media indeed gives museums additional opportunities to build online communities, both on their own websites and on popular international networks like Facebook or Twitter, which potentially can extend their cultural outreach beyond national borders" (Grincheva cited in Richani, Papaioannou and Banou, 2016, p.3). Also, in the last few years museums entered the world of mobile (smart)phones, tablets, applications and services. "The current rise in the popularity of mobile technologies such as smartphones and tablet devices forces cultural organizations, especially museums, to think strategically and creatively about how to best use these networked communication tools to be more effectively connected with the audience" (Senxton, 2014, p.15 cited in Vucetic, Cingula and Bunja, 2018, p.518). "The use of mobile apps opens up new channels of communication between the cultural institution and the user, which extent to his or her personal space and go beyond the boundaries of the museum's walls" (Economou cited in Richani, Papaioannou and Banou, 2016, p.3). According to Tolstaya et. al. (2014, p.5) "the contemporary museum cannot be imagined without many technical and technological achievements. The use of information and communication technologies at the beginning of the second decade of the 21st century became necessary not only for large museums, but also for quite small, and even municipal ones." "Today, museums have to accept Web 2.0's claim that if you are not present on the Internet, you do not even exist. As regards museums, this implies digitization in every function. It does not only call for investment in new technologies, but also requires more comprehensive and expansive ways of working and thinking" (Levay, 2014, p.27 cited in Vucetic, Cingula and Bunja, 2018, p.518). In other words, museums face the challenge of applying digital technologies that will present cultural, historical and natural heritage to their visitors in an interactive and interesting way, in the museum space, but also outside the museum walls.

3. METODOLOGY

The purpose of this paper is to determine to what extent and in what form museums as cultural institutions in the Republic of Croatia use multimedia and Web 2.0 technologies for the interpretation of museum material and communication with visitors, which are positive and negative sides of Web 2.0. technologies in the interpretation and communication of cultural heritage and how visitors react to the more intensive application of multimedia and Web 2.0 technology. Several methods of scientific research were used in the processing of the described issues, especially the method of documentation analysis, the inductive-deductive method, the method of analysis and synthesis, and the method of description and compilation. For the purposes of obtaining primary data, a survey method using a survey questionnaire and analysis of available documentation on websites were applied.

The sample included 161 museums registered in the Register of Public and Private Museums in the Republic of Croatia, which is kept at the Museum Documentation Center. The survey was conducted in the period from April 26 to May 9, 2021. The survey questionnaire was created using the Google Forms tool. The survey questionnaire was distributed via e-mail available on the museum's official website, and the data required for the research were collected online by filling out the survey questionnaire. The questionnaire consisted of 28 open-ended and closed-ended questions. The questions included the following topics: the purpose of using multimedia, web 2.0 technology and social networks, the types of multimedia content used to interpret cultural heritage in museums, the positive and negative sides of the application of Web 2.0. technologies and multimedia in the interpretation and communication of cultural heritage, characteristics and satisfaction of visitors and their reactions to more intensive use of multimedia, attitudes about the impact of multimedia on visitors' emotions and the creation of cultural tourism experiences and the level of use of multimedia and Web 2.0. technology for the interpretation of space, presentation of the offer and communication with visitors. On the other hand, the analysis of available documentation on the museum's websites included an analysis of basic ICT elements such as the official website, presence on social networks and Google maps, basic information about the institution and photos on Google maps, Facebook and TripAdvisor reviews, but also availability virtual tours of the museum on websites, virtual exhibitions and digital collections, then the existence of digital catalogs, online educational corner, 3D presentations of exhibits, virtual lectures and web tracks.

4. SURVEY RESULTS

The survey questionnaire was sent to 161 e-mail addresses, of which 155 were valid. 41 respondents answered the questionnaire, which is 25.4% of the total sample. 58.5% of general museums participated in the research, while the remaining 41.5% were respondents from specialized museums. The survey showed that the majority of respondents (78%) use multimedia for the purpose of attracting visitors and providing information about the museum, as well as for the purpose of educating and interpreting exhibits that enrich the visitor experience. Multimedia has been predominantly used since 2015 (only 29.2% of surveyed museums introduced some of the multimedia content before 2015). Of the multimedia content used for the purpose of interpreting the museum's cultural heritage, the most common are entertainment and games, virtual exhibitions, digital collections, QR codes for the presentation of objects and virtual walks (Chart 1).

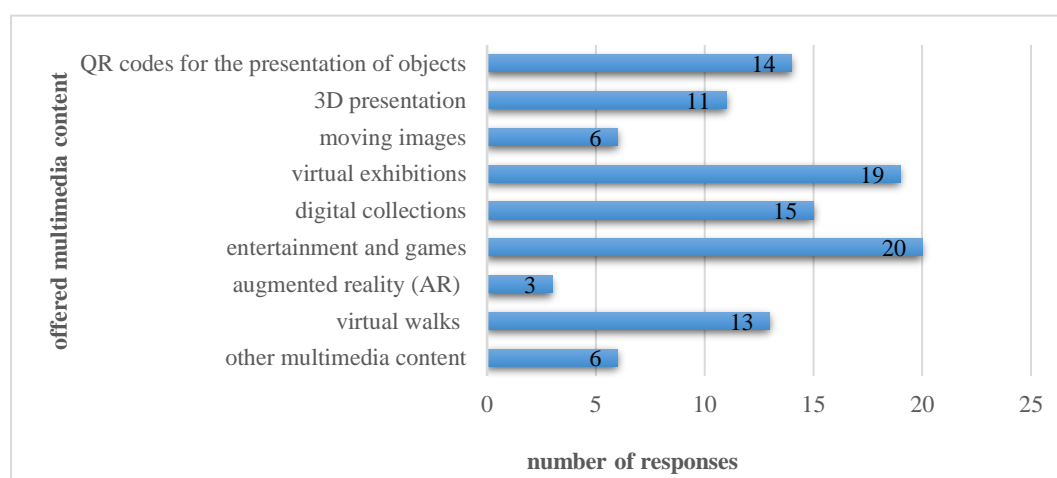


Chart 1: Application of multimedia content for the purpose of interpretation of the museum's cultural

(Source: Author's research)

In addition to the offered multimedia content, respondents have in the category of “other multimedia content” also mentioned an audio guide, info kiosk, hologram, QR codes for additional content in the exhibition, Youtube video content, interactive installations and a video wall showing the material. Since only one respondent pointed out that they do not use multimedia, it follows that respondents (museums) recognized the importance of multimedia in attracting visitors, but also for the purpose of education and interpretation of exhibits that enrich the visitor’s experience and apply various forms of multimedia to interactive approach enhancing the overall visitor experience. Accordingly, the majority of respondents (58.5%) rated the impact of multimedia on the creation of cultural tourism experiences as very good (4)¹. Respondents also confirmed the thesis that multimedia affects the emotions of visitors (95.1%) and agree that it is profitable to invest in multimedia equipment. Related to the positive aspects of Web 2.0 application technologies and multimedia in the interpretation and communication of cultural heritage, respondents highlighted the communication without spatial or time limits, better interpretation of content and easier filtering of information of interest to visitors as the three main advantages. On the other hand, they point out as a negativity the lack of social contact, the rejection of the technologies by visitors reluctant to use digital technologies and the distraction of the visitor’s attention from the actual exhibit (Table 1). This is also pointed out in the literature as one of the dangers of the increasingly intensive application of digital technologies in the interpretation and presentation of museum exhibitions.

POSITIVE (+)			NEGATIVE (-)		
Indicators	n	%	Indicators	n	%
Communication without spatial or time limits	30	73,2	Lack of social contact	31	75,6
Quality of the interpretative content	24	58,5	Rejection of visitors who are reluctant to use digital technologies	27	65,9
Easier filtration of interesting information	21	51,2	Distraction of visitors attention to the actual exhibit	24	58,5

Table 1: Positive and negative aspects of the application of Web 2.0. technologies and multimedia

(Source: Author's research)

The structure of visitors to the surveyed museums consists mainly of domestic visitors (75.6%), of which the most prominent are individual visits of adult visitors (82.9%) and primary school ages in groups (80.5%). Visitor satisfaction is to a larger extent not examined by museums (61%), but the majority of respondents (65.9%) believe that the application of multimedia and Web 2.0 technology has a positive effect on the growth of the number of visitors. Respondents also pointed out in the questionnaire certain reactions of visitors to the more intensive application of multimedia and Web 2.0 technology, such as: “positive reaction; showing interest; very good; they seem satisfied with the content offered; younger visitors are more interested than older ones; in most cases they are more satisfied because it is more approachable to the users for using and getting to know the cultural heritage; younger visitors have a more positive attitude, older ones prefer a classic approach; younger age groups of visitors are intrigued by multimedia and retain their attention, while older age groups of visitors still prefer to visit the museum in real space and time; secondary school and primary school students respond to multimedia better than to the museum object itself, which is sometimes

¹ available rating ranged from 1 (helps almost nothing) to 5 (extremely helps)

counterproductive... ” Consequentially, it can be concluded that the application of multimedia and digital technology has a positive effect on visitors, the overall experience of the visitors and their satisfaction with their visit. However, care should be taken in the application of multimedia and digital technologies so as not to distract the visitor from the actual exhibit. The level of use of Web 2.0 technology and multimedia for the purposes of interpreting space, presenting the offer and communicating with consumers, a third of respondents rated very good. Among the social networks, most respondents use Facebook (100%), YouTube (56.1%) and Instagram (53.7%). The purpose of using social networks varies from one institution to another, but most surveyed museums (97.6%) use social networks for the purpose of presenting the offer (museum settings, exhibitions...), then for the purpose of establishing communication with visitors (92.7%) and equally for the purposes of advertising (41.5%) and collecting feedback from visitors (41.5%). According to TOMAS Hrvatska 2019 research, since 2017, the Internet has become the main source of information for tourists coming to Croatia (55% of guests rely on the Internet). Tourists who collect information via the Internet also visit social media in large numbers (48.1%). If the same indicators are analyzed from the aspect of the main motive of travel, then it can be seen that 49.5% of visitors motivated by culture and art use the Internet as a source of information when traveling to a destination (Marušić et.al., 2020). Regarding this, and taking into account the fact that the importance of the Internet as a source of information is growing, an additional analysis of available documentation on the museum's website was conducted, which included an analysis of basic elements of information and communication technologies (ICT) and multimedia content. Of the total number of museums in the sample (161), 130² have their own website as a basic communication tool, and further analysis will be conducted on them. Museums that do not have their own websites are present mainly on the websites of tourist boards, cities, public open colleges and cultural centers. Also, 18 of them (60%) have a profile on Facebook through which they can communicate with their visitors, present the offer and current events. The analysis of presence on social networks showed that out of the total number of museums that have their own websites, 125 of them (96.15%) have a profile on Facebook. In addition to Facebook, Instagram (36.92%) and Twitter (30.76%) are among the slightly more used media, while other social networks such as Tik Tok, Pinterest, Linkend and Google + are significantly less represented (less than 10%). It should also be noted that 52 (40%) museums have featured links to videos located on the YouTube channel on their websites. Furthermore, almost all museums (98.46%) have a prominent location on Google maps and accompanying photos and reviews of previous visitors. Likewise, 50% of the museums provide information on the location, institution data, and reviews on TripAdvisor. Regarding the authenticity of multimedia content on the website, by which exhibitions, permanent exhibitions, individual exhibits and the space and activities of individual museums in general are presented, the largest share of museums (57.69%) provide detailed descriptions of collections and permanent exhibitions accompanied by pictures and photo gallery, 26.92% of them have a separate photo gallery on the website, while 17.69% of them provide posted video materials. Among other multimedia contents, the availability of virtual exhibitions and digital collections (18.46% of museums) as well as virtual walks through the museum space (15.38% of museums) stands out. Some museums also provide interesting interactive entertainment, educational content and games on its website (9.23%), exhibition catalogs (6.92%), brochures and / or information materials for tourists (8.46%), 3D presentations of exhibits (3.84%), the possibility of downloading audiovisual guides through the museum (3.84%) and available virtual lectures and workshops (3.07%). On the websites of some museums, multimedia content is grouped together under the name of a virtual museum (10%), while others have them separately highlighted.

²The Museum Documentation Center - a public institution established in 1955 as a documentation, information and communication point of the Croatian museum network was excluded from the analysis.

In addition to the above, 10% of museums also have a web shop for the sale of souvenirs and various publications related to the activities of the museum. The analysis also showed that although most museums have prominent ticket prices for various groups of visitors, only four of them provide the possibility to buy tickets online.

5. CONCLUSION

In conclusion, museums are aware of the importance and benefits of digital technologies, Web 2.0 and multimedia for the interpretation, as well as of the presentation of their permanent exhibitions and exhibitions, encouraging visitors to interact and to influence their emotions. In this way museums are able to create and convey the overall experience and satisfaction to their visitors and develop a better interaction with them. Research has also shown that the COVID-19 disease epidemic has influenced the faster development of digitization. Museums had to adapt quickly to the new situation, which led to the creation of new websites, the introduction of blogs, increased social media activities, introduced digital exhibitions and events, created virtual walks, set up mobile videocast musemophony (an online format in the form of conversations in which guests comment cultural topics) and established digital communication with visitors. In the coming period, museums should continue to work intensively on strengthening the digital presence on social networks, improving multimedia content on their own websites, but also in museum spaces, because research has shown that multimedia through an interactive approach enriches the cultural and tourist experience and has a positive impact on the visitors and their impressions during the museum visit. Despite all the positive sides that multimedia can attract to museums, it is important that the presence of multimedia creates a sense of connection with the museum space, which can usually be achieved through various virtual walks, 3D displays, live broadcasts, reels etc. In that way people can in the comforts of their home have the feeling as if they were in a museum, in a real space. Nonetheless, there is still a group of visitors who still strive for a traditional tour of the museum without the intensive use of multimedia content, so this should not be neglected. For this special group of people, it is necessary to maintain the level of quality of service and social interaction based on personal approach and social contact ("face to face"). The key is to set a balance that will lead to maximum visitor satisfaction because future museum visits, whether virtual or actual visits, will depend on the preferences and trends set by visitors of various profiles.

LITERATURE:

1. Antoš, Z. (2000). Uporaba multimedije i hypermedije u muzejima. *Informatica museologica*, 31(1-2), 32-35.
2. Antoš, Z. (2004). Primjena multimedijских tehnologija na muzejskim izložbama. *Informatica museologica*, 35(1-2), 45-51.
3. Johanson, L., Olsen, K. (2010). Alta Museum as a tourist attraction: the importance of location. *Journal of Heritage Tourism*, 5 (1), 1-16. Retrieved 12. 08. 2021 from <https://www.researchgate.net/publication/249025944>.
4. Klarić, V., Laszlo, Ž., Nevidal, R. (2011). *Muzeji i turizam: Turistički posjeti muzeju, upravljanje posjetiteljima*. Zagreb: Globtour Event.
5. Marušić, Z., Čorak, S., Ivandić, N., Beroš, I., Ambrošec, M. (2020). *Stavovi i potrošnja turista u Hrvatskoj - Tomas Hrvatska*. Zagreb: Institut za turizam. Retrieved 24.08.2021 from <http://www.iztztg.hr/files/file/RADOVI/KNJIGE/TOMAS-Hrvatska-2019.pdf>.
6. Mosio, G. (2002). Trebamo li se bojati propasti muzeologije? Muzeji i nove komunikacijske tehnologije. *Etnološka istraživanja*, (8), 209-228.

7. Richani, E., Papaioannou, G., Banou, Ch. (2016). Emerging opportunities: the internet, marketing and museums. *MATEC Web of Conferences*, 76 (doi:10.1051/mateconf/20167602044). Retrieved 12. 08. 2021 from https://www.researchgate.net/publication/309732289_Emerging_opportunities_the_internet_marketing_and_museums.
8. Richards, G. (2014). *Tourism trends: The convergence of culture and tourism*. Retrieved 18. 05. 2021 from https://www.academia.edu/9491857/Tourism_trends_The_convergence_of_culture_and_tourism.
9. Šonje, J. (ed.) (2000). *Rječnik hrvatskog jezika*. Zagreb: LZ Miroslav Krleža: Školska knjiga
10. Tolstaya N. et.al. (2014). *New Information and Communication Technologies for Museum Development: Policy Brief*. Moskva: UNESCO & Russian National Committee of Interantional Council of Museums (ICOM Russia). Retrieved 11. 05. 2021 from <https://icom-russia.com/upload/iblock/dc5/dc56630b3415f9302fcd1f157afa6ed2.pdf>.
11. Tomljenović, R., Boranić Živoder, S. (2015). *Akcijski plan razvoja kulturnog turizma*. Zagreb: Institut za turizam. Retrieved 03.05.2021 from https://mint.gov.hr/UserDocsImages/arhiva/001_160128-AP_kulturni.pdf
12. UNESCO Institute for Statistics (UIS). Retrieved 22. 04. 2021 from <http://uis.unesco.org/en/glossary-term/museum>.
13. Vidak, I., Bosnić, I. (2017). Multimedia as a communication tool. In U. Bacher et.al. (eds.) *Interdisciplinary management research XIII* (p. 1116-1129). Opatija: Josip Juraj Strossmayer University of Osijek, Faculty of Economics in Osijek Croatia: Hochschule Pforzheim University.
14. Vucetic, S, Cingula, D., Bunja, D. (2018). The role of ICT in the Zadar city museums as a challenge for cultural tourism. In T. Studzieniecki, M. Kozina, and D. Skalamera Alilovic (eds.), *Economic and Social Development (Book of Proceedings)*, 33rd International Scientific Conference on Economic and Social Development - "Managerial Issues in Modern Business" (p. 515-525). Warsaw: Varazdin Development and Entrepreneurship Agency, Varazdin, Croatia: Faculty of Management University of Warsaw, Warsaw, Poland: University North, Koprivnica, Croatia: Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat, Morocco
15. Vukonić, B., Čavlek, N. (2001). *Rječnik turizma*. Zagreb: Masmedia.
16. Zakon o muzejima (2015). *Narodne novine*, 110. Retrieved 22. 04. 2021 from https://narodne-novine.nn.hr/clanci/sluzbeni/2015_10_110_2121.html.

DATA ENVELOPMENT ANALYSIS (DEA) APPLICATION IN SUPPLY CHAIN MANAGEMENT

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ABSTRACT

In today's global and international business, supply chains pose a major challenge in the field of management, which implies the concept of managing from raw material to delivery of the finished product to the end customer. Supply chain management establishes a quality system that will properly, efficiently and effectively meet all the needs and requirements of both partners and end customers. Supply chains represent the flow of goods, services and information. The purpose of this article is to conduct an in-depth extensive literature review of studies implementing the DEA (Data Envelopment Analysis) methodology in supply chain management in the period from 2017 to August 2021 and focuses on 6 studies published in peer-reviewed journals that are cited in Scopus and WoS (SSCI and SCI papers). Furthermore, it reveals the journals that have published most of these papers as well as country of origin of the authors investigating "DEA" and "SUPPLY CHAIN MANAGEMENT" combined. This article also presents the leading mathematical programming methodology DEA and offers a theoretical background of this technique. DEA is the renowned non-parametric approach for evaluating the relative efficiency and performance of peers (known as Decision Making Units). It can be expected for this study to represent a basis and guidance for further research and implementation of DEA in supply chain management areas.

Keywords: *dea, data envelopment analysis, supply chain management, scm, relative efficiency*

1. INTRODUCTION

The concept of supply chain management emerged in the 1990s as a response to the increasing complexity of the market itself in the midst of business globalization. Therefore, conditioned by the globalization and internationalization of business, companies are increasingly focusing on the concept of supply chain management. Supply chain management represents managing of all activities, information, knowledge and financial resources related to the flow and transformation of goods and services from raw materials at the supplier to the end user (Van Weele, 2014). Therefore, the main goal and task of the supply chain is the integration and coordination of processes and the individual in the supply chain, which implies the integration of suppliers, customers and the organization itself. In the function of achieving multiple benefits at all levels of management and for all stakeholders in the supply chain through supply chain optimization, it is possible to create a competitive advantage and recognition in the market. In order for the supply chain process to respond to the current needs of the market and the organization should strive to find ways to increase its efficiency and performance. DEA (Data Envelopment Analysis) methodology can detect and evaluate the efficiency and performance of supply chain.

DEA methodology is a mathematical analysis that serves to evaluate the relative efficiency of organizational units that use more inputs and create more outputs, which is characteristic of the supply chain process. The aim of this paper is to investigate the application of the DEA method within the supply chain, its features and benefits that DEA method provides for the supply chain process, which today is one of the key analysis that ensures increased productivity and efficiency of supply chain. The remainder of the article is structured as follows: Section 2 presents an introduction to supply chain management; Section 3 offers an introduction and a theoretical overview of the non-parametric DEA methodology; Section 4 presents the methodology and the research approach for this study; Section 5 presents the extensive literature review through 6 case studies in supply chain management. Section 6 opens up a discussion and presents conclusions and guidance for future research.

2. SUPPLY CHAIN MANAGEMENT

By developing the supply chain concept process itself, there are a number of definitions of what a supply chain represents. The supply chain is dynamic system in which information, money and products are constantly exchanged between chain participants (Pupavac, 2013). Monczka et al. (2010) describes the supply chain as a series of activities and organizations that materials go through during their journey from initial suppliers to end customers. A supply chain is a set of three or more entities (organizations or individuals) directly involved in upstream and downstream flows of products, services, finance, and information from source to consumer (Mentzer et al., 2001:4). Ferišak (2006:25) defines the supply chain as “organizational and information integration of individual supply processes of business functions in the company (internal part of the supply chain) and their connection with environmental processes directly involved in value creation (external supply chain), with the aim of optimizing a complete process of flow of goods (materials, intermediates and products) and increase the contribution to value creation”. There are three types of supply chain: (1) Lean supply chain: used to eliminate unnecessary supply chain steps and used for simple products that are quantitatively limited (mature stages of product development), (2) Agile supply chain: requires complex technology, responds to rapid changes and is manifested by dynamics (earlier stages of product development), (3) Hybrid supply chain: a combination of lean and agile chain (meets the needs of complex products) (Jaklic et al., 2006). Jacobs and Chase (2018: 4) define operations and supply chain management as the process of designing, operating, and improving a system that manufactures and delivers a company’s primary products and services. Managing today’s modern supply chains involves experts in manufacturing, procurement and distribution (Jacobs and Chase, 2018). All steps in the supply chain management process should be coordinated and managed to prevent cost increases and to minimize potential losses. Therefore, managing operations and supply chains involves managing all individual processes as efficiently as possible (Jacobs and Chase, 2018). The term *operation and supply chains* have special meanings. According to Jacobs and Chase (2018: 6) “operations involve the process of production, services, health care to turn the assets used by the company into products that consumers want, while supply chains are processes that transfer data and materials to production and service processes of the company and from them”. Supply chain management is based on the principles of efficiency, flexibility, reliability and innovation and consists of 9 key elements: (1) customers, (2) forecasting (quantity and time), (3) design, (4) capacity planning and demand, (5) processing (quality control and work schedule), (6) stocks, (7) procurement, (8) suppliers, (9) location (Zekić, 2000). It is these elements and their coordination that lead to the establishment and implementation of a successful supply chain. Non-consideration and misunderstanding of needs within the supply chain can affect the design and strategy of supply chain management. Based on this there are two approaches: (1) efficient supply chain, (2) responsible supply chain.

An efficient supply chain coordinates the flow of goods and services in order to minimize stocks and increase the efficiency of producers in the chain, while the characteristic of a responsible supply chain is quick response to market demands (forecast errors are low, product life cycle is short, new product introduction is fast and more) (Zekić, 2000). Properly established supply chain is a challenge but brings added value at minimal cost. Therefore, the supply chain involves a number of stakeholders so that the whole process can function and achieve its goal, which is to create the final product and create a profit and the already mentioned added value for all participants in the chain. As already mentioned, supply chain management implies coordination and cooperation of all stakeholders involved in the supply chain. From the aspect of quality supply chain management, in addition to gaining profit and added value, other components are emphasized, such as reducing operating costs, improving the financial position of the company, creating more cash flow and more. When observing the importance of the supply chain for other participants (suppliers and end customers), it is necessary to ensure the availability of products, accurate delivery (to the right place and at the right time) and service. In addition to all the above, it is necessary to ensure and influence the reduction of the total costs of the supply chain and to ensure constant cost optimization (procurement, production and operating costs). The supply chain process includes: (1) planning, (2) procurement, (3) fabrication, (4) delivery, (5) return (Jacobs and Chase, 2018). The area of supply chain management is constantly changing precisely because of the dynamic market and the constant changes conditioned by new technologies. Therefore, success in the global market implies the selection and implementation of a quality and concrete business strategy that meets the wishes and needs of the organization and the consumers themselves. The choice of strategy of operations and supply chains should primarily include the component of sustainability, ie respect for the social, economic and environmental dimensions, and how it must be an integral part of the corporate strategy of the company. Furthermore, in addition to a properly established corporate strategy, it is very important that timely, accurate and reliable information's are used in the supply chain and its managing. Information about stocks, sales, sales forecasting, information on the ordering system, production and delivery schedule, etc., are very important data on which supply chain management depends in order to be able to reduce the cost of equipment, human resources but also affect the increase in capacity utilization. The flow of information is crucial for quality supply chain management because it ensures the flow and normal functioning of complex business processes, which consists of a large number of chain participants, which enhances the planning, control and coordination of the supply chain.

3. DATA ENVELOPMENT ANALYSIS (DEA): THE THEORETICAL BACKGROUND

Data Envelopment Analysis (DEA) is a mathematical programming approach for evaluating the relative technical efficiency (TE) of production activities, i.e. of “decision-making units” (DMUs) involved in a production process. It provides an efficiency score for each DMU that assesses the relative efficiency of its performance in the use of several inputs to produce several outputs. It furthermore represents a benchmarking analysis that allows identifying strengths and weaknesses of the analyzed homogenous units (the DMUs) (Färe et al., 2000; Ruiz et al., 2013). In DEA, these analyzed organizations are called DMUs (Decision Making Units). DMUs are not strictly defined so that they can allow flexibility in its use. A Decision Making Unit is an entity which is responsible for transforming input variables into output variables, and whose performance and efficiency is evaluated. DMUs may include banks, department stores and supermarkets, and extend to car makers, hospitals, schools, government agencies, public libraries and so forth (Cooper et al., 2007). The term DEA was originally introduced and proposed by Charnes, Cooper and Rhodes in their seminal paper „Measuring the efficiency of decision-making units“ published in 1978.

However, the original idea on assessing efficiency was by Farell (1957), who developed the concept of “best-practice frontiers and came up with the first measurement scheme and efficiency concept” (De Borger et al., 2002). Other than being a mathematical programming approach for evaluation of technical efficiency, DEA is also non-statistical and non-parametric. „Non-statistical implies that estimates are not based on any statistical distribution (e.g., the normal) and noise is not explicitly considered in the estimation“. However, this does not mean that statistical tests of various estimates are impossible to perform. When referred to as being non-parametric, researchers are referring to the fact that DEA does not require assumptions of a particular functional relationship between the inputs and outputs or to any statistical distribution (Färe et al., 2000). The selection of the input and output variables is of vital importance when applying DEA for assessing the efficiency of decision-making units (DMUs) (Cvetkoska & Fotova Čiković, 2020). In a DEA efficiency analysis, the n DMUs use m inputs to produce s outputs. Each DMU $_j$ can be described by means of the vector: $(X_j, Y_j) = (x_{1j}, x_{2j}, \dots, x_{mj}, y_{1j}, y_{2j}, \dots, y_{sj}), j = 1, \dots, m$. (Ruiz et al., 2013). Today, the DEA is one of the most common methods of operations research and is implemented in a many industries and areas of research regarding their performance and efficiency. This includes banking, public policy, agriculture, transportation and supply chain (Emrouznejad & Yang, 2018).

4. METHODOLOGY AND RESEARCH APPROACH

In our research, we have used the extensive literature review to summarize past findings in a research field, in our case findings about Data Envelopment Analysis (DEA) and its' application in Supply Chain Management. First, we identified relevant databases for our research, and we have decided to focus on the peer-review journals that are cited in Scopus and WoS (SSCI and SCI papers). Tables 1 and 2 present our search strategies in WoS (SSCI and SCI) and Scopus, with the period (2017 – 2021). We conducted a search using the scientific databases Web of Science (WoS) and Scopus in August 2021. Through the first part of the search, we checked WoS and Scopus using keywords: “DATA ENVELOPMENT ANALYSIS” and “SUPPLY CHAIN MANAGEMENT”. The search was focused on peer-reviewed papers in journals in English language. This approach resulted in 3.382 hits (2.792 in Scopus and 590 in WoS). In the next step, the search strategy was refined. Since Data Envelopment Analysis (DEA) is applied in different areas of scientific research, we decided to limit our research to papers in the fields business and economics. This criterion was related to Scopus subject areas and WoS categories (Table 1 and 2). The Following WoS Categories Are Used: Business Or Management Or Economics (Sci-Expanded, Ssci, A&Hci, Cpci-S, Cpci-Ssh, Bkci-S, Bkci-Ssh, Esci, Ccr-Expanded, Ic.). The following Scopus categories/areas are used: Business, Management and Accounting. This approach resulted in 104 hits (90 hits in Scopus and 14 hits in WoS) in a period of 2017 – August 2021.

Search strategy	Hits	Time span	Indexes
((data envelopment analysis) AND (supply chain management))	590	All years	SCIEXPAND., SSCI, A&HCI, ESCI
Refined by: DOCUMENT TYPES: (ARTICLE) AND PUBLICATION YEARS: (2021 OR 2020 OR 2019 OR 2018 OR 2017) AND WEB OF SCIENCE CATEGORIES: (BUSINESS OR MANAGEMENT OR ECONOMICS) AND RESEARCH AREAS (BUSINESS ECONOMICS)	14	2017-August, 2021 (last five years)	SCIEXPAND., SSCI, A&HCI, ESCI

*Table 1: WoS (SSCI, SCI) search strategy (2017-2021)
(Source: authors' work, 2021.)*

Search strategy	Hits	Time span	Indexes
(TITLE-ABS-KEY (data AND envelopment AND analysis)) AND (supply AND chain AND management)	2.792	All years	Scopus
AND (LIMIT-TO (OA , "all")) AND LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017)) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (LANGUAGE , "English"))	90	2017- August, 2021 (last five years)	Scopus

Table 2: Scopus search strategy (2017 – 2021)

(Source: authors' work, 2021.)

Number of papers that are investigating the various issues of Data Envelopment Analysis (DEA) and Supply Chain Management has increased substantially from 2019 (Figure 1 and 2).

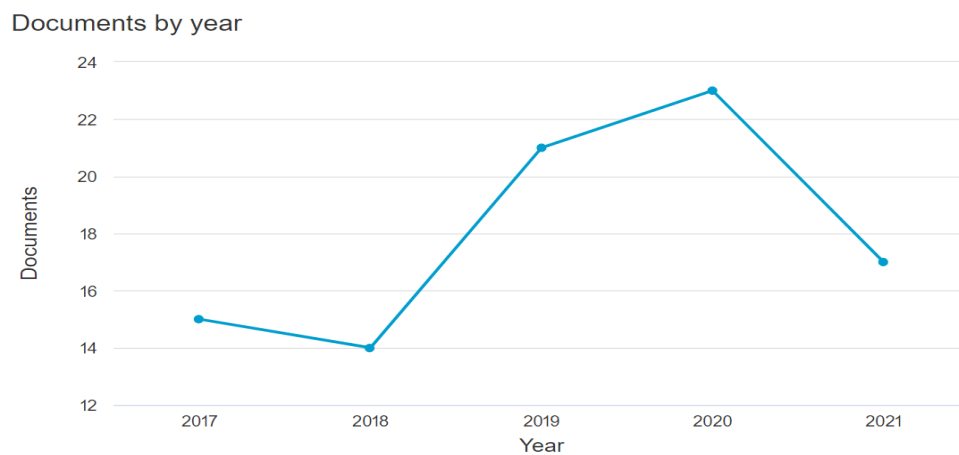


Figure 1: Number of papers that research the topic of data envelopment analysis (DEA) and supply chain management in Scopus (2017-2021)

(Source: authors' work, 2021.)

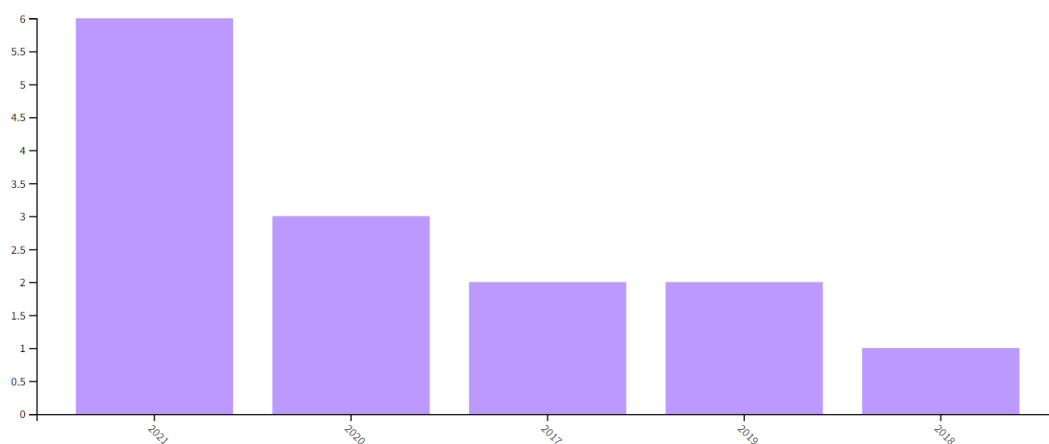
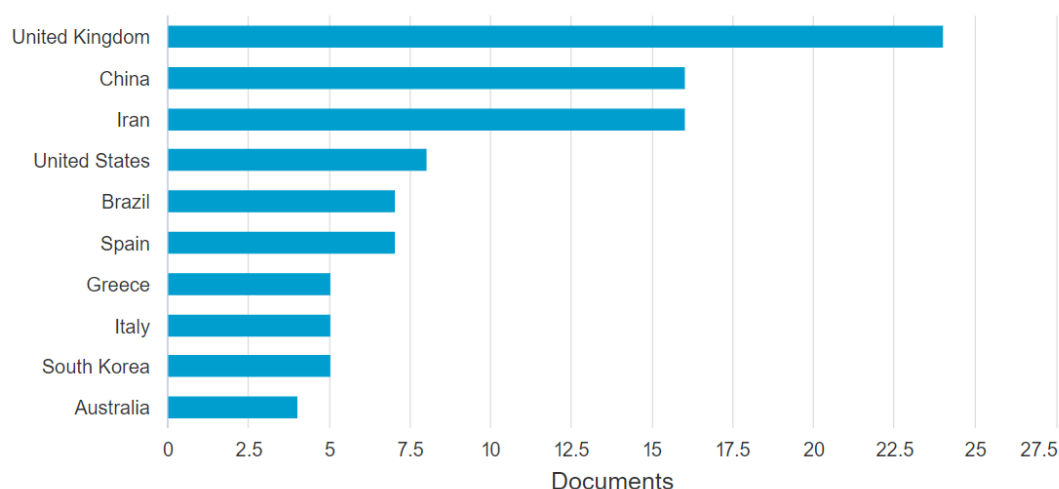


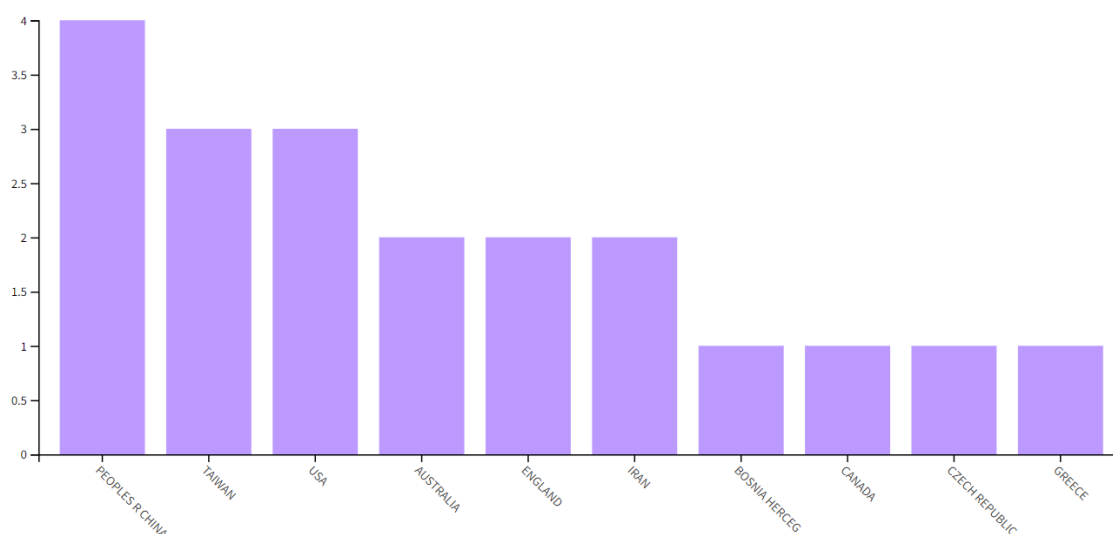
Figure 2: Number of papers that research the topic of Data Envelopment Analysis (DEA) and Supply Chain Management in WoS (2017-2021)

(Source: authors' work, 2021.)

Most of the research papers were from United Kingdom (24 papers), China (16 papers) and Iran (16 papers) (figure 3) regarding Scopus, while most of the research papers in Wos base were from China (4 papers) and Taiwan (3 papers) (figure 4).

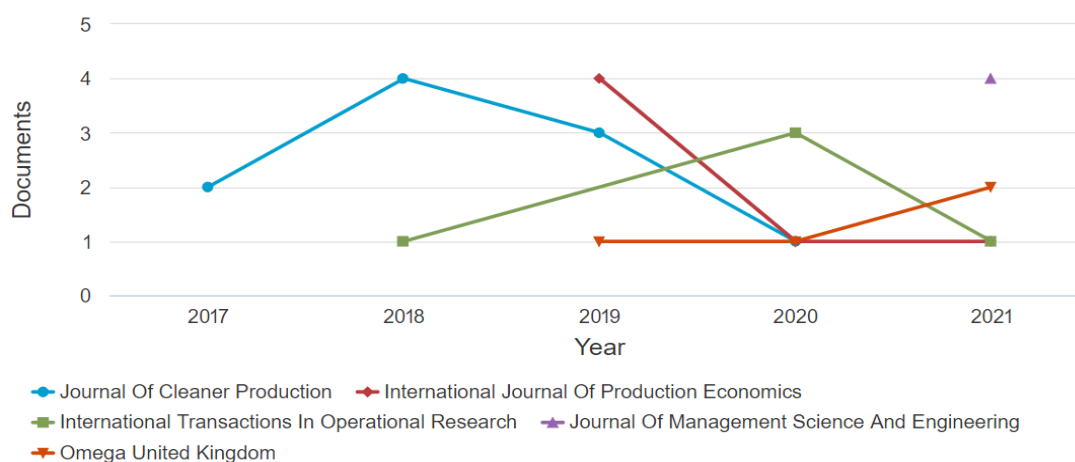


*Figure 3: Country of origin of the authors of the papers investigating the topic of data envelopment analysis (DEA) and supply chain management in Scopus (2017 - 2021)
(Source: authors' work, 2021.)*



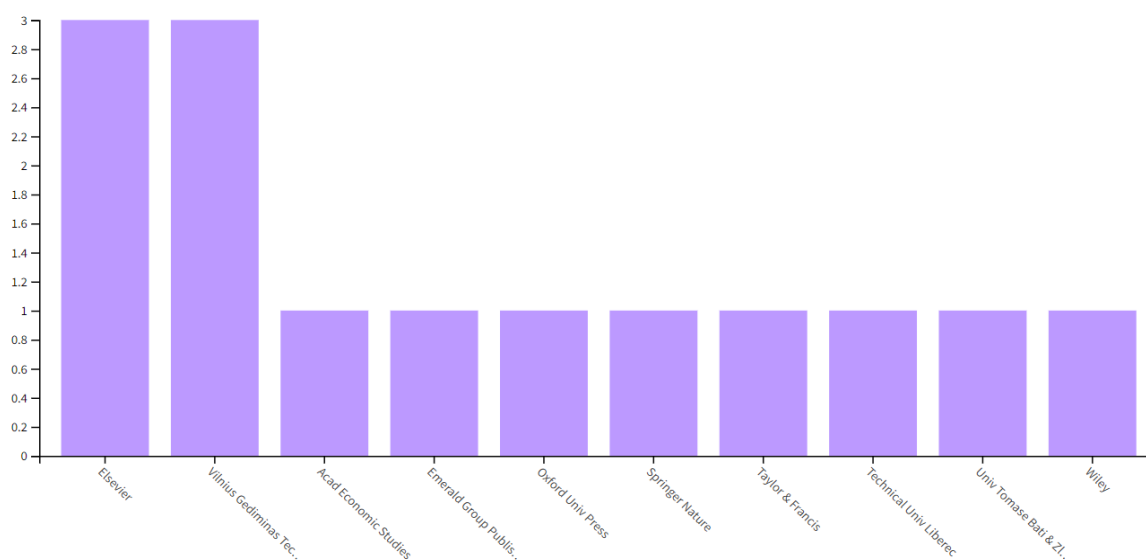
*Figure 4: Country of origin of the authors of the papers investigating the topic of Data Envelopment Analysis (DEA) and Supply Chain Management in Wos (2017 - 2021)
(Source: authors' work, 2021.)*

Figure 5 presents the journals that published the papers investigating the topic of data envelopment analysis and supply chain management in the period 2017- August 2021 in Scopus. The largest number of papers were published in the Journal of Clear Production (10 papers). Other journals that published more than four papers on data envelopment analysis and supply chain management are: International Journal of Production Economics (6 papers), International Transactions In Operational Research (5 papers), Journal of Management Science And Engineering (4 papers) and Omega United Kingdom (4 papers).



*Figure 5: Journals that published the papers investigating the topic of data envelopment analysis (DEA) and supply chain management in the period 2017-2021. in Scopus
(Source: authors' work)*

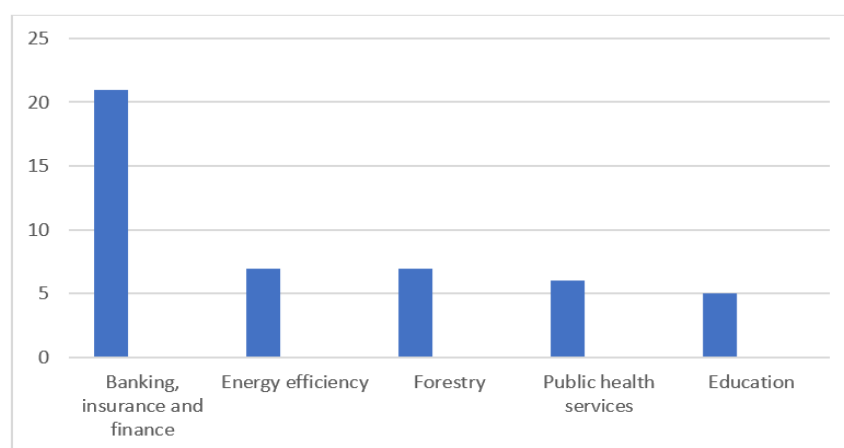
Figure 6 presents the journals that published the paper investigating the topic of data envelopment analysis and supply chain management in the period 2017- August 2021 in Wos. Elsevier and Vilnius Gediminas Tech Univ published three (3) papers while other journals that published only one (1) paper on data envelopment analysis and supply chain management



*Figure 6: Journals that published the papers investigating the topic of data envelopment analysis (DEA) and supply chain management in the period 2017-2021 in Wos
(Source: authors' work)*

When searching the Croatian Scientific Bibliography Database (also known as CROSB) with the keyword „DEA“, a total of 130 studies are found. The keyword „SUPPLY CHAIN“ has been used in 570 studies, whereas 269 studies have researched the area of „SUPPLY CHAIN MANAGEMENT“. However, when the two keywords „DEA“ and „SUPPLY CHAIN“/ „SUPPLY CHAIN MANAGEMENT“ are used combined, no search results have been found. In other words, there are no published studies by Croatian academics and researchers and/or by non-Croatian researchers that have published in a Croatian journal that investigate and focus on the supply chain management's efficiency with the application of DEA.

Despite the fact the supply chain management is a popular subject to explore by Croatian researchers and academics, it seems researchers in the area of supply chain have disregarded this methodology, even though it is globally one of the top five areas of research which implement the DEA methodology, together with agriculture, banking, transportation, and public policy (Emrouznejad & Yang, 2018). Our research shows that most of the studies implementing DEA in Croatia are in the areas of banking, insurance and finance (21 out of 130 studies), energy efficiency (7 out of 130 studies), forestry (7 out of 130 studies), public health services (6 out of 130 studies) and education (5 out of 130 studies) (figure 7).



*Figure 7: Studies in Republic of Croatia regarding DEA
(Source: authors' work, 2021.)*

5. APPLICATION OF DEA IN SUPPLY CHAIN MANAGEMENT

Lee, Jeon & Seo (2017) have presented „an optimization model for supporting the buyer-seller negotiations“, in which they consider the price, quality, and delivery as evaluation criteria, i.e. objectives for negotiation. They implement the input-oriented DEA with the inverse optimization. Their study contributes not only the literature but also helps the buyer understand the trade-offs between price and performance when they negotiate. Ishizaka, Lolli, Balugani, Cavallieri, Gamberini (2018) have applied the DEA methodology in inventory classification and management using ABC analysis. They present the implementation of DEASort, a generic classification method which can be easily applied to other sorting issues and areas in supply chain management in general. Vörösmarty & Dobos (2019) have focused on the supplier selection process as one of the main business decisions for prosperous and growing business, but they also include environmental aspects. They have combined the DEA (Data Envelopment Analysis) with common weights analysis (CWA) method. Kumar Dey, Yang, Malesios, De & Evangelinos (2019) have implemented the DEA model together with a combined Structural Equation Modelling to evaluate the performance of Supply Chain sustainability on a sample of 34 UK and 50 French Small and Medium-Sized enterprises (SMEs). Their study is quite influential due to its scientific contribution to the existing literature. Namely, they have proposed a new supply chain sustainability performance measurement and management framework for SMEs. Bajec, Kontelj & Groznik (2020) have assessed logistics platform efficiency and have implemented a three-phase methodological approach „integrating the traditional DEA by combining the Delphi technique with the Analytical Hierarchy Process (AHP) method“ in helping them identifying and determining proper and adequate input and output variables. They believe this developed model could be an efficiency monitoring model of logistics platforms.

Moghaddas, Vaez Ghasemi & Hosseinzadeh Lotfi (2021) have introduced a „novel DEA approach for evaluating sustainable supply chains with undesirable factors“. In their study, they evaluate eleven cement companies in 2017 for Iranian Stock Exchange Market, taking into consideration „the sociological, environmental, economic, and technological aspects“. They advise other scholars to revise traditional DEA models with regards to the important environmental factors.

Author/s and year of publication	Application
Lee, Jeon & Seo (2017)	Optimization-based buyer-supplier price negotiation: Supporting buyer's scenarios with supplier selection.
Ishizaka, Lolli, Balugani, Cavallieri, Gamberini (2018)	Assigning items in ABC classes (Inventory classification and management)
Vörösmarty & Dobos (2019)	Supplier Evaluation with Environmental Aspects and Common DEA Weights.
Kumar Dey, Yang, Malesios, De & Evangelinos (2019)	Performance Management of Supply Chain Sustainability in Small and Medium-Sized Enterprises
Bajec, Kontelj & Groznik (2020)	Assessment of Logistics Platform Efficiency
Moghaddas, Vaez Ghasemi & Hosseinzadeh Lotfi (2021)	Evaluating sustainable supply chains with undesirable factors

*Table 3: Application of DEA in supply chain management
(Source: authors' work)*

6. DISCUSSION AND CONCLUSION

The purpose of this paper is to conduct an extensive literature review of studies implementing the DEA methodology in supply chain management in the period from 2017 to August 2021 and to present its application. Furthermore, this study presents the journals that have published most of these papers as well as country of origin of the authors investigating “DEA” and “SUPPLY CHAIN MANAGEMENT”. Notwithstanding, this article presents the leading non-parametric mathematical programming methodology Data Envelopment Analysis (DEA). According to Cooper et al. (2007), one of the strong suits of DEA is that it does not require „prescribed weights to be attached to each input and output, as in the usual index number approaches, and it also does not require prescribing the functional forms that are needed in statistical regression approaches“. This is also one of the main differences between the parametric (regression) and non-parametric approaches. Furthermore, DEA can be perceived as an alternative to regression analysis, and while regression relies on central tendencies, DEA relies on extreme observations (Jemrić et al., 2002; Fotova Čiković et al., 2021). The DEA is widely accepted due to its many advantages. Mostly, due to its incorporation of multiple inputs and their transformation into multiple outputs. Furthermore, it does not require prior knowledge of the explicit functional form linking inputs and outputs nor a priori determination of input and output weights.

It also offers a simultaneous analysis of both inputs and outputs, and compares each inefficient DMU with its “peer group”. This enables management to use the efficiency results from DEA as a recommendation and guidance to improve their efficiency and change and improve their operations (Paço & Pérez, 2013; Cvetkoska, 2011; Jorda et al., 2012; Jemrić et al., 2002; Stolp, 1990; Škuflić et al., 2013; Maletić et al., 2013). Cooper et al. (2007) note the many additional opportunities for use of DEA, such as opportunities for collaboration between analysts and decision-makers in the form of collaboration in choices of the used inputs and outputs, to to “benchmarking” of “what-if” behaviors of competitors and also identification of potential (new) market players that may emerge for consideration. In spite of its many advantages, there have been common criticism and rebuttals on a number of methodological grounds regarding the DEA methodology, but the non-stochastic nature of the approach generates the most criticism (Färe et al., 2000). Notwithstanding, „sensitivity to outliers“ is another common criticism of DEA (Coelli et al., 1998). This problem has been also highlighted by Jemrić et al. (2002), stating the sensitivity of the frontier to extreme observations and measurement errors as the main disadvantage of DEA. According to Färe et al. (2000), the criticism regarding DEA being non-statistical “may be an appropriate criticism”. Namely, the DEA “does not yield estimates that can be easily validated with conventional statistical procedures“. Even though Stolp (1990) has elaborated many of DEA’s limitations, in his study he concludes it should be considered as an “informative and useful tool for systematic sensitivity analysis”. The findings of Škuflić et al. (2013) are in line with those of Stolp (1990). Namely, they claim DEA's advantages outweigh by far its limitations. The scientific contribution of this article is threefold: first, it provides an in-depth extensive literature review on studies in the area of supply chain management with DEA and focuses on 6 studies published in peer-reviewed journals that are cited in Scopus and WoS (SSCI and SCI papers; second, it presents the top journals of published DEA supply chain articles in the analyzed period, and authors’ country of origin; and finally, this article should be considered a basis and guidance for future research in this area, since it presents the leading non-parametric approach for efficiency and performance evaluation and thus promotes the DEA methodology among the academics and researchers of supply chain in Croatia and worldwide.

LITERATURE:

1. Bajec, P., Kontelj, M., & Groznik, A. (2020). Assessment of Logistics Platform Efficiency Using an Integrated Delphi Analytic Hierarchy Process – Data Envelopment Analysis Approach: A Novel Methodological Approach Including a Case Study in Slovenia. *E&M Economics and Management*, 23(3), 191–207. <https://doi.org/10.15240/tul/001/2020-3-012>
2. Charnes, A., Cooper, W. & Rhodes, E. (1978). Measuring the efficiency of decision-making units. *Eur. J. Oper. Res.*, 2, 429–444.
3. Coelli, T., Rao, D.P., & Batteese, G. (1998). *An introduction to efficiency and productivity analysis*. London, Kluwer Academic Publishers.
4. Cooper, W.W., Seiford, L.M., Tone, K. (2007). *DATA ENVELOPMENT ANALYSIS. A Comprehensive Text with Models, Applications, References and DEA-Solver Software*. Second Edition. Springer
5. Cvetkoska, V. & Fotova Čiković, K. (2020). Assessing the relative efficiency of commercial banks in the Republic of North Macedonia: DEA window analysis. *Croatian operational research review*, 11 (2), 217-227. doi:10.17535/corr.2020.0017.
6. Cvetkoska, V. (2011). Data Envelopment Analysis Approach and Its Application in Information and Communication Technologies In: M. Salampasis, A. Matopoulos (eds.): *Proceedings of the International Conference on Information and Communication Technologies for Sustainable Agri-production and Environment (HAICTA 2011)*, Skiathos, 8-11 September.

7. Cvetkoska, V., Savić, G. (2021). DEA in banking: Analysis and visualization of bibliometric data. *Data Envel. Anal. J.*
8. De Borger, B., Kerstens, K., Costas, A. (2002). Public transit performance: what does one learn from frontier studies? *Transport Reviews* 22 (1), 1–38.
9. Emrouznejad, A. & Yang, G. (2018). A survey and analysis of the first 40 years of scholarly literature in DEA: 1978–2016. *Socio Econ. Plan. Sci.* 61, 4–8.
10. Färe, R., Grosskopf, S., Kirkley, J.E., Squires, D. (2000). Data Envelopment Analysis (DEA): A Framework for Assessing Capacity In Fisheries When Data are Limited. *IIFET 2000 Proceedings*, 1-11
11. Farrell, M. (1957). The measurement of productive efficiency. *Journal of the Royal Statistical Society, Series A (General)*, 120(3), 253-290. <https://doi.org/10.2307/2343100>
12. Ferišak, V. (2006): Nabava: politika, strategija, organizacija, management, 2. aktualizirano i dopunjeno izdanje, Vlastita naklada, Zagreb
13. Fotova Čiković, K., Smoljić, M. & Lozić, J., (2021). The Application Of The Non-Parametric Methodology DEA In The Croatian Banking Sector. *Book of Proceedings - 71st International Scientific Conference on Economic and Social Development Development, online*, pp. 113-127
14. Hartwich, F., Kyi, T., (1999). Measuring efficiency in Agricultural Research: Strength and Limitations of Data Envelopment Analysis. In: *Discussion Paper No.99/8, Institute of Agricultural Economics, University of Hohenheim, Hohenheim.*
15. Ishizaka, A., Lolli, F., Balugani, E., Cavallieri, R., Gamberini, R., (2018). DEASort: Assigning items with data envelopment analysis in ABC classes, *International Journal of Production Economics*, Volume 199, Pages 7-15, <https://doi.org/10.1016/j.ijpe.2018.02.007>.
16. Jacobs, F.R., Chase, R.B. (2018) Upravljanje operacijama i lancima opskrbe, 13. Izdanje, Mate d.o.o., Zagreb
17. Jaklic, J.; Trkman, P.; Groznik, A.; Stemberger, M. (2006). Enhancing lean supply chain maturity with business process management, *Journal of Information and Organizational Sciences*, 30 (2), pp. 205-223
18. Jemrić, I., Vujčić, B. (2002). Efficiency of Banks in Croatia: A DEA Approach, *Comparative Economic Studies*, Vol. 44, No. 2-3, pp. 169-193, 10.1057/ces.2002.13.
19. Jordá, P., Cascajo, R. & Monzón, A. (2012). Analysis of the Technical Efficiency of Urban Bus Services in Spain Based on SBM Models. *ISRN Civil Engineering*. 12. 10.5402/2012/984758.
20. Kumar Dey, P., Yang, G., Malesios, C., De, D., Evangelinos, K. (2019). Performance Management of Supply Chain Sustainability in Small and Medium-Sized Enterprises Using a Combined Structural Equation Modelling and Data Envelopment Analysis. *Computational Economics*. <https://doi.org/10.1007/s10614-019-09948-1>
21. Lee, P., Jeon, D.-H., Seo, Y.-W. (2017). Optimization-based buyer-supplier price negotiation: Supporting buyer's scenarios with supplier selection. *Journal of Distribution Science*, 15 (6), pp. 37-46. DOI: 10.15722/jds.15.6.201706.37
22. Maletić, R., Kreća, M. & Maletić, P. (2013). Application of Dea methodology in measuring efficiency in the banking sector. *Economics of Agriculture*, 60 (4), 843-855.
23. Mentzer, T. J., DeWitt, W., Keebler, S. J., Ming, S., Nix, W. N., Smith, D. C., Zacharia, G. Z. (2001). Defining Supply Chain Management, *Journal of Business Logistics*, 22 (2), pp.1–25
24. Moghaddas, Z., Vaez Ghasemi, M., Hosseinzadeh Lotfi, F. (2021). A novel DEA approach for evaluating sustainable supply chains with undesirable factors. *Economic Computation and Economic Cybernetics Studies and Research*, Issue 2/2021; Vol. 55. DOI: 10.24818/18423264/55.2.21.11

25. Monczka et al. (2010). Purchasing and supply chain management, South-Western Cengage Learning, Hampshire, UK.
26. Noorizadeh, A., Mahdiloo, M. & Saen, R. Farzipoor. (2013). Using DEA cross-efficiency evaluation for suppliers ranking in the presence of non-discretionary inputs. *International Journal of Shipping and Transport Logistics*, 5 (1), 95-111.
27. Paço, C.L., Pérez, J.M.C., (2013). The use of DEA (Data Envelopment Analysis) methodology to evaluate the impact of ICT on productivity in the hotel sector. *En ligne*, 3, DOI: <https://doi.org/10.4000/viatourism.1005>
28. Pupavac, D. (2013). Cross- docking u lancima opskrbe, *PERSPEKTIVE TRGOVINE* 2013.: Odnosi u lancima opskrbe, pp.215-228
29. Ruiz, J.L., Pastor, D., Pastor, J.T. (2013). Assessing Professional Tennis Players Using Data Envelopment Analysis (DEA). *Journal of Sports Economics* 14(3), pp. 276-302. DOI: 10.1177/1527002511421952
30. Šerić, N.; Luetić, A. (2016). Suvremena logistika: Upravljanje logistikom u poslovanju poduzeća, Redak, Split
31. Škuflić, L., Rabar, D., Škrinjarić, B. (2013). Assessment of the efficiency of Croatia compared to other European countries using data envelopment analysis with application of window analysis. *International journal of sustainable economy*, 5 (1), pp.104-123 doi:10.1504/IJSE.2013.050601.
32. Van Weele, A.J. (2014.) Purchasing and Supply Chain Management, South-Western Cengage Learning, Hampshire, UK.
33. Visani, F., Barbieri, P., Di Lascio, FML., Raffoni, A., Vigo, D. (2016). Supplier's total cost of ownership evaluation: a data envelopment analysis approach. *Omega- International journal of management science*, 61. Pp. 141-154. 10.1016/j.omega.2015.08.001
34. Vörösmarty, G., Dobos, I. (2019). Supplier Evaluation with Environmental Aspects and Common DEA Weights. *Periodica Polytechnica Social and Management Sciences*, 27(1), pp. 17–25. <https://doi.org/10.3311/PPso.11814>
35. Vukasovic, D., Gligovic, D., Terzic, S., Stevic, Z., Macura, P., (2021). Novel fuzzy MCDM model for inventory management in order to increase business efficiency. *Technological and economic development of economy*, pp. 386-458. 10.3846/tede.2021.14427
36. Wojcik, V., Dyckhoff, H. & Clermont, M. (2019). Is data envelopment analysis a suitable tool for performance measurement and benchmarking in non-production contexts? *Bus Res* 12, 559–595. <https://doi.org/10.1007/s40685-018-0077-z>
37. Zekić, Z. (2000). Logistički menadžment, Glosa d.o.o., Rijeka

THE CUSTOMER AND ENTREPRENEURIAL BEHAVIOR TOWARDS THE COLLABORATIVE ECONOMY IN THE EUROPEAN UNION

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ABSTRACT

In recent years, the collaborative economy has emerged, and it is now used across the world. The collaborative economy covers a wide range of sectors, is rapidly developing in the European Union, and simultaneously represents new opportunities for both consumers and entrepreneurs. However, there are rules and obligations that need to be accepted. In June 2016, the EU provided clarity on applicable EU rules and policy recommendations to help consumers and businesses benefit from new business models that will influence the collaborative economy development. It is essential to find the balance between new service providers and existing market operators, support the development of the latest and current services, and protect all market participants in a new environment. The collaborative economy creates more choices and lower prices for consumers, and it creates more opportunities for entrepreneurs by giving them a chance to offer services either on an occasional basis or professionally, contributing to growth and jobs in Europe. This paper's main objective is to analyze customer and entrepreneurial behavior towards using collaborative platforms, which are the product of the collaborative economy. Moreover, to analyze the consumption of the EU's collaborative economy the authors will examine the Eurobarometer survey Flash Eurobarometer 438 and 467 with 14050 and 26544 respondents, respectively, from 28 countries in the EU. Univariate and bivariate statistical methods will be used to represent the results of the conducted analysis.
Keywords: collaborative economy, consumers, entrepreneurs, services

1. INTRODUCTION

A collaborative economy or sharing economy gives new business models of the future. Given the challenges of the 21st century, it is not surprising that the search for new models and business theories is gradually abandoning traditional models, depending on accelerated technological progress. Also, the global crisis in 2008 has forced business people and consumers to look for new options. Moreover, the main trigger of the global popularization of the sharing economy platforms are the consumers themselves, who want to be involved in the whole process: now, they are not only the consumers, they also act as service providers (Brozović et al., 2019). This paper analyzes differences between the EU Member States and their attitudes towards a collaborative economy. This paper's main objective is to analyze customer and entrepreneurial behavior towards using collaborative platforms, which are the product of the collaborative economy.

The authors also examined the Eurobarometer survey Flash Eurobarometer 438 and 467 with 14050 and 26544 respondents, respectively, from 28 countries in the EU. They used univariate and bivariate statistical methods to represent the results of the conducted analysis. This paper consists of six chapters: an introductory part, a review of the current literature related to the collaborative economy, methodology, results, conclusion, and the list of references.

2. THEORETICAL REVIEW

Collaborative consumption and the sharing economy are growing social phenomena. As Selloni (2017: 15) says, “the name ‘sharing economy’ may be interpreted under different labels: collaborative consumption, collaborative economy, on-demand economy, peer-to-peer economy, zero-marginal cost economy, and crowd-based capitalism are just some examples of the different interpretations that are currently interconnected to the notion of sharing economy.” The concepts abovementioned are not new. Collaborative consumption was initially mentioned in 1978 by Joe Spaeth and Marcus Felson, and was redefined by Rachel Botsman and Roo Rogers in 2010. The collaborative economy is more than just consumption, it is also about collaborating to produce and much more (Stokes et al., 2014). As Stokes et al. (2014) say, it includes the shared creation, production, distribution, trade, and consumption of goods and services by different people and organizations. It can also be named peer economy (P2P) because “people use platforms to rent, sell, lend, or share things with others without the involvement of shops, banks, or agencies. (...) This does not cover the whole collaborative economy, some of which involves more traditional aggregators and business-to-consumer, business-to-business, or even consumer-to-business models” (Stokes et al., 2014: 9). Petropoulos (2017) says that the collaborative economy matches people who want to share their assets and services with the primary medium – the internet. Frenken et al. (2015) defined the collaborative economy as the economy in which consumers grant other consumers temporary access to under-utilized assets (possibly for money). Maselli et al. (2016) expanded this definition in two ways. First, they discarded the temporary access aspect by considering all shared goods among consumers in a second-hand economy. Second, they considered the provision of services from one consumer to another via contests or auctions, instead of only counting the trade-in under-utilized assets. Botsman (2015) defines the collaborative economy as an “economic system of decentralized networks and marketplaces that unlocks the value of underused assets by matching needs and haves, in ways that bypass traditional middlemen” (Petropoulos, 2017: 2-3). Avram et al. (2017) also highlight Botsman as the first researcher to address the collaborative economy. All the technological development in IT have enabled the growth of the collaborative economy, through which various providers of durable goods and services trade online with individuals (Petropoulos, 2017: 340). As Petropoulos (2017) highlights, the collaborative economy models have an economic explanation based on the following main principles: Value of Information, Economies of Scale in the Platform Economy, Demand and Supply Heterogeneity, Low Search and Transaction Costs. Owyang et al. (2013: 4) say that “the Collaborative Economy is an economic model where ownership and access are shared between corporations, start-ups, and people. This results in market efficiencies that bear new products, services, and business growth”. Akgüç et al. (2018) describe how the EU has accepted and regulated the collaborative economy. Dredge & Gyimóthy (2015) provide an overview of collaborative economics and related concepts. Collaborative Consumption was first mentioned in 178 by Felson and Spaeth, Access Economy in 2000 by Rifkin, Social Sharing in 2004 by Benkler, Collaborative Consumption v. 2.0 by Botsman and Rogers in 2010, Peer-to-Peer Economy in 2012 by P2Pfoundation.net, Connected Consumption in 2015 by Schor and Fitzmaurice, Sharing Economy in 2008 by Lessig, and Hybrid Economy in 2015 by Rifkin.

As can be seen above, this is the central concept of the economy in the 21st century, and it is impossible to give a single comprehensive definition of this growing phenomenon. Sundararajan (2016, in Brozović et al., 2019: 38) notes the essential characteristics of a collaborative/sharing economy:

- sharing economy builds markets that enable the exchange of goods and the development of new services, which potentially increases the total consumption in the economy;
- higher utilization of existing assets, which increases the efficiency of capital use;
- the supply of capital and labor no longer comes from large state organizations and private corporations, but from a network of individuals;
- the disappearance of apparent differences between professional and personal relationships because it allows transactions such as borrowing less money between strangers even though such actions would otherwise be considered personal matters;
- the disappearance of apparent differences between permanent employment and temporary work and reduction of differences between employment and independent work and reduction of differences between work and free time.

In its report commissioned by the European Commission, the audit and consulting firm PwC (2016, in Brozović et al., 2019: 44) divided the activities performed by the sharing economy into five different sectors: peer-to-peer accommodation, peer-to-peer transportation, on-demand household services, on-demand professional services, and collaborative finance. On the other hand, various authors divide these sharing economy activities/sectors differently. Petropoulos (2017) lists four sectors in which collaborative economy platforms have the most significant presence: Accommodation, Transportation, Online Labor Markets, and Finance. Although different concepts, the core of these characteristics and lists is, of course, the same. Everything said above proves that the economy is emerging around exchanging goods and services between individuals instead of from business to consumer. The market relationships are no longer traditional (Owyang et al., 2013), and collaborative consumption business models “are creating important disruptions in numerous industries” (Dreyer et al., 2017: 13). To sum up the definitions, the collaborative economy refers to collaborative consumption resulting from sharing, exchanging, and renting some goods without ownership of them (Lessig, 2008, in Brozović et al., 2019: 37). As in the world, the collaborative economy/sharing economy is expanding in the European Union and provides consumers and sellers with far greater opportunities, but all market participants must be aware of the regulatory obligations of their 'behavior'. Given that the concept and the model are new, the European Union has not yet incorporated the collaborative economy into its legal acts. Inglese (2019) says that this possesses considerable challenges to policymakers and consumers, employees, and employers. “With the Communication on the European agenda for the collaborative economy of June 2016, the EU provides clarity on applicable EU rules and policy recommendations to help citizens, businesses and EU countries fully benefit from the new business models and promote the balanced development of the collaborative economy” (European Commission, 2020). These guidelines are not binding, but they help address the critical issues of market participants’ rights and obligations. EU countries are invited to review and, if necessary, revise existing legislation in line with these guidelines while ensuring that social and consumer rights are respected. As Inglese (2019: 163) concludes, “the economic costs of inaction can be greater than those of action and that, in any case, any response bears a regulatory cost of its own”. Also, the European Commission uses periodic surveys and mapping of regulatory developments in EU countries to monitor economic development. The European Commission also uses an evolving regulatory environment and encourages the exchange of acceptable practices among EU countries.

When researching the topic, the authors made three hypotheses.

- H1: There is a difference between respondents from the EU Member States and their collaborative platforms experience.
- H2: There is a difference between respondents from the EU Member States and their use of services offered via a collaborative platform in various sectors.
- H3: There is a difference between respondents from the EU Member States and their consideration of offering services via collaborative platforms.

3. METHODOLOGY

To conduct the analyses on collaborative platforms and collaborative economy, the authors used the Eurobarometer data. The Eurobarometer is an official measurement instrument of the EU, and the collected data is representative. The Eurobarometer data is publicly available through GESIS, where authors accessed the Flash Eurobarometer 438 (topic: The use of collaborative platforms) and the Flash Eurobarometer 467 (topic: The use of collaborative economy). The sample of the Flash Eurobarometer 438 has, in total, 14050 respondents, and all 28 nationalities of the European Union Member States are included in this survey from different social and demographic groups. The sample of the Flash Eurobarometer 467 has, in total, 26544 respondents, and all 28 nationalities of the European Union Member States are included in this survey from different social and demographic groups. Both surveys, the Flash Eurobarometer 438 and 467, were carried out by the TNS Political and Social Network. The first survey on collaborative platforms was carried out between 15th and 16th March 2016 in all Member States among the population aged 15 years and over (European Commission, 2016). The second survey on the collaborative economy was carried out between 23rd and 30th April 2018. Participants aged 15 years and over from all the Member States took part. To conduct both surveys, multi-stage random probability technique was used, and the respondents were drawn randomly following the “last birthday rule” in each household (European Commission, 2018). This paper applies different statistical methods (univariate and bivariate methods) using statistical software IBM SPSS 23.0 to define differences between the Member States and their knowledge on collaborative platforms as well as on the collaborative economy. The Chi-square test was used to find a statistically significant difference among knowledge about collaborative platforms and collaborative economy among 28 Member States.

Gender	n (%)	Community	n (%)
Male	5850 (41.6)	Rural area	4455 (32.03)
Female	8200 (58.4)	Urban area	9453 (67.97)
Total	14050 (100)	Total	13908 (100)
Age	n (%)	Occupation	n (%)
15 – 24	840 (6.0)	Self-employed	1205 (8.6)
25 – 39	2190 (15.6)	Employees	4461 (31.8)
40 – 54	3627 (25.8)	Manual workers	886 (6.3)
55 +	7393 (52.6)	Not Working	7458 (53.2)
Total	14050 (100)	Total	14010 (100)

*Table 1: Demographic Characteristics of the Respondents in the 438 Survey
(Source: authors)*

In total, there were 14050 respondents in the Flash Eurobarometer 438, and there were no requirements to answer all questions. Among all the respondents, there were 41.6% male and 58.4% female respondents.

All the respondents were divided into four age groups, 6.0% of them were between 15 and 24 years old, 15.6% respondents were between 35 and 39 years old, 25.8% of them were old between 40 and 54 years, and the majority, 52.6%, was 55 years old and more. According to the community type, 32.03% of respondents were from the rural area, while 67.97% were from the urban area. In total, 14010 respondents chose the occupation they belong to, and the majority of them, 53.2%, were not working, while 8.6% of them were self-employed.

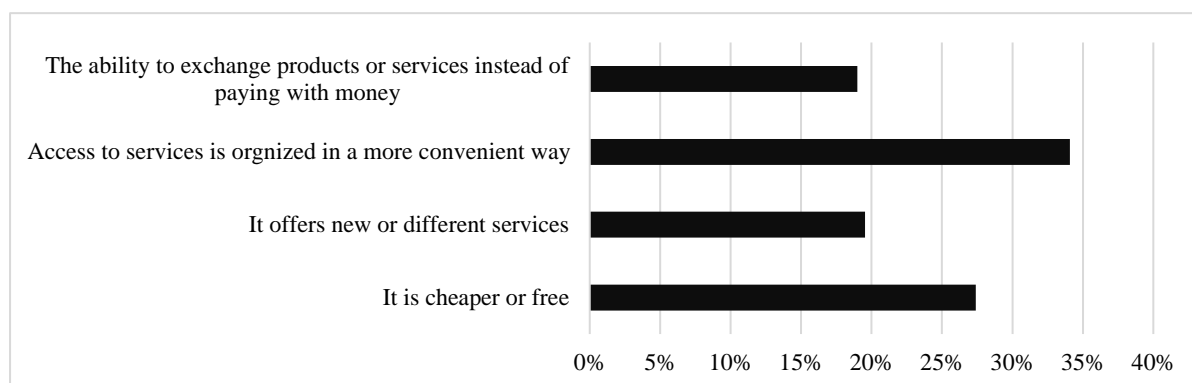


Figure 1: Main Benefits of Collaborative Platforms for its Users in the 438 Survey
(Source: Authors)

The respondents chose between four main benefits of using collaborative platforms. Only 7426 respondents chose one of four benefits, while others did not answer. The 34.07% of respondents said it was access to services due to it being organized more conveniently. Also, 27.40% of the respondents said it was cheap or free, while 19.54% agreed that the ability to exchange products or services instead of paying them for money is also a benefit. As the last benefit of collaborative platforms for its users, 18.99% said it offers new or different services.

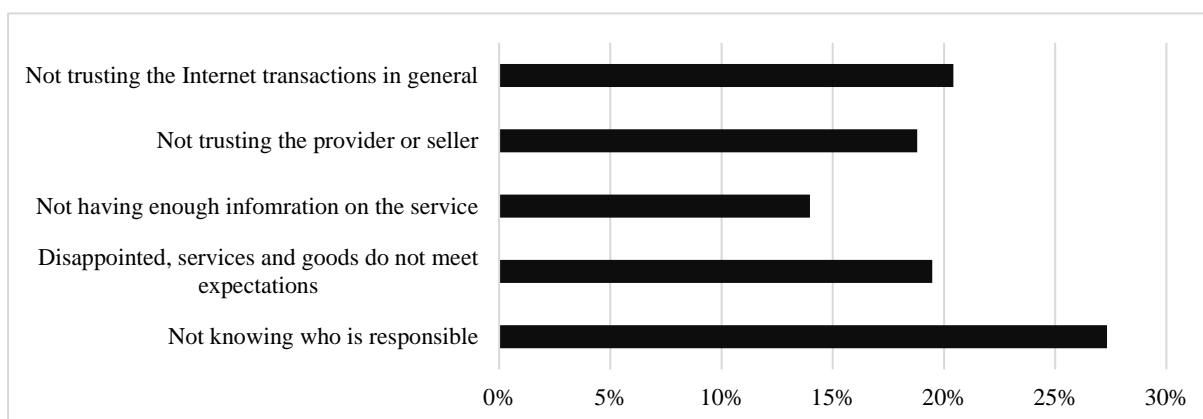


Figure 2: Main Problems of Collaborative Platforms for its Users in the 438 Survey
(Source: Authors)

The respondents chose between five main problems for users of collaborative platforms. Only 8620 respondents chose one of five problems, while others did not answer. 27.33% of respondents said that they do not know who is responsible when the problem arises. Besides, 20.42% of the respondents said that they do not trust the internet transactions in general, 19.48% are disappointed because the services and goods do not meet the expectations, and 18.79% do not trust the provider or seller. As the last problem of collaborative platforms for its users, 13.98% do not have enough information on the services provided.

Gender	n (%)	Community	n (%)
Male	11671 (44.0)	Rural area	8230 (31.26)
Female	14873 (56.0)	Urban area	18097 (68.94)
Total	26544 (100)	Total	26327 (100)
Age	n (%)	Occupation	n (%)
15 – 24	1627 (6.1)	Self-employed	2609 (9.86)
25 – 39	4217 (15.9)	Employees	9077 (34.32)
40 – 54	6800 (25.6)	Manual workers	1689 (6.39)
55 +	13900 (52.4)	Not Working	13072 (49.43)
Total	26544 (100)	Total	26447 (100)

Table 2: Demographic Characteristics of the Respondents in the 467 Survey
(Source: Authors)

There were 26544 respondents in the Flash Eurobarometer 467, and there were no requirements to answer all the questions. From all the respondents, 44% were male and 56% were female respondents. All the respondents were divided into four age groups. 6.1% were between 15 and 24 years old, while 15.9% respondents were between 35 and 39 years old. Also, 25.6% were between 40 and 54 years of age, and the majority, 52.4%, was 55 years old or older. According to the community type, 31.26% of respondents were from the rural area, while 68.94% were from the urban area. In total, 26447 respondents chose the occupation they belonged to, and the majority of them, 49.43%, were not working, while 9.86% of them were self-employed.

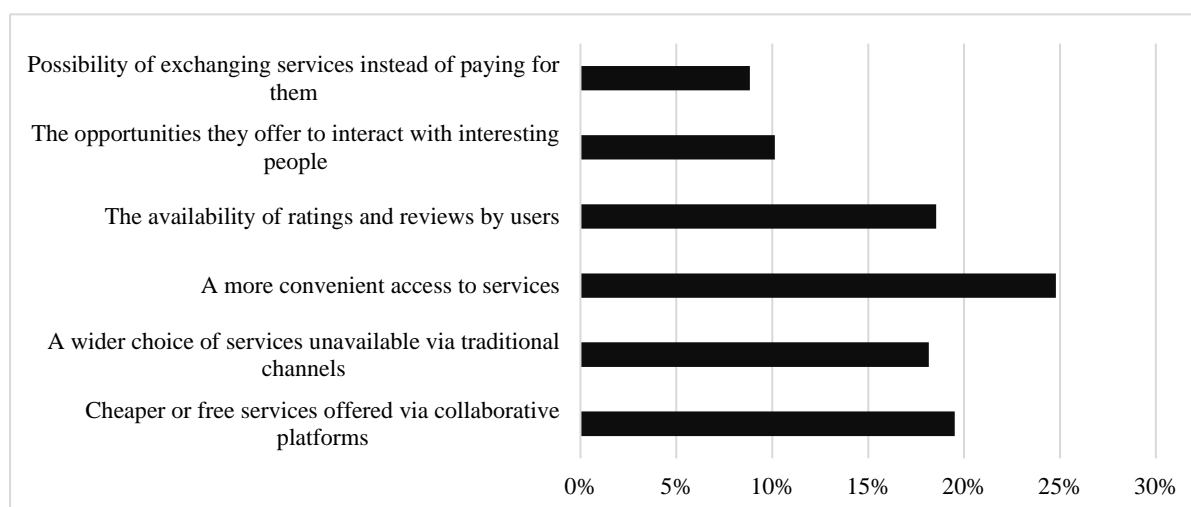


Figure 3: Advantages of Using Collaborative Platforms Compared to Traditional Channels in the 467 Survey
(Source: Authors)

Respondents could choose between six advantages of using collaborative platforms compared to traditional channels. Only 15763 respondents chose one of the six advantages, while others did not answer. Most respondents, 24.79%, think that using collaborative platforms allows for a more convenient access to services, while 19.52% think that cheaper or free services offered via collaborative platforms are also advantageous. Moreover, 18.55% believe that the availability of ratings and user reviews are also an advantage. 18.16% of respondents see a wider choice of services unavailable via traditional channels as an advantage. Only 8.84% of respondents see the possibility of exchanging services instead of paying for them as an advantage of the collaborative platforms.

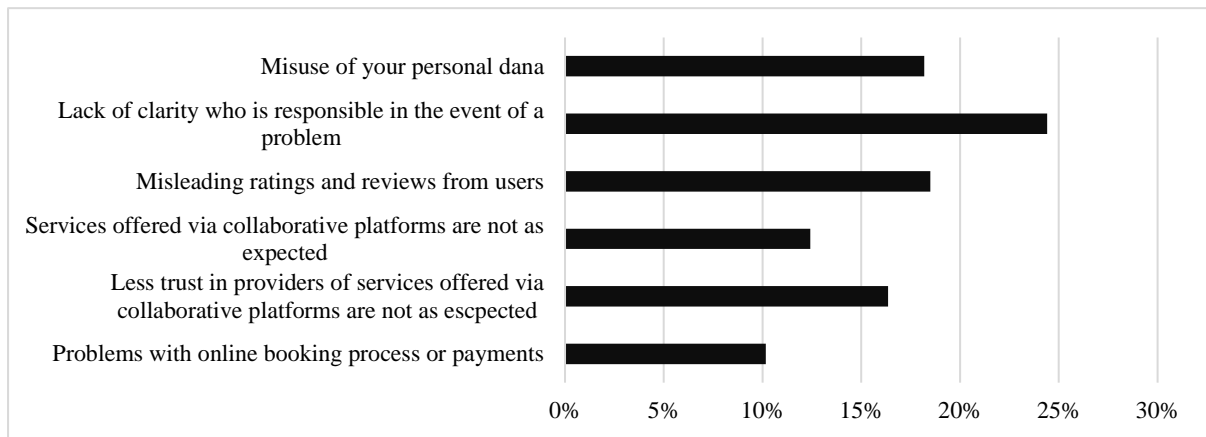


Figure 4: Disadvantages of Using Collaborative Platforms Compared to Traditional Channels in the 467 Survey
(Source: Authors)

Six disadvantages of using collaborative platforms compared to traditional channels were listed. Only 10023 respondents chose one of six disadvantages, while others did not answer. As the main disadvantage of collaborative platforms, 24.40% of respondents said that there is a lack of clarity about who is responsible in the event of a problem. In comparison, 18.49% of the respondents see misleading ratings and reviews from users as a disadvantage. Furthermore, 18.19% of respondents think that misuse of personal data is a disadvantage, while 16.35% of them see less trust in the providers of services offered via collaborative platforms as a disadvantage. Besides, 12.41% think that services offered via collaborative platforms are not as expected. Only 10.16% of respondents see problems with the online booking process or payments as a disadvantage of the collaborative platforms.

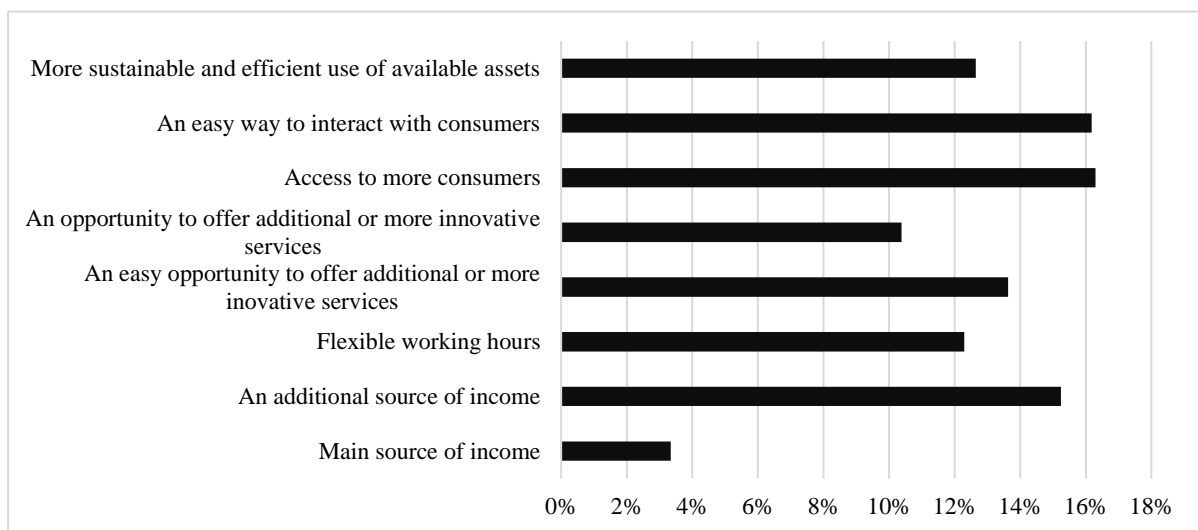


Figure 5: Reasons for Offering Services via Collaborative Platforms in the 467 Survey
(Source: Authors)

Eight reasons for offering services via collaborative platforms were listed. Only 3045 respondents chose one of eight reasons, while others did not answer. Three out of eight reasons are chosen more often. 16.29%, 18.18%, and 15.24% refer to access to more consumers, an easy way to interact with consumers, and an additional income source, respectively, are the three most often selected reasons. As to other reasons why people offer their services via collaborative platforms, the following results were found.

An easy opportunity to offer additional or more innovative services, more sustainable and efficient use of available assets, flexible working hours and an opportunity to offer additional or more innovative services with 13.63%, 12.65%, 12.30%, and 10.38%, respectively. Finally, only 3.34% of respondents chose the primary source of income as the reason for offering services via collaborative platforms.

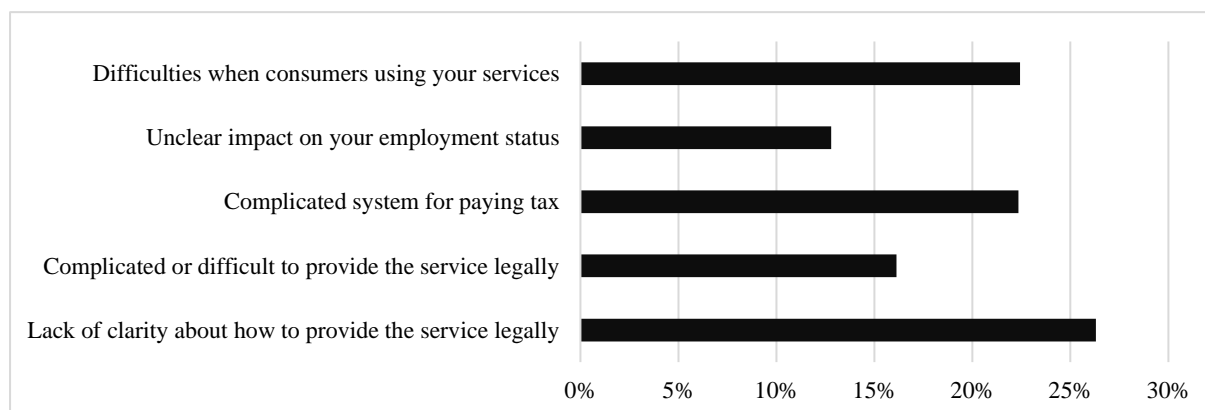


Figure 6: Main Problems Encountered When Providing Services Via a Collaborative Platform in the 467 Survey
(Source: Authors)

When providing services via a collaborative platform, there were five problems listed. Only 1110 respondents chose one of five problems, while others did not answer. Most respondents, 26.31%, chose a lack of clarity about providing the service legally as the main problem they encountered. Furthermore, 22.43% chose difficulties with consumers using their services, and 22.34% chose a complicated system for paying taxes. Only 16.13% and 12.79% of respondents say that it is complicated or difficult to provide the service legally, and it has an unclear impact on their employment status, respectively.

4. RESULTS

Authors have used the Chi-square test to find statistically significant differences between the Member States and their knowledge of collaborative platforms and collaborative economies. The following figures graphically show differences, while the Chi-square test results are stated in the text below each figure.

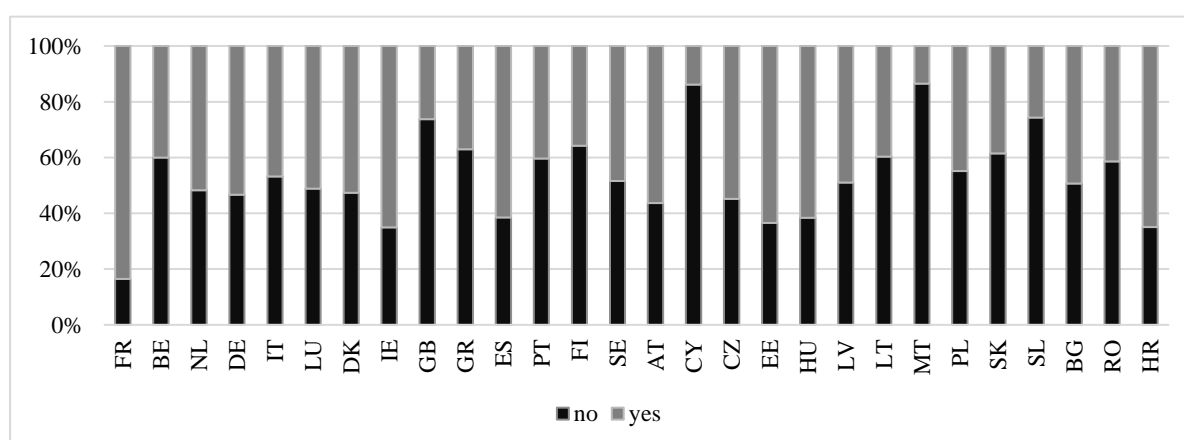


Figure 7: Experience Regarding Collaborative Platforms by the Country of the Respondents in Survey 438
(Source: Authors)

Results of Chi-square test for the experience regarding collaborative platforms by the country of the respondents show statistically significant difference ($p < 0.001$, $df = 27$, $\chi^2 = 126.137$). The mean difference is significant at 5%. As Figure 7 shows, in some countries such as Belgium, the United Kingdom, Greece, Portugal, Finland, Cyprus, Lithuania, Malta, Slovakia, and Slovenia, more than 60% of respondents have never heard of these platforms. On the other hand, 60% of respondents from countries such as France, Ireland, Spain, Estonia, Hungary, and Croatia have heard about these platforms.

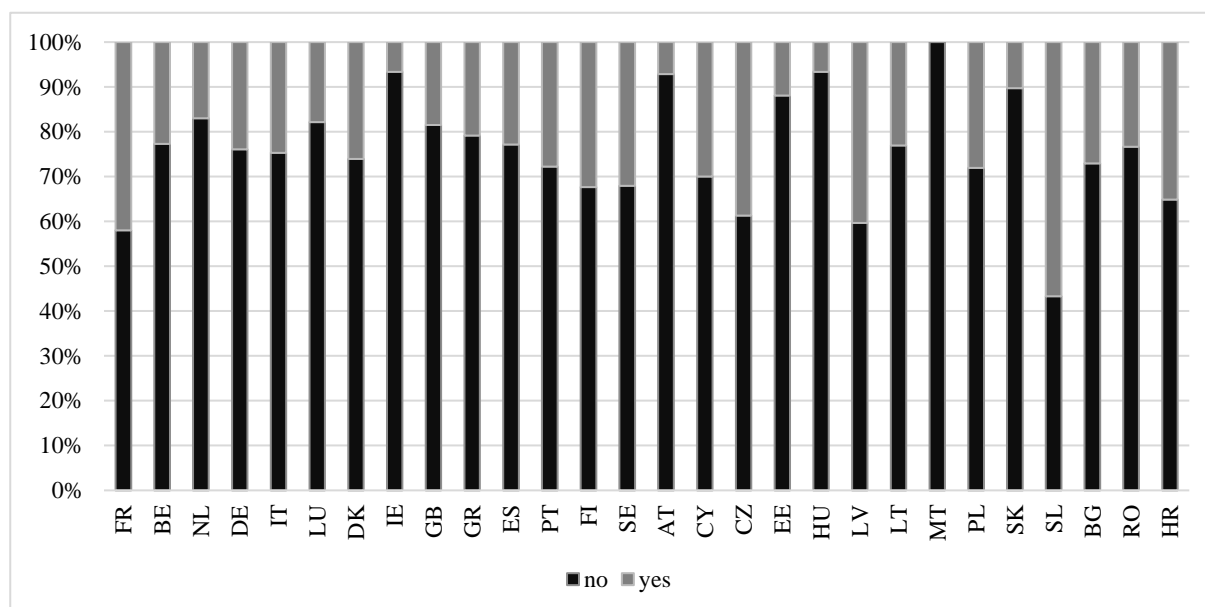


Figure 8: Providing Services on Collaborative Platforms by the Country of the Respondents in Survey 438
(Source: Authors)

The Chi-square test results for providing services on collaborative platforms by the respondents' country show a statistically significant difference ($p < 0.001$, $df = 27$, $\chi^2 = 1295.992$). The mean difference is significant at 5%. As Figure 8 shows, no country in the EU has more than 50% of their respondents who provided their services on collaborative platforms. Also, some differences between respondents in some countries are minimal such as in France, Latvia, or Croatia. On the other side, there are countries where these differences between respondents are vast, such as Ireland, Austria, Estonia, Hungary, Slovakia, Belgium, United Kingdom, Austria, or Cyprus. Respondents from Malta 100% agreed that they have never provided their services on collaborative platforms. According to Figure 8 and test results, the first hypothesis cannot be rejected, and there is a statistically significant difference between respondents from the EU Member States and their experience with collaborative platforms.

Figure following on the next page

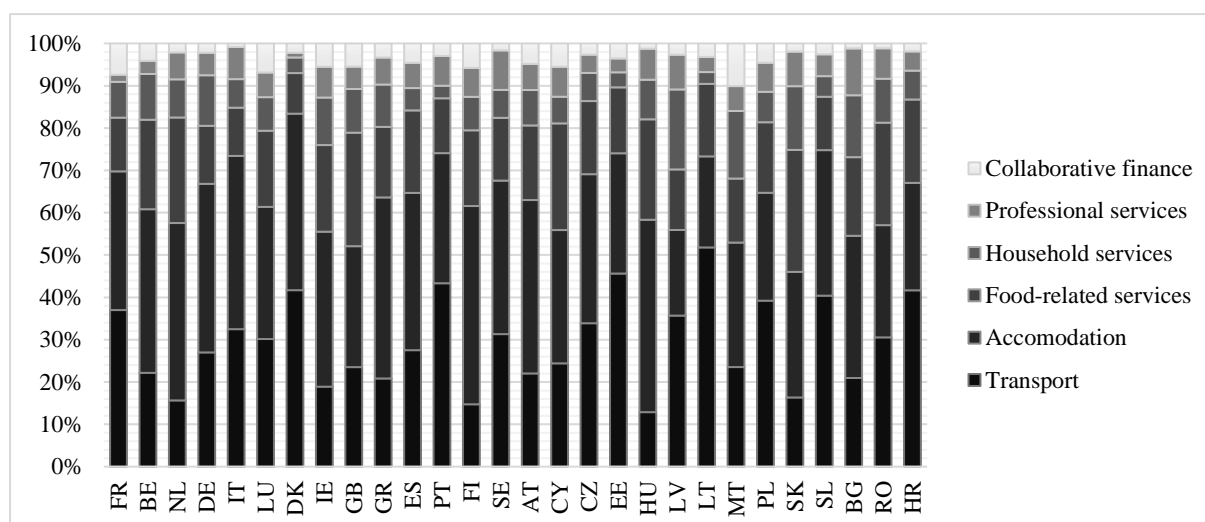


Figure 9: Using a Service Offered Via a Collaborative Platform in Different Sectors by the Respondents' Country in Survey 467
(Source: Authors)

To find the differences in six sectors where collaborative platforms are used, the authors conducted a Chi-square test for each sector. Results of the Chi-square test for using a service offered via the collaborative platform in transportation (e. g. car sharing) by the country of the respondents show a statistically significant difference ($p < 0.001$, $df = 27$, $\chi^2 = 593.759$). The mean difference is significant at 5%. As Figure 9 shows, six countries in the EU have 40% or more respondents using a service offered via the collaborative platform in transportation. These countries are Denmark, Portugal, Estonia, Lithuania, Slovenia, and Croatia, with 42%, 43%, 46%, 52%, 40%, and 42%. On the other side, there are five countries with less than 20% of respondents using services offered via a collaborative platform in transportation. Countries with the least number of respondents are the Netherlands, Ireland, Finland, Hungary, and Slovakia, with 16%, 19%, 15%, 13%, and 16%. Results of the Chi-square test for using a service offered via the collaborative platform in accommodation (e. g. renting an apartment) by the country of the respondents show a statistically significant difference ($p < 0.001$, $df = 27$, $\chi^2 = 311.624$). As Figure 9 shows, eight countries in the EU have 40% or more respondents using a service offered via the collaborative platform in accommodation. These countries are the Netherlands, Germany, Italy, Denmark, Greece, Finland, Austria, and Hungary, with 42%, 40%, 41%, 42%, 43%, 47%, 41%, and 45%. On the other side, there are only four countries with 25% or fewer respondents using service offered via a collaborative platform in accommodation. Countries with the least number of respondents are Latvia, Lithuania, Poland, and Croatia, with 20%, 22%, 25%, and 25%. Results of the Chi-square test for using a service offered via the collaborative platform in food-related services (e. g. home delivery, food sharing) by the country of the respondents show a statistically significant difference ($p < 0.001$, $df = 27$, $\chi^2 = 239.293$). The mean difference is significant at 5%. As the Figure 9 shows, four countries in the EU have 25% or more respondents who are using a service offered via the collaborative platform in food-related services, and these countries are the Netherlands, United Kingdom, Cyprus, and Slovakia with 25%, 27%, 25%, and 29%, respectively. On the other side, there are nine countries with 15% or fewer respondents using service offered via a collaborative platform in food-related services. Countries with the least number of respondents are France, Germany, Italy, Denmark, Portugal, Sweden, Latvia, Malta, and Slovenia with 13%, 14%, 11%, 10%, 13%, 15%, 14%, 15% and 13% of respondents, respectively. Results of the Chi-square test for using a service offered via the collaborative platform in household services (e. g. gardening, repairs) by the country of the respondents show a statistically significant difference ($p < 0.001$,

df = 27, $\chi^2 = 198.325$). The mean difference is significant at 5%. As the Figure 9 shows, four countries in the EU have 12% or more respondents who are using a service offered via the collaborative platform in household services, and these countries are Latvia, Malta, Slovakia, and Bulgaria with 19%, 16%, 15%, and 15%, respectively. On the other side, four countries with 4% or fewer respondents are using services offered via a collaborative platform in household services. Countries with the least number of respondents are Denmark, Portugal, Estonia, and Lithuania, with 4%, 3%, 4%, and 3%, respectively. Results of the Chi-square test for using a service offered via the collaborative platform in professional services (e. g. IT services, accounting) by the country of the respondents show a statistically significant difference ($p < 0.001$, df = 27, $\chi^2 = 81.071$). The mean difference is significant at 5%. As the Figure 9 shows, four countries in the EU have 8% or more respondents who are using a service offered via the collaborative platform in of professional services, and these countries are Sweden, Latvia, Slovakia, and Bulgaria with 9%, 8%, 8%, and 11%, respectively. On the other side, only two countries with 2% or less are using service offered via a collaborative platform in professional services. Countries with the least number of respondents are France and Denmark, with 2% and 1% of respondents, respectively. Results of the Chi-square test for using a service offered via the collaborative platform in collaborative finance (e. g. peer-to-peer lending or crowdfunding) by the country of the respondents show a statistically significant difference ($p < 0.001$, df = 27, $\chi^2 = 136.436$). The mean difference is significant at 5%. As Figure 9 shows, six countries in the EU have 6% or more respondents who are using a service offered via the collaborative platform in collaborative finance. These countries are France, Luxembourg, Ireland, Finland, Cyprus and Malta with 7%, 7%, 6%, 6%, 6%, and 10% respectively. On the other side, there are ten countries with 2% or fewer respondents using a collaborative platform in collaborative finance. Countries with the least number of respondents are the Netherlands, Germany, Italy, Denmark, Sweden, Hungary, Slovakia, Bulgaria, Romania, and Croatia with 2%, 2%, 1%, 2%, 2%, 1%, 2%, 1%, 1% and 2% of respondents, respectively. According to Figure 9 and test results, the second hypothesis cannot be rejected, and there is a statistically significant difference between respondents from the EU Member States and their use of services offered via a collaborative platform in various sectors.

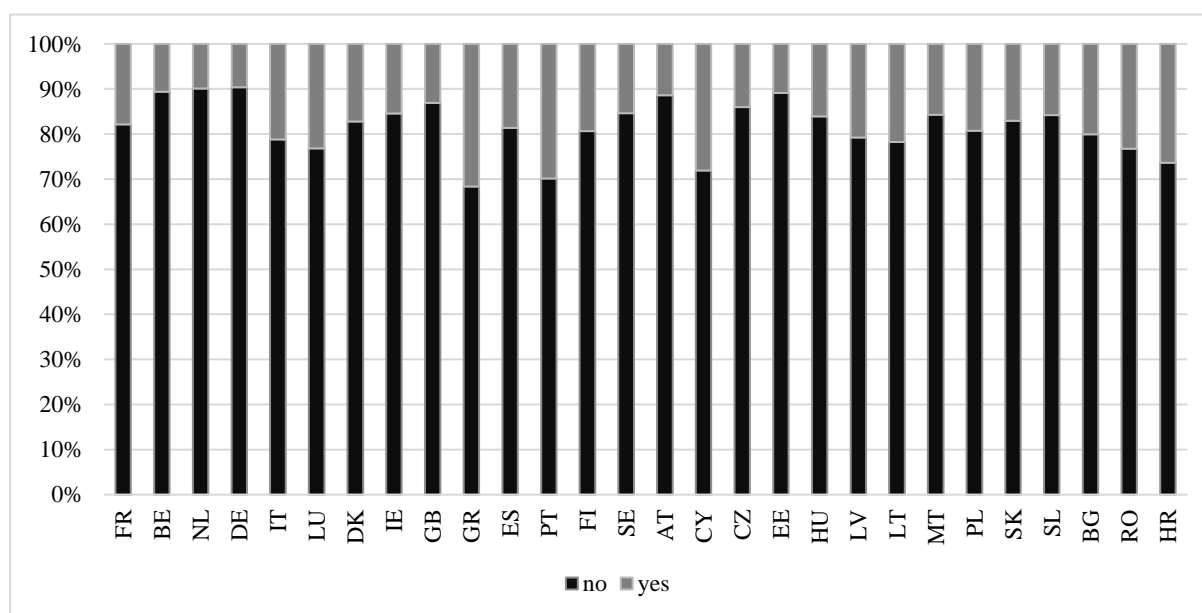


Figure 10: Considering Offering Services via Collaborative Platforms by the Country of the Respondents in Survey 467
(Source: Authors)

The Chi-square test results for consideration to offer services occasionally as a private individual via collaborative platforms by the country of the respondents show a statistically significant difference ($p < 0.001$, $df = 27$, $\chi^2 = 543.131$). The mean difference is significant at 5%. As Figure 10 shows, ten countries in the EU have 6% or more respondents considering offering their services occasionally as a private individual via collaborative platforms. These countries are Italy, Luxembourg, Greece, Portugal, Cyprus, Latvia, Lithuania, Bulgaria, Romania and Croatia with 21%, 23%, 32%, 30%, 28%, 21%, 22%, 20%, 23%, and 26% respectively. According to Figure 10 and test results, the third hypothesis cannot be rejected, and there is a statistically significant difference between respondents from the EU Member States and their consideration of offering services via collaborative platforms.

5. CONCLUSION

Given that the collaborative economy itself is a relatively new business concept, a relatively small number of respondents are familiar with the term. Furthermore, a large number of respondents do not consider switching their own business to collaborative business platforms. However, from the respondents who use collaborative business platforms, the most common are those who used them in transport, accommodation, and food-related services, and the least in household services, professional services, and collaborative finance. The most famous examples of everyday use of these platforms are Uber, Booking, Wolt, Glovo.hr, and others. The use of these platforms in all other industries is expected to increase in the years to come. None of the authors' hypotheses are not rejected because all tests indicate statistically significant differences between respondents from EU member states and their perception/use of collaborative platforms or collaborative economy. The authors recommend continuing the research, in terms of more detailed analyzes by the EU Member States, with more concrete examples of collaborative platform services.

LITERATURE:

1. Akgüç, M., Beblavý, M., Cirule, E., & Kilhoffer, Z. (2018). Industrial Relations and Social Dialogue in the Age of Collaborative Economy (IRSDACE). National Report FRANCE
2. Avram, G., Choi, J. H. J., De Paoli, S., Light, A., Lyle, P., & Teli, M. (2017, June). Collaborative economies: From sharing to caring. In *Proceedings of the 8th International Conference on Communities and Technologies* (pp. 305-307).
3. Brozović, V., Hrašić, F., Meštrović, L., Bilić, H., Naletina, D., & Petljak, K. (2019). Ekonomija dijeljenja: Poslovni model budućnosti?. *Zbornik Ekonomskog Fakulteta u Zagrebu*, 17(1), 33-61.
4. Dredge, D., & Gyimóthy, S. (2015). The collaborative economy and tourism: Critical perspectives, questionable claims and silenced voices. *Tourism recreation research*, 40(3), 286-302.
5. Dreyer, B., Lüdeke-Freund, F., Hamann, R., & Facer, K. (2017). Upsides and downsides of the sharing economy: Collaborative consumption business models' stakeholder value impacts and their relationship to context. *Technological Forecasting and Social Change*, 125, 87-104.
6. European Commission (2016). The Collaborative Economy. Collaborative economy - factsheet. Retrieved 3.7.2020. from <http://ec.europa.eu/DocsRoom/documents/16955/attachments/1/translations>
7. European Commission (2020). Collaborative Economy. Retrieved 3.7.2020 from https://ec.europa.eu/growth/single-market/services/collaborative-economy_en

8. European Commission, Brussels DG Communication COMM A1 'Strategy, Corporate Communication Actions and Eurobarometer' Unit (2016). Flash Eurobarometer 438 (The Use of Collaborative Platforms). GESIS Datenarchiv, Köln. ZA6776 Datenfile Version 1.0.0, <https://doi.org/10.4232/1.12639>.
9. European Commission, Brussels DG Communication COMM A3 'Media Monitoring, Media Analysis and Eurobarometer' Unit (2018). Flash Eurobarometer 467 (The Use of the Collaborative Economy). GESIS Datenarchiv, Köln. ZA6937 Datenfile Version 1.0.0, <https://doi.org/10.4232/1.13159>.
10. Inglese, M. (2019). *Regulating the Collaborative Economy in the European Union Digital Single Market*. Springer International Publishing.
11. Owyang, J., Tran, C., & Silva, C. (2013). *The collaborative economy*. Altimeter, United States.
12. Petropoulos, G. (2017). *An economic review of the collaborative economy* (No. 2017/5). Bruegel Policy Contribution.
13. Selloni, D. (2017). *New forms of economies: sharing economy, collaborative consumption, peer-to-peer economy*. In *CoDesign for Public-Interest Services* (pp. 15-26). Springer, Cham.
14. Stokes, K., Clarence, E., Anderson, L., & Rinne, A. (2014). *Making sense of the UK collaborative economy* (Vol. 49). London: Nesta.

FINANCIAL ANALYSIS OF Groupon PLATFORM: SATURATION AT INDUSTRY OF COUPON MARKET

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ABSTRACT

The Groupon platform was created as an entrepreneurial project that brought together customers online in an effort to secure discount prices on group sales. The idea was unique and Groupon was one of the fastest growing unicorn projects in the platform model. Coupon sales reached their peak and the number of service users began to fall sharply. The platform expanded technological support to the existing business model, but did not change the existing business management framework. The aim of this paper is to analyse the business practice of the platform and determine the current financial stability. The paper analyses the trends of financial parameters in the context of the analysis of the trend in the number of users. The results of the analysis are a valuable basis for analysing the business practices of similar online sales models.

Keywords: *gross profit, Groupon, platform economy, zero marginal cost*

1. INTRODUCTION

Groupon was founded in 2008, and the founders' basic idea was to build a group demand model for products sold at discounted prices. The combination of these two terms gave rise to the name of the platform "group" and "coupon". Groupon's name originated from this idea that the "the group deal is on". Today, Groupon has eliminated its namesake technique, instead of operating under a traditional model where buyers receive the deal they pay for, regardless of others' behaviour (Maclean et.al. 2017). According to the business model, it belongs to the platform economy (Parker et.al 2016; Moazed, Johnson 2016), and uses the effects of zero marginal cost (Rifkin 2015; Lozić 2019a). Historically, Groupon emerged from a handful of so-called online 'deal' sites. These sites have temporary special offers on products or services, colloquially referred to as 'deals'. These deals differ from traditional coupons in a number of respects. Unlike traditional coupons that may go out consistently and repetitively, 'deals' are relatively short-term and ephemeral (Maclean et.al. 2017). Li et.al. (2014) defines Groupon as a platform in the online-to-offline (O2O) model that directs customers acquired online toward online shopping. The platform takes advantage of the Web 2.0 interface and emerges as a social intermediary between supply and demand by offering a group discount to price-sensitive costumers (Lee et.al. 2015). Groupon brings coupon deals online where local merchants have a chance to improve their profitability using a combination of price discrimination service to attract customers with lower valuation, promotional service to target different market segments, and prepayment service to start or expand firms' operations (Arabshahi 2011). Groupon is a unique e-commerce platform that sells products and services at a discounted price.

It provides businesses with an avenue to reach price-sensitive customers who may not otherwise be willing to buy their products (Maclean et.al. 2017). What attracts the customers to buy deals is the possibility that they can purchase high quality products or services with a bargain price. Nevertheless, the quality of a deal is usually unknown to the customers (Wang et.al. 2016). Merchants benefit from Groupon transactions because of a large influx of customers in the short-term and repeat customers or referrals in the long-term. Groupon assures customers of the firms' product or service quality by promising refund of any online purchases otherwise (Ong et.al. 2017). According to the Groupon pricing model for products and services, there are three basic models (Maclean et.al. 2017): a) a "partisan price" model that serves only regular customers; b) the "quotable pricing" model which serves half of the regular users and half of the Groupon users; c) the "prudent pricing" model, which is used by regular and Groupon users, but in different parts of the market. Groupon differs from Amazon and similar platforms in the direction of impact on customers. While Amazon and similar platforms direct customers toward online shopping, Groupon directs them toward offline shopping. Since the launch of Groupon in 2008, the U.S. daily deals industry has experienced 332% annual average growth over five years, reaching \$3 billion in sales by 2013 (Li et.al. 2017). However, after retailers' euphoria of using such a service, some crucial drawbacks have been revealed. Not only are Groupon commission rates incredibly high for retailers (up to 50% of the discounted price) even for an ironically so-called price discrimination service (Ong et.al. 2017). However, Dholakia (2011) warns of the unsustainability of the model. Retailers very quickly experience disappointment with the sales model and are reluctant to develop the model. The frustration of retailers stems from the lack of business repetition and the extreme price sensitivity of customers who use offers. The situation created with the coupon sales model was very similar to the online sales model developed by the companies before the dot.com burst. The model worked until the moment corporations decided to launch their own online sales models. This paper will analyse the trend of financial performance indicators and compare them with the trend in the number of users. The corporation is currently on its way to bankruptcy, so financial analysis will be the basis for analyses by other corporations that are in the online sales industry.

2. LITERATURE REVIEW

Groupon, in its early beginnings, was declared the fastest growing unicorn corporation thus attracting the attention of a large number of scientists. Jing and Xie (2011) analyse group purchasing models and conclude that it is most effective in the central phase of the product life cycle. Subramanian (2012) explores a model of recommending customers who have already purchased a product and their impact on sales volume. A recommendation is useful if other customers apply it immediately, but it becomes useless if the purchase decision is delayed. Bayers et al. (2012) investigate the association between sales on the Groupon platform and the ratings they receive on Yelp. The survey results showed a drop in prices at Yelp with an increase in sales at Groupon. Song et.al. (2012) analyse group sales models in Korea and conclude that group purchases hinder inexperienced customers, that is, they would buy more if they were not hindered by group purchases. Hu et.al (2013) analyses purchases over two periods. In the second period, customers can learn the experiences of customers from the first period, which has a positive effect on sales volume. Linag et.al (2014) investigate the impact of product information on sales volume and prove that sales volume increases in proportion to the increase in product information. Edelman et al. (2014) demonstrates how the group purchase model suits smaller companies or those with low marginal costs. The conclusion coincides with the conclusions of other scientists that group buying is more suitable for smaller companies and sales in local markets. Suraswadi et al. (2014) explores models of the group purchase model with strategic buyers who immediately achieve fixed prices and leave the possibility of selling at discount prices.

Li et.al (2015) investigate the impact and effects of group sales on SMEs. Zheng and Guo (2016) investigate customer loyalty to restaurants in group sales in the local area. Spell et al. (2017) explore the Flux operational program that should facilitate business operations on the platform using machine learning. Lee et al. (2017) investigate the impact of word-of-mouth on platform sales results. The results show that sales increase with the growth of recommendations on the part of customers and the ability to learn on the part of sellers. Likewise, Li et.al. (2017) demonstrate that competition within the platform is more important for platform success than impacts coming from outside the platform ecosystem. Wang et al. (2018) analyse the game-theoretical social learning framework using external variables taken from Yelp. Adaya et.al. (2018) investigates the impact of flash-sales on the motivation of restaurant managers in using this sales model on the platform. Chang (2018) explores the results of affective customer loyalty and concludes that they are a key factor in customer loyalty. Research continues on the results of research by Wang et.al (2016) that prove the importance of loyalty in online group shopping. Chang (2018) expands the research and proves that calculative commitment has a negligible impact on customer loyalty relative to affective commitment.

3. METHODOLOGY AND RESEARCH QUESTIONS

The research in this paper is focused on the analysis of the business performance of the Groupon platform. The survey will use data from the Annual Report Corporation in recent years. The analysis of the selected financial parameters will be compared with the trend analysis of the number of users in order to be able to draw conclusions about the business efficiency of the platform. Groupon operates in a platform economy model, so financial analysis will focus on revenue, cost of revenue and gross profit, as well as on operating profit and net profit.

In the context of researching the business efficiency of the platform, the research will focus on answering two research questions:

- RQ₁ - What is the financial stability of the platform in the context of the results of the analysis of selected financial parameters?

The results of previous research indicated a strong correlation between business performance and sales in the coupon model in the local market (Maclean et.al. 2017; Edelman et.al. 2014). The model has proven to be more effective for SMEs (Lee et.al. 2015) as well as for local restaurants (Zengh and Guo 2017). But the question is whether that can be enough for a globally stable platform business.

- RQ₂ - What is the trend in the number of users using the platform's services in the context of business efficiency?

In maintaining the network effect and stability of the platform, oral presentation on the quality of the interaction process on the Subramanian platform (2012) is very important, the ratings that users leave on Yelp, but also on other networks (Bayers et.al. 2012). Lee et al. (2015) points to the importance of word-of-mouth on the business result of the platform, and Chang (2018) proves that platform loyalty most significantly affects the trend in the number of users.

The results of the research are presented in the Discussion and conclusion section.

4. DATA ANALYSIS

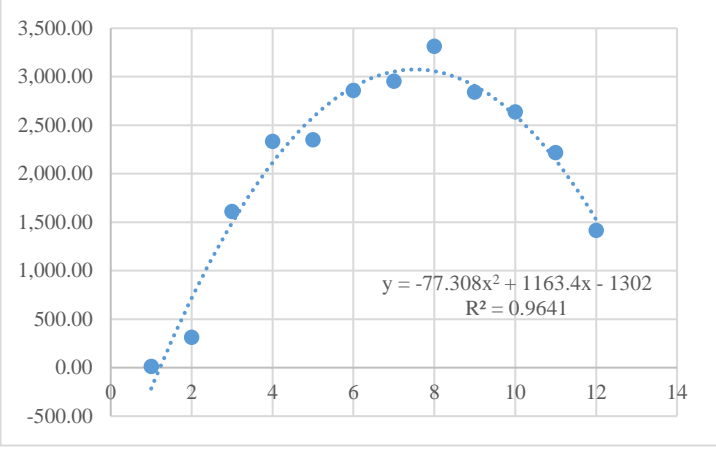
The data analysis is divided into two parts. The first part will analyse the selected financial parameters from the profit and loss account, and the second will analyse the trend in the number of users.

4.1. Financial analysis

Since the launch of the platform in 2008, revenues have grown sharply, and in 2010 increased by 2052% compared to the previous period. Total revenues continued to grow until 2017, after which they continued to fall. In the last analysed period, they recorded the largest decline of 36.1% and were smaller than in 2011. The regression curve of the direction of total revenues has a negative direction coefficient, and the analysis by the index method indicates a negative trend of total platform revenues. The analysis of the results is shown in Table 1.

Table 1: Total revenue 2008-2020 (\$; 000)

	Revenues	
2008	0,01	
2009	14,54	-
2010	312,94	2052,3%
2011	1.610,43	414,6%
2012	2.334,47	45,0%
2013	2.352,16	0,8%
2014	2.858,65	21,5%
2015	2.954,82	3,4%
2016	3.313,62	12,1%
2017	2.843,88	-14,2%
2018	2.636,75	-7,3%
2019	2.218,92	-15,8%
2020	1.416,87	-36,1%



Source: Annual Report; Own illustration

Table 2: Financial items (\$; 000)

	2016	2017	2018	2019	2020
Total revenue	3.013.615	2.843.877	2.636.746	2.218.915	1.416.868
Total cost of revenue	1.732.962	1.510.016	1.316.145	1.032.786	739.574
Gross profit	1.280.653	1.333.861	1.320.601	1.186.129	677.294
%	42,5%	46,9%	50,1%	53,5%	47,8%
Income (loss) from operations	-100.238	29.435	54.039	39.798	-277.098
Net income (loss)	-194.587	14.040	-11.079	-22.377	-287.931

Source: Annual Report; Own illustration

Revenue analysis indicates two different business periods. The period in which revenues continued to grow, and the period after 2016 in which revenues continued to decline. In the context of the first research question, the period in which revenues are continuously declining will be analysed. In the period between 2016 and 2020, total revenues fell by 53%, while the cost of revenue fell by 57%. The platform used the effects of zero marginal cost, so the cost of revenue fell more slowly than revenue, and the share of gross profit increased. The sharp decline in revenue in the last analysed period of 36.1%, directly affected the decline in gross profit compared to the previous period. In the last analysed period, income from operation and net profit were realized. For both financial parameters, these are the largest losses in the analysed period. For some future research, the question remains to what extent these losses were affected by the Covid-19 pandemic, and to what extent they are the result of the overall business result. The results of the research are shown in Table 2.

Table 3: Regression analysis of financial items 2016-2020

	Regression equation	R²	s
Revenue	$y = -441,85x + 3369,7$	0,9523	-17,77
Cost of revenue	$y = -246401x + 2E+06$	0,9927	-19,46
Gross profit	$y = -135445x + 1E+06$	0,6029	-11,68
Total operating expenses	$y = -101109x + 1E+06$	0,9234	-8,35

Source: Own illustration

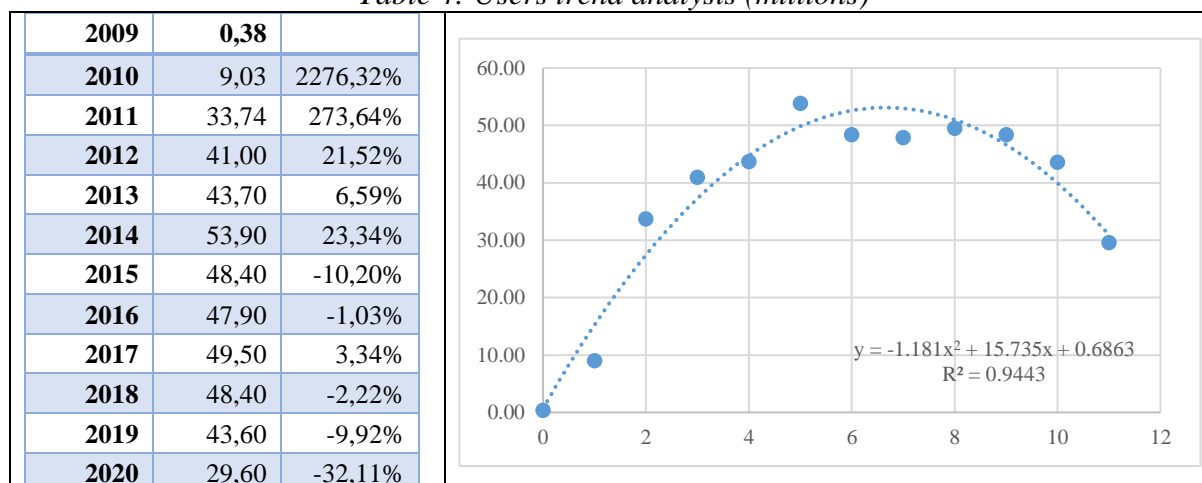
The results of the financial analysis were confirmed by regression analysis of the selected financial parameters. The largest average decrease of 19.46% was achieved by cost of revenue, with a coefficient of determination of $R^2 = 0.9927$. In the analysed period, total revenues fell by an average of 17.77% per year, with a coefficient of determination of $R^2 = 0.9523$. The cost of revenue fell relatively faster than the relative decline in total revenue which was reflected in gross profit growth. The average annual decline in gross profit was 11.86%, but the results cannot be interpreted precisely because the coefficient of determination $R^2 = 0.6029$, ie less than 0.8. The decline in revenue had a direct impact on the reduction and reduction of operating expenses, but total operating expenses fell less than the decline in total revenues. The average decrease in total operating costs was 8.35% with a coefficient of determination of $R^2 = 0.9234$. The continuous decline in total revenues directly affected changes in management models and cost reductions, and operating profit and net profit oscillated significantly in the analysed period. In the context of the first research question, it can be concluded that the financial stability of the platform has been brought into serious question. The results of the research are shown in Table 3.

4.2. User trend analysis

The trend in the number of users, for the most part, followed the trend in total revenues. The total number of users grew continuously until 2014, after which it continuously decreased. The continuous decline in the number of beneficiaries begins two years before the continuous decline in total revenues. The largest decrease in the number of users, as in revenue, was realized in the last analysed period and amounted to 32.11%. As with total revenues, the number of beneficiaries fell to the period before 2011. The regression equation of direction has a negative coefficient which indicates a declining trend in the number of users. The results of the descriptive statistical analysis showed that the mean value of the statistical set was 37.43 (mean = 37.43), with a slightly asymmetric distribution (skewness = -1.46173), which means that lower values prevail, i.e. the number of users decreases towards the end of the curve. The median is 43.65 million users and the MOD is 48.4 million users. In the context of the second research question, it can be concluded that the number of users is continuously declining, which has had a significant impact on revenue. In the context of existing business practices, a decline in the number of users will significantly jeopardize the business efficiency of the platform. The results of the analysis are shown in Figure 4.

Table following on the next page

Table 4: Users trend analysis (millions)



Source: Annual Report; Own illustration

Table 5: ANOVA analysis

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0,9720151							
R Square	0,9448134							
Adjusted R	0,9392947							
Standard Error	257,26706							
Observations	12							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	11331327,66	11331327,7	171,203	1,28974E-07			
Residual	10	661863,4003	66186,34					
Total	11	11993191,06						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	-186,3767	187,9231417	-0,9917708	0,3447	-605,095537	232,342169	-605,09554	232,34217
Users	60,346366	4,61205954	13,0844724	1,3E-07	50,07005677	70,6226749	50,0700568	70,622675

Source: Own illustration

The correlation analysis of total revenues and the trend in the number of users is shown in the ANOVA Table. The results of the analysis showed a strong correlation between total revenues and the trend in the number of users, i.e. the correlation was $|r| = 0.9720151$ with a coefficient of determination of $R^2 = 0.9392947$. Regression analysis showed a very significant relationship between the analysed variables, i.e. the significance was $F = 1.3E-07$. The amount of total revenue significantly depended on the trend in the number of users on the platform. The results of the analysis are shown in Table 5.

5. DISCUSSION AND CONCLUSION

The results of the research and analysis confirmed a strong correlation between the financial result of the business and the trend in the number of users. In the context of research questions, four fundamental factors have been identified that significantly affect the business performance of the platform:

- Revenues have been declining continuously in the last five years, and the decline in revenues of 36.1% in the last analysed period is the largest since the establishment of the platform.

- Gross profit grew slightly until the last analysed period, but this was a result of the effect of zero marginal cost and a slower decline in the cost of rhubarb than revenue decline.
- The number of beneficiaries began to decline significantly two years before the continuous decline in revenues.
- A significant correlation was found between the trend of the number of users and the amount of total revenues ($P = 1.3E-07$)

From the results of research and analysis, it can be clearly established that the financial stability of the platform is significantly compromised. Revenues continue to decline, while operating costs decline more slowly than revenue declines. The trend in the number of beneficiaries is negative, and the decline in the number of beneficiaries began two years before the start of the continuous decline in revenues. Test analysis with the ANOVA model proved a strong correlation between revenue and the number of users, and that the number of users significantly affects total revenues. Continuing the existing management model, the platform will not keep users on the platform or stabilize revenues. The concern expressed by Dholakia (2011) was fully justified as evidenced by the continuation of business in the existing managerial model. The problem of revenue stabilization comes from the sphere of customer satisfaction, not from the development of technological solutions to facilitate customer interaction. Such research has already been conducted by Wang et.al (2016) and Chang (2018) and proved hypotheses that customer satisfaction and personal experience is a fundamental parameter that attracts them back to the platform regardless of the level of technological equipment and the degree of artificial intelligence on the platform. The importance of personal experience and customer satisfaction in relation to the technological level of development of the platform was shown by Pandora radio, which lost most of the listeners who were not members of the basic music genre on the platform (Lozić 2020). Groupon has been actively developing artificial intelligence and machine learning in business process development, but after 2015 the number of users has been steadily declining which proves that changes in consumer preferences cannot be offset by the development of big data. The process of digitalization and digital transformation (Lozić 2019b) did not significantly affect the dissatisfaction of sellers, on the one hand, and the lack of interest of customers, on the other hand, the platform. The degree of development of technological solutions and artificial intelligence enables easier management of business processes, but it is not enough to ensure stable and long-term development of business operations.

LITERATURE:

1. Adaya, J.B.; Phelanb, K.V.; Ravichandranc, S. (2018). „Deals inside: examining restaurant operators’ motives when choosing whether to offer a flash-sale“. *Journal of foodservice business research*, Vol.21, No. 4, 440-461, <https://doi.org/10.1080/15378020.2018.1447740>.
2. Arabshahi, A. (2011). „Undressing groupon: An analysis of the groupon business model“. Working Paper, pp. 1–16.
3. Byers, J.W.; Mitzenmacher, M.; Zervas, G. (2012): „Daily deals: prediction, social diffusion and reputational ramifications“. Proceedings of the Fifth ACM International Conference on Web Search and Data Mining, Seattle, WA, USA, pp.543–552.
4. Chang, C.M (2018). „Determinants of customer loyalty in online group-buying: the self-regulation mechanism“. *The Service Industries Journal*, DOI:10.1080/02642069.2018.1537369.
5. Dholakia, U.M. (2011). „How Businesses Fare With Daily Deals: A Multi-Site Analysis of Groupon, LivingSocial, Opentable, Travelzoo and Buywithme Promotions“, Working Paper, Rice University.

6. Edelman, B.; Jaffe, S.; Kominers, S.D. (2014). „To Groupon or not to Groupon: The Profitability of Deep Discounts“. Working Paper, Harvard Business School.
7. Groupon Annual Report - <https://investor.groupon.com/financials/annual-reports-and-proxy-statements/default.aspx>.
8. Hu, M.; Shi, M.; Wu, J. (2013). „Simultaneous vs. sequential group-buying mechanisms“. *Management Science*, Vol. 59, No. 12, pp.2805–2822.
9. Jing, X.; Xie, J. (2011). „Group buying: a new mechanism for selling through social interactions“. *Management Science*, Vol. 57, No. 8, pp.1354–1372.
10. Lee, In.; Yoo, S.; Choi, M.J.; & Dal-Ho Shon, D.H. (2015). „Determinants of Social Shopping Performance in Small and Medium-Sized Social Merchants: Theories and Empirical Evidence.“ *Journal of Small Business Management*, 53:3, 735-747. DOI: 10.1111/jsbm.12084.
11. Li, H.; Shen, Q.; Bart, Y. (2017). „Local Market Characteristics and Online-to-Offline Commerce: An Empirical Analysis of Groupon“. *Management Science*, pp. 1-20. <http://dx.doi.org/10.1287/mnsc.2016.2666>.
12. Liang, X.; Ma, L.; Xie, L.; Yan, H. (2014). „The informational aspect of the group-buying Mechanism“. *European Journal of Operational Research*, Vol. 234, No. 1, pp.331–340.
13. Lozić, J. (2019a). „Zero marginal cost in magazine industry: Changing of cost paradigm in “new” magazine industry. 44th International Scientific Conference on Economic and Social Development. ESD Conference Split., p.p. 125-136.
14. Lozić, J. (2019b). “Core concept of business transformation: From business digitalization to business digital transformation.” 48th International Scientific Conference on Economic and Social Development – "Managerial Issues in Modern Business". Warsaw, str. 159.-167.
15. Lozić, J. (2020). „Pandora streaming radio: saturacija u industriji streaming platformi“. *Zbornik sveučilišta Libertas*, 5 (5), 137-157.
16. Maclean, K.D.S.; Wilson, G.J.; Krishnamoorthy, S. (2017). „Pricing of excess inventory on Groupon.“ *Int. J. Revenue Management*, Vol. 10, No. 1., pp.52–74.
17. Moazed, A.; Johnson, N.L. (2016). *Modern Monopolies – What it takes to Dominate the 21st Century Economy*, Applico, LLC. ISBN 9781250091895.
18. Ong, J.B.; Ng, W.K.; Vorobev, A; Ho, T.N. (2017). „Groupon and Groupon Now: Participating Firm’s Profitability Analysis“. *Comput Econ*. DOI 10.1007/s10614-017-9736-y.
19. Parker, G.G.; Van Alstyne, M.W.; Choudary, S.P. (2016). *Platform Revolution: How Networked Markets are Transforming the Economy and How to Make Them Work for You*, W.W. Norton & Company Ltd. ISBN 978-0-393-24913-2.
20. Rifkin, J. (2015). *The zero marginal cost society: The Internet of things, the collaborative commons, and the eclipse of capitalism*, Palgrave Macmillan, St. Martin's Press LLC. ISBN 978-1-137-28011-4.
21. Song, M.; Park, E.; Yoo, B.; Jeon, S. (2012). „Is The Daily Deal Social Shopping? An Empirical Analysis of Purchase and Redemption Time of Daily-Deal Coupons, Working Paper, University of Rochester.
22. Spell, D.C.; Xiao-Han T. Zeng, T.X.H.; Chung, J.Y.; Nooraei, B. (2017). „Flux: Groupon’s automated, scalable, extensible machine learning platform“. *2017 IEEE International Conference on Big Data (BIGDATA)*, pp. 1554-1559. 978-1-5386-2715-0/17/\$31.00.
23. Subramanian, U. (2012). „A Theory of Social Coupons“, Working Paper, University of Texas at Dallas.
24. Surasvadi, N.; Tang, C.; Vulcano, G. (2014). „Operating A Group-Buy Mechanism in the Presence of Strategic Consumers“, Working Paper, New York University.

25. Wang, C.Y.; Chen, Y.2, Liu, K.J.R. (2018). „Game-Theoretic Cross Social Media Analytic: How Yelp Ratings Affect Deal Selection on Groupon“? *2018 IEEE 34th International Conference on Data Engineering*, pp. 1809-1810. DOI 10.1109/ICDE.2018.00262.
26. Wang, W. T.; Wang, Y. S.; Liu, E. R. (2016). „The stickiness intention of group-buying websites: The integration of the commitment–trust theory and e-commerce success model“. *Information & Management*, 53, 625–642. Doi.org/10.1016/j.im.2016.01.006 0378-7206.
27. Zheng, X. Guo, X. (2016). „E-retailing of restaurant services: pricing strategies in a competing online environment“. *Journal of the Operational Research Society*, 67(11), 1408–1418. doi: 10.1057/jors.2016.29.

THE IMPACT OF EXOGENOUS SHOCK CAUSED BY THE COVID 19 CRISIS ON INDUSTRIAL PRODUCTION IN CROATIA

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ABSTRACT

In recent years, more precisely from the year of 2019, the world economy has faced a new form of crisis, which has not been recorded in the modern history. Accordingly, for the first time the world economy is facing a crisis of aggregate supply and aggregate demand at the same time. The effect of crisis transmission caused by pandemic COVID 19 arrived in Croatia at the beginning of 2020. Mainly the modern crisis were coming from banking or financial sector, such as the last one from 2008, the mortgage crisis, which came to Croatia in 2009. Crisis of 2008 caused the global increase of interest rates and monetary contraction. However, the new crisis caused by pandemic COVID 19 had opposite effect comparing to the crisis of 2008 and led to interest rate decrease and to monetary expansion. The resilience of domicile production on a new form of exogenous shock in Croatia is under the big uncertainty. The external trade coverage ratio in goods was at the level below 60% in 2019, which had a significant impact on the new form of crisis. The gap, which emerged between industries due to the shock of pandemic COVID 19, became a burning question of strategic development of industrial production in Croatia. Because of all mentioned, many questions has been raised on macroeconomic level, while the most important are the self-sufficiency and resilience of manufacturing industry, which presents the backbone of each economy. Now, the negative effects will be even more visible because of the long time postponed structural reform of Croatian economy. In this paper the authors will analyses which sector has suffered the most because of the pandemic COVID 19 crisis.

Keywords: *crisis, monetary policy, fiscal policy, interest rate, industrial production, external trade balance*

1. INTRODUCTION

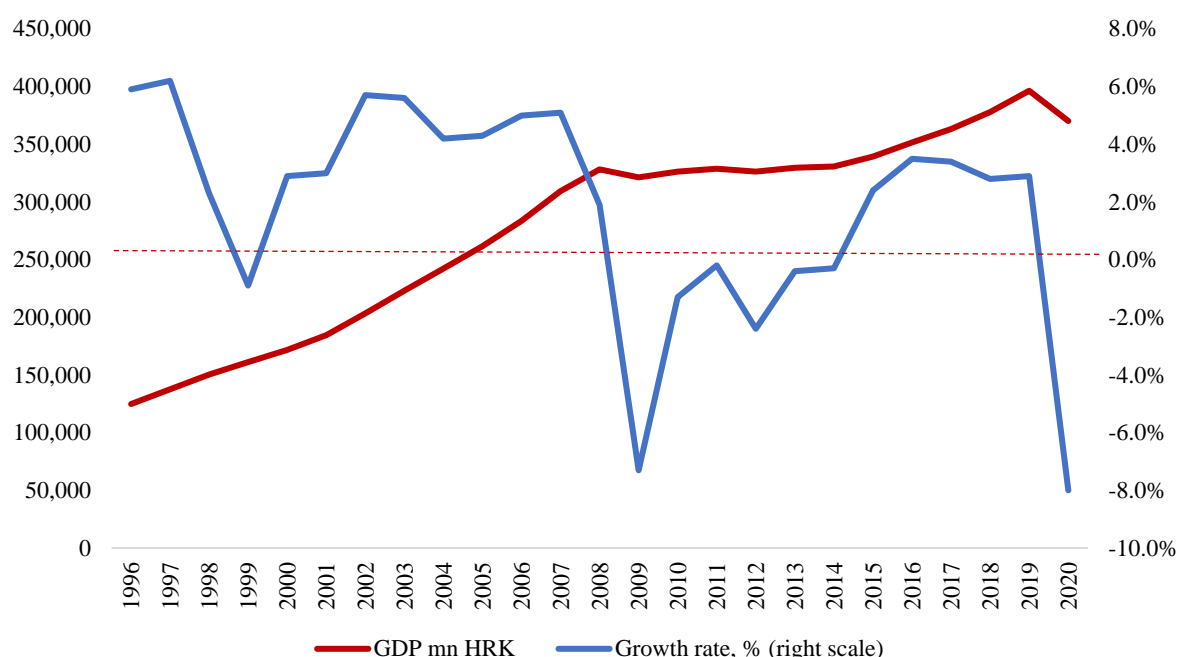
The world economy is facing a new form of economic crisis which started beginning of 2020 and which has not yet been recorded in the modern history. Previous crisis mainly came from the financial sector; the 2008 mortgage crisis, then the 1929 crisis caused by hyper production and the impact of monetarism. The 1973 and 1979 oil crises arose because of excess oil demand over supply and that led to hyperinflation. However, the world economy reacted to all those crises by finding the cause and remedying the consequences. COVID-19 crisis that suddenly appeared in early 2020 caused a significant drop of world GDP.

The reaction of the most countries were through the so-called, subsidized economic policies. Those policies were created in order to help a domicile economy to neutralize exogenous shock as much as possible. Subsidy policies oriented through helping the sectors which suffered the most because of the COVID-19 crisis have led to a significant rise in countries external debt. Because of insufficient knowledge of the cause of the new crisis, a shock of aggregate supply and aggregate demand arise. Each country had its own way of dealing with the crisis, but all had one thing in common and that is a high level of money printing, in order to keep the level of demand at pre-crisis level. Countries that are more resistant to exogenous shocks in terms of foreign trade balance and if looking at the strength of domicile industrial production, experienced a weaker impact of the COVID-19 crisis, while countries that rely on the service sector primarily tourism, faced much worse consequences. On the one hand, COVID-19 crisis has caused a supply crisis, as a deficit of domicile production of certain products. On the other hand, it caused a demand crisis because of expansionary monetary policy and government interventionism which aim was to keep demand at pre-crisis levels. For the first time an important global and afterwards local issue of self-sufficiency pop out, especially in the food industry. Croatia, with the commodity coverage of imports by exports in the food industry at the level of 60%, is facing a major problem. The increasing level of public debt in Croatia indicates a potential problem with the "bubble" effect. On the one hand, we have artificial growth in demand, and on the other hand deflation. Long-term deficit economic policies without a strategic vision of real economic development have opened up questions about the future sustainability of the economy, as well as the resilience of certain industrial sectors to exogenous shocks.

2. ECONOMIC OF DEPRESSION AND CRISIS

If looking back throughout the history of economic crises, the phenomenon of the 2020 crisis was not recorded in the modern history so far. It is very difficult to measure the economic effects caused by this crisis. Only crisis that can might be related to this one is the Spanish flu from 1918, which occurred after the First World War. Nevertheless, the first serious crisis that hit the world economy was the "Great Depression" in 1929. At that time, the economy of monetarism prevailed and the global economy was significantly influenced by the monetarist economists' way of thinking. They were emphasizing the neoliberal concept of expansive monetary policy, which led to strong monetary expansion and later to overproduction and "money illusion". Such economic theories were ongoing until the 1930. As they could not give the right response to the global crisis, those theories were rejected. However, a group of economists gathered around John Maynard Keynes found the answer to the existing crisis. The answer was in the economic or state interventionism. In this way, instead of looking for a solution on the side of aggregate supply and monetary expansion, the Keynesians found the solution in strengthening aggregate demand. The policy of the so-called "laissez-faire" was rejected and the policy of state interventionism started to dominate. The world economy was back on their feet and the reason was the performance of public works and series of infrastructure projects. During the Second World War, the world economy again re-entered in recession. The main reason for that were the oil crises of 1973 and 1979. Because of the strong inflation and limited oil supply in the global market, the significant pressure on the demand side occurred. The last global crisis (before the pandemic) was in 2008, called the mortgage crisis. If looking at Croatia, the economic crisis was present during the Croatian War of Independence from 1991 to 1995. After that, there was a banking crisis in 1999, and afterwards the crisis of 2009, or the mortgage crisis. It started in the USA in 2008, and came to Croatia one year after.

Chart 1: Yearly movement in GDP growth rate and real GDP in constant price from 1996 to 2020



Source: Croatian bureau of statistics, first quarterly gross domestic product estimate first quarter of 2021 First release May 2021

From 1995 until today, Croatia has recorded eight times a negative GDP growth rate. From the observed period, if we do not take into account the last COVID-19 year, the 2020, than the largest decrease of GDP occurred in 2009. All observed crises in Croatia since 1995 had a financial nature, in the other words the base was the financial or banking sector. The government responded on the crisis by conducting the wrong economic policy. Instead of encouraging consumption and pursuing an expansionary monetary policy, Croatia raised the interest rate on the market and implemented a monetary restriction. The result was expensive financing, and significant consumption decrease. Because of the implementation of the wrong monetary and fiscal policy, the emerged result was a long-term recession of 6 years. Croatia had the longest lasting recession comparing with other EU members. The crisis caused by the COVID-19 does not have a financial character. It is a completely new type of crisis recorded in the modern history. With cheap money and imposition of expansionary fiscal and monetary policies, the implications on GDP were not significant at all. In the first phase of the crisis, at the same time there was a crisis of supply and a crisis of demand. Due to the panic effect, the population accumulated stock what resulted into disruption within the value chain. Despite that, in the second phase of the crisis, the supply chain started to function normally. The domicile economy was not able to supply industry sectors from its own sources; therefore, it was highly oriented towards imports. All these mentioned points have a negative influence on vulnerable economies such as Croatia. A very important question raised, related to country own self-sufficiency and sustainability.

3. INDUSTRIAL PRODUCTION AND FOREIGN TRADE

Industrial production represents the backbone of any economy and it is a key sector for stability. The strength of industrial production depends on the level of competitiveness of the economy. The importance of specialization in individual sectors has been important ever since the times of principles of comparative and absolute advantage.

However, there are also sectors in which the necessary goods are produced, among other things, the food industry, which in this type of situations are exempt from the stated principles of comparative and absolute advantage. Such principle can be called the principle of necessity or self-sufficiency in the food industry. With the COVID-19 crisis from 2020, for the first time in the economic history the paradigm of self-sufficiency and vertical integration began to develop. The principles of comparative advantage have almost lost their meaning in the food sector. With subsidies policies, the strong domicile production is becoming again the most important among EU members. Croatia records a surplus in primary agricultural production by exporting corn, wheat and oilseeds that are surplus generators. However, in the secondary phase of production (the livestock production) in which cereals and oilseeds represent inputs for production through animal feed, Croatia is reaching a significant deficit. This indicates a problem for Croatian economy in strategic orientation, because the semi-finished products are being exported while the final products of higher value added are imported. Nonetheless, the situation should be different. There is a high potential for creating a strong vertical integration value chain including production and processing industry at macroeconomic level.

Table 1: External trade ratio coverage in goods from 2010 to 2020 in EUR

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total	58,8%	58,9%	59,4%	58,0%	60,5%	62,4%	62,5%	64,0%	61,2%	61,0%	65,0%
Agriculture, forestry and fishing	72,4%	77,6%	93,6%	91,2%	88,8%	97,2%	107,6%	105,2%	103,2%	100,0%	133,4%
Mining and quarrying	8,6%	5,5%	5,5%	7,7%	9,1%	8,8%	8,3%	6,4%	5,6%	11,9%	76,3%
Manufacturing	65,3%	65,8%	66,3%	63,2%	62,4%	63,7%	63,2%	65,4%	63,3%	61,7%	61,3%
Manufacture of food products, beverages and tobacco products	63,7%	60,3%	57,8%	51,3%	53,0%	55,6%	60,5%	57,2%	59,7%	56,8%	60,8%
Manufacture of textiles, apparel, leather and related products	69,9%	68,5%	71,4%	63,6%	61,7%	61,9%	60,9%	62,0%	61,2%	61,5%	57,5%
Manufacture of wood and paper products, and printing	79,6%	88,9%	91,9%	100,8%	106,0%	107,0%	111,4%	112,3%	112,5%	113,2%	118,7%
Manufacture of coke and refined petroleum products	135,0%	93,0%	97,8%	101,5%	75,4%	83,7%	96,5%	113,3%	125,8%	89,8%	83,4%
Manufacture of chemicals and chemical products	47,8%	48,9%	43,7%	43,5%	46,3%	45,7%	42,3%	44,0%	42,3%	43,5%	41,9%
Manufacture of basic pharmaceutical products and pharmaceutical preparations	55,0%	57,8%	65,5%	63,1%	59,3%	68,5%	72,1%	102,5%	77,5%	76,6%	63,1%
Manufacture of rubber and plastic products, and other non-metallic mineral products	51,4%	52,1%	56,8%	63,3%	66,1%	65,7%	67,1%	66,0%	66,0%	67,9%	70,2%
Manufacture of basic metals and fabricated metal products, except machinery and equipment	45,9%	51,3%	64,0%	67,0%	70,7%	67,4%	68,3%	66,3%	67,5%	66,1%	71,5%
Manufacture of computer, electronic and optical products	27,1%	26,7%	30,3%	32,4%	30,4%	32,9%	36,4%	35,0%	34,1%	32,7%	35,1%
Manufacture of electrical equipment	94,8%	103,7%	109,9%	98,7%	92,4%	86,4%	95,2%	93,6%	78,5%	84,8%	91,7%
Manufacture of machinery and equipment	43,1%	50,8%	55,6%	57,9%	69,5%	63,9%	55,2%	54,9%	55,5%	50,3%	48,0%
Manufacture of transport equipment	116,8%	121,0%	83,5%	56,3%	43,4%	62,5%	46,4%	51,0%	48,3%	55,1%	53,8%
Other manufacturing, and repair and installation of machinery and equipment	59,8%	55,8%	58,4%	65,6%	73,1%	70,0%	65,4%	58,1%	52,5%	43,9%	46,8%
Electricity, gas, steam and air conditioning supply	11,8%	9,2%	14,2%	38,0%	66,0%	55,7%	61,4%	65,6%	47,1%	44,0%	49,9%

Source: Croatian bureau of statistics, foreign trade in goods import and export according to NKD 2007 production approach, author calculation

Table 1 clearly shows the coverage of imports by exports of goods by individual industries. From all mentioned, only two sectors record a foreign trade surplus in 2020 and those are the Agriculture, forestry and fishing and Manufacture of wood and paper products. All other listed sectors have a foreign trade deficit. Those two sectors have an impact on the growth of the import coverage index by the foreign trade balance in 2020. It is also visible that traditional domicile industries, such as the textile industry have been recording negative import-export coverage rates for years.

The increase of import of cheaper goods from abroad significantly affected the process of import deflation, which has been present for many years, especially after Croatia joined the EU in 2013.

4. ELASTICITY OF THE INDUSTRIAL SECTOR IN CROATIA TO EXOGENOUS SHOCKS

How the each industrial sector will react to a certain shocks caused by exogenous factors, mostly depends on the competitiveness of the sector itself within the domicile economy. In Croatia does not really exists the strategic orientation towards development in competitive industrial sectors. The inherited industrial production from the previous country is mostly devastated and only a small part is functioning today. A strong manufacturing industry represents a backbone of the economy. Previously we had a very strong industry, but nowadays only parts of it remained alive. The textile, shipbuilding, and food industry have been generators of GDP growth throughout the country's history. Because of the poor management style and because of the neglect in technological progress, Croatia is importing most of the goods. Although it does not look that way, since the coverage of imports by exports in goods in 2020 is 65.0%, the situation is more alarming if we look at the parts of the components of the final product that participates in foreign trade. Thus, most of the components of the final product are imported and through the process of added value they pass into the final product. A clear defined economic strategy that explains the process of making the final product from the primary one does not currently exist. While the global multinational companies are opening their subsidiaries in all countries where they have a business running and in that way are becoming more competitive, at the same time, Croatian companies are still based in Croatia and facing more challenging to compete in international markets. Most of the countries are building their competitive advantage in sectors where they have better position than the rest of the world. On the other hand, in sectors where only necessary and inelastic goods predominate, the orientation of domicile economy is towards subsidies and towards strengthening the country core industry. Compared to other countries, Croatia used the "laissez-faire" model and left the economy to find the balance itself. Such model was responsible for the longest recession among other EU members which lasted 6 years (2009-2014). Croatian economy recuperated from the crisis mostly because of the recovery of neighboring countries, which are our most important foreign trade partners. The phenomenon of tourist consumption is getting more and more significant through years because it is in the perfect correlation with the movement of economic growth. To continue, the COVID-19 crisis in 2020 directly showed how vulnerable is our economy because the tourist season suffered a lot. As a result, the decrease in GDP of -8.0% is one of the largest in Europe, while measuring the quarterly decrease in Q2 2020 compared to the same period in 2019, the decrease was -14.4%. Croatia does not have a clear defined economic strategy. Therefore, the decrease in tourist consumption, which is the main GDP generator, together with process of strong depopulation, have had a negative impact on Croatian economy. With the spiral effect, it can only get worse. The deficit of consumption leads to increase of unemployment rate, which leads to decrease of GDP. The consumption represents the main component of GDP measured by expenditure method. The level of industrial production is a relevant indicator of country performance. From that indicator many conclusions regarding the economy competitiveness can be made. Thus, for example, the processing industry in times of economic crisis should have a stable production and should be the least sensitive to exogenous shocks. In the structure of industry, the manufacturing industry (NACE C) predominates with a share of 83.2% in 2021. From the manufacturing industry, the largest share represents the production of food products NACE C 10 with a share of 15.6%.

4.1. Empirical research on the impact of selected industrial sectors on exogenous shocks

In the next part of the paper, the impact of the most important industrial sectors (classified according to NACE in category C (manufacturing) on the impact of exogenous shocks in Croatia will be examined. Based on empirical data on the movement (increase and decrease) of rate of industrial production of 33 most important manufacturing sectors, the movement of GDP will be analyzed. Movements of each sector are going to be described by using regression and correlation analysis and descriptive statistics. In addition to descriptive statistics, in the research will be analyzed also the linear trend of variables, to point out the trend in production. As a source, authors used the database of the Central Bureau of Statistics on movements of industrial production index within NACE C. The data for monthly observations were calculated on quarters. In this way, observations are consistent and comparable to real GDP, which is also presented in quarterly basis. Year 2008 represents the base year, when the first significant recession hit Croatian economy. Analysis goes to 2021, Q2 with an estimation of quarterly GDP, which is being published at the end of August.

Table 2: Coefficients of correlations by sectors, main sector NACE C and subsectors in C

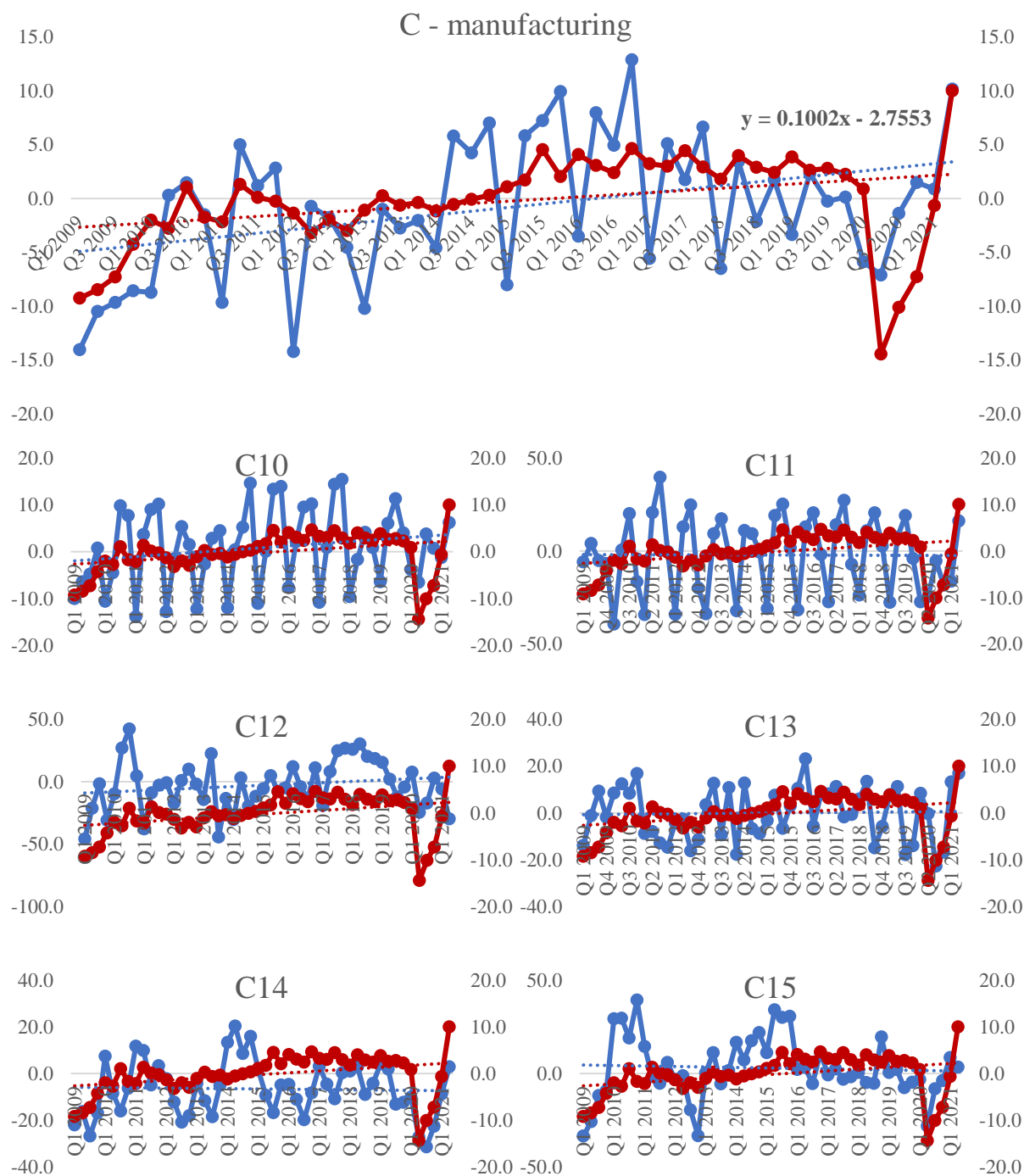
Sector by NACE categorization	r = coefficient of correlation
C - Manufacturing	0,57
C10 - Manufacture of food products	0,35
C11 - Manufacture of beverages	0,28
C12 - Manufacture of tobacco products	0,36
C13 - Manufacture of textiles	0,32
C14 - Manufacture of wearing apparel	0,48
C15 - Manufacture of leather and related products	0,41
C16 - Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	0,48
C17 - Manufacture of paper and paper products	0,11
C18 - Printing and reproduction of recorded media	0,42
C19 - Manufacture of coke and refined petroleum products	0,00
C20 - Manufacture of chemicals and chemical products	0,00
C21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations	0,23
C22 - Manufacture of rubber and plastic products	0,47
C23 - Manufacture of other non-metallic mineral products	0,31
C24 - Manufacture of basic metals	0,38
C25 - Manufacture of fabricated metal products, except machinery and equipment	0,20
C26 - Manufacture of computer, electronic and optical products	0,14
C27 - Manufacture of electrical equipment	0,22
C28 - Manufacture of machinery and equipment n.e.c.	0,32
C29 - Manufacture of motor vehicles, trailers and semi-trailers	0,44
C30 - Manufacture of other transport equipment	0,09
C31 - Manufacture of furniture	0,64
C32 - Other manufacturing	0,27
C33 - Repair and installation of machinery and equipment	-0,03

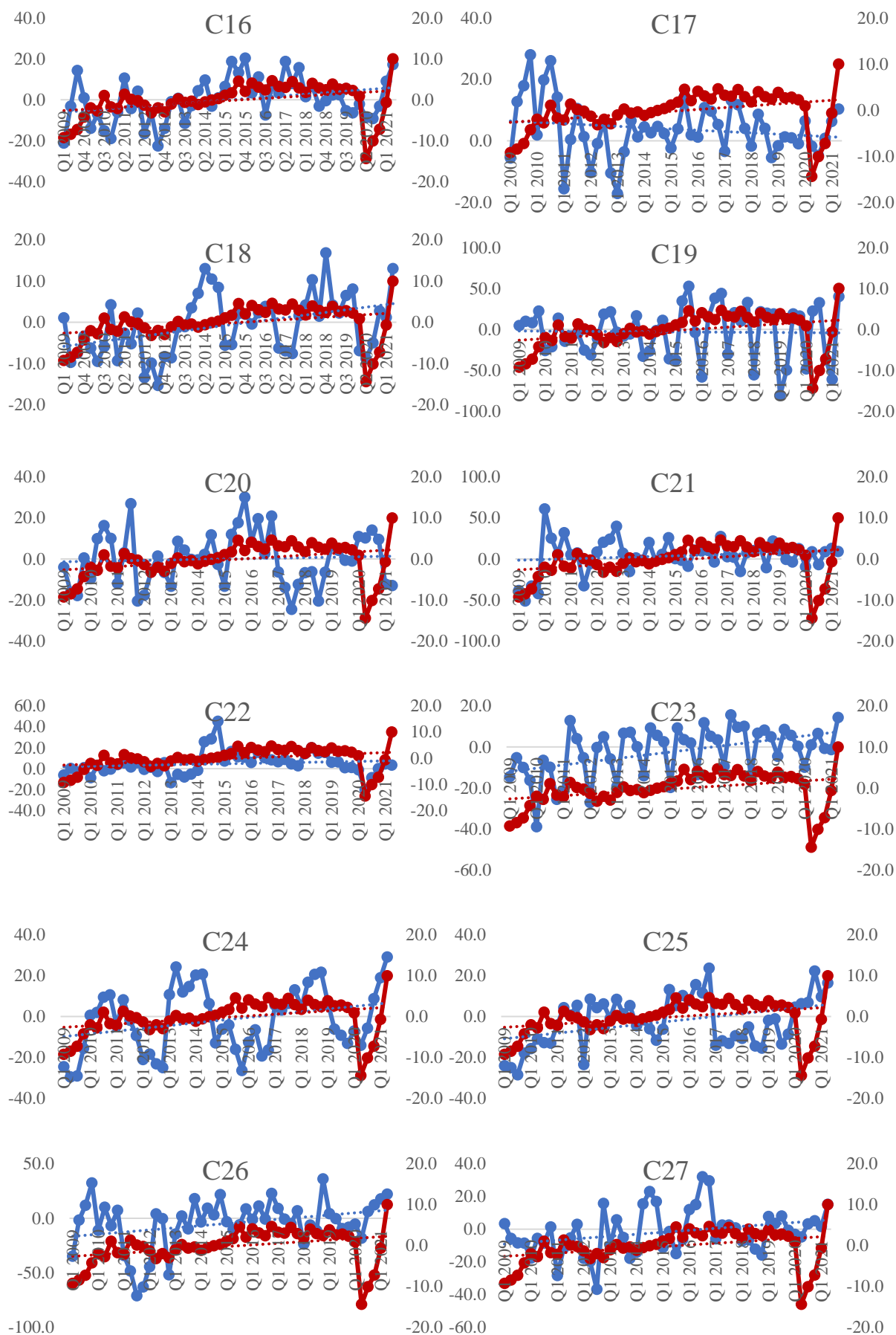
Source: Croatian bureau of statistics, author calculation

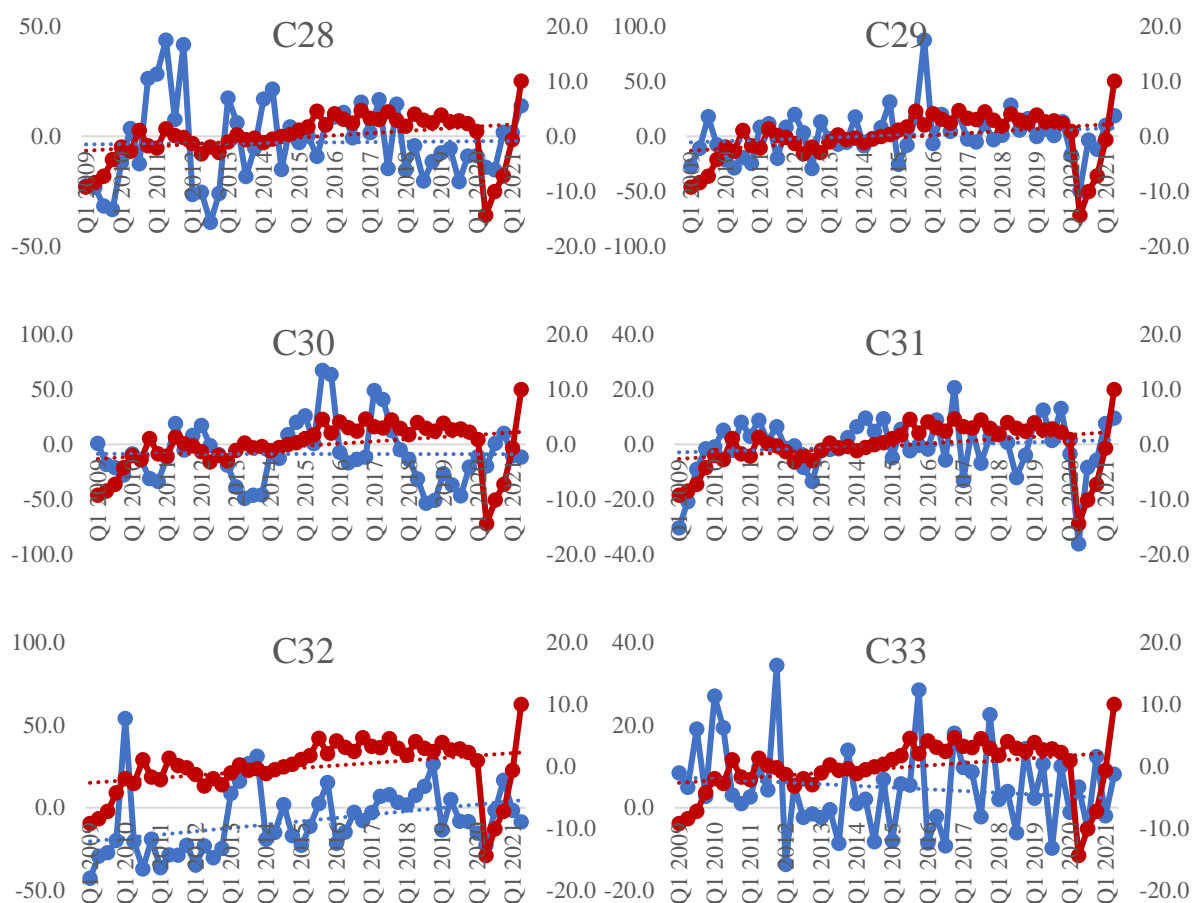
The analysis on the correlation coefficients between sectors and GDP movements is made. Only a weak correlation is visible between observed variables. The GDP movement is a variable that represents an exogenous shock. The highest correlation coefficient within sector C are in these subsectors: Manufacture of furniture (C 31) with the highest correlation coefficient of 0.64. It is followed by Manufacture of wood and of products of wood and cork, except furniture;

manufacture of articles of straw and plaiting materials (C 16) with coefficient 0.48, the same as Manufacture of wearing apparel (C 14). After is Manufacture of rubber and plastic products (C 22) with a coefficient of 0.47. If we take the tolerance threshold for a moderate correlation of 0.40. Only 7 sectors within NACE C have a coefficient above 0.40 which indicates mild correlation between the observed variables and GDP.

Chart 2: Quarterly movement in GDP growth rate and manufacturing growth rate by subsectors NACE C10 to C33, 2009 - 2021







Source: Croatian bureau of statistics, author calculation, NOTE: red line (right scale) real quarterly GDP growth, blue line manufacturing quarterly growth

Table following on the next page

Table 3: Industrial production volume index sectors 2009/2008 vs 2020/2019 and GDP growth – Crisis period

Activity	Q1 2009	Q2 2009	Q3 2009	Q4 2009	Q1 2020	Q2 2020	Q3 2020	Q4 2020
Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply	-13,4	-6,2	-11,5	-12,3	-3,6	-8,3	-2,1	3,1
Intermediate goods	-14,8	-10,4	-10,5	-9,0	-0,5	-5,1	-0,3	2,6
Energy (except D 35.3 and E)	7,9	-1,5	-1,5	2,2	2,6	-11,3	-3,4	6,6
Capital goods	-16,1	-13,9	-15,5	-13,6	-4,9	-4,5	-2,2	12,8
Durable consumer goods	-28,6	-24,1	-11,9	-7,6	-5,7	-35,1	-7,2	-6,9
Non-durable consumer goods	-14,2	-9,9	-8,9	-7,8	-9,8	-9,2	-2,9	-1,8
Mining and quarrying	-13,4	-6,2	-11,5	-12,3	-8,7	-7,5	-9,2	-10,5
Extraction of crude petroleum and natural gas	-4,3	-3,8	-4,3	-3,6	-8,3	-11,4	-20,1	-17,1
Other mining and quarrying	-31,0	-10,4	-23,2	-29,9	-13,0	-3,2	13,8	4,6
Mining support service activities	-8,2	0,3	8,2	9,4	1,9	7,1	-1,2	-9,3
C - Manufacturing	-14,0	-10,5	-9,6	-8,6	-5,9	-7,1	-1,4	1,5
C10 - Manufacture of food products	-10,0	-6,4	-4,8	0,8	-3,8	-6,6	3,8	0,7
C11 - Manufacture of beverages	-5,8	4,0	-5,2	-6,7	-27,3	-24,4	-5,3	-18,2
C12 - Manufacture of tobacco products	-45,8	-21,2	-1,6	-30,8	7,7	-24,4	-17,0	3,0
C13 - Manufacture of textiles	-13,9	-1,0	9,3	-1,8	8,4	-0,3	-22,7	-16,7
C14 - Manufacture of wearing apparel	-22,0	-16,3	-26,9	-16,9	-10,2	-27,3	-31,5	-22,6
C15 - Manufacture of leather and related products	-33,5	-25,8	-11,8	-9,1	-3,2	-28,2	-8,2	-3,9
C16 - Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	-21,2	-3,2	14,3	0,9	-2,2	-8,7	-9,2	-3,2
C17 - Manufacture of paper and paper products	-5,6	12,7	17,9	28,1	6,5	-1,8	-4,8	0,8
C18 - Printing and reproduction of recorded media	1,1	-9,7	-7,5	-3,3	-6,9	-8,8	-5,0	2,8
C19 - Manufacture of coke and refined petroleum products	4,6	9,9	8,2	22,4	-48,4	22,4	32,5	-36,9
C20 - Manufacture of chemicals and chemical products	-4,0	-16,1	-17,8	0,6	11,0	10,3	14,1	9,6
C21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations	-38,3	-51,1	-32,9	-42,1	-9,4	8,9	-6,8	8,8
C22 - Manufacture of rubber and plastic products	-6,2	0,1	-3,5	0,9	-1,1	-20,1	-8,7	0,0
C23 - Manufacture of other non-metallic mineral products	-14,5	-5,2	-10,0	-16,3	-9,9	1,0	6,6	-0,7
C24 - Manufacture of basic metals	-24,6	-29,5	-29,0	-15,5	-7,0	-14,0	-5,7	8,7
C25 - Manufacture of fabricated metal products, except machinery and equipment	-24,1	-25,1	-28,5	-17,9	4,6	6,4	6,9	22,3
C26 - Manufacture of computer, electronic and optical products	-34,8	-1,7	12,0	32,5	-5,3	-18,3	6,3	12,4
C27 - Manufacture of electrical equipment	3,3	-5,6	-8,5	-8,6	-3,1	-4,8	3,2	5,2
C28 - Manufacture of machinery and equipment n.e.c.	-22,7	-23,3	-31,7	-33,4	-8,8	-14,2	-15,4	1,7
C29 - Manufacture of motor vehicles, trailers and semi-trailers	-27,0	-11,1	17,8	-7,9	-17,0	-49,8	-3,5	-11,9
C30 - Manufacture of other transport equipment	1,0	-18,1	-21,0	-27,9	-11,0	-19,6	0,9	10,0
C31 - Manufacture of furniture	-30,4	-20,9	-9,1	-1,6	-3,4	-36,2	-8,4	-5,8
C32 - Other manufacturing	-42,7	-29,4	-27,3	-19,9	-15,3	-22,8	-1,7	16,5
C33 - Repair and installation of machinery and equipment	8,4	4,9	19,0	2,7	-1,1	5,0	-5,1	12,4
Electricity, gas, steam and air conditioning supply	12,0	-3,0	-3,7	2,6	11,7	-15,7	-4,6	17,3
Electricity, gas, steam and air conditioning supply	12,0	-3,0	-3,7	2,6	11,7	-15,7	-4,6	17,3
GDP, real growth rate, yoy %	-9,2	-8,5	-7,3	-4,3	0,9	-14,4	-10,1	-7,2

Source: Croatian bureau of statistics, author calculation

Table 3 shows which industry sectors were the most affected by the two different crises. In 2009 there was a mortgage crisis (banking-financial crisis), while in 2020 there was a crisis caused by the COVID-19 pandemic. It is clear that the crisis of 2009, as a result of rising interest rates and monetary contraction, had a significant impact on the movement of industrial production. The most affected sectors were cigarette production and pharmaceutical production, as well as mining and quarrying. However, the crisis caused by the COVID-19 pandemic affected other sectors more than those from the 2009. In COVID-19 crisis, sectors that produce essential goods such as the food industry were less affected than other sectors.

5. CONCLUSION

The analysis of the impact of exogenous shocks on the elasticity of selected industrial sectors showed that sectors react differently on crisis occurred in Croatia, in 2009 and 2020. The analysis is mainly focused on the manufacturing industry which is the backbone of the economy. From all conducted analysis, it is visible that Croatia has a very high share of imports in almost all sectors. Moreover, the Croatian economy has double problems; one is the strong external deficit in semi-products and other one is external deficit in final products. The processing industry has a decrease in the coefficient of coverage of imports by exports in 2020 compared to 2010 (65.3% in 2010 vs 61.3% in 2020). The food industry has a coverage of imports by exports in 2020 at 60, 8%, while this indicator in 2010 was 63,7%. While the textile industry, which used to employ thousands of workers and was extremely competitive, and in the last 10 years the foreign trade coverage index decreased to 57.5%, or -12.4pp. The crisis of 2009 started as a mortgage crisis and it extended to financial sector.

The result was a significant decrease in demand, increase of unemployment rate and decrease in aggregate purchasing power. The sector that suffered the most was Manufacture of basic pharmaceutical products and pharmaceutical preparations (C21), with an average annual decrease of over 30% in 2009 compared to 2008. Followed by the Manufacture of tobacco products (C12), with an average drop of over 20% in 2009 compared to 2008 and Manufacture of furniture (C31). Additionally, industrial sectors with higher demand elasticity caused by exogenous shocks also decreased because of monetary contraction and increase of interest rates. However, the C10 food production sector, with goods of lower elasticity, did not have such bad response to the exogenous shock caused by the financial crisis. Looking at the recent crisis caused by the COVID-19 the industry under NACE C10 has again good response to exogenous shock, and importantly it records a significant growth rates compared to the 2009 crisis. At the same time, the C14 clothing sector showed significant response to exogenous shock caused by the COVID-19 crisis and the 2009 mortgage crisis. It is important to point out that one part of 2020 the economy was under "lockdown". The C11 sector was very much limited in its growth compared to other sectors. The reason is HoReCa sector, which is one of the most important channels of sales. According to all mentioned, the food industry sector shows a high resistance to exogenous shocks. Therefore, the strategic economic policies should be oriented towards development of food industry because there will always be a demand despite crises and shocks. The crisis caused by the COVID-19 has just reopened the issue of economic self-sufficiency and vertical integration in food industry. Croatia is not self-sufficient in the food industry, i.e. the food production industry in which it can have a comparative and absolute advantages with a strategic location compared to many countries. Thus, from the COVID-19 crisis gained countries with a foreign trade surplus in food production, while Croatia further deepened the foreign trade deficit.

LITERATURE:

1. Baldwin, R. i Mauro, B. W. D. (2020). Economics in the Time of COVID-19. CEPR Press, London, UK
2. Bazen, S. 2011, Econometrics Methods for Labour Economics (Practical Econometrics), 1st Oxford University Press; 1st edition
3. Blanchard, O. 2010, Macroeconomics, Pearson College
4. Eurostat, <https://ec.europa.eu/eurostat/documents/2995521/11563071/2-30042021-BP-EN.pdf/bf5d61eb-d36f-7fb4-97c8-a9ac2ae134cc?t=1619776447550>, Preliminary flash estimate for the first quarter of 2021, first release April 2021
5. https://www.dzs.hr/default_e.htm - database, Croatian bureau of statistics, general data
6. <https://stsbaza.dzs.hr/en/Report/StsDataGrid?datatypeid=1&indicatorid=16&baseyearid=10&seasonaladjustmentid=1>, Data type: Industrial production volume index, Indicator: Production (variables 110, 115, 116), Periodicity: Monthly, date of approach 16th of August 2021
7. https://www.dzs.hr/default_e.htm, Gross domestic product, Statistic in line, date of approach 28th of May 2021, QUARTERLY GROSS DOMESTIC PRODUCT BY EXPENDITURE APPROACH, constant previous year prices
8. Robert B. Ekelund, Jr., Robert F. Hébert, 2013, A History of Economic Theory and Method, 6th Edition
9. Rogić Dumančić, Lucija; Bogdan, Željko; Raguž Krištić, Iren Utjecaj COVID-19 krize na hrvatsko gospodarstvo // Ekonomska politika Hrvatske u 2021.: Hrvatska poslije pandemije / Tica, Josip ; Bačić, Katarina (ur.). Zagreb: Hrvatsko društvo ekonomista, 2020. str. 121-163 (predavanje, domaća recenzija, cjeloviti rad (in extenso), znanstveni)
10. Romer, D. 2019, Advanced Macroeconomics, 5th edition, McGrawHill

ATTITUDES OF YOUNG CONSUMERS TOWARDS ONLINE SHOPPING

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ABSTRACT

Online shopping has recently become increasingly popular among consumers. A particular segment is young consumers, who constitute the majority of Internet users and whose attitudes towards shopping need to be understood. This paper has two objectives: first, to explain the concept of online shopping and, second, to reveal the relationships between young consumers' attitudes towards online shopping, perceived behavioural control, subjective norms, prices, delivery convenience, and security in online shopping, and young consumers' online purchase intention. The empirical research was conducted using a structured questionnaire on a sample of 160 Croatian citizens under the age of 37 who shop online at least once a year. The research results show that online shopping is used several times a year, mostly to buy clothes, shoes and accessories, payment is made by cash on delivery, and in recent years online shopping has increased. The research confirmed that young consumers' attitudes towards online shopping, perceived behavioural control, prices, security, and delivery have a positive effect on online purchase intention. The research findings provide useful implications that marketing departments can use when developing digital marketing strategies.

Keywords: *Online shopping; young consumers, attitudes, intention to use*

1. INTRODUCTION

The rapid spread of computerisation and the ever-growing body of knowledge in the field of digital technologies have impacted the rapid development of online shopping. Hence, the online shopping process has become faster, making searches for products considerably shorter and requiring only a few clicks in the online shop of your choice. The online shopping trend is gaining in strength thanks to changes within society and the technological environment as well as due to enhanced marketing communication. Although an increase in online shopping has been evident for some time now, numerous sources suggest that the beginning of the dramatic growth of online shopping can be traced back to about a year ago or, more precisely, to the emergence of the coronavirus pandemic that has brought about huge changes in the world economy. The impact of the pandemic on the increase of online shopping is corroborated by the fact that during the COVID-19 pandemic the market share of online shopping in the United States of America, on average amounting to 3% - 4%, has jumped to 10% - 15% (Grashuis, Skevas and Segovia, 2020). Recent studies also show that online shopping in Croatia grew by 12% in 2020 (Roška and Draganović, 2020).

Young consumers are an important target segment of online shopping, given the amount of time they spend daily using various forms of technology. Hence, it is the marketer's task to gain an in-depth understanding of that segment's purchasing behaviour and the factors impacting such behaviour. Numerous authors have focused their attention on studying the online-shopping behaviour of consumers and many of these studies centre on the segment of young consumers and their online-shopping behaviour (Clemes et al., 2014; Correia Loureiro and Breazeale, 2016; Katta and Patro, 2016; Khare and Rakesh, 2011; Meng – Hsiang et al., 2006; San Martín et al., 2011; Vasić et al., 2019). In 2021, Generations Y and Z account for 46% of the global population, thus constituting the most important consumer segment (Euromonitor International, 2021). Hence, this study focuses on Generation Y (born 1983 – 1997) and Generation Z (born 1998 – 2018) (Sabaitytė, Davidavičienė, Straková and Raudeliūnienė, 2019). Considering that consumers over the age of 18 are likely to have a steady income and can make purchasing decisions independently (Naseri et al., 2021), 18 is the lower age-limit used in this study. The aim of this paper is two-fold: first, to explain the basic concept of online shopping and, second, to explore the effects that young consumers' attitudes towards online shopping, perceived behavioural control, subjective norms, delivery, prices, and online shopping security have on their intentions to engage in this type of shopping in the future. The paper is divided into five sections. Following the introduction, the second section provides an overview of the theoretical background and sets the research hypotheses. The third section explains the research methodology. Research results are interpreted in the fourth section and discussed in the fifth section, providing a synthesis of the entire paper.

2. LITERATURE BACKGROUND AND HYPOTHESES DEVELOPMENT

The following chapter provides an overview of the literature, with emphasis on the basic determinants of online shopping and the characteristics of young consumers in online shopping.

2.1. Determinants of online shopping

Many authors have sought to define online shopping. No universal definition exists, however, because the concept of online shopping is so widely present and frequently used in today's society. According to Li and Huang (2012), online shopping refers to purchasing in online shops or on Internet shopping transaction websites. Online shopping can be said to be a kind of marketing service permanently available to consumers, regardless of where they are, provided they have access to the Internet (Katta and Patro, 2016). Online shopping behaviour refers to the behaviour of consumers in the process of buying via the Internet (Moshref Javadi et al., 2012). The shopping behaviour of consumers is strongly impacted by the presence of technologies and digital media in everyday life. The Technology Acceptance Model (TAM) focuses on the acceptance of technological change and the adoption of new behavioural habits, and its primary aim is to predict and explain the level of acceptance of information technology based on two specific beliefs (Li and Huang, 2012): perceived ease of use and perceived usefulness. To these two components of the TAM model, Holmes, Byrne and Rowley (2014) have added a third: the consumer's attitudes towards the use of technology. The theory of planned behaviour (TPB), also known as Ajzen's theory of planned behaviour, also plays an important role in the context of online purchasing behaviour and online purchase intention. According to Ajzen (1991), the theory of planned behaviour builds upon the theory of reasoned action, with attitudes towards a specific behaviour and subjective norms being overlaid by perceived behavioural control (Madden, Ellen and Ajzen, 1992). Ajzen (1991) describes attitudes towards behaviour as the degree to which a person has positive or negative aspirations to engage in the behaviour. He explains perceived behavioural control as an individual's perception of the ease or difficulty in performing a certain behaviour and defines subjective norms as the perceived social pressure to perform or not to perform a specific behaviour.

In keeping with the TPB, the attitudes of young consumers towards online shopping are fundamental factors that determine young consumers' online purchase intention. A study by Khare and Rakesh (2011) found that the attitudes of Indian students towards online shopping are mostly positive because, given their daily use of the Internet, they are very much at home with online shopping. The results of the study suggest that positive attitudes have a significant effect on the final purchase decision. Furthermore, the study proved there is a positive relationship between attitudes towards online shopping and the degree of acceptance of the Internet. Hence, we propose that: *The attitudes of young consumers towards online shopping have a positive effect on online purchase intention (H₁).*

A study by Correia Loureiro and Breazeale (2016) is dedicated to exploring the factors that stimulate consumers' interest in shopping via the Internet, with special emphasis on perceived behavioural control and the attitudes of respondents towards online clothes shopping. The study confirmed the positive effect that the orientation of respondents towards online shopping has on perceived behavioural control. Their research is particularly important as the respondents were members of Generation Y, that is, undergraduate and graduate students up to the age of 35. The study also pointed to the positive relationship between perceived behavioural control, attitudes towards online shopping, and online purchase intention. Therefore, the second hypothesis is set as follows: *The perceived behavioural control of young consumers has a positive effect on online purchase intention (H₂).*

Previous studies point to the influence of subjective norms on consumer behaviour, online consumer behaviour included. Influences from the environment, family, friends and other close people whose opinions an individual values can often lead to certain changes in behaviour. These influences tend to have a stronger effect on younger consumers, as young people are more likely to attach importance to the opinions of others. In their study, Clemes, Gan and Zhang (2014) found that subjective norms have a positive effect on consumers' online purchase intention. The study indicates that family and friends exert the greatest influence and are key factors affecting the majority of respondents. Emphasis is also placed on the importance of word-of-mouth, given that most consumers, whether satisfied or dissatisfied, tend to orally share their experiences with friends and relatives. Accordingly, the third hypothesis is proposed: *Young consumers' subjective norms have a positive effect on online purchase intention (H₃).*

Attitudes towards online shopping prices can also have a significant effect on online purchase intention as well as on overall purchase satisfaction. In this context, a study by Vasić et al. (2019) examined the different factors affecting customer satisfaction with online shopping. The results of the study show price as being a very important factor in generating overall online purchase satisfaction, suggesting that if a customer buys a quality product at a lower price via the Internet, their satisfaction with online shopping will be enhanced. Katta and Patro (2016) in their study identified five factors with a proven positive effect on customer satisfaction with online shopping; one of these factors is product price. Hence, we propose that: *Young consumers' attitudes towards prices have a positive effect on online purchase intention (H₄).*

Security is an issue that keeps most consumers from experiencing carefree online shopping. Regardless of the type of exposure involved, Internet shopping can give rise to a certain degree of scepticism in most people, typically when asked to disclose personal data or data regarding instruments of payment. Research by San Martín et al. (2011) focused on the effect that a consumer's level of involvement has on satisfaction, a sense of security, and trust. Their study looked at the differences between consumers with a higher level of involvement in online

shopping and consumers with a lower level of involvement and confirmed that trust is closely linked to satisfaction with service rendered, website quality, and privacy rules. Therefore, we posit that: *The attitudes of young consumers towards online shopping security have a positive effect on online purchase intention (H₅).*

The delivery of products ordered is clearly another feature that distinguishes shopping via the Internet from traditional shopping. Customers tend to give careful consideration to terms of delivery, such as waiting time, method of delivery, and delivery surcharge, prior to deciding to purchase a product via the Internet. According to a study conducted by Katta and Patro (2016) among Indian students, the way a product is delivered is one of the most important factors affecting both customer satisfaction and continued online purchase intention. Accordingly, we set the following hypothesis: *Young consumers' attitudes towards delivery convenience have a positive effect on online purchase intention (H₆).*

3. CHARACTERISTICS OF GENERATION Y AND GENERATION Z

When age, one of the personal factors affecting the purchasing behaviour of consumers, is taken into consideration, certain conclusions can be drawn regarding differences in purchase behaviour between consumers belonging to different age groups. A consumer's age will, to a considerable extent, determine their purchasing behaviour, in particular with regard to their purchasing preferences, purchase frequency, and how they shop. To explore these differences, comparisons are typically made by classifying consumers into smaller groups or generations, depending on when they were born (Levickaite, 2010). The purchasing behaviour of three generations – X, Y and Z – is examined. It is difficult to accurately determine the starting birth years and ending birth years of each generation as most sources cite different years for the same generation (Berkup, 2014). As this paper focuses on Generations Y and Z, a brief overview of the basic characteristics of these generations is given below. Members of Generation Y, also known as Millennials, were born between 1983 and 1997 (Sabaitytė, Davidavičienė, Straková and Raudeliūnienė, 2019). This generation is characterised by a high level of computer literacy, as most members of Generation Y grew up with technology. According to Ladhari et al. (2019), the key characteristics of Millennials include independence, self-sufficiency, high purchasing power, disloyalty, a desire to try new things, and a high level of exposure to social influence. The authors also point out that Millennials are more distrustful of things around them, unlike preceding generations. Generation Z comprises young people born between 1998 and 2018 (Sabaitytė, Davidavičienė, Straková and Raudeliūnienė, 2019). Their basic characteristic is an even greater connection with and dependence on technology, relative to the previous generation of Millennials. Levickaite (2010) sees exposure to marketing from an early age as an important defining feature of Generation Z. While Generations Y and Z share an affinity for digital technology (Euromonitor International, 2021), digital affinity is somewhat more pronounced in Generation Z. According to Lissitsa and Kol (2016), Generation Y leans towards a style of shopping that differs from earlier generations. Millennials are characterised by a high educational level, making them more prone to critical thinking and generally wanting to be well-informed about products. Compared with previous generations, they are more inclined to communicate with sellers online, searching for information via social networks. When dissatisfied, Millennials do not hesitate to contact sellers directly and, interestingly, if the problem is solved to their satisfaction, are very likely to become repeat buyers (Ladhari, Gonthier and Lajante, 2019). The key characteristics of Generation Z, according to Priporas, Stylos and Fotiadis (2017), are an interest in novel technologies, an insistence on ease of use, a need to feel safe, and a desire to sometimes escape the reality that they face. The members of this generation are highly educated, innovative and creative. As an interesting fact, the authors point out that Generation Z members consider technology as a “tool”, which they use almost

constantly, to achieve their goals. Similar to Millennials, the members of Generation Z do not fall into the category of loyal customers and are not susceptible to marketing activities. The fact that Generation Z members find it difficult to focus their attention on anything for a longer period of time is confirmed in a study by Shatto and Erwin (2016) which points out that the average Generation Z member has an attention span of eight seconds, unlike the average Millennial whose attention span is 12 seconds. This is an indication of the challenges facing marketers in designing content for Generation Z, the youngest but also most discerning generation of consumers.

4. RESEARCH METHODOLOGY

Research was conducted using the questionnaire survey method on a convenience sample of citizens of the Republic of Croatia. The questionnaire was designed in three parts. The first part – the first group of questions – consisted of one screening question (to identify respondents belonging to the young consumer category) and four additional questions aimed at establishing the online shopping habits and preferences of the respondents. The second group of questions was made up of 29 statements, composed using a 5-point Likert scale, anchored at 1 = strongly disagree and 5 = strongly agree. Respondents were asked to choose the score most closely corresponding to their level of agreement in the context of their attitudes towards online shopping, perceived behavioural control, and subjective norms, and attitudes towards prices, delivery convenience, online shopping security, and future online purchase intention. The questions in the third group aimed to analyse the respondents' socio-demographic data. Previous studies by Khare and Rakesh (2011), Correia Loureiro and Breazeale (2016), Clemes et al. (2014), Vasić et al. (2019), San Martín et al. (2011), Katta and Patro (2016), and Meng – Hsiang et al. (2006) served as a framework for setting the statements included in the questionnaire. Created using Google Forms, the survey was conducted between 20 February and 21 March 2021 and distributed exclusively online via the Facebook social network. A total of 172 questionnaires were completed, 12 of which were excluded from analysis as respondents older than 37 and respondents who have never shopped online were eliminated from the study. Hence, 160 questionnaires were analysed.

5. RESEARCH RESULTS

The results obtained from the survey are presented in this section. Fully 73.75% of the study subjects are female and 26.25% are male. Regarding age, the majority of respondents (74.38%), belong to the 22 – 25 age group, 12.50% to the 18 – 21 age group, 8.13% to the 26 – 29 age group, and only 5% to the 30 – 37 age group. Furthermore, most of the respondents are in a relationship (48.13%), and 45.00% of respondents are single, while the least number of respondents are married (6.88%). As to education levels, most of the respondents have a higher educational background, with 38.75% holding undergraduate degrees and 28.75%, graduate degrees, while 25.00% of respondents have secondary school qualifications. The least number of respondents have postgraduate degrees (4.38%) and 2-year college degrees (3.13%). The monthly income of most of the respondents is on average up to HRK 3,500.00 (46.88%), while 25.63% earn on average from HRK 5,001.00 to HRK 10,000.00, and 23.13%, from HRK 3,501.00 to HRK 5,000.00. The study shows that most of the respondents (50.00%) shop online several times a year; 37.50%, at least once a month; 5.00%, at least once a week; and 7.50%, only once a year. The products most in demand by respondents in online shopping are clothes, footwear and fashion accessories (79.38%), followed by cosmetics and perfume (29.8%), and computer equipment and devices (29.38%). Other products most often purchased by the respondents are books, magazines and children's story books (15.00%), food and household products (13.75%), while a few respondents usually purchase furniture (6.88%). The method of payment used by most respondents is cash on delivery (40.63%), while others prefer to use

Internet banking (25.63%) and debit cards (20.00%). The least number of respondents use their credit cards for payment (13.75%). In the context of changes in shopping habits in the past year, most of the respondents reported that their online shopping has increased in the past year (56.25%). A significant share of respondents, however, stated that their shopping habits have not changed (40.00%), while a very small share reported that they shopped less in the past year (3.75%). Table 1 shows the results of descriptive statistics and reliability analysis of constructs used to prove the set hypotheses.

	AS	SD	Cronbach's alpha
ATTITUDES TOWARDS ONLINE SHOPPING			0.880
1. I am interested in online shopping.	4.29	0.91	
2. I think online shopping is easy.	4.43	0.72	
3. I feel comfortable when shopping online.	4.09	0.98	
4. I have a positive attitude towards online shopping.	4.26	0.86	
PERCEIVED BEHAVIOURAL CONTROL			0.796
1. I feel self-confident when searching for products in online shops.	4.02	1.02	
2. I think it is easy to reach customer service in online shops.	3.54	1.06	
3. During the transaction process (payment process) in online shops, I know exactly what I have to do (I am not confused).	4.30	0.90	
4. I am comfortable with the level of security provided by online shops during the payment process.	3.88	1.02	
SUBJECTIVE NORMS			0.570
1. My decision to shop online was influenced by the media.	2.61	1.28	
2. My decision to shop online was influenced by marketing communication.	2.86	1.21	
3. My family and friends support me in my online shopping.	3.62	1.07	
ATTITUDES TOWARDS PRICES			0.844
1. You can save more through online shopping than through conventional ways of shopping.	3.41	1.29	
2. Online shopping is cheaper in comparison with conventional shopping.	3.33	1.11	
3. Transaction costs are considerably lower in online shopping in comparison with conventional shopping.	3.05	1.09	
ATTITUDES TOWARDS ONLINE SHOPPING SECURITY			0.903
1. Online shopping is safe and the online shop's policy ensures the privacy of consumers' personal data.	3.63	0.98	
2. The online shop provides consumers with vital information regarding its security and privacy policy.	3.87	0.98	
3. I feel safe when sharing my personal data.	3.03	1.2	
4. I believe the online shop respects the law with regard to my personal data.	3.58	1.01	
5. I do not think my personal data is being shared with other companies or being used for further advertising that I did not give my consent to.	3.21	1.17	
6. I believe the website has a system that ensures the safe transfer of personal data.	3.46	0.96	
ATTITUDES TOWARDS DELIVERY OF ORDERED PRODUCTS			0.780
1. Delivery to any place, free of delivery charges, represents added value.	4.31	0.92	
2. Being able to track the delivery of a package is very useful.	4.49	0.85	
3. Speedy delivery at an additional cost is a good option.	4.19	0.95	
4. Orders are received on time as promised.	3.89	0.9	
5. The time needed for delivery is acceptable, taking into consideration the price advantage of online shopping.	3.91	0.88	
6. All the ordered products are properly delivered.	4.23	0.95	
ONLINE PURCHASE INTENTION			0.863
1. I intend to continue shopping online in the future.	4.55	0.73	
2. I will continue to shop online in the future.	4.51	0.79	
3. I will shop online regularly in the future.	4.08	1.07	

*Table 1: Results of descriptive statistics and reliability analysis (N=160)
(Source: Research results)*

The results indicate that the respondents largely agree with the set statements. Relatively high average scores were achieved, on a 5-point scale. The construct “Attitudes towards online shopping” has the highest average score (AS = 4.27, SD = 0.87). The other constructs have average scores higher than 3. The respondents agree the least with two statements referring to the construct “Subjective norms”. The statement “My decision to shop online was influenced by the media” has an average score of 2.61 (SD = 1.28), while the statement “My decision to shop online was influenced by marketing communication” has an average score of 2.86 (SD = 1.21). The Cronbach alpha values shown in Table 1 are acceptable. With the exception of the construct “Subjective norms”, which has a Cronbach alpha value of 0.570, all other constructs have values higher than 0.70 and are thus considered reliable (Hair et al., 2006). Due to its low Cronbach alpha value, the construct “Subjective norms” was excluded from further analysis. The set hypotheses were tested using the Pearson correlation coefficient. The results obtained are presented in Table 2.

	Attitudes towards online shopping	Perceived behavioural control	Attitudes towards prices	Attitudes towards security	Attitudes towards delivery	Online purchase intention
Attitudes towards online shopping	1					
Perceived behavioural control	0.737**	1				
Attitudes towards prices	0.296**	0.282**	1			
Attitudes towards security	0.558**	0.676**	0.339**	1		
Attitudes towards delivery	0.644**	0.657**	0.196*	0.544**	1	
Online purchase intention	0.776**	0.648**	0.309**	0.511**	0.619**	1
*Correlation is significant at the 0.01 level						
** Correlation is significant at the 0.05 level						

Table 2: Pearson's correlation coefficient
(Source: Research results)

Table 2 shows that the correlation coefficients range from 0 to 1 and are statistically significant. Furthermore, a strong positive correlation can be seen between “Attitudes towards online shopping” and “Online purchase intention” ($r=0.776$, $p<0.05$), thus confirming hypothesis H₁. A strong positive correlation can also be observed between “Perceived behavioural control” and “Online purchase intention” ($r=0.648$, $p<0.05$), thereby confirming hypothesis H₂. The moderate positive correlation between “Attitudes towards prices” and “Online purchase intention” ($r=0.309$, $p<0.05$) confirms hypothesis H₄. Based on the strong positive correlation between “Attitudes towards security” and “Online purchase intention” ($r=0.511$, $p<0.05$), hypothesis H₅ is also confirmed. Finally, there is a significant positive correlation between “Attitudes towards delivery” and “Online purchase intention” ($r=0.619$, $p<0.05$), which confirms hypothesis H₆.

It should be pointed out that of the six hypotheses set, only five were tested as reliability analysis revealed a low value for the construct "Subjective norms" (0.570), causing it to be excluded from further analysis.

6. DISCUSSION AND CONCLUSION

In the context of the respondents' attitudes towards online shopping, the study shows that attitudes towards online shopping have a positive effect on online purchase intention. When shopping online, the respondents feel comfortable and consider online shopping to be easy, which is consistent with the findings of Khare and Rakesh (2011), who found a positive relationship between attitudes towards online shopping and online purchase intention. With regard to perceived behavioural control, the results of this study show that respondents feel they are in control of their behaviour during online shopping. Furthermore, during the payment process they are comfortable with the level of security provided by the online shop and feel that they can easily access customer service in online shops. The study also proves that perceived behavioural control has a positive effect on purchase intention, which is consistent with the findings of Hsu et al. (2006), stating that the purchasing behaviour of individuals depends upon perceived behavioural control, among other things. The research results also show that the attitudes of young consumers towards prices have a positive effect on their online purchase intention, which is consistent with the results of research by Vasić et al. (2019), confirming that price is an important factor of overall customer satisfaction. According to research by Correia Loureiro and Breazeale (2016), price awareness is one of the factors of consumers' online shopping orientation. Regarding security, the results of this study indicate that the respondents believe online shops provide key information concerning their security and privacy policies and, in general, the respondents feel that online shopping is safe. San Martín et al. (2011) argue that the relationship between a higher degree of security and satisfaction is unequivocal. With regard to attitudes towards delivery, the respondents feel that the possibility of tracking the package during delivery is very helpful and that delivery to anywhere, without delivery charges, represents added value. They also feel that orders are received on time and that waiting times are acceptable when the price advantage of online shopping is taken into consideration. This study proves that the attitudes of young consumers towards delivery convenience have a positive effect on online purchase intention. Katta and Patro (2016) highlight timely delivery and the delivery of undamaged products as key features of properly executed delivery. They also indicate that delivery is a key factor of customer satisfaction and future online purchase intention. Based on the results obtained, suggestions for improving marketing activity can be drawn. First and foremost, greater emphasis should be placed on enhancing the quality of marketing communication to ensure dialogue which is essential when young consumers are the target group. In this respect, integrated marketing communication is needed so that the opinions of young consumers can be taken into consideration. To ensure the loyalty of young consumers, the prices in online shops should be reduced, relative to prices in physical shops, to ensure that the online experience justifies its "value added" epithet. Furthermore, while young consumers are the target group with the lowest earnings, they are also the most frequent Internet users. Hence, price adjustments in online shops could serve as a tool to ensure young consumer loyalty. Finally, it is suggested to ensure that security terms are defined as clearly as possible and communicated to young consumers as concisely as possible, in order to keep their attention and gain their trust. With regard to the research results, this study has several limitations. The first limitation of the empirical research is the size of the sample on which the survey was conducted and the fact that the survey included only respondents in the Republic of Croatia. Another limitation is the prevalence of female respondents in the sample. Hence, the findings of this study regarding the online purchasing behaviour of young consumers cannot be generalised, and the presented results are indicative in nature.

Future research should seek to include respondents from other countries, to obtain more in-depth insights into the online purchasing behaviour of young consumers. Furthermore, it would be necessary to explore the moderating role of variables such as gender, income, education and age. Another limitation is the scope of the questionnaire, which did not encompass all other factors (such as the availability of information on online shopping, the quality of online shopping, the loyalty of respondents, etc.) which could affect the consumers' attitudes and online purchase intention. Overcoming the limitations of the current study can provide directions for improving future research.

LITERATURE:

1. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*. Vol. 50, No. 2, pp. 179 - 211.
2. Berkup, S.B. (2014). Working With Generations X And Y In Generation Z Period: Management Of Different Generations In Business Life. *Mediterranean Journal of Social Sciences*. Vol. 5, No. 19, pp. 218-229.
3. Clemes, M.D., Gan, C., Zhang, J. (2014). An empirical analysis of online shopping adoption in Beijing, China. *Journal of Retailing and Consumer Services*. Vol. 21, No. 3, pp. 364-375.
4. Correia Loureiro, S.M., Breazeale, M. (2016). Pressing the Buy Button: Generation Y's Online Clothing Shopping Orientation and Its Impact on Purchase. *Clothing and Textiles Research Journal*. Vol. 34, No. 3, pp. 1-12.
5. *Euromonitor International*. (2021). Retrieved 27.07.2021 from <https://blog.euromonitor.com/new-strategies-to-engage-millennials-and-generation-z-in-times-of-uncertainty/>.
6. Grashuis, J., Skevas, T., Segovia, M.S. (2020). Grocery Shopping Preferences during the COVID-19 Pandemic. *Sustainability*. Vol. 12, No. 13, pp. 1-10.
7. Hair, J.F., Jr., Black, W.C., Babin, B.J., Anderson, R.E. (2006). *Multivariate Data Analysis* (Sixth Edition). Upper Saddle River, New Jersey: Pearson Prentice Hall.
8. Holmes, A., Byrne, A., Rowley, J. (2014). Mobile shopping behaviour: insights into attitudes, shopping process involvement and location. *International Journal of Retail & Distribution Management*. Vol. 42, No. 1, pp. 25-39.
9. Hsu, M.-H., Yen, C.-H., Chiu, C.-M., Chang, C.-M. (2006). A longitudinal investigation of continued online shopping behavior: An extension of the theory of planned behavior. *International Journal of Human-Computer Studies*. Vol. 64, No. 9, pp. 889-904.
10. Katta, R.M.R., Patro, C.S. (2016). Online Shopping Behavior: A Study of Factors Influencing Consumer Satisfaction on Online viz-aviz Conventional Store Shopping. *International Journal of Biotechnology and Knowledge Development*, Vol. 8, No. 4, pp. 21-36.
11. Khare, A., Rakesh, S. (2011). Antecedents of Online Shopping Behavior in India: An Examination. *Journal of Internet Commerce*. Vol. 10, pp. 227-244.
12. Ladhari, R., Gonthier, J., Lajante, M. (2019). Generation Y and online fashion shopping: Orientations and profiles. *Journal of Retailing and Consumer Services*. Vol. 48, pp. 113-121.
13. Levickaite, R. (2010). Generations x, y, z: How social networks form the concept of the world without borders (the case of Lithuania). *LIMES: Cultural Regionalistics*. Vol. 3, No. 2, pp. 170-183.
14. Li, Y.-H., Huang, J.-W. (2012). Ambidexterity's mediating impact on product development proficiency and new product performance. *Industrial Marketing Management*. Vol. 41, No. 7, pp. 1125-1132.

15. Madden, T.J., Ellen, P.S., Ajzen, I. (1992). A comparison of the theory of planned behavior and the theory of reasoned action. *Personality and Social Psychology Bulletin*. Vol. 18, No. 1, pp. 3-9.
16. Moshref Javadi, M.H., Dolatabadi, H.R., Nourbakhsh, M., Poursaeedi, A., Asadollahi, A.R. (2012). An Analysis of Factors Affecting on Online Shopping Behavior of Consumers. *International Journal of Marketing Studies*. Vol. 4, No. 5, pp. 81-98.
17. Naseri, R.N.N., Hussin, H., Esa, M.M., Aziz, N.E.M., bin Nordin, M.N. (2021). What is a Population in Online Shopping Research? A perspective from Malaysia. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*. Vol. 12, No. 4, pp. 654-658.
18. Roška, V., Draganović, A. (2020). Osobna potrošnja u vrijeme COVID-19 pandemije u Republici Hrvatskoj. *Acta Economica et Turistica*. Vol. 6, No. 1-2., pp. 5-23.
19. Sabaitytė, J., Davidavičienė, V., Straková, J., Raudeliūnienė, J. (2019). Decision tree modelling of E-consumers' preferences for internet marketing communication tools during browsing. *Economics and Management*. Vol. 22, No. 1, pp. 206-221.
20. San Martín, S., Camarero, C., San José, R. (2011). Does Involvement Matter in Online Shopping Satisfaction and Trust?. *Psychology & Marketing*. Vol. 28, No. 2, pp. 145-167.
21. Vasić, N., Kilibarda, M., Kaurin, T. (2019). The Influence of Online Shopping Determinants on Customer Satisfaction in the Serbian Market. *Journal of Theoretical and Applied Electronic Commerce Research*. Vol. 14, No. 2, pp. 70-89.

ANALYSIS OF ACQUISITION SUCCESS IN SOFT BEVERAGE INDUSTRY OF THE REPUBLIC OF CROATIA

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ABSTRACT

It is common to observe the acquisition success through the analysis of financial statements of the acquirer. This paper is utilizing horizontal analysis of the acquirer's financial statements, as well as analysis of individual financial indicators. The analysis shows the impact of the transaction on acquirer's business performance. Accounting approach is relevant when doing M&A research and it is used in this paper to examine the success of acquisition of Jamnica's soft beverage brands by company Stanić Beverages d.o.o. which is subsidiary fully owned by Stanić Grupa d.o.o. After the analysis of key business indicators it has been concluded that business performance of the acquirer Stanić Beverages d.o.o. was improving after the successful acquisition of Jamnica's soft beverage brands.

Keywords: *acquisition, food and beverage industry, financial statement analysis*

1. INTRODUCTION

Corporate restructuring like mergers and acquisitions (M&A) has become world-wide phenomena for firms to achieve their strategic objectives. In an ever-changing business environment, mergers and acquisitions have become one of the quickest routes for companies to operate in new markets and add resources to existing resources (Kumar, 2019, pp.1). M&A is a century-old activity which happened in waves. The value of M&A deal rose from \$200 billion in 1992 to about \$4.74 trillion by 2017 (Kumar, 2019, pp.1). M&As are a vital part of any healthy economy because they force firms to use their resources efficiently and allow strong companies to grow and weaker companies to be swallowed (Baker, Kiymaz, 2011). The typical strategic growth options are as follows: organic, inorganic, or by external means. Examples of organic growth are hiring additional salespeople, developing new products, and expanding geographically. The best example of inorganic growth is an acquisition of another firm, something that is often done to gain access to a new product line, customer segment, or geography. External revenue growth opportunities include franchising, licensing, joint ventures, strategic alliances, and the appointment of overseas distributors (Sherman, 2011). Theoretically, companies should pursue an acquisition only if it creates value – that is, if the value of the acquirer and the target is greater if they operate as a single entity rather than as separate ones. Transactions should be made only when they improve the strategic position of the investor's existing business or add to its core competencies (Cullinan, Holland, 2002). Mergers and acquisition is justified if synergies are associated with the transaction. Synergies can take three forms: operating, financial, or managerial (Petitt, Ferris, 2013). Operating synergy consists of economies of scale, economies of scope, and the acquisition of complementary technical assets and skills, which can be important determinants of shareholder wealth creation. The synergy and savings evaluations process generally focuses on the areas of procurement, R&D investments, and new product development, as well as distribution channel and supply chain analysis (Trompenaars, Asser, 2011). Gains in efficiency can come from these factors and from improved managerial operating practices (DePamphilis, 2018, pp. 8). Financial synergy refers to the reduction in the acquirer's cost of capital due to a merger or acquisition. They could occur if the merged firms have cash flow that are relatively uncorrelated.

The conventional view holds that corporations moving into different product lines whose cash flows are uncorrelated reduce risk specific to the firm, i.e. business specific risk (DePamphilis, 2018, pp.11). Buying firms beyond a company's current lines of business is called diversification. Diversification may create financial synergy that may allow a firm to shift its core product lines or target markets to ones with higher growth prospects. The new product lines or target markets may be related or unrelated to the firm's current products or markets (DePamphilis, 2018). Thus, the main purpose of this paper is to analyze acquisition success of Jamnica's soft beverage brands by company Stanić Beverages d.o.o.

2. ACQUISITIONS IN SOFT BEVERAGE INDUSTRY

Consumer goods companies are using M&A as a strategy to expand global reach, enter new markets and consolidate the focus on their core brands. Acquisitions are also used to vertically integrate and optimize supply chain operations (Kumar, 2012). The industries growing only with inflation and population growth are stable and predictable. Companies are generally attractive to longer-term investors. The market is large as expressed as a percentage of the national economy (Miller, 2012). The food and beverage production sector is one of the most important industrial sectors in Croatia. Compared to other branches of the processing industry, food and beverage production still has the largest share in Croatia's gross domestic product and total employment. The share of food and beverage industry in Croatia's GDP in 2017 was 2,9% (of which the share of food production was 2,3% and beverage production 0,6%). At the same time, the share of food and beverage production in the GDP of the processing industry was 22,5%. Food production accounts for 17,5% and beverage production for 5%. The share of the food and beverage industry in total employment in 2019 was 3,6% (of which the share of food production was 3,2% and beverage production 0,4%).¹ The food and beverage production sector participated in the total employment of the processing industry in January 2020 with a share of 20,9%, while in the same period last year that share was 19,9%. The share of the food industry was 18,7%, and the beverage industry 2,2% of the total employment of the processing industry. After the decline in the production activity of this industry in 2018, in 2019 it recorded a year-on-year growth of 3,7%.² Food and beverage sector in the period from 2011 to 2019 experienced an increase in labor productivity. The labor productivity of the food industry in 2019 was 38,5% higher than in 2010. At the same time, labor productivity in the beverage industry increased by 38,7%.³ Analyzing the trends in exports and imports of food and beverage industry products from 2010 to 2019, it can be stated that there is an increase in the volume of foreign trade, with the increase in exports less than the increase in imports. Exports of the food and beverage industry in the period from 2010 to 2019 increased by 105,6%, and imports by 118,6%. Faster growth of imports than growth of exports led to a slight deterioration of the foreign trade balance and thus less coverage of imports by exports in food and beverage industry. The coverage of imports by exports of food industry products in 2019 was 52,4%, while in 2010 it was 55,7%.⁴ The food and beverage industry is one of the biggest drivers of the economy in the European Union and stands out as a very important sector. Production and sales in the food and beverage industry are in constant and stable growth and exceed the growth of total industrial production. The European Union's food and beverage industry grew by 0,8% in the fourth quarter of 2019 when compared to the fourth quarter of 2018.

¹ Available at: https://www.eizg.hr/userdocsimages/publikacije/serijske-publikacije/sektorske-analize/SA_hrana-2018.pdf [21.06.2021.]

² Available at: https://www.eizg.hr/userdocsimages/publikacije/serijske-publikacije/sektorske-analize/SA_hrana-2018.pdf [21.06.2021.]

³ Available at: https://www.eizg.hr/userdocsimages/publikacije/serijske-publikacije/sektorske-analize/SA_hrana-2018.pdf [21.06.2021.]

⁴ Available at: https://www.eizg.hr/userdocsimages/publikacije/serijske-publikacije/sektorske-analize/SA_hrana-2018.pdf [21.06.2021.]

At the annual level, in 2019 there was an increase in production in the food and beverage industry of 3,6%, while total industrial production fell by 1,1% year on year.⁵ Food and beverage sector is one of the major contributors to the growth of all global economies, and has historically witnessed consistent growth. It is estimated that the global food and beverage sector has accumulated value in excess of \$7 trillion. Its substantial value, of course, is one of the main reasons why the industry is a particular target for mergers and acquisitions activity.⁶ Opportunities for geographic growth, expansion of product portfolio and know-how, with low cost of funding as a complement, is driving much of the M&A activity in the food and beverage industry. Buyers are not only looking to obtain economies of scale in order to reduce inefficient cost structures, but also to incorporate technological know-how that allows maximizing productivity.⁷ EU food and drink industry employs 4,82 million people, generates a turnover of EUR 1,2 trillion and EUR 266 billion in value added, making it the largest manufacturing sector in the EU. In half of the EU's 27 Member States, the food and drink industry is the biggest manufacturing employer.⁸ Since being an appropriate industry for long-term investors, there is a significant number of M&A transactions in the European Union soft beverage industry. Figure 1 shows number of transactions in selected countries of European Union from 2011 to 2021.

Figure following on the next page

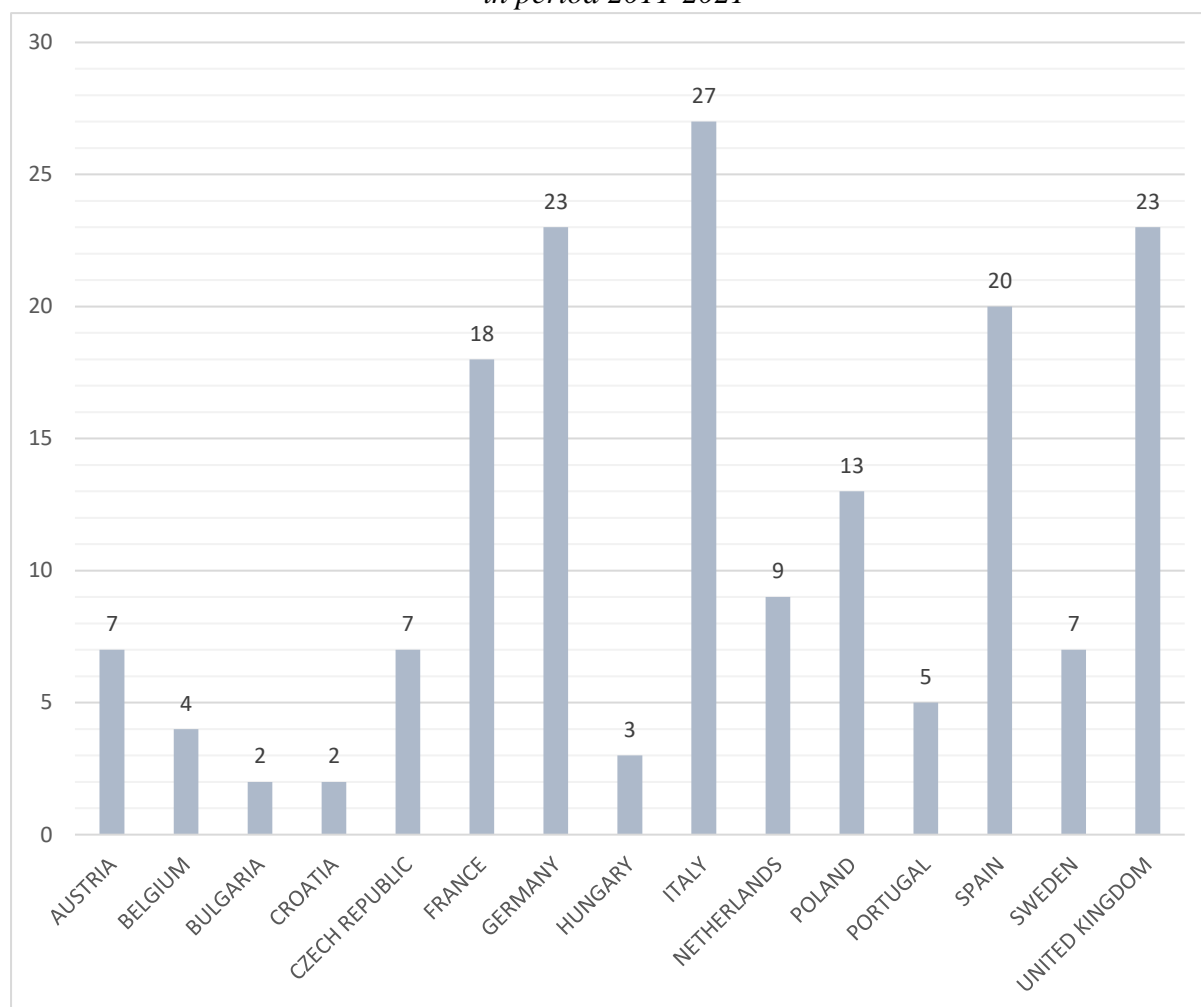
⁵ Available at: https://www.eizg.hr/userdocsimages/publikacije/serijske-publikacije/sektorske-analize/SA_hrana-2018.pdf [21.06.2021.]

⁶ Available at: <https://www.financierworldwide.com/food-beverage-industry-serves-up-tasty-ma#.YPPzGy12Bp8> [23.06.2021.]

⁷ Available at: <https://m-a-worldwide.com/wp-content/uploads/2020/04/MA-WORLDWIDE-Agri-Food-Beverages-Industry-Report-May-2017.pdf> [22.06.2021.]

⁸ Available at: <https://www.fooddrinkurope.eu/wp-content/uploads/2021/02/FoodDrinkEurope-Data-Trends-2020-digital.pdf> [23.06.2021.]

Figure 1: Acquisitions in soft beverage industry in selected countries of the European Union in period 2011-2021



Source: www.mergermarket.com [30.06.2021.]

Data in Figure 1 was gathered from Mergermarket database that records transactions with a deal value of more than 5 million Euros. As it can be seen, the largest number of transactions has been concluded in Italy, which doesn't come as a surprise, since it is the third-largest nation economy in the European Union and the eight largest by nominal GDP in the world. Italy's food and beverage sector is one of the leading sectors of the Italian manufacturing. At the end of 2019 it grew by 3%, with export growth of 6,6%, compared to 2,3% of Italy's total export growth.⁹ There are 331 food and beverage companies registered in Italy.¹⁰ In Germany and United Kingdom there were 23 acquisitions in the soft beverage industry. It is important to note that Germany is Europe's largest market for the food and beverage industry. The changing food habits of German consumers are prompting several international food and beverage companies to set companies in this region. There are significant investment opportunities in this industry in Germany.¹¹ The German economy is highly developed. It is the largest national economy in Europe with nominal GDP of 4,3 trillion USD. There are 5.800 food and beverage companies registered in Germany, with 570.000 employees, thus, food and beverage industry is one of the largest German industrial sectors.

⁹ Available at: <https://news.italianfood.net/2020/02/25/italys-food-beverage-the-challenges-of-the-future/> [23.06.2021.]

¹⁰ Available at: <https://www.crunchbase.com/hub/italy-food-and-beverage-companies> [23.06.2021.]

¹¹ Available at: <https://www.infiniiresearch.com/thoughts/thought-leader-insights-key-challenges-german-food-beverage-market> [22.06.2021.]

They set a record in sales of food and beverage products in European Union, with total sales of 2012 were almost 170 billion EUR.¹² There were 20 transactions in Spain, which justifies their economic power in food and beverage industry. This industry achieved 102 billion EUR worth of production in 2017, thus setting a new record and firmly establishing its role as the leading industry in Spain. It also provides employment to 500.000 people. Exports of Spanish food and beverage products continued to rise in 2017, with 30,6 billion EUR in export value.¹³ When it comes to France, there were 18 transactions in the period from 2011 to 2021. Food and beverage industry in France represents around 180 billion EUR or 20% of total manufacturing. There are 16.000 registered companies that employ 400.000 people. Most of the companies are small to medium sized. It is important to note that due to diverse ethnic background of the people living in France, there is a market for vast variety of products.¹⁴ Those numbers stated are followed by Sweden, Czech Republic and Austria who all experienced 7 transactions in the food and beverage industry. When it comes to Croatia, there were only 2 M&A transactions in soft beverage industry. One was the acquisition of Robic d.o.o. by private investor in 2016, and the other was the acquisition of Jamnica's juice brands by Stanic Group with a deal value of 45 million EUR.¹⁵ This is partially justified with the fact that food and beverage industry is not fast-paced as, for example, tourism industry, and thus the number of restructuring processes is less than that of other more cyclical industries. Apart from the M&A activity in food and beverage industry measured with number of transactions it is also important to analyze the value of some of the most significant transactions. Table 1 presents highest value transactions in the period 2011-2021 for the selected EU countries.

Table following on the next page

¹² Available at: <https://biooekonomie.de/en/economy/sectors/food-and-beverage-industry> [24.06.2021.]

¹³ Available at: <https://www.foodswinesfromspain.com/spanishfoodwine/global/food/news/new-detail/spain-food-beverage-industry.html> [24.06.2021.]

¹⁴ Available at: <https://www.allianceexperts.com/en/knowledge/countries/europe/opportunities-in-the-french-food-market/> [23.06.2021.]

¹⁵ Available at: www.mergermarket.com [30.06.2021.]

Table 1: Highest value transactions in the soft beverage industry in selected countries of the European Union in period 2011-2021

Country	Completed date	Target Company	Bidder Company	Transaction value, EUR (million)
Greece	18.06.2013.	Coca-Cola Hellenic Bottling Company S.A. (76,7% stake)	Coca-Cola HBC AG	6239,13
Spain	28.05.2016.	Coca-Cola Iberian Partners, S.A.	Coca-Cola Enterprises, Inc.	5763,44
Germany	28.05.2016	Coca-cola Erfrischungsgetraenke AG	Coca-Cola Enterprises, Inc.	2949,40
United Kingdom	31.12.2013.	Lucozade Ribena Suntory Limited	Suntory Beverage & Food Limited	1599,15
Spain	18.02.2013.	Rendelsur S.A.	Cobega, S.A.	1215
Spain	18.02.2013.	Compania Castellana De Bebidas Gaseosas, S.L.	Cobega, S.A.	880
Spain	29.07.2015	Coca-Cola Iberian Partners, S.A. (13% Stake)	Cobega Invest, L.L.C.	800
Spain	14.04.2014.	Arca Continental Argentina, S.L. (25% Stake); Arca Ecuador, S.A. (25% Stake)	Arca Continental S.A.B. de C.V.	512
Germany	24.04.2014.	Coca-Cola Erfrischungsgetraenke AG (17% Stake)	European Refreshments Limited	366
United Kingdom	07.10.2015.	Matthew Clark Bibendum Limited	Conviviality Plc	273
Netherlands	28.03.2017.	Strauss Coffee B.V. (25,1% Stake)	The Strauss Group	257
Italy	23.06.2020.	Davide Campari-Milano S.p.A. (2,58% Stake)	Lagfin S.C.A.	251
Croatia	24.12.2013.	Jamnica d.d. (Jamnica juice brand)	Stanic Group	45

Source: www.mergermarket.com [30.06.2021.]

Majority of highest value transactions were concluded between 2013 and 2016, so it can be concluded that the economic recovery affected the number of transactions. It can be observed that the highest value transactions were concluded in United Kingdom, Germany and Spain, and that can be explained by the strength of their economies. The highest value acquisition in soft beverage industry in Croatia was concluded by Stanic Group in 2013 when they acquired juice brand and bottling facility of Jamnica d.d. which will be analyzed in the next section of this paper.

3. ANALYSIS OF ACQUISITION OF JAMNICA'S JUICE BRAND BY STANIĆ GRUPA D.O.O

Stanić Grupa d.o.o. was founded in 1994 and is registered as a limited liability company at the Commercial Court in the City of Split. The share capital of the company amounts to 94.349.200,00 HRK.¹⁶ Stanić Grupa d.o.o. acts as a holding company and currently consists of 8 different companies operating in the field of production, distribution and sale of alcoholic and non-alcoholic beverages, technical goods and tobacco, and in the media segment.¹⁷ Boreas d.o.o. is a distributor and representative of world-famous brands in the range of beverages and tobacco products in Bosnia and Herzegovina. These brands are: Heineken, Karlovačko, Union, Laško, Zajčarsko, Krušovice, MB, as well as products from the range of companies Maraska and Diageo. It is also a distributor of Philip Morris tobacco products.¹⁸ Stanić Beverages d.o.o. is the owner of the Juicy brand, one of the largest brands in the category of juices and other fruit products in the region. The production plant is located in Jastrebarsko in Zagreb, from where the European Union countries are supplied.¹⁹ Stanić Beverages d.o.o. Bosnia and Herzegovina is a company whose headquarters are located in Kreševo near Sarajevo, and within which there is a factory for the production of Juicy juices, for the needs of the BiH market and CEFTA countries.²⁰ Stanić Trade d.o.o., Bosnia and Herzegovina, is a leading company in Bosnia and Herzegovina for import, distribution and sale of technical goods, which it places on the market through its own retail network, and through a large number of distribution network sales facilities. Since Stanić Trade d.o.o. is authorized importer of the world's largest technology brands like LG Electronics, Toshiba, Sony, Philips, Electrolux, Whirlpool, Hotpoint, Indesit, Hisense, Rowenta and Tefal.²¹ Stanić Media d.o.o. Bosnia and Herzegovina, is the youngest company within the group, and was established for the purpose of launching a new TV channel on the media market of Bosnia and Herzegovina and the region. Also, the company is the owner of Radio KISS, and in parallel with the establishment of the new channel, a significant investment in digital media is expected.²² Borvel d.o.o. Bosnia and Herzegovina is a company engaged in the wholesale and retail sale of alcoholic and non-alcoholic beverages.²³ In the late 2013, Jamnica, a member of the Agrokor Group, signed a contract with Stanić Group for the sale of Juicy fruit juices. Stanić Group became the new owner of the bottling facility in Jastrebarsko as well as of the Juicy, To, Juicy Fruits, Juicy Kids and Juicy Vita brands through its fully owned subsidiary Stanić Beverages d.o.o. The investment was worth 45 million EUR. It was a strategic decision aimed at making further investments in production and regional brand and business growth. With this move, Stanić Group reinforced its strong presence on the Bosnia and Herzegovina market and made a considerable step towards expansion on Croatian and neighbouring markets.²⁴ Stanić Beverages d.o.o. is a limited liability company registered at the Commercial Court in Zagreb with a share capital of 106.607.100 HRK.²⁵ Stanić Beverages kept continually investing and improving the business since the acquisition in 2013. The acquisition of Jamnica's brands is a decision compatible with the strategy of Stanić Group. It can be viewed as an attempt to diversify business and thus create multiple uncorrelated cash flow streams which are reducing financial and business specific risk. The acquisition of a company can drive increased revenues in a variety of ways. The buyer may be able to utilize the target's channels to sell its products, or sell the target's products through its own existing channels (Frankel,

¹⁶ Available at: https://sudreg.pravosudje.hr/registar/f?p=150:28:0::NO:28:P28_SBT_MBS:060061510 [24.06.2021.]

¹⁷ Available at: <http://www.stanic.com/hr/grupacija/clanice-grupacije.html> [24.06.2021.]

¹⁸ Available at: <http://www.stanic.com/hr/grupacija/clanice-grupacije.html> [24.06.2021.]

¹⁹ Available at: <http://www.stanic.com/hr/grupacija/clanice-grupacije.html> [24.06.2021.]

²⁰ Available at: <http://www.stanic.com/hr/grupacija/clanice-grupacije.html> [24.06.2021.]

²¹ Available at: <http://www.stanic.com/hr/grupacija/clanice-grupacije.html> [24.06.2021.]

²² Available at: <http://www.stanic.com/hr/grupacija/clanice-grupacije.html> [24.06.2021.]

²³ Available at: <http://www.stanic.com/hr/grupacija/clanice-grupacije.html> [24.06.2021.]

²⁴ Available at: <https://www.agrokor.hr/en/news/agrokor-sold-jamnica-s-juicy-to-the-stanic-group/> [24.06.2021.]

²⁵ Available at: https://sudreg.pravosudje.hr/registar/f?p=150:28:0::NO:28:P28_SBT_MBS:060305943 [24.06.2021.]

Forman, 2017). In order to assess the acquisition success of Jamnica's brands by accounting approach, comparative income statement of Stanić Beverages d.o.o. (Table 2) was analyzed in period after the acquisition till 2019.

Table 2: Comparative income statement of Stanić Beverages d.o.o. in period 2013-2019

(000's of HRK)	2013	%	2014	%	2015	%	2016	%	2017	%	2018	%	2019
Sales	559	7266%	41.248	282%	157.545	-6%	148.169	19%	175.985	-8%	162.439	6%	172.939
Expenses	3.436	667%	26.346	450%	144.826	-3%	140.841	18%	165.921	-6%	155.496	3%	159.584
Financial revenues	-	-	1.680	39%	2.337	16%	2.715	-23%	2.104	78%	3.741	-58%	1.584
Financial expenses	415	4729%	20.064	-9%	18.205	-25%	13.684	-22%	10.693	-2%	10.505	9%	11.432
Total revenues	559	7567%	42.928	272%	159.882	-4%	153.606	16%	178.089	-7%	166.180	5%	174.523
Total expenses	3.851	1105%	46.410	251%	163.031	-5%	154.525	14%	176.614	-6%	166.001	3%	171.016
Gross profit	(3.291)	6%	(3.482)	-	(3.149)	-	(919)	-	1.475	-88%	179	1859%	3.507
Taxes	-	-	-	-	-	-	-	-	-	-	-	-	494
Net income/loss	(3.291)	-	(3.482)	-	(3.149)	-	(919)	-	1.475	-88%	179	1583%	3.013

Source: Author's calculations based on Annual Financial Statements of Stanić Beverages d.o.o., available at: <http://rgfi.fina.hr/JavnaObjava-web/izbornik.do> [30.06.2021.]

From 2013 to 2019 we can observe overall positive trend in revenue increase. Revenue increased from 559.000 HRK in 2013 to 172.939.000 HRK in 2019. This positive trend can be associated with higher demand, both domestic and foreign and the nature of soft beverage industry, which is characterized by lower price elasticity of demand compared to some more cyclical industries. The continuous improvements in assortment offered by Stanić Beverages' brand Juicy and penetration to new markets will undoubtedly continue to have a positive impact on the business in the future and thus on the revenue. From 2013 to 2016 company was loss making which can be attributed to the higher costs of production due to the quality Stanić Beverages wants to maintain. However, company started making profit in 2017 and this positive trend continued to 2019, with 2019 profit being twice as high as that in 2017. The financial ratios used to assess the safety of business performance are the liquidity and debt ratios which are shown in the table below for the period after the acquisition of Jamnica's brands. Financial ratios are analyzed (Table 3) in order to make conclusion about the impact of debt, which was generated in the acquisition process, on financial stability of Stanić Beverages d.o.o.

Table 3: Selected financial ratios of Stanić Beverages d.o.o. after the acquisitions of Jamnica's juice brand

FINANCIAL RATIOS	2017	2018	2019
CURRENT LIQUIDITY RATIO	0,02	0	0
FINANCIAL STABILITY RATIO	0,58	0,52	0,64
DEBT RATIO	16,22	20,38	16,68
SELF-FINANCING RATIO	0,27	0,27	0,29
FINANCING RATIO	2,65	2,64	2,42
COVERAGE RATIO I.	0,33	0,35	0,37
COVERAGE RATIO II.	0,93	0,86	0,93

Source: Author's calculations based on Annual Financial Statements of Stanić Beverages d.o.o., available at: <http://rgfi.fina.hr/JavnaObjava-web/izbornik.do> [30.06.2021.]

Since the acquisition in 2013 was financed with debt, it is justified that the debt ratio is high through the year covered in the analysis. Current liquidity ratio is low, but not far away from the industry average, which was 0,02 in 2019. Self financing was higher than the industry average which was 0,19 in 2019. This higher than the average ratio is signalling less risk when doing business with the company.

The higher and improving coverage ratio I indicates that the company is financing larger part of its long-term assets with its own sources, but however it is still lower than the industry average which was 0,41 in 2019. It can be concluded that the indebtedness has the greatest impact on these financial results, but however due to the nature of the industry, it should not imply excessive risks associated with the business. Ratios for evaluating business performance are activity ratios, economy ratios, profitability and investment ratios. Table 4 is highlighting some of the most important ratios which are used to evaluate the success of the acquirer's business performance after the acquisition of Jamnica's brands.

Table 4: Selected business performance ratios of Stanić Beverages d.o.o. after the acquisition of Jamnica's juice brand

BUSINESS PERFORMANCE RATIOS	2017	2018	2019
TOTAL ASSETS TURNOVER RATIO	0,51	0,49	0,53
SHORT-TERM ASSETS TURNOVER RATIO	2,87	2,59	2,54
EBITDA MARGIN	13,51%	11,14%	13,73%
NET PROFIT MARGIN	0,79%	0,10%	1,63%
RETURN ON ASSETS	0,41%	0,05%	0,86%
RETURN ON EQUITY	1,53%	0,18%	3,05%
RETURN ON INVESTED CAPITAL	3,03%	2,21%	4,42%

Source: Author's calculations based on Annual Financial Statements of Stanić Beverages d.o.o., available at: <http://rgfi.fina.hr/JavnaObjava-web/izbornik.do> [30.06.2021.]

Total assets turnover ratios is increasing and thus indicating more efficient asset management. However, it is still below the industry average, which was 0,63 in 2019. Net profit margin experienced a sharp increase in 2019 to 1,63% from 0,10% in 2018, which means that the company was able to efficiently manage operating costs while increasing sales. Return on assets and return on equity were both improving in the period from 2017 to 2019. Higher return on assets signifies greater efficiency in utilising company's resources, and higher return on equity represents greater power of generating results on the capital invested by owner. It can be stated that the acquisition of Jamnica's brands did have a positive effect for the business of Stanić Beverages d.o.o. and thus the positive effect for the parent company Stanić Group d.o.o. Stanić Beverages d.o.o. managed its resources as effectively as possible taken the given business circumstances. Operation efficiency is also observable, and therefore, the acquisition of Jamnica's brands can be considered as a successful acquisition from acquirer's perspective.

4. CONCLUSIONS

The Croatian food and beverage industry is of great importance since it has the largest share in Croatia's gross domestic product and total employment. The industry historically witnessed consistent growth. Opportunities for geographic growth and the expansion of product portfolio are one of the main drivers of mergers and acquisitions transactions in the food and beverage industry. It can be concluded that food and beverage industry is appropriate for long-term investors who are looking to diversify their business holdings by entering low-risk environment and thus creating multiple uncorrelated cash-flow streams. As consumer preferences are evolving over time, the offering by soft beverage companies needs to keep up with this trend of evolving consumer preferences. Those companies which will be successful in following consumer preferences are those that are going to provide the highest return for their owners and position themselves as the industry leaders. Stanić Beverages d.o.o. has a wide soft beverage offering, which is undoubtedly serving diverse consumer preferences. It already positioned itself as a regional leader in terms of revenues and in terms of brand recognition.

Because of the quality of the product, Stanić Beverages d.o.o. started to expand into foreign markets, thus creating larger customer base, and diversifying business risks. Comparative income statement shows a positive trend in revenue, and financial ratios showed operational efficiency and overall profitability. After the analysis of acquisition using the accounting approach it can be concluded that this was successful acquisition from acquirer's perspective.

LITERATURE:

1. Baker, H. K., Kiymaz, H. (2011) *The Art of Capital Restructuring: Creating Shareholder Value through Mergers and Acquisitions*, 1st ed. Hoboken, New Jersey: John Wiley & Sons
2. Cullinan, G., Holland, T. (2002) *Strategic Due Diligence*, 1st ed. New York: Bloomberg Press
3. DePamphilis, D. M. (2018) *Mergers, Acquisitions, and Other Restructuring Activities: An Integrated Approach to Process, Tools, Cases and Solutions*, 9th ed. San Diego: Academic Press
4. Frankel, M. E., Forman, L. H. (2017) *Mergers and Acquisitions Basics: The Key Steps of Acquisitions, Divestitures, and Investments*, 2nd ed. Hoboken, New Jersey: John Wiley & Sons
5. Kumar, B. R. (2012) *Mega Mergers and Acquisitions: Case Studies from Key Industries*, 1st ed. London: Palgrave Macmillan
6. Kumar, B. R. (2019) *Wealth Creation in World's Largest Mergers and Acquisitions: Integrated Case Studies*. Cham, Switzerland: Springer
7. Miller, S. D. (2012) *Buyouts: Success for Owners, Management, PEGs, Families, ESOPs and Mergers and Acquisitions*, 1st ed. Hoboken, New Jersey: John Wiley & Sons
8. Pettit, S. B., Ferris, R. K. (2013) *Valuation for Mergers and Acquisitions*, 2nd ed. Upper Saddle River, New Jersey: Pearson Education
9. Sherman, J. A. (2017) *Mergers and Acquisitions from A to Z*, 4th ed. American Management Association
10. Trompenaars, F., Asser, M. N. (2011) *The Global M&A Tango: How to Reconcile Cultural Differences in Mergers, Acquisitions and Strategic Partnerships*, 1st ed. New York: McGraw Hill
11. https://www.eizg.hr/userdocsimages/publikacije/serijske-publikacije/sektorske-analize/SA_hrana-2018.pdf
12. <https://www.financierworldwide.com/food-beverage-industry-serves-up-tasty-ma#.YPPzGy12Bp8>
13. <https://m-a-worldwide.com/wp-content/uploads/2020/04/MA-WORLDWIDE-Agri-Food-Beverages-Industry-Report-May-2017.pdf>
14. <https://www.fooddrinkurope.eu/wp-content/uploads/2021/02/FoodDrinkEurope-Data-Trends-2020-digital.pdf>
15. <https://news.italianfood.net/2020/02/25/italys-food-beverage-the-challenges-of-the-future/>
16. <https://www.crunchbase.com/hub/italy-food-and-beverage-companies>
17. <https://www.infiniteiresearch.com/thoughts/thought-leader-insights-key-challenges-german-food-beverage-market>
18. <https://biooekonomie.de/en/economy/sectors/food-and-beverage->
19. <https://www.foodswinesfromspain.com/spanishfoodwine/global/food/news/new-detail/spain-food-beverage-industry.html>
20. <https://www.allianceexperts.com/en/knowledge/countries/europe/opportunities-in-the-french-food-market/>
21. www.mergermarket.com
22. https://sudreg.pravosudje.hr/registar/f?p=150:28:0::NO:28:P28_SBT_MBS:060061510
23. <http://www.stanic.com/hr/grupacija/clanice-grupacije.html>

24. <https://www.agrokor.hr/en/news/agrokor-sold-jamnica-s-juicy-to-the-stanic-group/>
25. https://sudreg.pravosudje.hr/registar/f?p=150:28:0::NO:28:P28_SBT_MBS:060305943
26. <http://rgfi.fina.hr/JavnaObjava-web/izbornik.do>

IMPACT OF ENTREPRENEURSHIP EDUCATION ON ENTREPRENEURIAL INTENTION WITH MEDIATING ROLE OF DESIRE FOR SUCCESS

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ABSTRACT

The role of entrepreneurship intention is considered essential in establishing a new business. Earlier studies have revealed attitude as a major component in forming intentions of the students towards entrepreneurship. Nevertheless, few have discussed this relationship by taking desire for success as a mediating construct. This research aims to develop a conceptual model to show how entrepreneurship education creates entrepreneurship intentions of being an entrepreneur primarily in students. Cross-sectional approach will be used in research design. Structural equation modeling technique (SEM) will be employed to test current model and outlined relationship.

Keywords: *Entrepreneurship Education, Desire for Success, Entrepreneurial Intention*

1. INTRODUCTION

Unemployment rate of the graduates is increasing day by day and becoming a national issue. This issue is because of increase in the number of graduate students but have lesser opportunities of jobs in the market. Scholar, government and aid development agencies of all over the world are assured that entrepreneurship defined as a prominent and essential component for the purpose of development of the financial system of the country and also for employment creation (Bell, 2015; Karimi, Biemans, Lans, Chizari, & Mulder, 2016; Klapper, 2004; Prakash, Jain, & Chauhan, 2015). Discouragingly, this multiplication not as it were surpassing the current request for their administrations but moreover the abilities of modern graduates don't coordinate those required by managers. Thus, academic abilities no longer guarantee immediate employment after graduation, and graduates must maintain a positive attitude in the face of an ever-changing labor market. Whereas advancement in business has had well-known impacts on the commerce world nowadays. Graduates must change their worldviews since their devotion to business will improve the financial development of the country and support it move closer to becoming a developed country in the future. Hence, this is essential to carry out a research aiming to know-how about the thinking of the students towards the intentions to become an entrepreneur and the constructs that influencing choices of the students. Model depends on independent variable as entrepreneurship education, mediating variable as desire for success and dependent variable as entrepreneurial intention. Planned behavior theory joins one's convictions and behavior. For the purpose of shaping intentions of individual's behavioral and behaviors theory states that main components are perceived behavioral control, attitude and subject norms. Planned behavior theory show the relationship between behaviors and attitudes (Ajzen, 1991). Intention is used to seize emotional reactions that affect individual's behavior and also related to someone's effort towards intentionally behavior.

The main purpose to conduct this research will determine and examine the influence of education that related to the entrepreneurship on perception of the students to become an entrepreneur by creating desire for success among them. And will also determine that is there any relationship between the education that related to entrepreneurship and intention to become entrepreneur with influence of desire for success. The current study will propose and analyze the conceptual model in which describe through hypothesize that the relationship between the education that related to entrepreneurship and intention to become entrepreneur will mediated by desire for success or not. This contrasts with past research, which has focused on the association between education that related to entrepreneurship and entrepreneurial goals without addressing the role of a desire for success.

2. LITERATURE REVIEW

2.1. Entrepreneurship Education

In modern era, Entrepreneurship plays a critical part in the development of today's economies and communities (Holmgren & From, 2005; Ozaralli & Rivenburgh, 2016). Due to entrepreneurship, the advancement which is related to the technology and innovation also the programs which are refer to an hiring generation that makes a significant contribution to the creation of innovative markets opportunities which arouse the development of economic circle and wealth of the nation (Holmgren & From, 2005). Entrepreneurship education is basically the process of the development of behaviors, attitudes in order to apply on the career of an individual as an entrepreneur (Cumming, 2014). Entrepreneurship education is complicated because of a wide range of its goals and also variety of different contexts and ways in which it is introduced. As a consequence, instructional programs which are related with entrepreneurship assume different styles and forms. According to the Pittaway and Cope (2007) and Pittaway and Edwards (2012) education is used as e.g. “for”, “about”, “through” and “in” entrepreneurship. These words descried as, firstly education for entrepreneurship is designed for people who desire to start and run their own firm. Secondly, the pragmatic component of entrepreneurship was stressed in entrepreneurship education. As a result, individuals in this kind of systems learn through portraying and performing entrepreneurially. The main idea towards this to focus in order to create ability to make the transition from idea acknowledgement to creating customer's value. Thirdly, The academic tradition of education about entrepreneurship poses the question that how can we explain and understand entrepreneurship? (Hoppe, Westerberg, & Leffler, 2017). Last Of All, through entrepreneurship education strives to train people with social skills as a result of their encouragement to adopt an innovative mindset in order to achieve social goals. education “through” entrepreneurship aims to prepare individuals with human skills that promote an entrepreneurial attitude to achieve social objectives. As a result, people are forced to live a life of entrepreneurship. In this regard, any member of society, regardless of their life goals, is likely to become an entrepreneur at some point. Entrepreneurship education is attempting to build intention in the individuals in order to accomplish entrepreneurial behaviors, desirability of an entrepreneurial activity and entrepreneurial knowledge (Francisco Liñán, 2004). Entrepreneurship education is being used as a key element to develop an intention in the individuals to execute entrepreneurial behaviors, desirability of the entrepreneurial activity and entrepreneurial knowledge (Francisco Liñán, 2004). There is a high scope of entrepreneurship education among the higher education in all over the world.

2.2. Desire for Success

Desire for success basically is the degree in which an individual sets some desirable goals in order to get success (Tessema Gerba, 2012). The concept of desire for success actively related with the entrepreneurship in which researchers showed that desire for success is relatively

associated with human qualities such as desire for freedom and chasing of achieving the objectives (Awang, Amran, Nor, Ibrahim, & Razali, 2016; Dess, Pinkham, & Yang, 2011; Dinis, Paço, Ferreira, Raposo, & Rodrigues, 2013; Ferreira, Raposo, Rodrigues, Dinis, & Paço, 2012; Gerba, 2012; Zhang et al., 2014). Researcher highlighted that there was an inadequate resources for the students to develop a desire for entrepreneurship and a result students may not be able to achieve entrepreneurial dreams (Wang & Wong, 2004). The education system plays a crucial part in recognizing and forming entrepreneurial characteristics (Ibrahim & Soufani, 2002). According to several polls, education, particularly education connected to technology training, is critical to enhancing entrepreneurs' inventive skills and drive for success in an increasingly complicated global ecosystem (Galloway & Brown, 2002; Garavan & Cinnéide, 1994). In some preceding study, this showed significant relation of desire for success, innovation and knowledge through entrepreneurship in terms to the relation of objectives. Therefore, researchers concluded that there is a high relation between desire for success and willingness of youth in order to take initiative and some kind of risk towards entrepreneurship (Ozaralli & Rivenburgh, 2016). Thus, these variables such as, desire for success and willingness of youth contributed a lot towards entrepreneurial intentions (Ghazali, Ibrahim, & Zainol, 2012).

2.3. Entrepreneurial Intention

Individuals with entrepreneurial intentions have a mindset that expects to gain personal experiences and a desire to engage in planned entrepreneurial activities (Do & Dadvari, 2017). So, an individual's entrepreneurial intention is described as a self-recognized factor that directs them to start a new business in the future (Thompson, 2009). As a result, entrepreneurial purpose is considered a significant component of entrepreneurial potential. Regardless of its conceptual ambiguity, entrepreneurial intent has been a key study component in the last three periods (Fayolle & Liñán Alcalde, 2014; Francisco Liñán & Fayolle, 2015). So, the intention is an important motivational factor that influence individual's behavior in order to direct planned behavior practices (F. Liñán & Santos, 2007). Entrepreneurial intention is considered to be an important component for future commencement of new businesses (Nguyen, Do, Vu, Dang, & Nguyen, 2019). Social behavior can be classified as either encouragement or reaction. Entrepreneurship can be considered planned behavior (Krueger, Reilly, & Carsrud, 2000; Francisco Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011). All scheduled behaviors must have been planned. As a result, considering that entrepreneurship is a multi-layered process that can lead to company innovation, having a plan is a good place to start (Krueger et al., 2000). According to the guidance of planned actions intention act as an anticipated outcome. So, in this context planned behavior theory creates the link between behaviors and attitudes (Ajzen, 1991). Intentions are expected as an intentional behaviors because behavior may also be planned. In the framework of entrepreneurship, intention is considered as the significant element for the purpose of establishing an organization (Katz & Gartner, 1988). This theory emphasizes on the intention to carry out certain behaviors is constituted by individual's desire to bring out their behavior and beliefs in their capacity to do so. The Planned Behavior Theory is used to build the conceptual foundation for this study. As a result, if a person's intention to perform an act is higher, the likelihood of that act being performed is also higher. Entrepreneurial intentions of university students from diverse culture backgrounds revealed that university environment encouragement influences university students' entrepreneurial confidence in the context of educational establishments (Autio, Keeley, Klofsten, & Ulfstedt, 1997). Providing of professional education in the universities is a useful and effective way to acquire knowledge and proper information about entrepreneurship. The purpose of commence a new business relay on an individual's desire and also on availability of resources.

2.4. Hypotheses Development

As a result of this literature, the following hypotheses were proposed:

- **H1:** Entrepreneurship education is positively related with entrepreneurial intention of the students.
- **H2:** Entrepreneurship education is positively related with the desire for success of the students.
- **H3:** Desire for success is positively related with entrepreneurial intention of the students.
- **H4:** Desire for success mediates the relationship between entrepreneurship education and entrepreneurial intention of students.

3. RESEARCH METHODOLOGY AND DESIGN

This study will take a quantitative research approach in line with Rahi, Othman Mansour, Alharafsheh, and Alghizzawi (2021). Research model will be tested through empirical data that would be collected through a research survey, with questionnaires as the primary data collection tool (Rahi, Khan, & Alghizzawi, 2021). The population for this study comprises undergraduate and graduate students from universities. The method of data collection can be performed through online google form due to COVID-19 pandemic. For the purpose of testing hypotheses of direct relationship of constructs, we will use structural equation modeling approach in line with Rahi, Khan, and Alghizzawi (2020). The questionnaire used in this study will primarily consist of closed-ended questions. Similarly, demographics questions include entrepreneurship education, desire for success, and entrepreneurial goal. On the other side, a five-point Likert scale will be used for evaluation, with response categories ranging from 1 (strongly disagree) to 5 (strongly agree) consistent with earlier studies (Rahi & Abd.Ghani, 2019; Rahi, Ghani, & Ngah, 2020; Rahi, Othman Mansour Majeed, Alghizzawi, & Alnaser Feras, 2019).

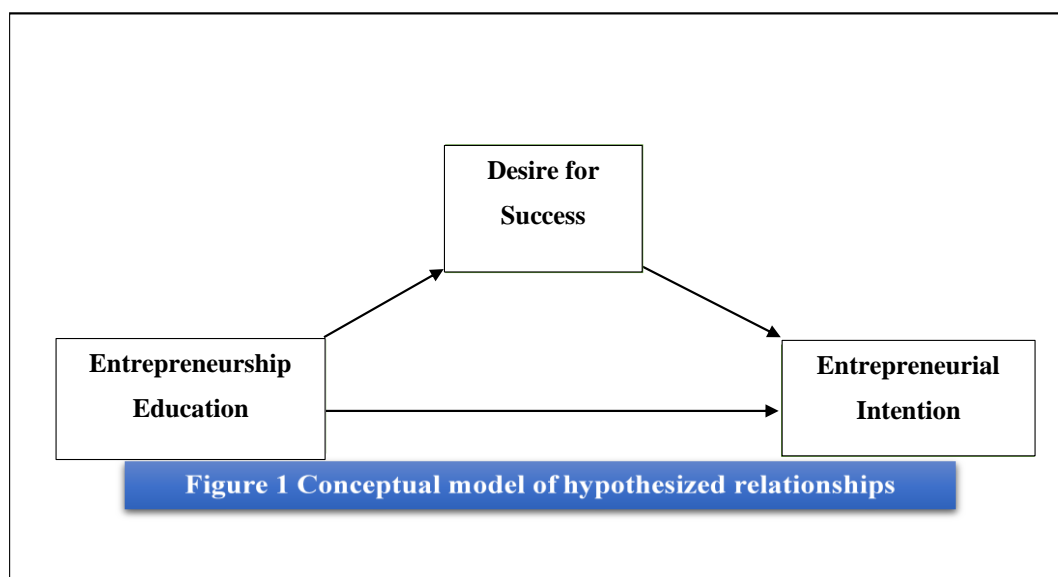


Figure 1: Research Model

4. CONCLUSION

The findings will reveal whether or not the desire for success is wholly or partially mediated. However, the findings will show whether or not entrepreneurship education has a direct impact on entrepreneurial intention. Using instructional tactics such as role advisers, models, mentors, and discussions from successful entrepreneurs will also contribute to the achievement of the specified educational goal.

Students' understanding of the benefits of pursuing entrepreneurship as a professional career should be enhanced through the use of teaching approaches. It will be claimed in this study that students' exposure to entrepreneurship education has or does not have an impact on their psychological development. The study will add to the body of knowledge by highlighting the technique by which entrepreneurship education shapes entrepreneurial intention. The research will also contribute to the existing literature on entrepreneurial intention in the undeveloped nations. This will have practical consequences for educators, who will need to modify their teaching technique and curriculum contents to accommodate students' motivation to succeed.

LITERATURE:

1. Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
2. Autio, E., Keeley, R. H., Klofsten, M., & Ulfstedt, T. (1997). Entrepreneurial intent among students: testing an intent model in Asia, Scandinavia and USA.
3. Awang, A., Amran, S., Nor, M. N. M., Ibrahim, I., & Razali, M. W. M. (2016). *INDIVIDUAL ENTREPRENEURIAL ORIENTATION IMPACT ON ENTREPRENEURIAL INTENTION: INTERVENING EFFECT OF PBC AND SUBJECTIVE NORM*.
4. Bell, R. (2015). Developing the next generation of entrepreneurs: Giving students the opportunity to gain experience and thrive. *The International Journal of Management Education*, 13(1), 37-47. doi: <https://doi.org/10.1016/j.ijme.2014.12.002>
5. Cumming, G. (2014). The New Statistics: Why and How. *Psychological Science*, 25(1), 7-29. doi: 10.1177/0956797613504966
6. Dess, G. G., Pinkham, B. C., & Yang, H. (2011). Entrepreneurial Orientation: Assessing the Construct's Validity and Addressing Some of Its Implications for Research in the Areas of Family Business and Organizational Learning. *Entrepreneurship Theory and Practice*, 35(5), 1077-1090. doi: 10.1111/j.1540-6520.2011.00480.x
7. Dinis, A., Paço, A., Ferreira, J., Raposo, M. L., & Rodrigues, R. (2013). Psychological characteristics and entrepreneurial intentions among secondary students. *Journal of Education and Training*, 55, 763-780.
8. Do, B.-R., & Dadvari, A. (2017). The influence of the dark triad on the relationship between entrepreneurial attitude orientation and entrepreneurial intention: A study among students in Taiwan University. *Asia-Pacific Management Review*, 22, 185-191.
9. Fayolle, A., & Liñán Alcalde, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research*, 67(5), 663-666.
10. Ferreira, J., Raposo, M. L., Rodrigues, R., Dinis, A., & Paço, A. (2012). A model of entrepreneurial intention: An application of the psychological and behavioral approaches. *Journal of Small Business and Enterprise Development*, 19, 424-440.
11. Galloway, L., & Brown, W. (2002). Entrepreneurship education at university: a driver in the creation of high growth firms? *Education + Training*, 44(8/9), 398-405. doi: 10.1108/00400910210449231
12. Garavan, T., & Cinnéide, B. Ó. (1994). Entrepreneurship education and training programmes: A review and evaluation - Part 2. *Journal of European Industrial Training*, 18, 13-21.
13. Gerba, D. T. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. *African Journal of Economic and Management Studies*, 3, 258-277.
14. Ghazali, Z., Ibrahim, N., & Zainol, F. (2012). Factors Affecting Entrepreneurial Intention among UniSZA Students. *Asian Social Science*, 9, 85.

15. Holmgren, C., & From, J. (2005). Taylorism of the Mind: Entrepreneurship Education from a Perspective of Educational Research. *European Educational Research Journal*, 4(4), 382-390. doi: 10.2304/eerj.2005.4.4.4
16. Hoppe, M., Westerberg, M., & Leffler, E. (2017). Educational approaches to entrepreneurship in higher education: A view from the Swedish horizon. *Education+ Training*.
17. Ibrahim, A. B., & Soufani, K. (2002). Entrepreneurship education and training in Canada: a critical assessment. *Education + Training*, 44(8/9), 421-430. doi: 10.1108/00400910210449268
18. Karimi, S., Biemans, H. J. A., Lans, T., Chizari, M., & Mulder, M. (2016). The Impact of Entrepreneurship Education: A Study of Iranian Students' Entrepreneurial Intentions and Opportunity Identification. *Journal of Small Business Management*, 54(1), 187-209. doi: <https://doi.org/10.1111/jsbm.12137>
19. Katz, J., & Gartner, W. B. (1988). Properties of emerging organizations. *Academy of management review*, 13(3), 429-441.
20. Klapper, R. (2004). Government goals and entrepreneurship education@ an investigation at a Grande Ecole in France. *Journal of Education and Training*, 46, 127-137.
21. Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5), 411-432. doi: [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
22. Liñán, F. (2004). Intention-based models of entrepreneurship education. *Piccola Impresa/Small Business*, 3(1), 11-35.
23. Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, 11(4), 907-933. doi: 10.1007/s11365-015-0356-5
24. Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: a role for education. *International Entrepreneurship and Management Journal*, 7(2), 195-218.
25. Liñán, F., & Santos, F. J. (2007). Does Social Capital Affect Entrepreneurial Intentions? *International Advances in Economic Research*, 13, 443-453.
26. Nguyen, A., Do, T. H. H., Vu, T., Dang, K., & Nguyen, H. L. (2019). Factors affecting entrepreneurial intentions among youths in Vietnam. *Children and Youth Services Review*, 99, 186-193.
27. Ozaralli, N., & Rivenburgh, N. K. (2016). Entrepreneurial intention: antecedents to entrepreneurial behavior in the U.S.A. and Turkey. *Journal of Global Entrepreneurship Research*, 6(1), 3. doi: 10.1186/s40497-016-0047-x
28. Pittaway, L., & Cope, J. (2007). Entrepreneurship Education: A Systematic Review of the Evidence. *International Small Business Journal*, 25(5), 479-510. doi: 10.1177/0266242607080656
29. Pittaway, L., & Edwards, C. (2012). Assessment: examining practice in entrepreneurship education. *Education + Training*, 54(8/9), 778-800. doi: 10.1108/00400911211274882
30. Prakash, D., Jain, S., & Chauhan, K. (2015). Entrepreneurial intensity in relation to presence of entrepreneurship development cell: A study of institutes offering professional courses in national capital region Delhi, India. *The International Journal of Management Education*, 13(1), 95-105. doi: <https://doi.org/10.1016/j.ijme.2015.01.004>
31. Rahi, S., & Abd.Ghani, M. (2019). Integration of DeLone and McLean and self-determination theory in internet banking continuance intention context. *International Journal of Accounting & Information Management*, 27(3), 512-528. doi: 10.1108/ijaim-07-2018-0077

32. Rahi, S., Ghani, M. A., & Ngah, A. H. (2020). Factors propelling the adoption of internet banking: the role of e-customer service, website design, brand image and customer satisfaction. *International Journal of Business Information Systems*, 33(4), 549-569. doi: 10.1504/ijbis.2020.105870
33. Rahi, S., Khan, M. M., & Alghizzawi, M. (2020). Extension of technology continuance theory (TCT) with task technology fit (TTF) in the context of Internet banking user continuance intention. *International Journal of Quality & Reliability Management*, 38(4), 986-1004. doi: 10.1108/ijqrm-03-2020-0074
34. Rahi, S., Khan, M. M., & Alghizzawi, M. (2021). Factors influencing the adoption of telemedicine health services during COVID-19 pandemic crisis: an integrative research model. *Enterprise Information Systems*, 15(6), 769-793. doi: 10.1080/17517575.2020.1850872
35. Rahi, S., Othman Mansour Majeed, M., Alghizzawi, M., & Alnaser Feras, M. (2019). Integration of UTAUT model in internet banking adoption context: The mediating role of performance expectancy and effort expectancy. *Journal of Research in Interactive Marketing*, 13(3), 411-435. doi: 10.1108/jrim-02-2018-0032
36. Rahi, S., Othman Mansour, M. M., Alharafsheh, M., & Alghizzawi, M. (2021). The post-adoption behavior of internet banking users through the eyes of self-determination theory and expectation confirmation model. *Journal of Enterprise Information Management, ahead-of-print*(ahead-of-print). doi: 10.1108/jeim-04-2020-0156
37. Tessema Gerba, D. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. *African Journal of Economic and Management Studies*, 3(2), 258-277. doi: 10.1108/20400701211265036
38. Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice*, 33(3), 669-694.
39. Wang, C. K., & Wong, P. (2004). Entrepreneurial interest of university students in Singapore. *Technovation*, 24, 163-172.
40. Zhang, H., Zhang, T., Cai, H., Li, Y., Wei Huang, W., & Xu, D. (2014). Proposing and validating a five-dimensional scale for measuring entrepreneurial orientation. *Journal of Entrepreneurship in Emerging Economies*, 6(2), 102-121. doi: 10.1108/jeee-03-2014-0004

COMPATIBILITY OF THE BUSINESS SECTOR NEEDS WITH ECONOMIC DIPLOMACY ACTIVITIES – CASE STUDY CROATIA

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ABSTRACT

Economic diplomacy is extremely important for a country's economy. Economic diplomacy as a term has appeared in Croatia only recently, and it is therefore difficult to talk about its comparison with the conduction of economic diplomacy models in other countries, especially those with a long tradition. Economic diplomacy should ensure a space where entrepreneurs and businessmen are able to work and grow in a simpler way in the context of establishing bilateral and multilateral relationships among different countries, regions and the wider area, with the aim of advancing the sole production, but also cooperation in general. However, to what extent is the business sector in Croatia satisfied with the activities carried out for them by the competent Croatian economic diplomacy? There is currently no consistent decision-making policy about the economic diplomacy activities which need to be intensified, and neither is it clearly established who is in charge of certain economic diplomacy activities inside the institutional framework. Moreover, economic diplomacy activities are not compatible with the economy situation, while the public diplomacy, i.e. politics, impact is still superior compared to economic diplomacy. The conducted research aims at proving the paper's basic hypothesis (H1) The business sector needs and the competent economic diplomacy activities in Croatia are not compatible.

Keywords: *entrepreneurship, economic diplomacy activities, business sector needs*

1. INTRODUCTION

Economic diplomacy is a combination of diplomacy in the classic, political sense and economic sciences and management, methods and techniques of negotiation with foreign partners, public relations and the accumulation of business information interesting to a country's economy, aiming at the penetration to another country's or the global market. In today's globalised world marked by economic dependency, which is a measurable component of the level of relationship among countries, it started to influence the direction, content and intensity of those relations. Economy thus took the central role of diplomatic activities, while the border between the traditional political and diplomatic activities has become less and less conspicuous. For diplomatic activities to be possible in such conditions and for the set goals to be achieved, it is important to be able to use the "supporting" economic diplomacy, such as business intelligence and lobbying, in the right way. It is also important to choose how the personnel which will satisfy today's economic diplomacy needs, first of all of the business sector needs, will be recruited.

2. LITERATURE OVERVIEW

Lee (2004:51) defined economic diplomacy as the "common process of the private and public sector used to manage commercial relations using diplomatic channels and processes." Naray (2008:2) defines it in a similar way: "An activity conducted by state actors with a diplomatic status aiming at the promotion of business between one's own and a foreign country with the aim to support the business sector development through the promotion of business and its supporting activities."

Rana (2011:95) in a chapter in the book by Bayne and Woolcock (2011) "Serving the Private Sector: India's Experience in Context" differentiates between economic diplomacy and commercial diplomacy, stating that commercial diplomacy has existed since the first trade exchange, whereas economic diplomacy appeared after World War II, when governments started to pay greater attention to economic activities with other countries. Wilkinson and Brouthers (2006:233-252) analysed the impact which using economic diplomacy had on exporting companies and came to the result that companies which used incentive exporting programmes as part of economic diplomacy achieved more significant exporting success. Potter (2004) dealt with the area of export promotion and differed between promotion "from the inside out" and "from the outside in," i.e. toward the bearers of the export promotion. He came to the conclusion that a more successful export promotion is the one "from the outside in," conducted by economic diplomacy actors stationed in the country which is the target export market, not the one conducted by actors stationed in the "home" country. Rose (2007:33) used the "gravity" model to study the impact of the presence or absence of embassies in export markets of certain countries. Results showed that certain countries had a much easier international trade when the primary contact between the "domestic" and foreign company (or vice versa) was done by the economic diplomacy, i.e. embassy, consulate or chamber of economy representations in the foreign country. Yakop and Bergeijk (2009) wrote about the efficiency of economic and commercial diplomacy. They followed Rose's work and supported his research results. In his research on approaches to economic diplomacy depending on the level of a country's development, Janssen (2013:7) came to the conclusion that countries made choices about the market in which their economic diplomacy was going to intensify its activities depending on the level of their development, where those developed choose markets which will contribute to their capital flow increase, while the non-developed or developing (middle-income countries) take as their priority to expand and penetrate markets to which they did not have access before. Economic diplomacy activities were studied by Kostecki and Naray in their work "Commercial Diplomacy and International Business" (2007:27-28) by interviewing businessmen and economic diplomats in 22 countries.

Table following on the next page

	ECONOMIC DIPLOMATS' SERVICES	BUSINESS SECTOR NEEDS
Finding partners	<ul style="list-style-type: none"> Standard list of importers and distributors, information from the internet 	<ul style="list-style-type: none"> Deeper insight and knowledge about distributors, importers and potential clients, as well as prioritization
	<ul style="list-style-type: none"> quite slow reactions to inquiries 	<ul style="list-style-type: none"> speed of reaching agreements
	<ul style="list-style-type: none"> insufficient knowledge and feeling for the market 	<ul style="list-style-type: none"> pragmatic assessment of who needs the product and how it has to be adapted
	<ul style="list-style-type: none"> no proactive search for partners 	<ul style="list-style-type: none">
Finding information on the partner	<ul style="list-style-type: none"> primary focus on macroeconomic data and reports 	<ul style="list-style-type: none"> specific short sector reports which will include information on tenders and attractive projects
	<ul style="list-style-type: none"> general information on trade barriers and agreements 	<ul style="list-style-type: none"> market analysis based on real experience about entering a market and threats
	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Sense for the regulatory environment which influences decision-making
Help with investments	<ul style="list-style-type: none"> promotion of the homeland image and public diplomacy activities with the aim of strengthening trust and reputation 	<ul style="list-style-type: none"> information on the real help and support which can be obtained for investing, and the comparative analysis with other countries
	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> commitment and credible promises of support by the authorities
Trade fairs	<ul style="list-style-type: none"> stand representing the country 	<ul style="list-style-type: none"> search for distributors
	<ul style="list-style-type: none"> support to state companies participating in the fair 	<ul style="list-style-type: none"> targeted approach and subsequent monitoring; fairs are meaningful and useful only if part of a global strategy, if not, they represent a loss of resources
	<ul style="list-style-type: none"> general patronage of the diplomatic mission (ambassador's visit, etc.) 	<ul style="list-style-type: none">
Negotiation over contracts	<ul style="list-style-type: none"> meeting potential partners, but without participation in negotiations about contracts or without the provision of technical aid 	<ul style="list-style-type: none"> preparing the ground for negotiations, participation in the organisation of local technical aid (e.g. legal advice, contacts with banks, etc.)
		<ul style="list-style-type: none"> PR activities which will ensure for the local company to be perceived as a reliable partner
Trade disputes	<ul style="list-style-type: none"> A list of local attorneys at law 	<ul style="list-style-type: none"> Expressed concern with the local authority and proactivity in solving problems.

Table 1: Business sector needs and economic diplomats' services
(Source: According to Kostecki and Naray (2007:27-28))

According to Kostecky and Naray (2007: 21-22), there are three types of economic diplomats:

- **BUSINESS PROMOTER** – primarily business-oriented, with the role of consultant, owns necessary economics and management knowledge, usually located in the capital city of a country. Their services have to be paid, although different countries have a different practice in this regard. In the organisation sense it is linked to agencies and organisations promoting trade and economy.
- **STATE OFFICIAL** – a diplomat governed by the instructions of the Government, not business, committed to conducting the Government's (economic) policies, primarily builds relations between the business sector and the Government. In the organisation sense, the state official diplomat is most intensively linked to the state institution in charge of foreign trade.
- **GENERALIST** – a diplomat who often solves certain economic problems *ad hoc*, usually a career diplomat, seeing his/her function as a business-support one, has less technical knowledge, and often less knowledge from the area of economics. He/she is functional for the creation of contacts (e.g. a highly ranked ambassador) for activities linked to certain projects of help and cooperation, etc., but more at the level of governments than companies and the private sector, however, sometimes this cannot be excluded. In conclusion, there is a strong organisational bond of the generalist with the Ministry of Foreign Affairs.

However, regardless of the “types” of economic diplomats, each of them primarily has to be highly educated, preferably with a specialisation in international economy and foreign trade business or international finance, having adequate experience and with thorough knowledge of the global economy situation. They also need to have information technology skills, as well as good knowledge of the language spoken in the country they are sent to, i.e. they need to be educated about the country they are going to work in. According to Naray (2010:9), to answer the business sector tasks, the economic diplomat of the present needs to have the following information:

- An overview of the domestic market needs – exchange of goods, imported goods, most important industrial branches, most important partner countries, what is not produced in the host country, etc.
- Knowledge of the structure of the host country economy and the level of technology and applied standards development; main economy branches, energy potential, education system, foreign investments, the export support to economy, etc.
- Knowledge about the most important contacts at the national as well as local level; ministers, mayors, prefects, dukes, professors, etc.
- Information on the network of national and local institutions which influence the functioning of the economic system; ministries, agencies, financial institutions, fairs, chambers, etc.
- Knowledge of the legislature in which economic activities are realised; legal regulations, support to business, support to exporters, support to investors, etc.

However, all the aforementioned leads to the conclusion that each sending country has to ensure its economic diplomats the following information:

- Who they cooperate with in their own country and how, i.e. what is the accepted organisation mode of the economic diplomacy (more about that in the following chapter)
- What is the economic strategy of their own economy development (what are the economic potentials with exporting possibilities on specific foreign markets, domestic brand-companies capable of exporting their know-how, investments abroad, catalogues of priority investments projects and the strategy of attracting foreign investors, clear and short

procedures in obtaining various permits and the compatibility of the legal system and the market economy standards, etc.)?)

One of the best examples of an economic diplomats of the present times among the highly-ranked statesmen is the 1995 – 2007 French president Jacques Chirac. Namely, at the annual meeting with the diplomats held in Paris on 29 August 1996, he started his speech with these words: “French ambassadors, you are also ambassadors of the French economy!” Moreover, before the opening of the economic exhibition “France ‘97” in Shanghai in May 1997 he declared that he was not ashamed if he could contribute to the sale of a French product in the world, and said: “When I travel abroad, I have no prejudice. I go there to sell French products.” He then declared the economic exhibition open, and this was the “crown” of the French economic diplomacy. Namely, in that presentation to the large Chinese market there were 320 French business operators which presented their export programme, 70% of which were small businesses and manufactures. In those five days, 65,000 Chinese businessman visited the economic exhibition. For 65% of the French business operators who participated in the exhibition, this was the first encounter with the huge Chinese market, but thanks to their good economic diplomacy, they finalised business arrangements of a few billion dollars. Economic exhibitions in South Africa, Chile and Brazil followed, and they were again opened by Jacques Chirac. According to *The Economist*¹ it was immediately clear that after the economic exhibitions in the period from 1996 to 1998, the French economic operators sold goods and services of the value of 31 billion dollars, so *The Wall Street Journal* named him “first economic diplomat of the world.”

3. METHODOLOGY

The research was done on 200 largest Croatian business operators according to their total income² using a structured anonymous questionnaire. A software was used to prevent one business operator to fill in the questionnaire more than once. The questionnaire consists of nine questions. The open-ended question is about the business operators’ proposals for the improvement of the existing economic diplomacy model in order to help the business sector and Croatian economy in general to be more competitive on the global market. The latter is used to obtain /detailed) individual information, whereas closed-ended questions are used to rank and analyse the presence of certain elements in the Croatian economic diplomacy from the business operators’ point of view.

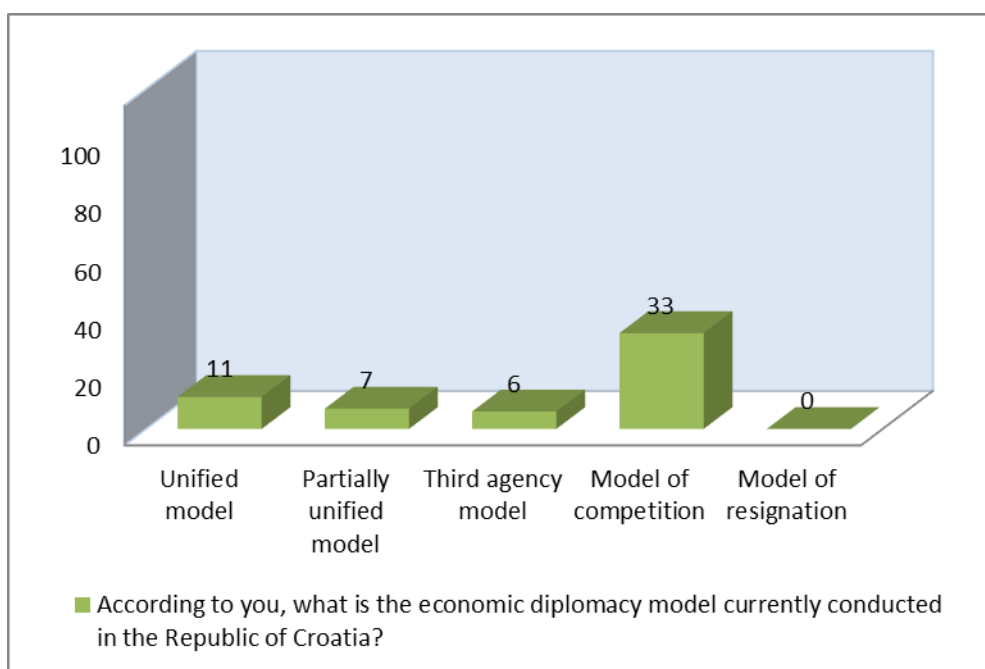
4. DATA ANALYSIS AND INTERPRETATION OF RESULTS

The sample consisted of 200 business operators, but 57 answered the questionnaire, which is a return of 28.5%. It is interesting that the largest number of trade companies owning the largest chain stores running their business in Croatia refused to participate in the survey due to the company “policy.”

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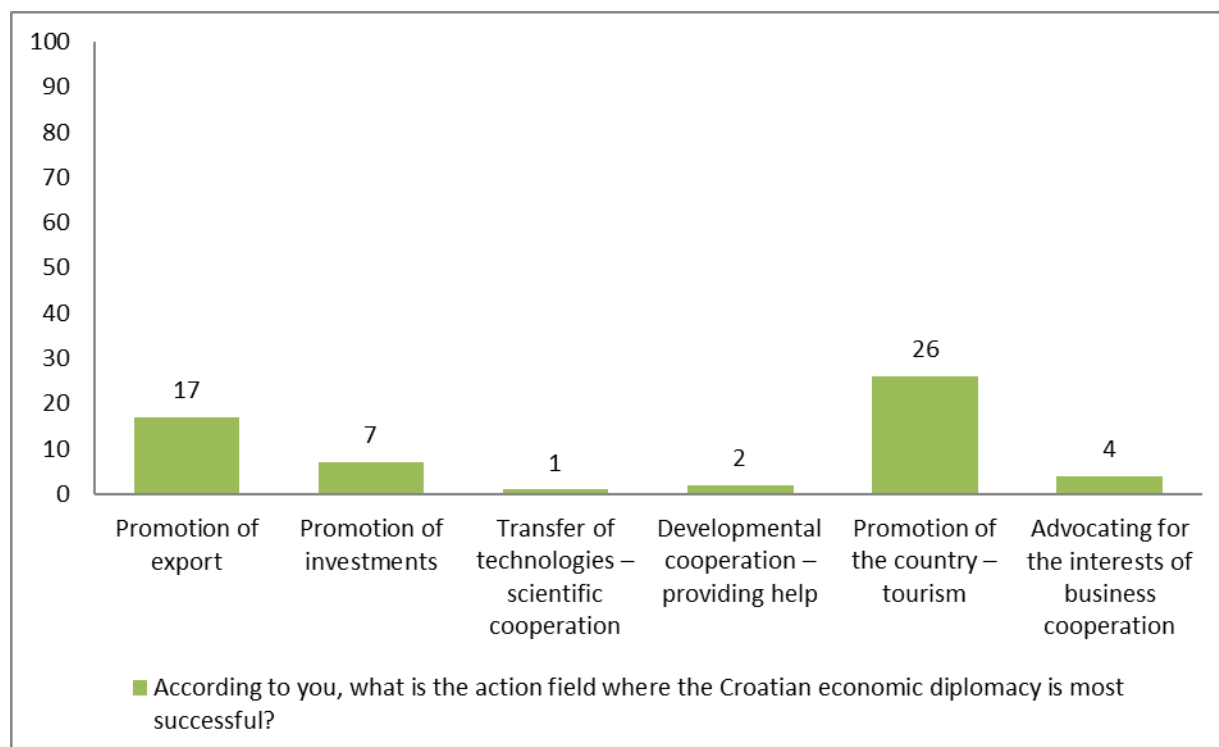
¹ He knows how to do it, *The Economist*, December 23, 1997. p. 35.

² The register of economic operators is available on <http://www.biznet.hr>



*Chart 1: The implementation model of economic diplomacy in the Republic of Croatia
(Source: Author's work)*

The first question in the structured questionnaire was about the business operators' opinion about the economic diplomacy model currently conducted in Croatia, and the largest part of them (33) answered it was the model of competition, 11 said that it was the unified model, 7 of them said it was the partially unified model, 6 business operators thought it was the third agency model while neither of them thought that the model of resignation was conducted in the Croatian economic diplomacy.



*Chart 2: Success of the Croatian economic diplomacy activities in different action fields
(Source: Author's work)*

The second question in the questionnaire was about the success of the economic diplomacy of the Republic of Croatia in different action fields. As many as 26 surveyed operators thought that the promotion of the country – tourism was the most successful action field of the Croatian economic diplomacy, followed by the promotion of export and promotion of investments for which 7 operators thought it was a successful field of the economic diplomacy. Linked to advocating the interests of the business community, only 4 operators considered it a successful field of economic diplomacy, in the same way as 2 operators thought that developmental cooperation – providing help was successful. Only one operator thought that the transfer of technology – scientific cooperation was successful.

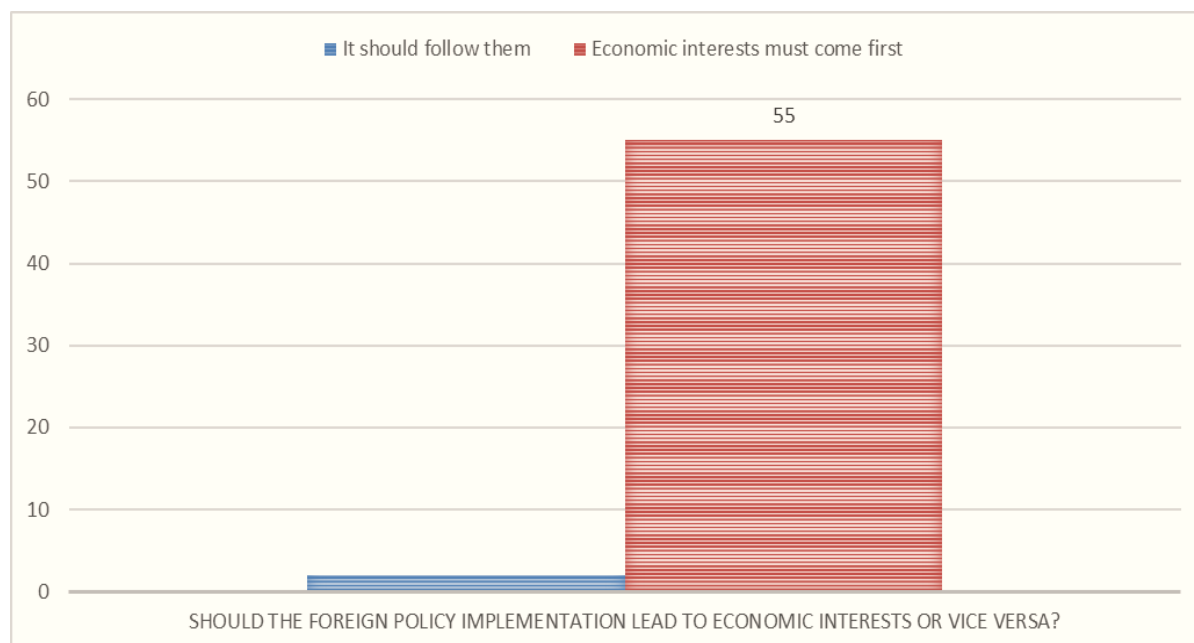


Chart 3: Foreign policy implementation and economic interests according to economic operators

(Source: Author's work)

Chart 3 presents the business operators' opinion about the implementation of foreign policy – should it lead to economic interests or vice versa, and this was the third question in the questionnaire. As many as 55 business operators thought that economic interests should come first in relation to the conduction of foreign policy, whereas two of them thought that economic interests should follow foreign policy.

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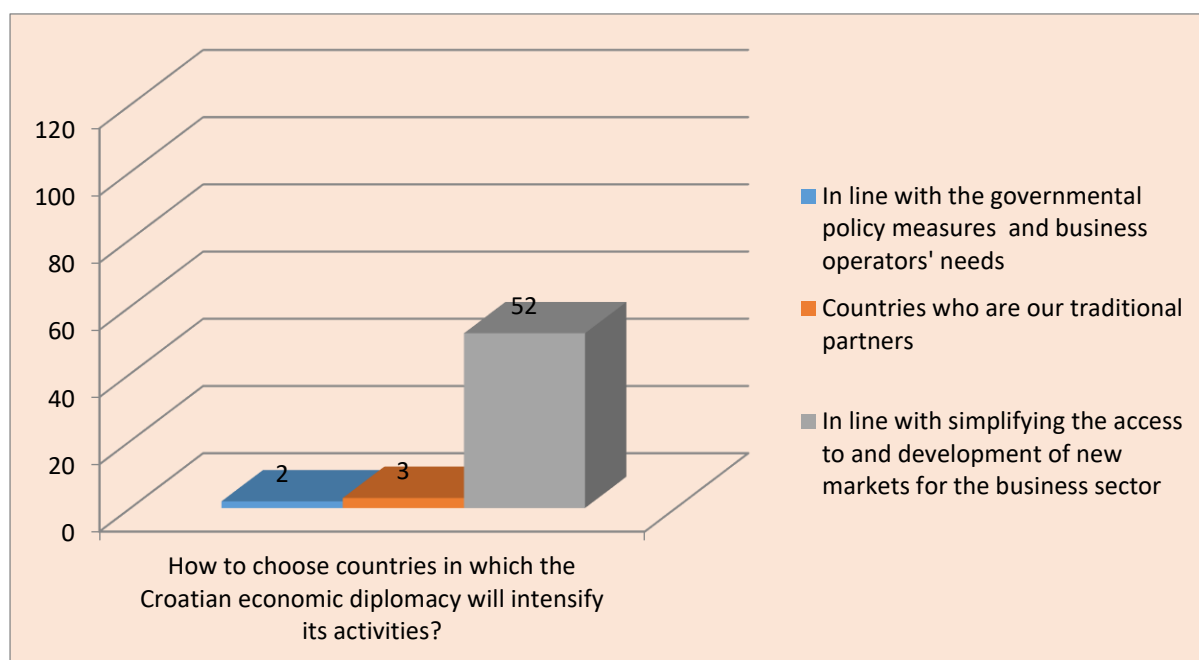


Chart 4: Choice of countries to intensify economic diplomacy activities in the Republic of Croatia
(Source: Author's work)

Regarding the choice of countries in which Croatia should intensify its activities, most of the operators, more precisely 52 of them were of the opinion that the institutional framework of the Croatian economic diplomacy should choose countries by simplifying the access to and the development of new markets for the business sector, three of them thought it was necessary to choose countries which are traditionally our partners, whereas two operators thought it was necessary to choose this in line with governmental policy measures and business operators' needs.

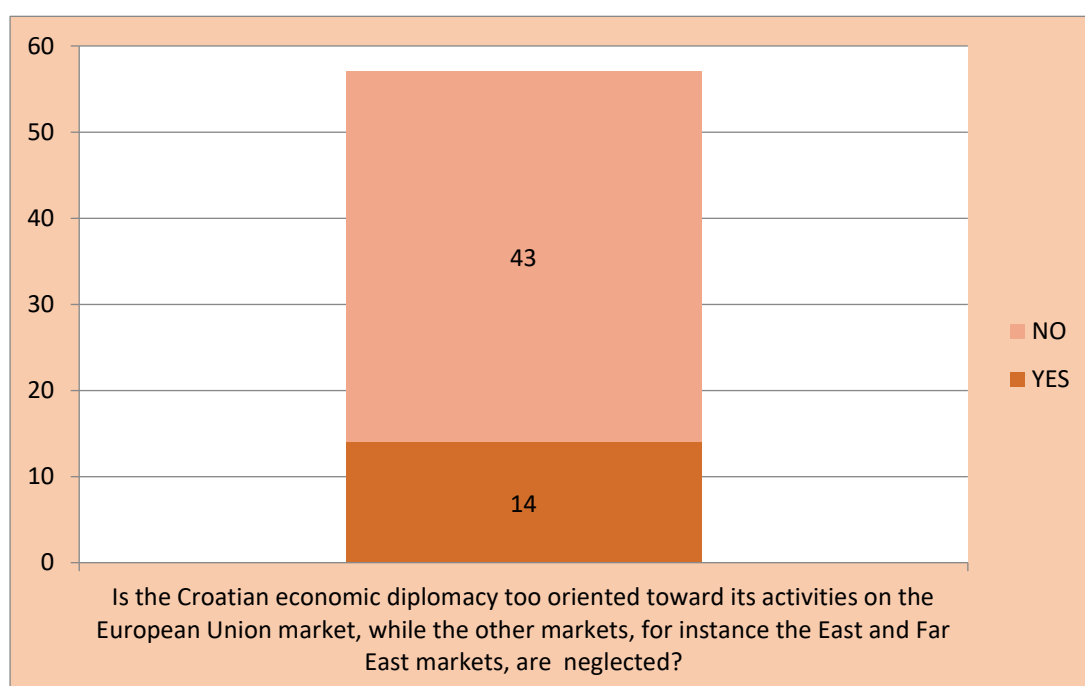
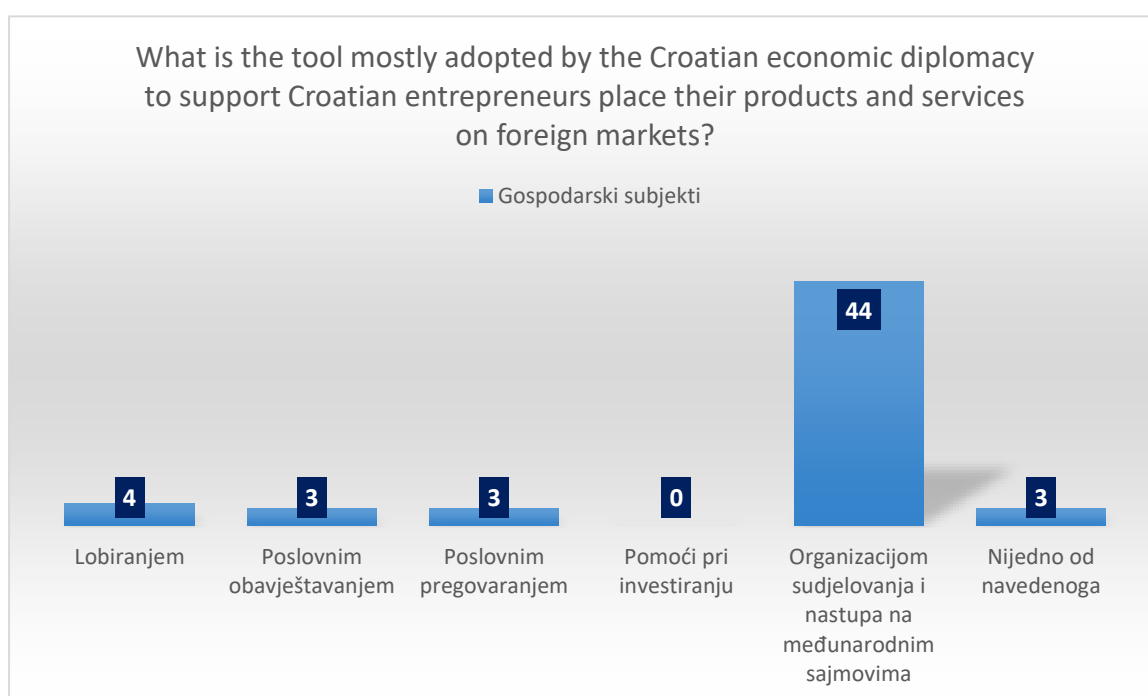


Chart 5: Orientation of the Croatian economic diplomacy to specific markets
(Source: Author's work)

The task of the surveyed economic operators in the fifth question was to determine whether the Croatian economic diplomacy was too oriented towards its activities inside the European Union market, while the other markets, for instance the East and Far East markets, were neglected. As many as 43 operators answered that the other markets were not neglected compared to the European Union, while 14 said they were. Such an opinion of business operators is understandable since by accessing the European Union the Croatian economic sector gained a market of 650 million citizens, which was, prior to that, limited by various customs, taxes and fees, as well as bureaucratic procedures.



*Chart 6: The tools implemented by the economic diplomacy of the Republic of Croatia for the placement of goods and services on foreign markets
(Source: Author's work)*

That the tool used by the Croatian economic diplomacy to support entrepreneurs place their products and services on foreign markets is the organisation and presentation on international fairs was the opinion given by 44 business operators, four operators said it was lobbying, whereas an identical number of operators, three of them, said it was business intelligence and business negotiation. There were also three of them considering that none of the mentioned tools could be characterised as the one used by the economic diplomacy to support Croatian entrepreneurs. It is interesting to notice that none of the operators thought that the Croatian economic diplomacy helped entrepreneurs in the form of support in investments.

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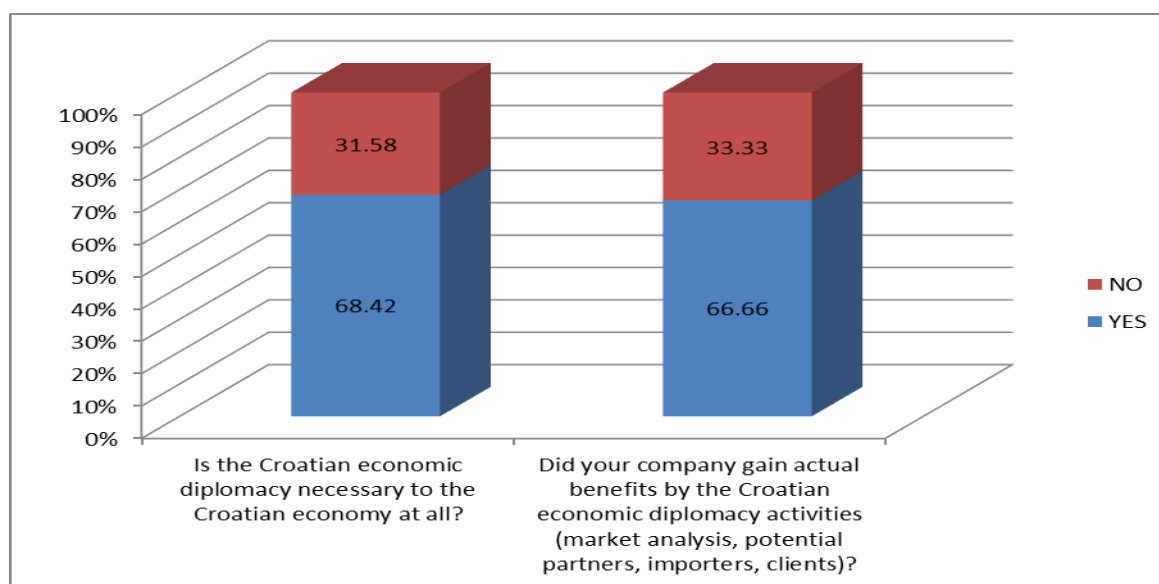


Chart 7: Benefits for the business sector brought by Croatian economic diplomacy activities
(Source: Author's work)

Closely related to the former question and opinion by business operators about the tools adopted by the Croatian economic diplomacy to support the business sector, questions 7 and 8 asked about opinions on actual benefits gained by the economic diplomacy and whether the Croatian economic diplomacy was at all necessary to the Croatian economy. Economic subjects, 39 of them, answered that they had actual benefits by obtaining detailed market analysis, finding potential partners, importers and clients, and attracting investments, while 19 of them said they did not gain any benefits. The eighth question, the need of the Croatian economic diplomacy for the Croatian economy, was answered positively by 39 operators, while 18 of them said it was not needed, which talks in favour of the fact that entrepreneurs recognised the activities of the Croatian economic diplomacy as a significant component of their business growth.

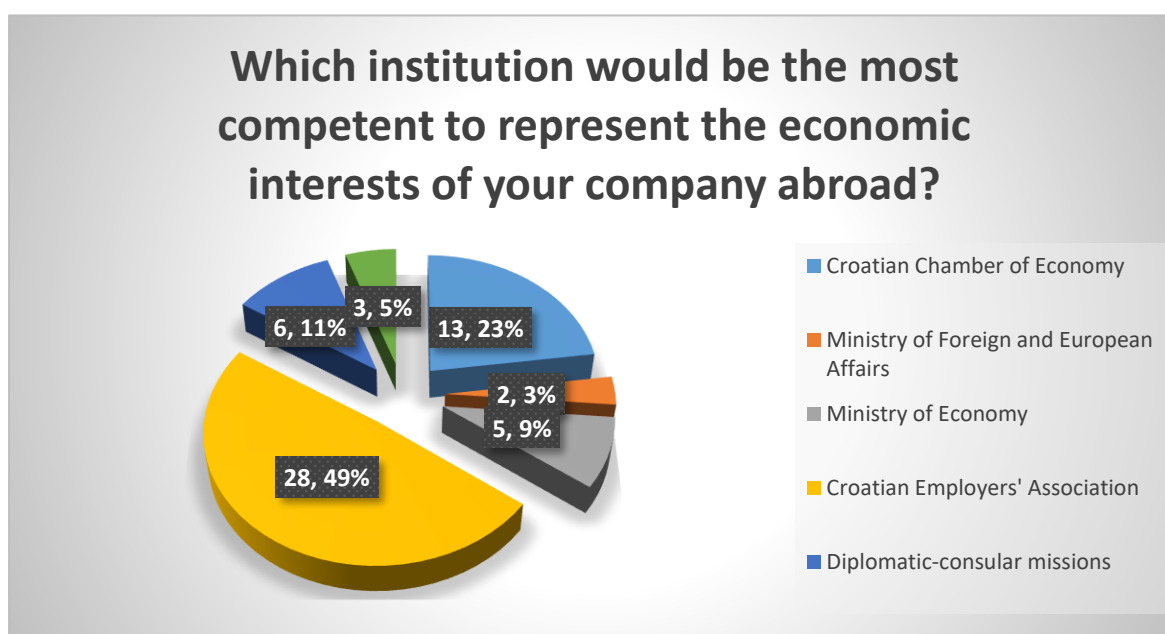


Chart 8: Business operators' opinion about the institutional framework for the promotion and representation abroad
(Source: Author's work)

The last closed-ended question in the questionnaire was about the business operators' attitude about the institutional framework and competence of certain institutions for the promotion and representation of their companies' economic interests abroad. There were 28 entrepreneurs who considered the Croatian Employer's Association as the most competent for the promotion and representation of their economic interests abroad, while 13 entrepreneurs thought the same for the Croatian Chamber of Economy. Diplomatic-consular missions were considered as the most competent for the promotion and representation of the business sector abroad by 6 operators, whereas 5 operators thought that the task would be best performed by the Ministry of Economy. However, only one of all the surveyed operators was of the opinion that the task should be entrusted to the Ministry of Foreign and European Affairs. The open-ended question about the modality in which the Croatian economic diplomacy could help the business sector, and thus contribute to the Croatian Economy to be more competitive on the global market, was mostly answered by business operators so that they expressed dissatisfaction with the activities of the Croatian institutional framework in the area of economic diplomacy due to the lack of compatibility between the Croatian economic diplomacy activities and the real needs of the business sector. The collected information is not always usable or clear and it is necessary to subject them to additional processing with the aim of adequately preparing themselves for the decision-making process, i.e. the aim is to extract useful information from the volume of data surrounding them. Entrepreneurs and the business sector think it necessary to actively include the state into the financial support of Croatian operators' activities in the European/global business networks, as well as to change/adopt the legislative framework in support of lobbying and conducting active economic diplomacy (for instance, a higher possibility of using the influence owned by honorary consuls or connecting foreign aid and businessmen offer). Furthermore, they think that lifelong education for officers, politicians and diplomats is a necessity. Croatia has to learn a lot in the area of economic diplomacy, especially in the EU case where the competitiveness of the Union is measured by the economic relationships between the member states. Due to objective limitations, the best economic diplomacy model for Croatia would be the target model and public-private partnership in lobbying, such as the one in the United Kingdom. By "pushing" the business interests inside different business-political networks and chambers, and by actively lobbying for certain sectors, the business community can be supported in achieving its project which consequently makes a contribution to the development of the Croatian economy. The largest number of entrepreneurs encompassed by the research were of the opinion that the problem of the Croatian economic diplomacy model lies in the incompetent staff and insufficient allocations for the needs of economic diplomacy activities which, according to them, need to be identified first. Another problem is the slowness in solving the problems and demands made by the business sector. The "apparatus" of the Croatian economic diplomacy needs to employ people with private sector experience who will be paid according to their efficiency, while politics should be banned from interfering in employment procedures in this area. The existing economic diplomacy model should be revised, not only in line with the public sector, but also with the business one for which the economic diplomacy activities should be conducted in the first place. Scandinavian countries are a good example of solving the problem of economic diplomacy conduction. There entrepreneurs "play" the main role, and everything is subordinate to them.

5. CONCLUSION

The research results show that the business sector representatives expect a substantially different focus and orientation of economic diplomacy activities, as well as experienced and business-oriented staff. More precisely, business operators mostly resent the almost sole orientation of the economic diplomacy institutional framework to the organisation and presentation of entrepreneurs on international fairs, as well as to the delivery of market analyses,

study designs, etc. On the other hand, the whole economic diplomacy system lacks orientation toward supporting investments and closing foreign business deals. Another downfall expressed by entrepreneurs is the insufficiently experienced human potential, especially in diplomatic-consular representations, where, they think, people possessing experience in economy and a business vision should be employed and engaged instead of “classic” political diplomats. To enable the conduction of economic diplomacy activities in this area and achieve the set goals, it is necessary to know how to use the supporting economic diplomacy activities such as business intelligence and lobbying, and choose how to recruit staff who will satisfy the today’s economic diplomacy needs. These are also recommendations for future research.

LITERATURE:

1. Bayne, N, (2011), *The Diplomacy of the Financial Crisis in Context*. The Hague Journal of Diplomacy, 6(1–2), pp 187–201
2. Carierre, G. C. de la. (1998.). *La diplomatie économique – La diplomate et le marché*. Paris: Economica – Collection Diplomatie
3. Janssen, M. C. J. (2013), „What to Do? Commercial Diplomacy Strategies MSc International Relations & Diplomacy“, Leiden University & the Netherlands Institute for international relations ‘Clingendael’
4. Kostecki, M., and Naray, O. (2007), *Commercial diplomacy and international business* (Den Haag: Netherlands Instituut voor Internationale Betrekkingen Clingendael, April 2007)
5. Lee, D. (2004), ‘The growing influence of business in U.K. diplomacy’, *International Studies Perspective*, Vol. 5, No 1
6. Lee, D., and Hudson, L. (2004), "The old and the new significance of political economy in diplomacy", *Review of International Studies*, 30, 343-360
7. Naray, O. (2008), "Commercial Diplomacy: A Conceptual Overview." Conference paper for the 7th World Conference of TPOs – The Hague, The Netherlands.
8. Naray, O. (2010), "Commercial Diplomats in the Context of International Business", *The Hague Journal of Diplomacy*, 6, 121-148.
9. Naray, O. (2010), "What a good commercial diplomat has to know and be capable of", *Exchange: The Magazine for International Business and Diplomacy*, 2 (December 2010)
10. Potter, E. H. (2004), "Branding Canada: The Renaissance of Canada's Commercial Diplomacy", *International Studies Perspectives*, 5, 55-60
- Putnam, R. D. (1993), *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton
11. Rose, A.K. (2007), „The foreign service and foreign trade:embassies as export promotion“, *World Economy* 30, str. 22-38
12. Wilkinson, T, Brouters, L. T. (2006), ‘Trade Promotion and SME Export Performance’, *International Business Review*, Vol. 15, No. 1 (2006), pp. 233-252
- Woolcock, M. (1998), *Social Capital and Economic Development*. *Theory and Society* 27: 151-208.
13. Yakop, M. and Bergeijk, P. (2009), ‘The weight of economic and commercial diplomacy’, Working Paper International Institute of Social Studies, No. 478, The Hague: International Institute of Social Studies

EXPENDITURE ON ENVIRONMENTAL PROTECTION IN THE EU

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ABSTRACT

Since the 1970s, climate change has become a global problem. All the world's developed countries are starting to pay attention to it and environmental pollution, all for the purpose of sustainable development for future generations. The European Union has established strict goals that need to be achieved to fight against the abovementioned climate change through the years. One of the essential parts of the fight against climate change is environmental protection, which is the sum of investment expenditures and current expenditures for environmental activities. This paper examines the European Union as the global leader in environmental protection. Furthermore, the European Union established an efficient environmental policy, and success is measured by resources spent on environmental protection. Also, this paper analyzes expenditures on environmental protection in the EU in the period from 2011 to 2018. Eurostat provided the data for the observed time, and it includes all the current EU Member States. The changes in expenditures on environmental protection are compared to total national spending. France can stand out as a member of the European Union that allocates the most resources for environmental protection, while Cyprus allocates the least. As can be seen from the research results, the countries of the European Union have been spending more on environmental protection since 2012. It is also evident that individual human habits are changing in the direction of environmental protection.

Keywords: *climate change, environmental protection, the European Union, the global leader*

1. INTRODUCTION

In the 21st century, environmental protection is indeed an essential part of caring for humanity. The last century has shown how little man knows about the environment, so several environmental disasters have possibly irreversibly affected today's lives. In 1968, the United Nations first showed interest in environmental protection by adopting a resolution on Human Environment Problems aimed at reducing various pollutants, and in 1972 the first United Nations Global Conference on the Human Environment was held in Stockholm due to growing concerns and growing environmental problems. These events are considered the beginning of world environmental policy (Djogaš, 2020 and Turjak et al., 2018). Shortly after these events, the term 'sustainable development' was introduced into economic circles, which does not come

out of those circles even today. "The 1987 Brundtland Commission Report described the concept of sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (UNESCO, 2021), and which actually refers to economic development that does not negatively affect the environment. Such environmental protection policies have recently become increasingly important. They are the aspiration of all developed countries today, which is especially evident through the set goals of the European Union from period to period. As environmental protection, primarily through utilities, water care, heating, etc., is usually taken care of from public goods (now, more and more from private companies), there is a significant public interest in the same. For that reason, it matters to increase expenditures on environmental protection to help in preserving the world for future generations and prevent further devastation of nature. This paper aims to find the differences between the European Member States in their expenditures on environmental protection and the differences between total expenditures and expenditures on environmental protection. Based on relevant information, the authors have set one hypothesis:

- H1: Member states increased their expenditures on environmental protection during the observed time.

2. THEORETICAL BACKGROUND AND KEY TERMS

For environmental policies to function, they must pursue specific goals (Črnjar, 1997; in Djogaš, 2020): to accept and support sustainable development policies, preserve biodiversity, ecological balance, and stability of the environmental system, develop an awareness of the need for rational use of space and natural resources, review development plans and subject them, among other things, to strict environmental standards, improve methods and knowledge about the environment and planned activities to reduce environmental risk, improve or enact regulations that will enable environmental protection with economic development, strengthen the responsibility of users and the public in making economic and environmental decisions, while developing environmental education, strengthen international cooperation and the influence of international institutions in ecological protection. According to Djogaš (2020), there are several groups of instruments in environmental protection: legal-regulatory instruments, economic-financial instruments, self-regulatory instruments, institutional instruments (an institutional mechanism). Jeffrey and Perkins (2014) state that legal regulations were the primary tool in reducing environmental pollution until the 1980s, and that such regulations led to a reduction in water and air pollution, but that the absolute removal of environmental pollution is preceded by changes in the way companies operate, different pollution taxing, energy taxation, as well as innovation in business processes. Pollution taxing was adopted in 1972 by the OECD countries. The data from 2014 say that "energy taxes appear to be motivating businesses to undertake initiatives intended for the protection of ambient air and climate, but the policymakers should consider the relative importance of current mitigation efforts and investment in initiatives that are likely to impact emissions over a longer time period" (Jeffrey and Perkins, 2014). As said earlier, collecting the data about environmental protection and expenditure was poor until the last three decades. Pearce and Palmer (2001) state that "the data [20 years ago] on environmental expenditure outside the USA, and probably Norway, are so poor that it is very much open to question whether econometric exercises are currently worthwhile". In 1991 OECD started collecting the data about environmental protection expenditure and Eurostat, but separately, until 1996 when the collection of this data became cooperation. According to Eurostat and Kierepka-Kasztelan (2018), environmental protection (EP) expenditure is a sum of investment expenditure and running expenditure on activities related to environmental protection. When measuring environmental expenditure, it is essential to mention Environmental Expenditure Accounts (EPEA), which are a set of satellite accounts of national accounts and aim to describe all national transactions related to

environmental protection to develop a measure of national environmental expenditure and to assess the importance of these activities as a share of total production (Vandille and Bureau, 2005). "The EPEA shows which economic sectors contribute to environmental expenditure, both on producers and users. The EPEA can be further used to analyze which environmental domain absorbs most of the country's resources. The accounts vary expenditure according to different areas (e.g., water purification, air pollution protection, etc.). It also allows EPEA to be linked to physical satellite accounts, such as NAMEA (national accounting matrix including environmental accounts), which measure the development of biological pollution and assess whether environmental costs are being used effectively" (Vandille and Bureau, 2005:1). Badulescu et al. (2016) say that, in the case of the European Union, the relationship between GDP and investment in environmental protection fails in half of the analyzed countries, or, in other words, said that the Environmental Kuznets¹ curve is not found in environmental investment. That is yet to be seen in future research. Morgenstern, Pizer, and Shih (2001) and Kierepka-Kasztelan (2018) say that environmental expenditures account for approximately 2% of GDP. Still, they also say that environmental reported expenses likely understate the actual economic cost of environmental protection.

3. ENVIRONMENTAL POLICY PROTECTION – THE CASE OF THE EUROPEAN UNION

Ercolano and Romano (2017:1) state that "environmental degradation overcomes national boundaries." Therefore, to have adequate environmental protection, cross-national environmental policies must be harmonized. Usually, countries act according to their policies that reflect the common goals of EU directives. That gives each country freedom to develop their environmental protection policy and to measure if it is effective or not. As Wurzel et al. (2019) concluded, there are three main stakeholders in policy-making activities – the European Council, the Council, and the Member States. The European Council has the major structural leadership capacity. The Council has the most significant entrepreneurial leadership capacity. The Member States have the most important cognitive and exemplary leadership capacities. Hence, it is essential to measure the success of environmental protection policies. Furthermore, national expenditure on environmental protection ("NEEP") "measures the resources used by resident units in a given period for protecting the natural environment. It is calculated as a sum of current expenditure on environmental protection (EP) activities and investments for EP activities, including net transfers to the rest of the world" (Eurostat). Consistent with Eurostat's estimates, "EU expenditure on environmental protection, measured by the NEEP aggregate, increased by 40 % from 2006 to 2020" (Eurostat). This result indicates positive trends in the development of environmental protection policies. Kelemen (2010) investigates the European Union's potential to become a global leader in environmental policy. One significant advantage is that the EU has taken on a leadership role in promoting good practices in the fight against climate change as it set goals to reduce greenhouse gas emissions higher than any other country in the world. In addition, those goals are also set to become accomplished fastest in the world. But the EU was not the global leader in environmental protection since the beginning. As mentioned before, the first environmental issues emerged in the early 1970s on the worldwide scene. For the first two decades, the USA became a global leader in the fight against environmental problems. The EU became the global environmental leader in the 2000s because the USA shifted from global environmental leader in the 1970s and 1980s to laggard and obstructionist in the 1990s and 2000s (Kelemen, 2010). Likewise, Oberthür and Kelly

¹ "The environmental Kuznets curve (EKC) is a hypothesized relationship between various indicators of environmental degradation and per capita income. In the early stages of economic growth, pollution emissions increase, and environmental quality declines. Still, the trend reverses beyond some level of per capita income (which will vary for different indicators). At high-income levels, economic growth leads to environmental improvement. This implies that environmental impacts or emissions per capita are an inverted U-shaped function of per capita income" (Stern, 2018).

(2008:36) emphasize that "the EU has provided leadership in international climate change policy by pushing for stringent international commitments on the Climate Change Convention in 1991. In 1997, when the Kyoto Protocol was negotiated, the EU proposed the deepest emission cuts and accepted the highest reduction target among the major industrialized countries." On the other hand, some scientists doubt the EU's success as a global environmental leader. Zito et al. (2019) state that EU environmental policy has witnessed substantial and significant change since 1992 and especially since 2007. The EU generated new ideas, new legislations have been approved, and environmental governance helps to contribute to the implementation of EU environmental objectives. These stories make the EU successful, but it is less favorable for those pushing an environmental agenda, seeking material and conceptual change. Burns et al. (2020:3) investigated how does EU environmental policy adapt in times of crisis. They found that, at least in the short term, "a "crisis effect" was revealed by a decline in the amount of EU environmental legislation brought forward and the ambition of new legislation." Other authors find different reasons why the EU is not successful as a global leader in environmental protection. Since 2004, the EU has enlarged to the East and South, bringing in poorer states where environmental policy is not prioritized (Braun 2014). Moreover, Wurzel et al. (2017) state that it has been suggested that the former green pioneers no longer want to lead environmental policy. In addition, Parker et al. (2012) examined that the EU appeared to have lost its leadership mantle in environmental diplomacy. Likewise, Gravey and Jordan (2016) and Steinebach and Knill (2017) state there are some indications that environmental ambition is stalling or even reversing. There are different opinions if the EU is the global leader in environmental policy. Still, it can be stated that the EU has a detailed environmental policy that helps develop environmental protection. The environmental protection results can be examined in the long term; therefore, it will be possible to analyze them in the future.

4. NATIONAL EXPENDITURE ON ENVIRONMENTAL PROTECTION IN THE EUROPEAN UNION

Environmental protection expenditure accounts (EPEA) "measure the economic resources devoted to all activities and actions that have the main purpose of preventing, reducing, and eliminating pollution and any other degradation of the environment" (Eurostat). All the analyzed data is retrieved from Eurostat, and it is secondary data. Due to the relevance of the Eurostat, the analysis of retrieved data is valid. Two different datasets were observed; the first one Government revenue, expenditure, and main aggregates (online data code gov_10a_mai) and the second one Environmental protection expenditure accounts (online data code env_ac_epea). For the analysis, data for 27 Member States was used, excluding the UK. Figure 1 shows the total national expenditure on environmental protection by the general government. Even though the time series started in 2011, not all governments had expenses in environmental protection until 2014. From 2011 to 2013, fifteen out of twenty-seven countries spent money on environmental protection. France was the country that spent the most, while Latvia spent at least. From 2014 until 2018, all Member States recorded expenditures on environmental protection. Even in this period, France was the leader of the expenses with more than 11.480 million Euros each year. On the other hand, Cyprus has the lowest expenditures, and they spent more than 64.1 million Euros each year.

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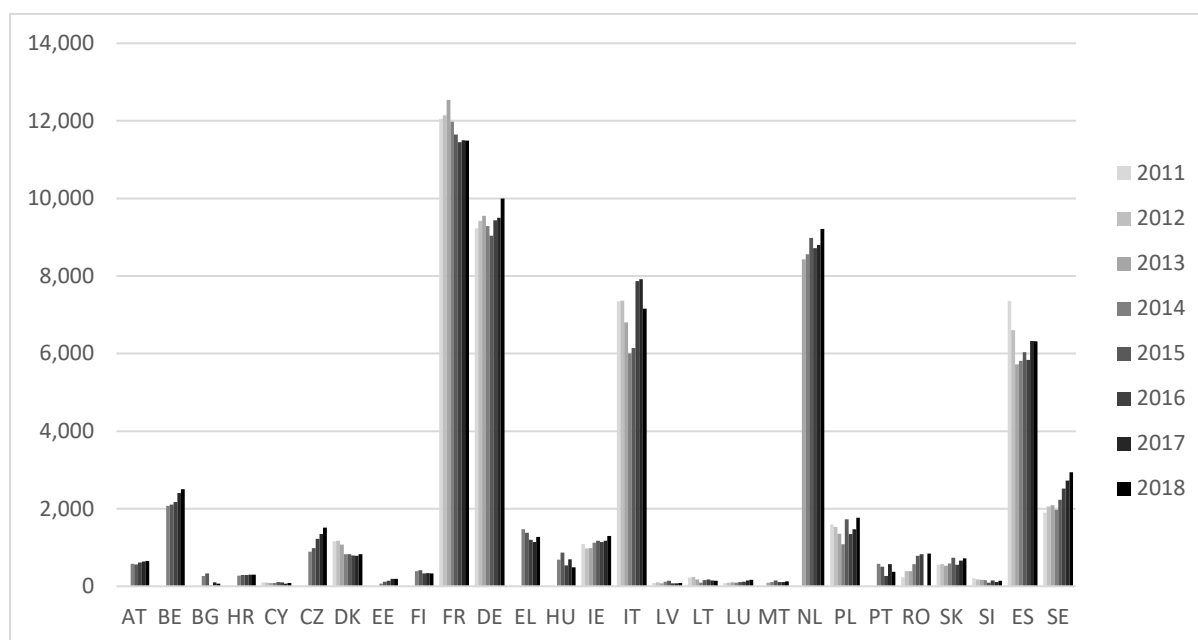


Figure 1: National expenditure on environmental protection by the general government in the EU in a million Euros
(Source: authors according to data available at Eurostat – online data code env_ac_epea)

Countries like Bulgaria, Croatia, Cyprus, Estonia, Finland, Latvia, Lithuania, Luxembourg, Malta, Portugal, Romania, Slovakia, and Slovenia, recorded expenditure on environmental protection less than 1.000 million Euros each year. Moreover, Figure 2 reveals how the Member States differ from each other for five years in their expenditures on environmental protection.

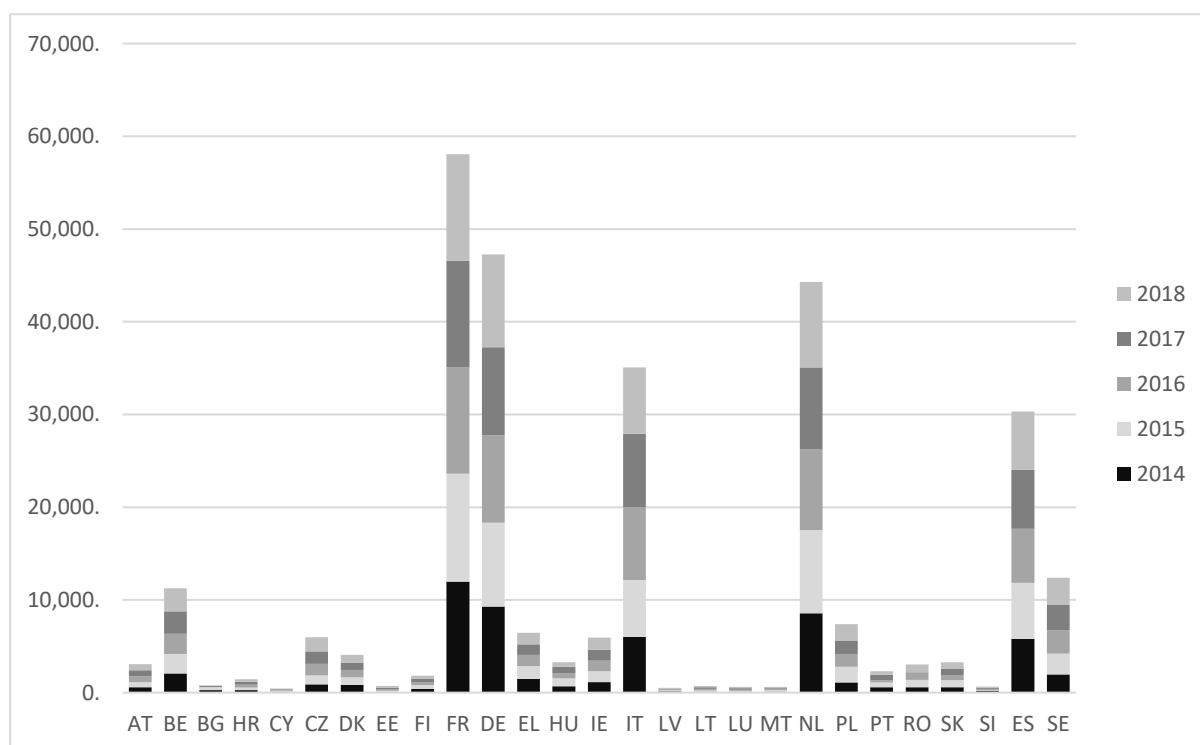


Figure 2: National expenditure on environmental protection in the EU from 2014 to 2018 in a million Euros
(Source: authors according to data available at Eurostat – online data code env_ac_epea)

Only seven out of twenty-seven Member States spent more than 10.000 million Euros on environmental protection. The countries that spent the most are Belgium, France, Germany, Italy, Netherlands, Spain, and Sweden. On the other hand, ten countries spent less than 2.000 million Euros in total during five years. The countries that spent the least are Bulgaria, Croatia, Cyprus, Estonia, Finland, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. In addition, Figure 3 shows differences between changes in total government expenditures and changes in the expenses on environmental protection. Member States did significantly improve their expenditures on environmental protection during the observed time.

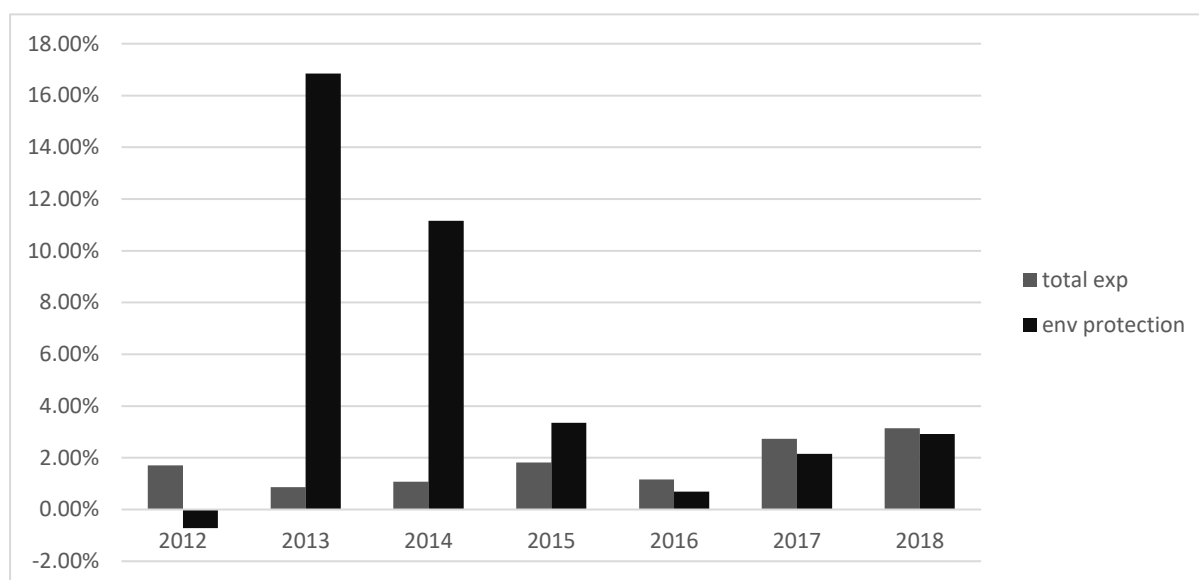


Figure 3: Changes in total national expenditure and national expenditure on environmental protection by the general government in the EU

(Source: authors according to data available at Eurostat – online data code env_ac_epea and gov_10a_mai)

Member States have a greater increase in expenditures on environmental protection in comparison to changes in total spending. Only in 2012 have the changes of the expenses on environmental protection negative value which means that countries spent less money on environmental protection in 2012 than in 2011, while the changes in total expenditure have positive value during all observed years. In 2013, 2014, and 2015, countries had a bigger increase in changes in expenditures on environmental protection than changes in total expenditures. During 2016, 2017, and 2018, changes in total expenditures have been greater than changes in expenditures on environmental protection. Based on the numbers shown in Figure 3, the authors do not reject the first hypothesis because the Member States have a positive trend in their expenditures on environmental protection during the observed time.

5. CONCLUSION

Climate change is a long-term process that did not happen only in the last few years. Still, in the previous few decades, it also means that the results of effective environmental policies will be visible in decades. But to broader the viewpoint, new technologies that will help improve the effectiveness of environmental policy can be seen as a unique opportunity. The world tends towards a better future, and to make it possible, it is essential to change human habits. By changing human habits, the world will prosper. For example, if more people use bicycles to go to work instead of their cars, less pollution is made. Also, if companies invest in greener ways of production, they will emit fewer greenhouse gases.

All the changes that are made now tend towards sustainability and many benefits above environmental protection. Not only will that environment prosper, but new jobs can be made and increase in economic activity to well-being and health. Based on the analyzed data, there are significant differences between expenditures on environmental protection among the EU Member States. Countries such as France, Germany, and Italy are spending more money than countries like Finland, Croatia and Slovenia are. Even though that difference in expenditure on environmental protection exists, the environmental policy in the EU is still developing. The authors recommend further research on differences between the Member States. Besides, it will be interesting to find a way to measure how environmental protection is developing.

LITERATURE:

1. Badulescu, D., Badulescu, A., Rangone, A., and Sipos-Gug, S. (2016). Different or alike? Investigating the impact of GDP on environmental protection expenditure in selected European States. *Global and Local Economic Review*, 20(1), 55-75.
2. Braun, M. (2014) 'EU climate norms in East-Central Europe', *JCMS: Journal of Common Market Studies* 52 (3): 445–60.
3. Burns, C., Eckersley, P. and Tobin, P. (2020) EU environmental policy in times of crisis, *Journal of European Public Policy*, 27:1, 1-19.
4. Djogaš, M. (2020). ANALIZA FISKALNOG UČINKA POLITIKE ZAŠTITE OKOLIŠA U REPUBLICI HRVATSKOJ (Doctoral dissertation, University of Zagreb. Faculty of Economics and Business.).
5. Ercolano, S., and Romano, O. (2018). Spending for the environment: General government expenditure trends in Europe. *Social indicators research*, 138(3), 1145-1169.
6. Eurostat, Environmental protection expenditure account. Retrieved 24.8.2021. from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Environmental_protection_expenditure_accounts
7. Gravey, V. and Jordan, A. (2016) 'Does the European Union have a reverse gear? Policy dis- mantling in a hyperconsensual polity', *Journal of European Public Policy* 23(8): 1180–98.
8. Jeffrey, C., and Perkins, J. D. (2014). The relationship between energy taxation and business environmental protection expenditures in the European Union. *The International Journal of Accounting*, 49(4), 403-425.
9. Kelemen, R.D. (2010) Globalizing European Union environmental policy, *Journal of European Public Policy*, 17:3, 335-349.
10. Kierepka-Kasztelan, A. (2018). Environmental Protection Expenditure in the EU Countries. *on European Integration* 2018, 690.
11. Morgenstern, R. D., Pizer, W. A., and Shih, J. S. (2001). The cost of environmental protection. *Review of Economics and Statistics*, 83(4), 732-738.
12. Oberthür, S. and Kelly, C.R. (2008) EU Leadership in International Climate Policy: Achievements and Challenges, *The International Spectator*, 43:3, 35-50.
13. Parker, C., Karlsson, C., Hjerpe, M. and Linner, B-O. (2012) 'Fragmented climate change leadership: making sense of the ambiguous outcome of COP-15', *Environmental Politics* 21(2): 268–86.
14. Pearce, D., and Palmer, C. (2001). Public and private spending for environmental protection: a cross-country policy analysis. *Fiscal studies*, 22(4), 403-456.
15. Steinebach, Y. and Knill, C. (2017) 'Still an entrepreneur? The changing role of the European Commission in EU environmental policy-making', *Journal of European Public Policy* 24(3): 429–46.
16. Stern, D. I. (2017). The environmental Kuznets curve. In *Oxford Research Encyclopedia of Environmental Science*.

17. Turjak, S., Unukić, I., and Liović, D. (2018). SMES, RESOURCE EFFICIENCY AND GREEN MARKETS–ASPECTS OF THE TRANSITION OF SMES IN THE REPUBLIC OF CROATIA. In BOOK OF PROCEEDINGS (p. 450).
18. UNESCO (2021). Sustainable Development. Retrieved 14.8.2021. from: <https://en.unesco.org/themes/education-sustainable-development/what-is-esd/sd>
19. Vandille, G., and Bureau, F. P. (2005). Environmental Protection Expenditure Accounts for Belgium: 1997-2002. Federal Planning Bureau, Brussels, December.
20. Wurzel, R.K.W., Liefferink, D. and Di Lullo, M. (2019) The European Council, the Council and the Member States: changing environmental leadership dynamics in the European Union, *Environmental Politics*, 28:2, 248-270.
21. Wurzel, R.K.W., Connelly, J. and Liefferink, D. (eds) (2017) *The European Union in International Climate Change Politics. Still Taking a Lead?* London: Routledge.
22. Zito, A.R., Burns, C. and Lenschow, A. (2019) Is the trajectory of European Union environmental policy less certain?, *Environmental Politics*, 28:2, 187-207.

CHARACTERISTICS OF OIL INDUSTRY WITHIN THE MANAGERIAL ECONOMIC

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ABSTRACT

Oil is one of the most important strategic raw materials globally, which implies that all major events in the oil market and the oil industry impact the state of the global economy. Given that the oil industry, events in it can be viewed as factors that affect the economy, it is important to understand the characteristics of the industry and the impact of management decisions of the company on the industry itself. The subject of this paper is a review of the oil industry through an overview of the application of the regularity of economic theory in managerial decision-making. Secondary data were used to write the paper, referring to books, textbooks, scientific articles related to the field of management economics, and the official annual reports of INA d.d. were used to perform the analysis. In addition to the above, relevant Internet sources and literature in the field of financial statement analysis and crisis management were used. The scientific research methods used in this paper relate to the method of description, the method of analysis and synthesis, the inductive and deductive methods, and the method of comparison. This paper aims to get acquainted with the elements of management economics within the oil industry and use the theory of managerial economics to identify factors that contribute to the improvement of business in the observed industry. An analysis of the oil industry in the Republic of Croatia was conducted and the business operations of INA d.d.

Keywords: *oil industry, managerial economics, management, market, market analysis, INA*

1. BUSINESS ANALYSIS OF INA D.D.

1.1. Financial analysis

To achieve successful business development, and thus the safe growth of the company, it is necessary to understand the business and achieve satisfactory business results. However, to achieve these goals, the company must have a quality information base. Financial statements are imposed as an indispensable source of information related to the financial position of the company, business performance, and cash flows of the company. Financial statements must be credible, clear, reliable, comparable, and written by accounting principles and standards to be a quality and useful source of information.¹ Analysis of financial statements plays an important role when it comes to planning and control in the management of the company's operations, so

¹ Dečman, N. (2012.), Financijski izvještaji kao podloga za ocjenu sigurnosti i uspješnosti poslovanja malih i srednjih poduzeća u Republici Hrvatskoj, *Ekonomski pregled*, 63(7-8), p 448

all strategic and operational plans formulated by management must be expressed in financial terms. For management, the analysis of operations from a financial point of view must include an analysis of financial results, financial conditions, and financial structure and changes in it. With this in mind, the analysis of financial statements is a process in which various analytical tools and techniques are used to obtain information from the financial statements that are useful for management. Analytical tools and procedures commonly used for the analysis of financial statements relate to structural and comparative financial statements, analysis using financial indicators, and specialized analysis.² The balance sheet, income statement, cash flow statement, and notes to the financial statements were used to perform the financial analysis.

1.2. Structured financial statements

Structural financial statements are the basis for vertical analysis related to the comparison of data in one year. Structural financial statements are used as a basis for vertical analysis, insight into the structure of the balance sheet in which assets and liabilities are equalized with 100%, other balance sheet items are presented as a percentage and in the structure of profit and loss account in which total revenues are equalized 100%, other positions are shown as a share in them.³

1.3. Vertical analysis of balance sheet

The balance sheet is the basic financial report that provides an insight into the assets, liabilities, and capital of the company on a particular day. When it comes to audits it's the most important financial report because it is used to assess the financial position of the company, and conduction of analysis of liquidity, profitability, activity, and indebtedness.

Table following on the next page

² Žager, K., Mamić Sačer, I., Sever Mališ, S., Ježovit A., Žager, L. (2020.), *Analiza financijskih izvještaja – načela, postupci, slučajevi*, četvrto izdanje, Zagreb: RIF, p36 - 37

³ IBID, p 265

Table 1: Structural balance sheet of INA d.d. by quarters for 2019 and 2020

BALANCE SHEET								
ASSETS	Q1		Q2		Q3		Q4	
	2019	2020	2019	2020	2019	2020	2019	2020
A) RECEIVABLES FOR REGISTER BUT UNPAID CAPITAL	/	/	/	/	0	/	/	/
B) FIXED ASSETS	79,9%	79,0%	74,9%	80,0%	74,9%	81,7%	78,7%	84,2%
I. INTANGIBLE ASSETS	2,4%	1,9%	1,9%	1,8%	2,0%	2,2%	2,0%	2,2%
II. TANGIBLE ASSETS	53,4%	53,6%	50,4%	54,2%	50,7%	55,0%	53,6%	56,8%
III. LONG - TERM FINANCIAL ASSETS	16,5%	15,9%	15,6%	16,9%	15,5%	16,8%	16,5%	17,3%
IV. RECEIVABLES	2,6%	2,4%	2,4%	2,5%	2,4%	2,5%	2,4%	2,5%
C) CURRENT ASSETS	19,9%	20,6%	24,9%	19,7%	24,9%	18,1%	21,1%	15,7%
I. SUPPLIES	9,2%	6,8%	12,4%	10,7%	12,1%	9,6%	9,2%	7,1%
II. RECEIVABLES	8,3%	7,9%	9,1%	6,6%	10,7%	7,1%	9,3%	6,0%
III. CURRENT FINANCIAL ASSETS	0,4%	1,0%	0,4%	1,2%	0,4%	0,9%	0,4%	0,7%
IV. MONEY IN THE BANK AND THE CASH DRAWER	2,0%	4,9%	2,9%	1,1%	1,8%	0,4%	2,3%	1,8%
V. PAID EXPENSES FOR THE FUTURE PERIOD AND ACCRUED INCOME	0,3%	0,4%	0,2%	0,3%	0,2%	0,3%	0,2%	0,2%
D) TOTAL ASSETS	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
LIABILITIES								
A) CAPITAL AND RESERVES	58,9%	50,3%	50,6%	51,6%	52,8%	50,8%	53,9%	52,3%
I. SHARE CAPITAL	42,6%	41,1%	40,0%	42,4%	40,1%	44,5%	40,7%	45,6%
II. CAPITAL RESERVES	/	/	/	/	/	/	/	/
III. RESERVES FROM PROFIT	6,1%	6,4%	6,0%	6,5%	6,2%	6,9%	6,2%	6,9%
IV. REVALUATION RESERVES	/	/	/	/	/	/	/	/
V. FAIR VALUE RESERVES	0,8%	0,7%	0,9%	0,8%	1,0%	1,0%	1,1%	1,0%
VI. RETAINED EARNINGS OR LOSS CARRIED FORWARD	9,2%	5,8%	2,7%	6,0%	2,8%	3,4%	2,8%	3,5%
VII. PROFIT OR LOSS FOR THE BUSINESS YEAR	0,2%	-3,7%	0,9%	-4,1%	2,8%	-5,0%	3,0%	-4,7%
VIII. MINORITY (UNCONTROLLING) INTEREST	/	/	/	/	/	/	/	/
B) LONG TERM OBLIGATIONS	20,1%	23,0%	18,2%	20,5%	18,6%	21,4%	19,8%	21,7%
C) SHORT TERM LIABILITIES	21,0%	26,6%	31,2%	27,8%	28,6%	27,8%	26,3%	25,9%
D) TOTAL LIABILITIES	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Source: author's calculation based on data from financial statements of INA d.d.

The analysis of the balance sheet concludes that in the structure of assets of INA d.d. fixed assets dominate. In the observed period, the share of fixed assets ranges between 79.9% and 84.2%. It is evident that in the first quarter of 2020 share of fixed assets decreased below the value level for the previous year, but it grew in the second quarter and by the end of the observed period was constantly higher compared to the same periods in the previous year with a tendency to grow. Given that it is a manufacturing company, it is not surprising that tangible assets have the largest share in fixed assets. Through all the observed periods, an increase in intangible assets in 2020 is seeable, and that's a result of investment in real estate, plants, and equipment. While fixed assets grew in the observed period, the share of short-term assets in total only decreased and at the end of the fourth quarter of 2020, the value of short-term assets was 1414 million HRK or 31.35% lower than in the first quarter of 2020 due to reduced inventories and trade receivables. When it comes to sources of assets, the dominant share through all observed periods has capital and reserves, which through most of the observed periods in 2020 were below the level of 2019, the main culprit for this was the losses throughout 2020. Short-term liabilities prevail over long-term, through the second, third, and fourth quarters lower in 2020 than the previous year. The largest share of short-term liabilities relates to liabilities to banks and other financial institutions and liabilities to suppliers, and these two items in the observed period account for 56% to 76% of short-term liabilities, at the lowest level of 56% were in the first quarter of 2019, and at the highest in the third quarter of 2019.

1.3.1. Vertical analysis on the income statement

Another financial statement that can be used to assess business performance is the income statement. Except for the above, it can be used as a basis for conducting cost-effectiveness and profitability analysis. The structure of the income statement shows the share of certain statement positions concerning total revenues, and how the company uses expenses in the process of generating revenues. It is necessary to put each of them in correlation with total revenues to analyze the structure of revenues and expenditures. Considering that INA sells oil products, operating revenues have the largest share in the total revenues, and they make up between 97.31% and 99.6% of the total revenues in the observed period. The company operated at a loss in certain quarters of the observed period and it is to be expected that expenditures in these periods will be higher than total revenues, the table shows that that was the case in the first and third quarters of 2020.

Table 2: Structural income statement of INA d.d. by quarters for 2019 and 2020

	INCOME STATEMENT							
	Q1		Q2		Q3		Q4	
	2019	2020	2019	2020	2019	2020	2019	2020
OPERATING INCOME	99,1%	98,0%	98,2%	98,2%	99,2%	98,5%	99,6%	97,31%
1. Sales revenue with entrepreneurs within the group	15,8%	15,2%	16,2%	10,6%	14,4%	11,2%	14,0%	12,5%
2. Sales revenue (outside the group)	81,7%	81,6%	80,2%	86,4%	84,1%	86,2%	83,3%	82,9%
3. Revenues based on the use of own products, goods, and services	0,1%	0,3%	0,1%	0,2%	0,05%	0,2%	0,1%	0,1%
4. Other operating income with entrepreneurs within the group	0,1%	0,1%	0,2%	0,2%	0,05%	0,1%	1,9%	0,2%
5. Other operating income (outside the group)	1,5%	0,9%	1,5%	0,8%	0,6%	0,8%	0,2%	1,6%
OPERATING EXPENSES	96,6%	121,9%	96,0%	98,3%	90,5%	104,8%	99,7%	95,7%
1. Changes in the value of inventories of unfinished and finished products	13,0%	13,9%	-14,4%	-5,2%	6,4%	0,7%	0,2%	7,5%
2. Material costs	62,0%	84,1%	97,5%	80,7%	72,4%	74,9%	76,9%	64,8%
3. Staff costs	4,6%	4,5%	4,9%	6,1%	2,7%	5,1%	3,1%	4,9%
4. Amortization	9,3%	10,0%	7,4%	13,4%	6,1%	9,6%	8,1%	12,8%
5. Other costs	5,4%	5,6%	4,8%	6,2%	3,0%	3,8%	5,2%	7,4%
6. Value adjustments	1,2%	3,7%	0,5%	0,1%	-0,1%	9,6%	3,4%	-2,6%
7. Reservations	1,0%	0,2%	-4,7%	-3,0%	-0,1%	1,1%	2,7%	0,8%
FINANCIAL REVENUE	0,9%	1,8%	1,7%	0,5%	0,8%	0,9%	/	2,0%
FINANCIAL EXPENSES	1,5%	3,6%	0,6%	-0,2%	1,4%	0,7%	-0,5%	1,7%
SHARE OF PROFITS OF JOINT VENTURES	/	0,1%	0,1%	1,3%	0,0%	0,6%	0,4%	0,7%
SHARE OF LOSSES OF JOINT VENTURES	0,6%	/	/	/	/	/	/	/
TOTAL INCOME	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
TOTAL EXPENSES	98,7%	125,5%	96,6%	98,1%	92,0%	105,4%	99,2%	97,4%
PROFIT OR LOSS BEFORE TAX	1,3%	-25,5%	3,4%	1,9%	8,0%	-5,4%	0,8%	2,6%
PROFIT TAX	0,2%	-4,6%	0,4%	4,2%	1,4%	-1,8%	0,4%	0,2%
PROFIT OR LOSS FOR THE PERIOD	1,1%	-20,9%	3,0%	-2,3%	6,6%	-3,7%	0,4%	2,4%

Source: author's calculation based on data from financial statements of INA d.d.

In the first quarter of 2020, a significant increase in material costs has occurred, which was a result of the raw material cost growth and materials that reflect the different dynamics of processing. The value in the first quarter of 2019 is much lower due to the overhaul of the Rijeka Oil Refinery in that period. Then, a significant difference in material costs is noticed in the second quarter when compared to 2019 lower material costs in the second quarter of 2020 are the result of a reduction in the volume of business due to a drop in demand for oil products caused by restrictions due to COVID-19 restrictions and a decline in the price of oil on the world market. The material costs are declining after the second quarter of 2020, the main reason for this is the reduction in the volume of business and lower costs related to the purchase price

of oil on the world market, with the decline in the value of intangible costs in the same period and intangible costs due to lower costs of intellectual services.

1.4. Comparative financial statements

Comparative financial statements enable the observation of changes in the observed periods and represent an analytical tool used to perform horizontal financial analysis. The horizontal financial analysis enables the comparison of data over a longer period to observe the trend or dynamics of changes in financial data.⁴

1.4.1. Horizontal analysis of balance sheet

The following table represents the comparative balance for 2020 by quarters compared to the same periods of the previous year.

Table 3: Comparative balance sheet of INA d.d. for 2019/2020

Name of position	Q1		Q2		Q3		Q4	
	Increase/ decrease from the previous year	% increase/ decrease from the previous year	Increase/ decrease from the previous year	% increase/ decrease from the previous year	Increase/ decrease from the previous year	% increase/ decrease from the previous year	Increase/ decrease from the previous year	% increase/ decrease from the previous year
Assets								
A) Receivables on registered but unpaid capital	0	/	0	/	0	/	0	/
B) Fixed assets	418	2,5%	140	0,8%	-294	-1,7%	-763	-4,4%
I. Intangible assets	-75	-15,0%	-52	-12,0%	-12	-2,7%	0	0,0%
II. Tangible assets	449	4,0%	172	1,5%	-265	-2,3%	-625	-5,3%
III. Long-term financial assets	10	0,3%	77	2,2%	-91	-2,6%	-232	-6,4%
IV. Receivables	-21	-3,8%	-11	-2,1%	-40	-7,3%	-31	-5,9%
C) Short-term (current) assets	312	7,4%	-1419	-25,4%	-1928	-34,6%	-1566	-33,6%
I. Supplies	-448	-23,1%	-505	-18,2%	-764	-28,3%	-619	-30,6%
II. Receivables	-24	-1,4%	-648	-31,5%	-950	-39,7%	-853	-41,7%
III. Current financial assets	141	183,1%	163	168,0%	106	126,2%	57	64,0%
IV. Money in the bank and the cash drawer	643	151,3%	-429	-65,1%	-320	-80,6%	-151	-30,1%
V. Paid expenses for the future period and accrued income	29	54,7%	15	31,3%	3	6,0%	-13	-30,2%
D) Total assets	759	3,6%	-1264	-5,6%	-2219	-9,9%	-2342	-10,6%
Liability								
A) Capital and reserves	-1421	-11,4%	-413	-3,6%	-1584	-13,4%	-1563	-13,1%
I. Share (registered) capital	0	0,0%	0	0,0%	0	0,0%	0	0,0%
II. Capital reserves	0	/	0	/	0	/	0	/
III. Reserves from profit	105	8,1%	35	2,6%	7	0,5%	-10	-0,7%
IV. revaluation reserves	0	/	0	/	0	/	0	/
V. Fair value reserves	-22	-13,3%	-33	-15,9%	-21	-9,7%	-39	-16,2%
VI. Retained earnings or loss carried forward	-661	-34,2%	656	106,3%	75	12,2%	75	12,2%
VII. Profit or loss for the business year	-843	-1960,5%	-1071	-530,2%	-1645	-261,1%	-1589	-242,2%
VIII. Minority (uncontrolling) interest	0	/	0	/	0	/	0	/
B) Long-term obligations	779	18,3%	265	6,5%	172	4,1%	-82	-1,9%
C) Short-term liabilities	1401	31,6%	-1116	-15,9%	-807	-12,6%	-697	-12,0%
D) Total liabilities	759	3,6%	-1264	-5,6%	-2219	-9,9%	-2342	-10,6%

Source: author's calculation based on data from financial statements of INA d.d.

Throughout all four quarters of 2020, the most significant change is noticed in the position profit or loss for the business year where INA made a loss through all observed periods mainly due to the reduction in business volume caused by the COVID-19 pandemic. In addition, significant changes are visible in the value of current assets, which in the second, third, and fourth quarters of 2020 were lower than in the same periods in 2019 ranging from 25.4% to 34.6%. The value of current assets is continuously falling because its components also experienced a decline, it is evident that inventories and short-term receivables are falling through all four quarters, and after the first quarter of 2020, the money in the bank and treasury is declining.

⁴ IBID, p 269-272

1.5. Horizontal analysis of income statement

Comparative analysis of income statements shows that through all four quarters of 2020 the company has significantly lower revenues than in the previous year. The decrease in the volume of business caused a decrease in revenues and expenditures, and that's mostly reflected in the reduction of material costs, which consist of the cost of raw materials, costs of goods sold, and other external costs. This is an expected change considering the decline in demand for oil products in 2020

Table 4: Comparative income statement for 2019/2020

	Q1		Q2		Q3		Q4	
	Increase / decrease compared to the previous year	% increase / decrease compared to the previous year	Increase / decrease compared to the previous year	% increase / decrease compared to the previous year	Increase / decrease compared to the previous year	% increase / decrease compared to the previous year	Increase / decrease compared to the previous year	% increase / decrease compared to the previous year
OPERATING INCOME	-237	-5,9%	-2286	-43,7%	-2503	-39,0%	-2452	-42,4%
1. Sales revenue with entrepreneurs within the group	-52	-8,2%	-547	-63,2%	-484	-52,0%	-387	-47,5%
2. Sales revenue (outside the group)	-166	-5,0%	-1682	-39,3%	-2016	-37,0%	-2004	-41,4%
3. Revenues based on the use of own products, goods, and services	7	233,3%	4	133,3%	4	133,3%	-1	-20,0%
4. Other operating income with entrepreneurs within the group	0	0,0%	-8	-61,5%	2	66,7%	-102	-93,6%
5. Other operating income (outside the group)	-26	-43,3%	-53	-67,9%	-9	-21,4%	42	350,0%
OPERATING EXPENSES	779	20,0%	-2165	-42,3%	-1691	-28,9%	-2515	-43,5%
1. Changes in the value of inventories of unfinished and finished products	9	1,7%	613	79,6%	-390	-93,5%	249	2766,7%
2. Material costs	723	28,9%	-2775	-53,4%	-1707	-36,4%	-2250	-50,4%
3. Staff costs	-16	-8,6%	-76	-29,3%	27	15,3%	-13	-7,2%
4. Amortization	11	2,9%	9	2,3%	-15	-3,8%	-32	-6,8%
5. Other costs	-2	-0,9%	-71	-27,6%	-46	-23,4%	-51	-16,8%
6. Value adjustments	90	180,0%	-26	-89,7%	390	5571,4%	-288	-145,5%
7. Reservations	-36	-85,7%	161	-64,4%	50	833,3%	-130	-82,3%
FINANCIAL REVENUE	35	100,0%	-75	-84,3%	-15	-30,6%	68	/
FINANCIAL EXPENSES	77	128,3%	-36	-120,0%	-67	-72,0%	86	307,1%
SHARE OF PROFITS OF JOINT VENTURES	5	/	35	700,0%	23	1150,0%	-2	-7,7%
SHARE OF LOSSES OF JOINT VENTURES	-23	-100,0%	0	/	0	/	0	/
TOTAL INCOME	-197	-4,9%	-2326	-43,6%	-2495	-38,5%	-2386	-41,1%
TOTAL EXPENSES	833	21,0%	-2201	-42,7%	-1758	-29,5%	-2429	-42,2%
PROFIT OR LOSS BEFORE TAX	-1030	-1943,4%	-125	-69,1%	-737	-141,5%	43	91,5%
PROFIT TAX	-187	-1870,0%	103	468,2%	-163	-175,3%	-13	-61,9%
PROFIT OR LOSS FOR THE PERIOD	-843	-1960,5%	-228	-143,4%	-574	-134,1%	56	215,4%

Source: author's calculation based on data from financial statements of INA d.d.

1.6. Ratio analysis

The financial indicator represents a relative number which means that one economic quantity is put in proportion to another economic quantity to get useful information. That is a reason why financial indicators are the most important instrument of financial analysis. Indicators are considered to be the carrier of information needed to manage the business and development of the company. Given the time dimension, financial indicators can be divided into two groups; one group is based on income statements and includes a consideration of the company's operations within a certain period, and the other group of financial indicators refers to a specific time and talks about the financial position of the company. Also, the indicator can be divided into groups that separately provide information on business stability or performance. Financial indicators related to business stability are: liquidity indicators, indebtedness indicators, and activity indicators, and business performance indicators are: cost-effectiveness indicators, profitability indicators, research indicators, or activity indicators that provide information on business stability and profitability.

Table 5: Financial indicators

	Q1		Q2		Q3		Q4	
LIQUIDITY RATIOS	2019	2020	2019	2020	2019	2020	2019	2020
Quick ratio	0,49	0,48	0,39	0,28	0,43	0,27	0,44	0,30
Current ratio	0,95	0,77	0,80	0,71	0,87	0,65	0,80	0,60
Financial stability ratio	1,01	1,08	1,09	1,11	1,05	1,13	1,07	1,14
Working capital (mil. HRK)	-231,00	-1320,00	-1.430,00	-1.733,00	-844,00	-1.965,00	-1.156,00	-2.025,00
Financial leverage	0,70	0,99	0,98	0,94	0,89	0,97	0,86	0,91
INDEBTEDNESS INDICATORS								
Debt ratio	0,41	0,50	0,50	0,49	0,47	0,49	0,46	0,48
Self-financing ratio	0,59	0,51	0,51	0,52	0,53	0,51	0,54	0,52
Indebtedness factor	20,88	28,29	20,08	25,42	12,86	26,18	20,51	18,07
ACTIVITY INDICATORS								
Asset turnover ratio	0,19	0,17	0,24	0,14	0,29	0,20	0,26	0,17
Short-term assets turnover ratio	0,96	0,85	0,95	0,72	1,16	1,09	1,24	1,10
Receivables turnover ratio	86,76	104,28	119,02	89,42	156,66	126,45	152,08	118,82
Inventory turnover ratio	1,07	1,87	1,67	0,82	1,56	1,34	1,97	1,23
Trade receivable collection period ratio	4,21	3,50	3,07	4,08	2,33	2,89	2,40	3,07
COST-EFFECTIVENESS INDICATORS								
Cost-effectiveness of the overall business	1,01	0,80	1,04	1,02	1,09	0,95	1,01	1,03
Cost-effectiveness of business activities	1,03	0,80	1,02	1,00	1,10	0,94	1,00	1,02
PROFITABILITY INDICATORS								
Net profit margin	1,07%	-20,9%	3,0%	-2,3%	6,6%	-3,7%	0,4%	2,4%
ROA	0,20%	-3,7%	0,7%	-0,3%	1,9%	-0,7%	0,1%	0,4%
ROE	0,35%	-7,3%	1,4%	-0,6%	3,6%	-1,4%	0,2%	0,8%
INVESTMENT INDICATOR								
EPS	4,30	-80,00	15,90	-6,90	42,80	-14,60	2,60	8,20

Source: author's calculation based on data from financial statements of INA d.d.

Liquidity ratios measure the ability of an enterprise to meet its short-term liabilities and are calculated using balance sheet data. The quick liquidity ratio provides information on the company's ability to settle a certain amount of short-term liabilities with quickly liquidated assets.⁵ If a company wants liquidity at the normal level, it must be able to meet its short-term liabilities from liquid assets, which means that the value of the quick liquidity ratio should be 1. The table shows that INA does not meet this assumption and that the quick liquidity ratio is at a lower level in 2020 than it was the previous year. The current liquidity ratio should be higher than two if the company wants to maintain current liquidity at a normal level and settle due liabilities on time. If the value of the current liquidity ratio is two, it means that the company has twice as many current assets as it has short-term liabilities.⁶ INA's current liquidity ratio in the observed period is constantly lower than one, which means that the company has more short-term liabilities than current assets. It is also evident that this ratio is only getting lower after the third quarter of 2019. The reason for this can be found in the reduction of demand for oil products, which directly affects the reduction of current assets. The financial stability ratio indicates how much fixed assets are financed by long-term sources of financing. This indicator value should be less than one because the company should finance part of its current assets from quality long-term sources, the company should have working capital.⁷ It's clear that the values for the financial stability ratio of INA are constantly above one during the observed periods,

⁵ Žager, K., Mamić Sačer, I., Sever Mališ, S., Ježovit A., Žager, L. (2020.), *Analiza financijskih izvještaja – načela, postupci, slučajevi*, četvrto izdanje, Zagreb: RIF, p45-46

⁶ IBID, p 47

⁷ IBID, p 48

and throughout all quarters of 2020, the value of the coefficient only increases, which means that the company has no working capital, there is a deficit of working capital. An increment of the value of the financial stability ratio indicates a decrease in the liquidity of the company, and a decrease in financial stability that the company does not adhere to the golden rules of financing, and part of its fixed assets are short-term funded. Debt indicators such as debt ratio, funding ratio, and self-financing ratio provide information on so-called static debt because they are calculated based on balance sheet data. They indicate how much of the company's assets are funded by equity or other sources of funding. Other debt indicators are considered indicators of dynamic debt and are calculated based on income statement data.⁸ The sum of the debt ratio and the total self-financing ratio value should be one because these two ratios show the structure of financing the company's assets. In the observed period, the debt ratio and the self-financing ratio are approximately equal in value, the self-financing ratio is still higher, and that's preferable. The funding ratio provides information on how many third-party sources of financing were used to finance the company's operations, according to the obtained values this ratio leads to the same conclusions as to the previous two, INA finances operations with its sources of funding. The debt factor indicates how many years it takes to settle total liabilities from retained earnings increased by depreciation, it can be used as an indicator of how many years the company will replace debt as a source of financing with its own.⁹ The values of the debt factor in the observed period usually range between 20.08 and 28.29 with two exceptions: in the third quarter of 2019, the debt factor was 12.86, but in the next quarter, it was 20.51. Through 2020 factor values are far more volatile than was the case in the previous year. Activity indicators or turnover ratios indicate the speed of asset circulation in the business process. With their help, it is possible to calculate the average days of binding funds. The turnover ratio of total assets tells how many times the company has turned its assets on an annual basis, that is, how many monetary units of total revenues have been generated per one monetary unit of total assets.¹⁰ The table shows that the turnover ratio of total assets throughout 2019 was higher than in 2020. If the period is observed through, the average value of the turnover ratio of total assets in 2019 is 0.24, and in 2020.g. 0.17, this verifies that INA, on average, through all four quarters of 2020 realized 0.17 HRK of income per one HRK of assets. The current assets turnover ratio measures the efficiency of revenue generation when it comes to the use of current assets. The value of the coefficient in the first quarter is lower than in the rest of the year, the same case is repeated in both observed years, reason for that could be the annual overhaul of refineries that takes place at the beginning of the year due to market seasonality. The turnover ratio of receivables puts revenues from sales and receivables in relation and provides information on how many times a year receivables are collected, and with the help of this coefficient, it is possible to calculate the duration of collection of receivables. In the observed period receivables ratio ranged between 86.76 and 156.66, the duration of the collection was between 2.33 and 4.21 days. In both observed years, the turnover ratio of receivables is the highest in the third quarter at the same time the number of days for collection of receivables are at its lowest. The inventory turnover ratio correlates the sales revenue with that average inventory and provides information on how much the average inventory turnover is on an annual basis. It is desirable that the higher value of this coefficient otherwise the company does not use its resources productively.¹¹ In the observed period, the turnover ratio of INA ranged from 0.82 to 1.97, and through 2020 the values of the coefficient are lower than the previous years. Cost-effectiveness indicators are calculated based on income statement data and represent a measure of business

⁸ IBID, p 48-49

⁹ IBID, p 49-50

¹⁰ IBID, p 50

¹¹ Vukoja, B. (2010) Primjena analize financijskih izvješća pomoću ključnih financijskih pokazatelja kao temelj donošenja poslovnih odluka, p 11

efficiency since they put income and expenses in a ratio.¹² Throughout all the observed periods, the efficiency of INA's operations is low or the company does not operate economically, expenditures are higher than revenues. Given that operating revenues and operating expenses make up the majority of total revenues and total expenses, it is to be expected that the ratio of business activities will move in the same direction as the ratio of all operations. As the name suggests, profitability indicators provide information about a company's ability to generate revenue with available resources and therefore represent a strategic tool for company management. The net profit margin measures the capability of the company to keep the realized revenues as the amount of net profit is increased by interest expenses.¹³ Through the first three-quarters of 2020 INA failed to keep the realized revenues in the form of profit, while in other observed periods it was more successful. The Return on Assets (ROA) indicator evaluates the company's ability to make returns for all owners, it provides information on the company's capability to make returns based on available resources.¹⁴ Through 2019 the profitability of INA's total assets is quite low, but it is still positive, unlike the first three quarters of 2020. Return on equity (ROE) indicator shows how many monetary units a company generates per one unit of equity.¹⁵ It can be said that in the observed period ROE follows the trend of ROA, through 2019 ROE values are positive, and through the first three-quarters of 2020 negative. The only thing is that ROE values are "more positive or negative" because INA is more financed by its sources of financing. Investment indicators measure the success of investments in company shares, and for their calculation, we used data from financial statements and the number of shares and their market value.¹⁶ EPS (Earnings per share) expresses the net profit realized per share. While through all quarters in 2019 INA shareholders made profits in the first quarter of 2020 that changed and INA certainly wasn't attractive for investment.

1.7. Analysis comprehension

2020 itself was one of the most challenging for the entire world economy, including INA, the demand for the company's products, oil products in certain parts of the year was 30-50% lower than in 2019. Such a demand reduction has negatively affected the performance of all segments of the company from refining, retail, and exploration and production of oil and gas. In addition to the fall in demand for oil products on the world market, there was a significant decrease in the price of oil that also negatively influenced INA's operations. Lower levels of oil prices caused a drop in revenue of 1042 mil HRK. How important Brent is in INA's business and how much impact it has on business results is shown by the fact that a 34% drop in Brent's price caused a drop in revenue of 611 mil HRK that is 58% of the total revenue decline. Retail faced a 16% decrease in the number of oil products sold compared to the previous year, which is a consequence of COVID-19 and restrictions on traveling throughout Croatia. There was a decrease in the expenses of raw materials and energy of 32% compared to the previous 2019, and this was due to lower oil prices and different dynamics of oil refining. When it comes to intangible costs, they are 15% lower than in the previous year, mainly due to lower costs of intellectual services. Through 2020 there was a decrease in the value of assets, and the main reason for this is the decision of the management related to the transformation of traditional refining processes and the conservation of the plant in the Sisak Oil Refinery.

¹² Žager, K., Mamić Sačer, I., Sever Mališ, S., Ježovit A., Žager, L. (2020.), *Analiza financijskih izvještaja – načela, postupci, slučajevi*, četvrto izdanje, Zagreb: RIF, p 51

¹³ Ježovita, A. (2016) Analiza marže profita kao odrednica profitabilnosti poslovanja poduzeća, *Journal Of Economy And Business*, XXII. (2016), Posebno izdanje, p 181-185

¹⁴ Žager, K., Mamić Sačer, I., Sever Mališ, S., Ježovit A., Žager, L. (2020.), *Analiza financijskih izvještaja – načela, postupci, slučajevi*, četvrto izdanje, Zagreb: RIF, p 53

¹⁵ IBID, p53-54

¹⁶ IBID, p55

Throughout the observed period, expenditure decreased, but at the same time, there was a more significant decline in revenues, which became more pronounced with each quarter and indicated a negative result for the business year. With this in mind and the fact that at the annual general meeting of shareholders INA d.d. in August 2020 decided to profit from 2019 of 656 million HRK will be allocated to legal reserves (33 million HRK), retained earnings (92,000 HRK), and payment of dividends (HRK 623 million) indirectly indicate the attitudes of the main shareholder when it comes to the continual and development of the company itself. The risks that INA faces are related to its activities in foreign markets, performing transactions in foreign currency, and for that reason, it is exposed to exchange rate risks and interest rate risks because it uses sources of financing that have variable interest rates. In addition, there are risks when it comes to liquidity, which is negatively affected by the increase in receivables from suppliers, it is important to emphasize that the responsibility for liquidity risk management rests with the Management Board by forming a risk management framework for the use of reserves and credit lines overdue receivables and liabilities of the company. The oil industry includes exploration, production, and refining, transportation of crude oil and oil products by road, rail, pipeline, or tanker. It is split up into three parts: upstream, midstream, and downstream. The upstream sector includes all steps from oil field exploration to the crude oil extraction process in oil companies, often called exploration and production, and the first step in the production of oil products. This means that the upstream sector is in charge of drilling wells, but also determining the exact location of the well and extracting crude oil. After the crude oil is extracted to the surface, the upstream work in the production process is finished and then the crude oil is taken over by the midstream, which collects the oil and transports it by pipelines, railways, and tanks to the refinery. This means that midstream companies are focused on the storage and transport of raw materials to the companies involved in the final stage of production, downstream. Downstream is a sector that includes oil refining, placing oil products on the market, and thus represents the last step in the production process. It is possible for one oil industry company to be integrated and include all three sectors of the production process, or it can specialize in a particular sector.¹⁷ Given that it is easy to conclude that the companies operating in the oil industry require large investments and the number of workers of different knowledge and skills, which indicates that the oil industry is characterized by large companies. The size of the company, the value limits that describe a particular category are determined by the laws of all countries, so in Croatia, the legislator has three classification criteria, namely: total assets, net income, and a number of employees in the company. According to the criteria, it is possible to classify companies as:

- Micro - assets < 2.6 million HRK, net income < 5.2 million HRK, no. employees ≤ 10;
- Small - entrepreneurs who do not exceed two of the following three conditions: assets ≤ 30 million HRK, net income ≤ 60 million HRK, no. employees ≤ 50;
- Medium - entrepreneurs who do not exceed two of the following three conditions: assets ≤ HRK 150 million, net income ≤ HRK 300 million, no. employees ≤ 250;
- Large - entrepreneurs who meet two of the three conditions: assets ≥ 150 million HRK, net income ≥ 300HRK, no. employees ≥ 250, and banks, housing savings banks, leasing companies, insurance companies, and other financial institutions.¹⁸

In 2020, INA employed 9829 workers, the value of its assets was 19744 million HRK. According to the criteria for classifying companies by size, INA is considered a large company.

¹⁷ Dekanić, I., Kolundžić, S., Karasalihović, D. (2002.), *Stoljeće nafte, Veza između nafte, novca i moći koja je promijenila svijet*, Zagreb : Naklada Zadro, p 10-22.

¹⁸ Zakon o računovodstvu, NN 78/15, 134/15, 120/16, 116/18, 42/20, 47/20 (2020.), <https://www.zakon.hr/z/118/Zakon-ora%C4%8Dunovodstvu>

To get an impression of the market of oil products in Croatia and the demand for them, gasoline fuels are taken as an example and price changes, total consumption in Croatia, the volume of sales of gasoline by INA, and how much is the market demand and INA sensitive to price changes of fuels.

Table 6: Price elasticity of demand for gasoline fuels (INA)

Year	% change in the price of gasoline (HRK)	Sale of gasoline fuels in kt(INA)	% change in the amount of gasoline fuels sold(INA)	%change in petrol fuel consumption in Croatia
2017	-2,30%	286	-2,00%	-3,80%
2018	-3,11%	278	-2,88%	-2,80%
2019	6,62%	273	-1,83%	-4,40%

Due to the lack of data on total gasoline consumption in Croatia, 2020 was omitted from the calculation, and average gasoline prices on the market of Croatia throughout the observed period were used to calculate price changes. The table shows that the total market consumption of gasoline decreases with age, a negative trend is noticed. The same trend dominates at INA when it comes to the amount of gasoline sold, but the decline in 2018 is minor than the decline in total demand while in the Croatian market in 2019 INA achieved growth in sales of gasoline fuels and a decrease in the overall market led to an increase in its market share. The table shows that the absolute value of demand elasticity is approaching zero every year, demand is price inelastic, which is to be expected given the characteristics of the product. Consumers will continue to buy gasoline regardless of whether the price increases, gasoline is not a product that can be replaced by anything else. Observing the oil industry, it is easy to conclude that all investments in technology improvement, such as the improvement or construction of certain plants in refineries, require large investments, so such projects often take several years. An example of investment is the upgrade of INA's Rijeka Oil Refinery, a project to build a plant for the treatment of heavy residues. Upon completion, the Rijeka Refinery will increase the share of motor fuels in its production, which are profitable products. This project is the largest investment of INA, and its value is 4 billion HRK, with the fact that it is extremely capital-intensive, the time of completion of the project is estimated at three years. But even though it is a large investment and the duration of the project is three years, the management has decided that this is an investment that will ensure the sustainability of the business in the future. In addition to investments related exclusively to increasing the profitability of companies, they also encounter various regulations that have become increasingly focused on preserving nature and human health in recent years. Thus, when it comes to the impact on the oil industry, the transition to a low-carbon economy is emphasized, which increases uncertainty when it comes to oil demand and prices. To adjust its business to the requirements of the regulator, INA is developing biofuels with lower carbon content and is planning a project to build a biorefinery, in addition to developing hydrogen-based fuels. The importance of the Biorefinery project is also shown by the fact that the Government of Croatia supported it by including it in the Strategic Investment Projects of Croatia. The transition to a low-carbon economy is becoming more and more important in the world, and INA's Biorefinery project seeks to follow the trend, but the transition to a low-carbon economy calls into question future demand and oil and gas prices. INA is constantly investing in technologies when it comes to exploring potential oil fields in the Republic of Croatia, at the end of 2020 completed the first phase of 3D seismic imaging using wireless technology that is more efficient and allows for better sampling and display and has less impact on agricultural land. In terms of investment in marketing activities, retail campaigns are at the forefront of approaching the expansion of services and the range of Fresh Corner at gas stations where INA offers services and products that are not related to their

core business but relate to the provision of services and products in the form of fast food and hot and cold drinks. This shows the management's decision to diversify operations in the retail segment. It was recognized that consumers change their habits and seek experience, and in this way it was decided to use it to achieve greater customer retention and attract new customers, all to increase the revenue of that business segment. When it comes to investments, attention should be paid to the actions of MOL as the majority owner of INA, in recent years the focus of business is not research and development but retail of oil products, MOL uses INA's network of petrol stations to market its products that are not manufactured in Croatia.¹⁹ Barriers to entry into the oil industry are high since the industry requires high capital investment and the establishment of an efficient relationship between companies and suppliers and companies and customers.²⁰ When it comes to the oil industry of Croatia and the market of oil products, the value of the HHI index itself indicates that it is a concentrated market and that INA is the dominant company. The very fact that the market is saturated is a form of barrier to market entry, especially for small businesses that will find it difficult to fight for a significant market share. Market saturation is also a problem for larger companies that want to get in the market, but they can use a different approach, which is to take over a company that already operates in the Croatian oil market. In addition, barriers to entry into the market of oil products of Croatia may be represented by laws and regulations adopted by the Government that creates the conditions and monitors the safe, regular, and quality supply of the market of oil products in Croatia. On the side of exit barriers, there are non-refundable costs that can be related to investments in marketing, renovation of sales premises, and also conservation of the plant. The growing emphasis on environmental protection creates large exit barriers when it comes to refineries, i.e. their closure. Due to the rehabilitation of the environment, and the refinery plants themselves, it is more profitable to sell it.²¹ The oil industry, i.e. the market of oil products in Croatia is defined and regulated by the Oil and Oil Products Market Act, which ensures the establishment and implementation of measures for a safe and reliable supply of oil and oil products. In addition, it regulates rules and measures related to the safety of production and transport of oil and oil products, wholesale and retail trade, storage, market access, intervention plan in the event of a disruption in the supply of oil products, and defined operational and mandatory oil stocks. In addition, the law defines the exact activities and that a person could perform any of them must obtain a permit from the Croatian Energy Regulatory Agency, except when it comes to the transport of oil and retail trade in oil products and gas.²² To better understand the market of oil products in Croatia, the side of demand can also be observed. Consumption of energy and thus oil products can be observed through three segments, consumption by industry, transport, and general consumption related to consumption by households, the service sector, agriculture, and construction. In 2019, 23.3% of the total energy consumption of industry referred to oil products, while the share of consumption of oil products in general consumption rose to 33.4%, and as expected, oil products have the largest share of 98.8%.²³

¹⁹ Garata, M. (2021.), Naftna industrija na pragu ogromnih promjena, preuzeto 29.06.2021. s <https://www.index.hr/vijesti/clanak/kakva-je-buducnost-naftne-industrije-u-svijetu-koji-se-odrice-fosilnih-goriva/2286585.aspx>

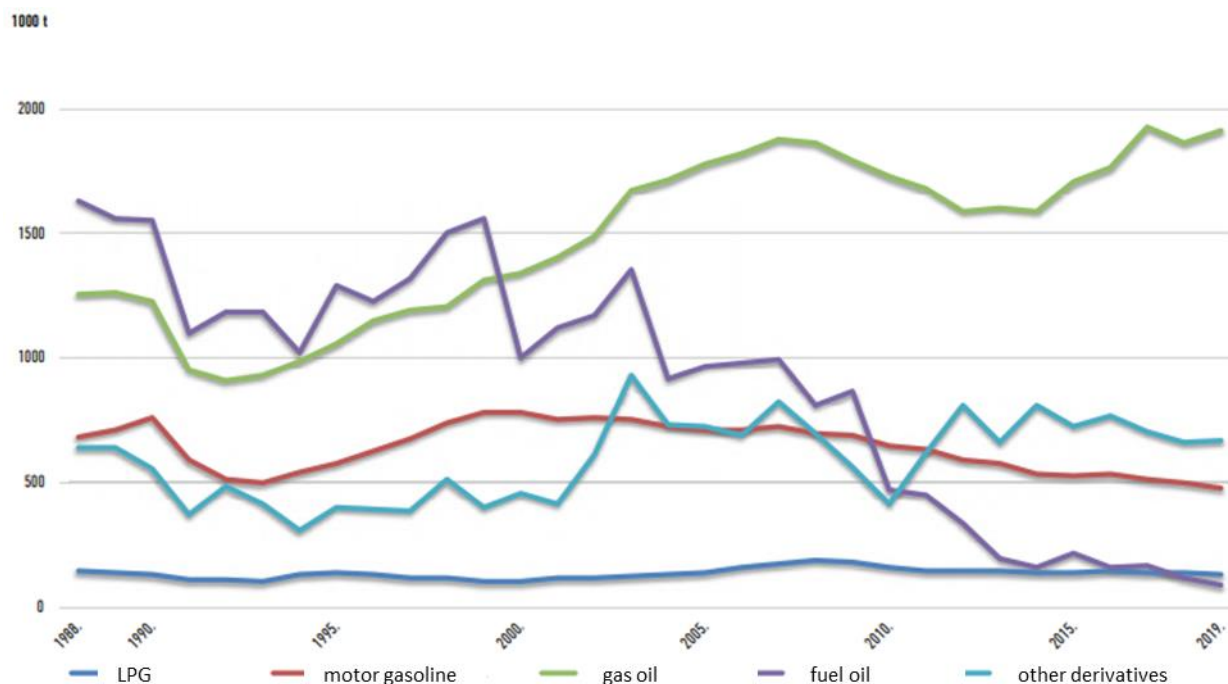
²⁰ Inkpen, A., Moffett, M. H. (2011.), *The global Oil and Gas Industry: Management, Strategy and Finance*, Tulsa: PennWell Corporation, p 452.

²¹ Zakon o tržištu nafte i naftnih derivata, NN 19/14, 73/17, 96/19 (2019.), <https://www.zakon.hr/z/379/Zakon-o-tr%20C5%BEi%20A1tu-nafte-i-naftnih-derivata>

²² Zakon o tržištu nafte i naftnih derivata, NN 19/14, 73/17, 96/19 (2019.), <https://www.zakon.hr/z/379/Zakon-o-tr%20C5%BEi%20A1tu-nafte-i-naftnih-derivata>

²³ Min.gov.hr; dostupno na: https://mingor.gov.hr/UserDocsImages/UPRAVA%20ZA%20ENERGETIKU/Energija_u_Hrvatskoj/Energija_u_Hrvatskoj_2019-2.pdf, (pristupano dana: 08.06.2021.)

Graph 1: Consumption of liquid fuels in Croatia



Although the latest available data is from 2019, the graph shows that the consumption of oil products is decreasing over the years. Taking into account the events in 2020 it is to be expected that this trend will continue and that the share of petroleum products in general consumption will decrease, as well as the amount of consumption of oil products when it comes to trade. The share of oil products in 2019 in total energy consumption in Croatia was 57.7%, and the prices of oil and oil products are by the rules governing market relations, although if there is a need for consumer protection or market regulation, the Government of Croatia may determine the highest retail price for certain oil products for a maximum of 90 days. Also, when determining the prices of oil products, companies must be careful not to exceed the value obtained according to the ordinance on determining the highest retail prices of oil products.²⁴

Figure following on the next page

²⁴ Pravilnik o utvrđivanju najviših maloprodajnih cijena naftnih derivata, retrieved 08.06.2021. from https://narodne-novine.nn.hr/clanci/sluzbeni/2012_12_145_3102.html

Figure 1: Formula for calculating the maximum price of oil products (excluding excise duties and taxes)

$$C_{max} = \left(\frac{\sum_{i=1}^n CIFMed_i \times T_i}{n} \right) \times \frac{\rho}{1000} + P$$

C_{max} - highest price HRK / l

CIF Med - average daily stock exchange price of oil products in USD / l published in Platt's European Marketscan

T - Average daily exchange rate in HRK / USD published by the CNB for the day for which the average daily stock exchange price of petroleum products was published

i - daily data, i = 1, 2, ..., n

n - number of published average daily stock exchange prices of oil products (CIF Med) in the intra-accounting period

ρ - density of oil product

P - premium of energy entity HRK / l

Source: available at https://narodne-novine.nn.hr/clanci/sluzbeni/2012_12_145_3102.html, (accessed on: 08.06.2021.)

The price obtained by this formula does not include taxes and excise duties, it is necessary to add them to get the retail price. When it comes to the prices of oil products on the Croatian market, differences in retail prices between competitors are minor, so it can not be said that any company attracts more consumers only based on prices so consumer preferences must be taken into account. 2020 was extremely challenging for companies in the oil industry, on top of the pandemic and its consequences INA faced a cyberattack at the beginning of the year. The cyberattack caused the impossibility of access to certain databases and the difficulty of certain business processes. Although a cyber attack is never good news, in this case, INA was lucky that the entire system of the retail sector, as well as the part of the system related to SAP (Systems Applications and Products in Data Processing), remained intact, so the market supply in no at the time she was not endangered. Even though one of the most important business sectors remained intact, a crisis has inevitably occurred and therefore crisis communication is needed. INA needed to inform all stakeholders, and the public if necessary about the current crisis affecting the company. When it comes to communication models in crisis, in the case of this crisis, INA has reached the so-called second degree, that is, it informs the public.²⁵

2. CONCLUSION

Oil is one of the most important strategic raw materials in the world. That implies that all major events in the oil market and the oil industry have an impact on the state of the economy of all countries. Given that the oil industry, i.e. events in it, can be viewed as factors that affect the economy, it is important to understand the characteristics of the industry and the impact of management decisions of the company on the industry itself. Society should not be neglected either, the increasing emphasis on sustainable development and renewable energy sources in general, and such ideas have slowly found their way to the energy sector. In the last few years, companies from the oil industry have increasingly been targeted by the public and the regulators

²⁵ Osmanagić Bedenik, N. (2007.), *Kriza kao šansa*. Zagreb: Školska knjiga, p. 215

themselves regarding environmental problems and climate change. Due to various regulations, oil companies are increasingly investing in the development of technologies that would reduce air pollution and thus reduce their negative contribution to climate change, and they reached a point where the future successful business will require changes in strategy and the creation of new business segments away from the use of fossil fuels. The price of oil affects the level of economic activity and given that in Croatia until 2020 demand for oil and oil products is growing. It is not uncommon for significant changes in world oil prices to have a pronounced impact on the decline in economic activity. In 2020 there was a significant decrease in the price of oil, as well as in market demand and thus economic activity in Croatia. COVID-19 pandemic and all restrictions had a negative impact so it is impossible to single out the price of oil as the only culprit for economic activities. The analysis of the oil industry and the market in Croatia concluded that this is a concentrated market where INA d.d. imposes itself as a market leader. The largest shareholder of INA is the Hungarian oil company MOL, and in the third quarter of 2020, when it was already obvious that the result of the business year would be negative, dividends for 623 mil HRK were paid, which is more than 95% of the profit in 2019 it is concluded that MOL sees INA only as a profit generator and a retail channel where it markets its products. It is considered that INA does not have sufficient autonomy when it comes to making decisions that affect the further development of the company. That is limiting INA's progress and investing in research and development of technologies that would be in line with market requirements and the transformation of companies by which INA would gain a competitive advantage not only in the Croatian market but in the entire region. Although there is some uncertainty about the movement of oil demand in the world and Croatia, it is unlikely that there will be a strong turnaround soon when it comes to the use of oil products, but there will be a gradual reduction. With such changes, the profitability of the oil industry will fall and its survival in Croatia is questionable, at least when it comes to refinery processing. It is believed that if the participants in the oil industry in Croatia want to survive as long as possible, they must seriously consider the development of energy production, which will be an alternative form of energy. Despite the investments made so far and the planned investments, for the survival of the company, it is necessary to transform it from a pure oil company into an energy one, which would enable it a wider range of market portfolio, as well as long-term sustainability and strength at the regional level.

LITERATURE:

1. Baye, M.R. (2009.), *Managerial Economics and Business Strategy*, 7th edition, New York: McGraw-Hill Education
2. Benac, K., Slosar, T., Žuvić M. (2008.) Svjetsko tržište nafte, *Pomorski zbornik*, 45(1), 71-88.
3. Cerić, E. (2006.), *Nafta : procesi i proizvodi*, Zagreb: INA Industrija nafte.
4. Dečman, N. (2012.), Financijski izvještaji kao podloga za ocjenu sigurnosti i uspješnosti poslovanja malih i srednjih poduzeća u Republici Hrvatskoj, *Ekonomski pregled*, 63(7-8), 446-467.
5. Dekanić, I., Kolundžić, S., Karasalihović, D. (2002.), *Stoljeće nafte, Veza između nafte, novca i moći koja je promijenila svijet*, Zagreb : Naklada Zadro
6. Dobbs, I. (2000.), *Managerial Economics: Firms, Markets and Business Decisions*, Oxford: Oxford University Press
7. Fisher, F.M., McGowan, J.J. (1983.), On the Misuse of Accounting Rates of Return to Infer Monopoly Profits, *American Economic Review*, 73(1), 82-97.
8. Friedman, J.W. (1983.), *Oligopoly theory*, Cambridge: Cambridge University Press
9. Fućkan, Đ., Sabol, A. (2013.), *Planiranje poslovnih dometa*, Zagreb: HUM Naklada

10. Haring, J.R. (1976.), *Weakening the OPEC cartel: an analysis and evaluation of the policy options: staff report to the Federal Trade Commission*, Michigan: University of Michigan Library
11. Hočevar M. (2009.) Metode optimiziranja troškova s obzirom na opseg aktivnosti, *Računovodstvo, revizija i financije*, 9(2009), 41
12. Inkpen, A., Moffett, M. H. (2011.), *The global Oil and Gas Industry: Management, Strategy and Finance*, Tulsa: PennWell Corporation
13. Ježovita, A. (2016) Analiza marže profita kao odrednica profitabilnosti poslovanja poduzeća, *Journal Of Economy And Business*, XXII. (2016), Posebno izdanje, 181-201.
14. Jones, T. (2004.), *Business Economics & Managerial Decision Making*, Chichester: John Wiley & Sons Ltd.
15. Kesić, T., (2003.g.), *Integrirana marketinška komunikacija*, , Zagreb: Opinio.
16. Lipczynski, J., Wilson, J., Goddard, J. (2005.), *Industrial Organization: Competition, Strategy, Policy*, 2nd edition, London: Prentice Hall
17. Miloš Sprčić, D., Orešković Sulje, O. (2012.): *Procjena vrijednosti poduzeća: Vodič za primjenu u poslovnoj praksi*, Zagreb: Ekonomski fakultet Zagreb.
18. Monroe, K. B. (2003.), *Pricing: Making Profitable Decisions*, 3rd edition, New York: McGraw-Hill Irwin.
19. Osmanagić Bedenik, N. (2007.), *Kriza kao šansa*. Zagreb: Školska knjiga.
20. Ottosen, G.K. (1990.), *Monopoly Power: How it is measured and how it has changed*, Salt Lake City: Crossroads Research Institute.
21. Palepu, K.G., Healy, P.M. (2013.), *Business analysis & valuation using financial statements*, 5th edition, Ohio: South-Western, Cengage Learning.
22. Pitatzis, A. (2016.) Porter's Five Forces Model for Oil and Gas Industry, *Energy Routes: Global energy trends and dynamics*.
23. Porter, M. E. (1979) How Competitive Forces Shape Strategy, *Harvard Business Review*, 57(2), 137-145.
24. Porter, M. E. (1998.), *Competitive Strategy: Techniques for Analysing Industries and Competitors*, New York: The Free Press.
25. Previšić, J. (2007.), *Osnove marketinga*, Zagreb: Adverta.
26. Rupčić, N. (2016.), *Upravljačka ekonomika-teorija i praksa*, Rijeka: Ekonomski fakultet Sveučilišta u Rijeci.
27. Salvatore D. (1994.), *Ekonomija za menadžere u svjetskoj privredi*, Zagreb: MATE.
28. Samuelson, P.A., Nordhaus, W.A. (2011.), *Economics*, 19th Edition, New York: McGraw-Hill Education.
29. Sekulić, G. (2004.) Skokovi cijena na ranjivom i neizvjesnom naftnom tržištu, *EGC*, 5/2004, 18.
30. Sekulić, G. (2020.), COVID-19, recession and market shocks in 2020 accelerate energy transition of oil companies, *Nafta i plin*, 40(166), 21-32.
31. Shy, O. (1995.), *Industrial organization Theory and applications*, Cambridge: The MIT Press.
32. Sopta, M., Slavica A. (2017.) Importance of cost function in business decision making. 19th International Scientific Conference on Economic and Social Development, p 208-225. Melbourne, Australia, 9-10 February 2017
33. Tirole, J. (1988.), *The theory of industrial organization*, Cambridge: The MIT Press.
34. Von Weizsäcker, C.C. (1980.), *Barriers to Entry A Theoretical Treatment*, Berlin: Springer-Verlag Berlin Heidelberg
35. Vukoja, B. (2010.) Primjena analize financijskih izvješća pomoću ključnih financijskih pokazatelja kao temelj donošenja poslovnih odluka

36. Wang, Z. (2006.) Learning, Diffusion, and Industry Life Cycle, Federal Reserve Bank of Kansas City, Working Paper 04-01
37. Yi, T. (2010.), *The Oil and Gas Service Industry in Asia*, London: Palgrave Macmillan
38. Žager, K., Mamić Sačer, I., Sever Mališ, S., Ježovit A., Žager, L. (2020.), *Analiza financijskih izvještaja – načela, postupci, slučajevi*, četvrto izdanje, Zagreb: RIF
39. Žager, K., Smrekar, N., Olujić, A. (2009.), *Računovodstvo malih i srednjih poduzeća*, Zagreb: Mikrorad.
40. Upravljačka ekonomika nastavni materijali : Upravljačka ekonomika kao znanost
41. Annual statistic bulletin 2020 (b.d.), OPEC Members' population, retrieved 26.05.2021 from https://asb.opec.org/ASB_Charts.html?chapter=1
42. Bloomberg.com (b.d.), Electric vehicle outlook 2021, retrieved 01.06.2021 from <https://about.bnef.com/electric-vehicle-outlook/>
43. BP (b.d.), Statistical review of world energy 2020, retrieved 26.05.2021 from <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-full-report.pdf>
44. Concurrences.com (b.d.), Cartel, retrieved 25.05.2021 from <https://www.concurrences.com/en/dictionary/cartel>
45. Dieselnet.com (b.d.), EU: fules , retrieved 29.05.2021 from <https://dieselnet.com/standards/eu/fuel.php>
46. Eia (b.d), What drives crude oil prices: spot prices, retrieved 26.05.2021 from Energy & Financial Markets - Crudeoil - U.S. Energy Information Administration (EIA)
47. Eihp.hr (b.d.), Energija u Hrvatskoj 2019, retrieved 29.05.2021 from http://www.eihp.hr/wp-content/uploads/2020/12/1_Energija_u_Hrvatskoj_2019-compressed-1.pdf
48. Enciklopedija.hr (b.d.), Pandemija, retrieved 29.05.2021 from <https://enciklopedija.hr/natuknica.aspx?ID=46397>
49. European Commission (b.d.), The 2020 EU Survey on Industrial R&D Investment Trends, retrieved 10.06.2021 from <https://iri.jrc.ec.europa.eu/sites/default/files/2020-12/2020%20RD%20Survey%20online%20final.pdf>
50. Garata, M. (2021.), Naftna industrija na pragu ogromnih promjena, retrieved 29.06.2021 from <https://www.index.hr/vijesti/clanak/kakva-je-buducnost-naftne-industrije-u-svijetu-koji-se-odrice-fosilnih-goriva/2286585.aspx>
51. Gatar, M.(2021.) Katastrofa na pomolu: što se događa s naftnim kompanijama?, retrieved 30.05.2021 from <https://www.index.hr/vijesti/clanak/katastrofa-na-pomolu-sto-se-dogadja-s-naftnim-kompanijama/2279792.aspx>
52. Hayes, A. (2021.), Vertical integration, retrieved 26.05.2021 from <https://www.investopedia.com/terms/v/verticalintegration.asp>
53. Iea.org (b.d.), Global energy review 2020., retrieved 29.05.2021 from <https://www.iea.org/reports/global-energy-review-2020/oil#abstract>
54. Iedunote.com (b.d.), Size of Business Unit: Definition, Measures, Factors, Concepts, Optimum Size of Business, retrieved 25.05.2021 from <https://www.iedunote.com/size-of-business>
55. Ina.hr (b.d.), Godišnji izvještaji, retrieved 02.06.2021 from <https://www.ina.hr/home/investitori/financijska-izvjesca/godisnji-izvjestaji/>
56. Ina.hr (b.d.), Povijest , retrieved 05.06.2021 from <https://www.ina.hr/home/o-kompaniji/povijest/>
57. Ina.hr (b.d.), Struktura dioničara , retrieved 05.06.2021 from <https://www.ina.hr/home/investitori/struktura-dionicara/>
58. Kenton, W. (2021.), Conglomerate merger, retrieved 26.05.2021 from <https://www.investopedia.com/terms/c/conglomeratemerger.asp>

59. Kenton, W. (2021.), Horizontal integration, retrieved 26.05.2021 from <https://www.investopedia.com/terms/h/horizontalintegration.asp>
60. Kurt, D. (2020.), Benchmark Oils: Brent Crude, WTI and Dubai, retrieved 26.05.2021 from <https://www.investopedia.com/articles/investing/102314/understanding-benchmark-oils-brent-blend-wti-and-dubai.asp>
61. Macrotrends (b.d.), WTI crude oil prices - year chart, retrieved 2.05.2021 from <https://www.macrotrends.net/2516/wti-crude-oil-prices-10-year-daily-chart>
62. Opec.org (b.d.), OPEC share of world crude oil reserves, retrieved 26.05.2021 from https://www.opec.org/opec_web/en/data_graphs/330.htm
63. Opec.org (b.d.), Member countries, retrieved 26.05.2021 from https://www.opec.org/opec_web/en/about_us/25.htm
64. Pravilnik o utvrđivanju najviših maloprodajnih cijena naftnih derivata, retrieved 08.06.2021. from https://narodne-novine.nn.hr/clanci/sluzbeni/2012_12_145_3102.html
65. WHO (2021.), WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020, retrieved 29.05.2021 from <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>
66. Zakon o računovodstvu, NN 78/15, 134/15, 120/16, 116/18, 42/20, 47/20 (2020), <https://www.zakon.hr/z/118/Zakon-o-ra%C4%8Dunovodstvu>
67. Zakon o tržištu nafte i naftnih derivata, NN 19/14, 73/17, 96/19 (2019), <https://www.zakon.hr/z/379/Zakon-o-tr%C5%BEi%C5%A1tu-nafte-i-naftnih-derivata>

ICT AND EXPORT PERFORMANCES OF CENTRAL AND EASTERN EUROPEAN COUNTRIES

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ABSTRACT

*The paper examines the effects of Information Communications Technology (ICT) and general technological environment expressed in knowledge economy on export performances of Central and Eastern European Countries (CEEC). Empirical results derived from the pseudo Poisson Maximum Likelihood (PPML) estimator find that relative differences in the factor endowments explain well the patterns and destinations of the CEEC exports. Extending the model with ICT variables and proxies for knowledge economy outlines that the higher ICT use, stronger ICT infrastructure and well-developed knowledge economy increase exports of CEEC. Distinguishing among different income countries in the sample further strengthens these effects. **Keywords:** ICT, Central and Eastern Europe, international trade, technological progress, knowledge economy*

1. INTRODUCTION

In the recent century, information technology revolution and the Internet together with the fast pace of globalization gave birth to digital economy that created new opportunities to produce, deliver, trade, and consume goods and services all over the world. Consequently, global economy as well as international trade is broadly affected by the recent waves of digitization. In this context, deployment of Information Communications Technology (ICT) is vital, as it is ICT that enables using recent technological advancements and reaping full benefits of digitalisation. As it is reported by the International Telecommunication Union (ITU), ICT development can be reflected in the following factors: in ICT infrastructure that provides readiness for employing ICT; in ICT use, since the contribution of ICT does not exist unless ICT is not deployed; and in skills (human capital) that enables usage of ICT (ICT Development INDEX (IDI), ITU 2009). While US and other large economies as well as western European countries are broadly covered in scientific analysis, the literature on ICT effects on trade performances of Central and Eastern European Countries (CEEC) is quite scarce. To fill the gap in the literature, the goal of the paper is to analyze ICT effects on trade of CEEC. In particular, I examine the effects of ICT infrastructure, ICT use and ICT network effects on exports of CEEC. Moreover, the paper elaborates the impact of general technological environment to assess implications of the knowledge economy on export performances of CEEC. Finally, for concrete empirical insights, the analysis distinguishes between income levels of the trade partners and tracks the magnitude of ICT effects on exports with low and high-income countries. To conduct empirical analysis, I augment the structural gravity equation proposed by Cieřlik (2009) with ICT variables, such as ICT use, ICT infrastructure and ICT network effects, human capital and knowledge economy. Empirical results derived from the pseudo Poisson Maximum Likelihood (PPML) estimator find that relative differences in the factor endowments explain well the patterns and destinations of the CEEC exports. Including the ICT variables and proxies for the knowledge economy in the model further strengthens the effects and outlines that the higher ICT use, stronger ICT infrastructure and well-developed knowledge economy increase exports of CEEC.

The rest of the paper is organised as follows: section 2 reviews the literature around the ICT and trade, section 3 presents the empirical framework, variables and data used in the analysis followed by estimation results in section 4. Finally, section 5 concludes.

2. LITERATURE REVIEW

The literature on ICT and trade starts from the early 2000s and outlines that ICT has positive effects on trade performances by reducing trade costs. Freund and Weinhold (2002, 2004), were one of the very first scholars who examined the impact of the Internet and ICT infrastructure on trade. Authors analysed US trade in services and found that an increase in the number of web hosts by 10 percentage points is associated with the increase in exports by about 0.2 percentage points. The positive impact of ICT infrastructure on export performances was also supported by study of Portugal-Perez and Wilson (2010). Authors outlined that together with “hard infrastructure”, ICT infrastructure enhances trade. Furthermore, while analysing impact of “soft infrastructure” on trade of Asian countries, Ismail and Mahyideen (2015) found that a 10% increase in the number of fixed and mobile phone subscribers in both exporter and importer countries increases trade by 2.6% and 2.2%, respectively. Given its importance, authors concluded that together with hard infrastructure, effects of soft infrastructure should also be examined systematically for different country groups. Additionally, studies illustrate that the trade-enhancing effect of ICT may not depend solely on ICT infrastructure or ICT capability per se, but on its use. Namely, Liu and Nath (2013) employed panel data for forty emerging market economies from 1995 to 2010 and found that Internet subscriptions and Internet hosts have significant positive effects on both exports and imports in the emerging countries. Impact of broadband use on trade development in Middle East and North Africa is studied by Gelvanovska, Rogy and Rossotto (2014). As authors outlined, broadband contributes to trade in this region. The study found that one percentage point increase in the number of Internet uses increases exports by 4.3 % points. Positive impact of ICT use is furthermore outlined for trade in fruits and vegetables by Thiemann, Flemming and Mueller (2012). Authors proxy ICT use by the data on telephone main lines, Internet usage and mobile phone subscribers and found that mobile phone penetration significantly stimulates trade in vegetables and fruit. The role of ICT use for different Spanish industries is studied by Bernal-Jurado and Moral-Pajares (2010). The paper found that the largest exporting and importing industries are the ones that are more engaged in electronic commerce through different communication channels, such as EDI, Minitel or Internet. Furthermore, there is empirical evidence on direction of causality between Internet penetration and exports. This issue was quite controversial for the last decade, as mid-1990s and early 2000s was characterized by drastic increase in both world exports and Internet hosts. As summarized by Clarke and Wallstein (2004), world exports increased from 20% of gross world product in 1994 to 24% in 2002. At the same time the number of Internet hosts rose from 17 per 10,000 people in 1994 to 231 in 2001. Authors argued that on the one hand boom in world exports since 1990s could stimulate deployment of ICT, and on the other hand, rapid growth in ICT use could boost exports (alternatively, this could just be a coincidence). By using instrumental variable approach for macro-level analysis, the paper found that causality runs from ICT to exports. This finding was further confirmed by Kneller and Timmis (2016) who conducted analysis on the effects of broadband use on the firm-extensive margin of UK service exports. To deal with possible endogeneity, authors built an instrument that exploited exogenous variation in access to broadband technologies owing to the historic telephone network. Empirical findings indicated that the causal effect runs from the Internet to trade in business services. ICT effects via trade costs is analyzed by Keita (2015). Estimations of gravity model outline that the elasticity of trade costs to distance decreases as the level of ICT increases. The hypothesis that ICT use creates network effects is supported by Mattes, Meinen, and Pavel (2012).

Authors analyze the EU trade and show that ICT yields positive and significant impact on trade especially if both trading partners reveal advanced ICT endowments. This finding supports existence of ICT network effects. Furthermore, a number of studies suggest that ICT effects could substantially depend on the level of intangible capital in a given country. Such intangible capital may refer to organizational changes and firms' own experiments to adopt new technologies in practice. However, as argued in the study, processes related to "co-invention" in firms takes longer time than modernization of technologies, therefore effects of ICT could show up after some time (Crafts, 2008 cited in Akhvlediani, 2016). This intuition is embodied in the idea of classifying ICT as a General Purpose Technology (GPT). This implies that all the advantages related to a new GPT might be fully utilized through complementary investment in both tangible and intangible assets (Bresnahan and Trajtenberg, 1995). Here investment in tangible assets refer to investments in ICT equipment and software, while organizational changes in firms represent investment in intangible assets (Brynjolfsson and Hitt, 2000, 2003; Basu et al., 2003; Lechman, 2016). Classification of ICT as GPT underlines importance of human capital and digital literacy in ICT uptake. As underlined by the ITU, ICT development can be reflected in the following factors: in ICT infrastructure that provides readiness for employing ICT; in ICT use, since the contribution of ICT does not exist unless ICT is not deployed; and in skills (human capital) that enables usage of ICT (ITU, 2009). Furthermore, importance of high-quality university system and widespread of digital skills is highlighted by Renda (2016). As the author states, in the age of digitalisation one of the scarcest resource in ICT ecosystem is human capital since the latter presents a fundamental driver of ICT uptake. Therefore, according to Renda (2016) development of high-quality university system and widespread of e-skills and digital literacy should be one of the main targets of policies aiming at improving economic performance, competitiveness and innovation. As for the CEEC, the literature on ICT and trade performance is rather scarce. Some general evidence is found by Lechman (2016) who finds that during 1995-2015 exports of CEEC countries were strongly oriented towards the high-tech and ICT manufactures. To sum up, the literature on international trade and ICT shows that ICT has positive effects on trade performances via providing digital infrastructure for quick exchange of goods and services, reducing trade costs and creating network effects. The latter implies that ICT benefits increases when ICT is intensively used in both trading countries. Additional factors which should widespread ICT effects are human capital and investments in intangible capital, both contributing to building knowledge economy. While studies are mostly done for the US economies and the EU countries in general, the literature on the ICT effects for the CEEC economies is quite scarce. To fill the gap in the literature, this paper studies the ICT effects on exports of the CEEC.

3. EMPIRICAL FRAMEWORK AND DATA DESCRIPTION

To conduct empirical analysis, this paper relies on the structural gravity equation suggested by Cieřlik (2009). Although the gravity model proposed by Jan Tinbergen (1962) is broadly employed in empirical trade analysis for over five decades, the model is often criticized for lacking the micro foundations. Among many efforts that have been gone to derive gravity equation from the theory, the framework proposed by Cieřlik (2009) departs from the assumption of the complete specialization and allows the incomplete specialization of the trading partners. The latter is quite important feature as it implies that countries differ in factor endowments which is quite realistic assumption. As an extension of the initial specification by Cieřlik (2009) together with capital-labour ratios, I include human capital endowments in the model. This approach, on the one hand, complements initial model and on the other hand, introduces the needed channels for tracking the impact of ICT which depends on the level of human capital and knowledge economy. These two factors should account for the general technological environment in the trading countries.

Empirical equation extending the initial specification proposed by Cieřlik (2009) could be specified as follows:

$$\begin{aligned} X_{ijt} = & \beta_0 + \beta_1 \ln(K_{it}/L_{it} - K_{jt}/L_{jt}) + \beta_2 \ln(K_{it}/L_{it} + K_{jt}/L_{jt}) + \beta_3 \ln(H_{it}/L_{it} - H_{jt}/L_{jt}) \\ & + \beta_4 \ln(H_{it}/L_{it} + H_{jt}/L_{jt}) + \beta_5 \ln(1 - s_{it}^2 - s_{jt}^2) + \beta_6 \ln(\text{GDP}_{it} + \text{GDP}_{jt}) \\ & + \beta_7 \ln(\text{ICT_infr}_{it}) + \beta_8 \ln(\text{ICT_infr}_{jt}) + \beta_9 (\text{ICT_use}_{it}) + \beta_{10} (\text{ICT_use}_{jt}) \\ & + \beta_{11} (\text{ICT_use}_{it} * \text{ICT_use}_{jt}) + \beta_{12} \ln(\text{Kn_Ec}_{it}) + \beta_{13} \ln(Z_{ij}) + \beta_{14} D'_{ij} + \mu_i \\ & + \varphi_j + \lambda_t + \mu_i * \lambda_t + \varphi_j * \lambda_t + \varepsilon_{ijt} \end{aligned}$$

where X_{ijt} is the export flow from country i to country j at time t ; K_{it}/L_{it} and K_{jt}/L_{jt} stand for the capital-labour ratio of trade partners, likewise, H_{it}/L_{it} and H_{jt}/L_{jt} stand for human capital-labour ratio of trade partners; $1 - s_{it}^2 - s_{jt}^2$ presents similarity index proposed by Helpman (1987); GDP_{it} and GDP_{jt} represent the current GDPs of the trade partners at time t , ICT_infr and ICT_use stand for the ICT infrastructure and ICT use in trade partners at time t , while $\text{ICT_use}_{it} * \text{ICT_use}_{jt}$ proxies network effects of ICT usage; finally Kn_Ec stands for knowledge economy of the CEEC countries at time t . Geographical variables are presented by Z_{ij} , which is the non-binary but time invariant information such as distance between the exporter and importer countries, common language and common colonial ties; D'_{ij} which stands for contiguity and equals one when the trade partners share the common border and zero otherwise; μ_i and φ_j represent country effects, λ_t presents time dummies, $\mu_i * \lambda_t$ and $\varphi_j * \lambda_t$ present country-time effects, and ε_{ijt} is the error term that does not have to be homoscedastic.

Based on the literature review, to reflect all possible effects of ICT, the analysis controls for ICT infrastructure, ICT use, possible network effects created by ICT use and knowledge economy as the proxy of the technological environment for the ICT effects. ICT infrastructure is proxied by fixed telephone lines subscribers per 100 inhabitants and ICT use by Internet users as % of the population (this variables is taken as fraction and therefore is not put into the logarithm). Network effects, as discussed by Mattes, Meinen, and Pavel (2012) are presented as the product of the ICT use in both trade partners. Following Von Ark and O'Mahony (2008), knowledge economy is calculated as sum of human capital, capital services and total factor productivity. The data on the export flows in millions of Euros are taken from WITS. Following Head and Mayer (2015) the trade flows are not deflated as the gravity equation presents an expenditure function of nominal GDPs and nominal trade flows. The data of the current GDP levels are extracted from the World Development Indicators database compiled by the World Bank. Data on factor endowments such as capital and human capital¹ labour ratios come from the Penn World Tables (PWT 9.0). The data on ICT infrastructure and ICT use are included from the ITU database. Knowledge economy of the CEEC are calculated based on the variables sourced from the PWT (9.0).² The data for the other variables such as distance, contiguity and other cultural and historical ties are extracted from the CEPII database. The information about regional trade agreements (RTAs) are source from the WTO agreement database. According to the time span of different databases, the sample covers the period from 2000 to 2018. The division of the trade partners into low, middle and high income countries is done based on the World Bank classification of the countries.

¹ Human capital endowment is proxied by human capital-labour ratios calculated based on the human capital index subtracted from PWT 9.0.

² The analysis could also employ the data extracted from the EUklems database. Yet, this database does not offer up-to-date time series on needed variables and would considerably limit the time span of the regression analysis.

The considered group of countries consists of the CEEC countries as exporters and all the countries from the rest of the world as their trading partners. To estimate structural gravity equation augmented with human capital and ICT variables, the paper employs the seminal findings of Silva and Tenreyro (2006). Authors argue that the multiplicative trade models with multiplicative error terms do not satisfy the assumption of the homoscedasticity of the error term since there is dependency between the error term of transformed log-linear model and the regressors, which finally causes inconsistency of the ordinary least squares estimator or the random and fixed effects estimator. As an alternative, authors propose estimating of the gravity model in levels using the PPML estimator. Besides tackling with heteroscedasticity of the error term, the estimator deals with the zero value observations in trade flows. Additionally, unlike the standard Poisson approach, PPML does not require the data to be Poisson type, in other words, it does not require the dependent variable to be an integer. Finally, PPML allows identifying effects of time invariant factors. To control for the multilateral resistance term (MRT) discussed by Rose and van Wincoop, (2001); Anderson and van Wincoop (2003); Feenstra, (2004), the estimation equation includes country and time fixed effects (see Head and Mayer, 2015). Here time effects account for cyclicity of the economies involved. Additionally, the estimation equation also controls for dynamic MRT by including country-time effects, to control the changes in MRT, as the period of analysis is long and covers more than a decade, (see Baldwin and Taglioni, 2006). The country-pair-time effects are not included as the model controls for several country-pair information such as contiguity, distance, common language, common colonial ties and regional trade agreements (RTAs). Therefore country-pair-time effects could be correlated by other country-pair controls leading to the biased estimations.

4. ESTIMATION RESULTS

Estimation results on export flows of the CEEC are reported in Tables 1. First, I start with regressions on standard gravity variables and then I augment the model with ICT variables. Due to the high correlation between ICT use and ICT network effects,³ these variables are always included separately in all specifications. Columns 1-6 present the estimations for the sample of all trade partners of the CEEC, while columns 7-12 report the estimations for the sub-samples of the high, middle and low-income countries. In all estimations on export flows (see Table 1) coefficients on standard gravity variables, such as GDPs, similarity index, contiguity, common language, common colonial ties, and distance turn out statistically significant and yield expected signs. Yet, it is noteworthy that in all specifications the coefficient on distance has very small magnitude, close to zero. This suggests that factor proportions, ICT variables and the other factors such as ICT network effects, knowledge economies and country and time heterogenous effects explain bilateral exports better than physical distance between the trade partners. This finding is in line with the results of Keita (2015) who finds that the elasticity of trade costs to distance decreases as the level of ICT increases. Factor proportions, namely, difference in capital-labour ratios and sum of human capital indices yield statistically significant and positive signs in most of the estimations on export flows. Yet, coefficients on capital-labour ratios are not robust to the inclusion of additional variables standing for knowledge economy and ICT networks and take negative and statistically significant values. Although, this can be explained by the fact that the regressions provided in Columns 1-6 of Table 1 are done for the sample of all the trade partners without discriminating among different income countries. As outlined by Cieřlik (2009) the effects of factor proportions need to be interpreted in sub-samples of the trade partners in order to account for the relative factor endowments. Namely, the theoretical model proposed by Cieřlik (2009) predicts that when a country is relatively capital abundant compared to its trading partner then an increase in the

³ Correlation between ICT network variables and ICT use in the reporter and partner countries stands around 70% and 90%, respectively.

capital-labour ratio in this country leads to a higher absolute value of the capital-labour difference and translates into an increased volume of bilateral trade. This is well demonstrated in the estimation results which distinguish between different income countries as reported in columns 7-12 of Table 1. As predicted by the model, exports of the CEEC with low-income countries increase with the difference in capital-labour ratios, because the CEEC are more capital abundant than low-income countries. The opposite holds for the CEEC exports to the high and middle-income countries, suggesting that higher difference in factor proportions decreases exports of the CEEC as they are relatively less capital abundant (more labour abundant) than their trading partners. The difference in human capital endowment turns out significant only for exports with low-income countries highlighting that exports of the CEEC increase when the CEEC are more human capital-abundant than their trade partners. Overall, estimations suggest that there is an incomplete specialization in production of the CEEC, favouring the Heckscher-Ohlin-Samuelson (HOS) model assuming inter-industry trade patterns where trade is explained by factor-endowment differences. When it comes to ICT variables, ICT use in the CEEC countries yields positive coefficients in all estimations run for the whole as well as for the sub-samples of different income countries. Yet, the effect is not robust to the inclusion of the other variables in the model. ICT use in the partner countries turns out negative and statistically significant in all estimations for the whole sample. When I distinguish between the high, middle and low-income countries, the effect is strongest for the middle-income countries. This implies that exports increase with ICT use in the CEEC yet decrease with the countries which have higher ICT use. This finding strengthens the effects of the relative differences in factor endowments. ICT infrastructure yields more robust coefficients and shows that stronger ICT infrastructure in the CEEC leads to higher exports, particularly with the high-income countries, while the opposite holds for the low-income countries. This suggests that the CEEC exports to the high-income countries increase with strengthening ICT infrastructure. Whereas the low-income countries which increase their ICT infrastructure tend to decrease their imports from the CEEC. As the ICT infrastructure is closely associated with the overall economic growth, this hints that emerging developing economies diversify their imports which could lead to decreased imports from the CEEC. ICT network effects turn out significant and negative but with miniscule magnitudes. This could be explained by the empirical results on ICT use: the CEEC exports increase with the higher ICT use at home but decrease with the higher ICT use in the partner countries. This would cancel out the overall network effects. Finally, knowledge economy yields positive and statistically significant effects on exports in most of the estimations run for the whole sample as well as for the sub-samples of different income countries. This implies that improving knowledge economy in both the CEEC and their partner countries positively affects export flows, particularly with middle-income countries (see columns 7-12 of Table 1).

Table following on the next page

Table 1: Estimation Results on export flows

Estimation Results on export flows											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Total sample				High	Middle	Low	High	Middle
											Low
IAKL	0.013*** (0.003)	0.014*** (0.003)	0.014*** (0.003)	0.024*** (0.003)	0.015*** (0.003)	0.025*** (0.003)	0.024*** (0.004)	0.021** (0.009)	0.154 (0.118)	0.023*** (0.004)	0.024*** (0.009)
IAKL	-0.119*** (0.021)	-0.129*** (0.022)	-0.127*** (0.023)	-0.308*** (0.033)	-0.158*** (0.023)	-0.331*** (0.033)	-0.370*** (0.061)	-0.368*** (0.097)	-0.973*** (0.396)	-0.347*** (0.061)	-0.387*** (0.097)
IAHC	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	0.003 (0.004)	-0.006 (0.004)	0.002 (0.004)	0.003 (0.005)	-0.005 (0.015)	0.093 (0.062)	0.004 (0.005)	-0.013 (0.015)
IAHC	1.592*** (0.193)	1.714*** (0.199)	1.733*** (0.203)	1.242*** (0.219)	1.561*** (0.204)	1.105*** (0.219)	1.493*** (0.330)	0.934** (0.465)	-0.535 (2.350)	1.465*** (0.330)	0.928** (0.460)
IGDP	0.377*** (0.015)	0.381*** (0.015)	0.381*** (0.015)	0.313*** (0.015)	0.359*** (0.015)	0.294*** (0.015)	0.389*** (0.023)	0.185*** (0.026)	-0.384* (0.206)	0.390*** (0.023)	0.177*** (0.026)
Sim	0.471*** (0.040)	0.484*** (0.040)	0.487*** (0.040)	0.456*** (0.042)	0.440*** (0.041)	0.415*** (0.042)	0.729*** (0.057)	0.532*** (0.078)	0.052 (0.578)	0.732*** (0.057)	0.520*** (0.078)
contig	0.181*** (0.018)	0.180*** (0.018)	0.179*** (0.018)	0.182*** (0.017)	0.176*** (0.018)	0.179*** (0.017)	0.185*** (0.016)	0.174*** (0.049)		0.185*** (0.016)	0.166*** (0.049)
comlang_eth	0.086*** (0.022)	0.081*** (0.021)	0.081*** (0.022)	0.080*** (0.021)	0.083*** (0.022)	0.082*** (0.021)	0.006 (0.021)	0.327*** (0.046)		0.007 (0.021)	0.343*** (0.048)
colony	0.042* (0.025)	0.045* (0.024)	0.045* (0.024)	0.058** (0.024)	0.045* (0.023)	0.057** (0.019)	0.071*** (0.019)	0.417*** (0.077)		0.070*** (0.019)	0.432*** (0.074)
distcap	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
ICT_use		0.098 (0.078)	0.081 (0.077)	0.137* (0.080)			-0.039 (0.094)	0.194 (0.171)	1.261 (1.021)		
ICT_useP		-0.331*** (0.038)	-0.333*** (0.038)	-0.317*** (0.039)			-0.007 (0.059)	-0.808*** (0.095)	0.809 (1.781)		
ICT_infr			-0.013 (0.022)	-0.047* (0.025)	-0.027 (0.022)	-0.062** (0.025)	-0.035 (0.030)	-0.136** (0.055)	-0.320 (0.240)	-0.028 (0.030)	-0.152*** (0.056)
ICT_infrP			0.043*** (0.012)	0.054*** (0.013)	0.037*** (0.012)	0.046*** (0.013)	0.055** (0.023)	-0.015 (0.028)	-0.188** (0.078)	0.057** (0.022)	-0.019 (0.028)
know_ec				0.239*** (0.038)		0.226*** (0.038)	0.209*** (0.046)	0.452*** (0.097)	1.172 (0.752)	0.214*** (0.045)	0.411*** (0.097)
know_ecP				0.168*** (0.020)		0.155*** (0.020)	0.231*** (0.039)	0.088** (0.043)	0.500** (0.218)	0.217*** (0.037)	0.085** (0.043)
networks					-0.000*** (0.000)	-0.000*** (0.000)				0.000** (0.000)	-0.000*** (0.000)
Constant	-4.593*** (0.383)	-4.952*** (0.421)	-5.116*** (0.426)	-6.086*** (0.461)	-4.082*** (0.453)	-4.995*** (0.486)	-7.618*** (0.806)	-5.312*** (0.902)	-4.451 (5.171)	-7.716*** (0.789)	-4.460*** (0.906)
N	21668	20621	20488	16375	20488	16375	5764	4269	1460	5764	4269
adj. R ²											

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

5. CONCLUSIONS

The paper examined the effects of ICT and knowledge economy on export performances of the CEEC. The empirical framework augmented the structural gravity equation proposed by Cieslik (2009) with ICT variables, such as ICT use, ICT infrastructure and ICT network effects, human capital and knowledge economy. The analysis allowed distinguishing among the different income countries across the trading partners of the CEEC. Empirical results derived from the PPML estimator are in line with the literature on the standard gravity variables, except distance. The latter seems to yield minor explaining power on the CEEC exports once including the factor proportions, ICT variables, knowledge economies and country and time heterogenous effects in the model. Estimation results hint at the incomplete specialization in production of the CEEC, favouring the Heckscher-Ohlin-Samuelson model assuming inter-industry trade patterns where trade is explained by factor-endowment differences. With this, the paper demonstrates that controlling for the relative differences in the factor endowments explains well the patterns and destinations of the CEEC exports. Including the ICT variables and proxies for the knowledge economy in the model further strengthens the effects of the relative differences in the factor endowments. Distinguishing among the high, middle, and low-income countries makes the empirical results more straightforward. In particular, the higher ICT use, the stronger ICT infrastructure and well-developed knowledge economy increase exports of the CEEC. Moreover, the empirical results show that the CEEC exports increase with the higher ICT use and stronger ICT infrastructure at home while decrease with the higher ICT use and stronger ICT infrastructure in the partner countries. This finding strengthens the effects of the relative differences in factor endowment and cancels out ICT network effects.

Finally, improving knowledge economy in both the CEEC and their partner countries positively affects export flows, particularly with middle-income countries. Overall, the paper demonstrates that ICT and general technological environment expressed in knowledge economy contribute importantly to the growth of exports. And the positive effects are stronger when the CEEC have relatively better ICT capacities than their trading partners. This highlights that investing in the ICT infrastructure, intangible and human capital could play important role in boosting the export potential of the CEEC.

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LITERATURE:

1. Akhvlediani, T., (2016), "Impact of ICT capital services on productivity growth across Central and Eastern European Countries – where have all digital benefits gone?", in Book of Proceedings of the 16th International Scientific Conference on Economic and Social Development Split, 1-2 September 2016, (ISSN 1849-7535) ed. Zeljka Primorac, Candida Bussoli, Nicholas Recker, pp. 762-770.
2. Anderson, J.E., and van Wincoop, E. (2003), "Gravity with Gravitas: A Solution to the Border Puzzle". The American Economic Review, vol. 93, no. 1 pp. 170-192.
3. Baldwin, R. and Taglioni, D. (2006), "Gravity for dummies and dummies for gravity equations", National Bureau of Economic Research Working Paper 12516, NBER.
4. Basu, S., Fernald, J., Oulton, N., Srinivasan, S. (2003), "The Case of the Missing Productivity Growth, or Does Information Technology Explain Why Productivity Accelerated in the United States but Not in the United Kingdom?" NBER Macroeconomics Annual, 18: 9–63.
5. Bernal-Jurado, E. and Moral-Pajares, E. (2010), "Internet and International Trade by Manufacturers: an Approach Using Industrial Sectors Data". Innovar, 20(38), 191-202.
6. Bernard, A., B., and Jensen, B., J. (1995), "Exports, Jobs and Wages in US Manufacturing 1976-1987", Brookings Papers on Economic Activity, Microeconomics.
7. Brynjolfsson, E., Hitt, L., M. (2003), "Computing Productivity: Firm-Level Evidence." Review of Economics and Statistics, 85(4): 793–808.
8. Cieřlik, A. (2009), "Bilateral trade volumes, the gravity equation and factor proportions", The Journal of International Trade & Economic Development.
9. Crafts, N. (2008). "What Creates Multi-factor Productivity", ECB, Banque de France and The Conference Board conference "The Creation of Economic and Corporate Wealth in a Dynamic Economy", Frankfurt, January 2008.
10. Damijan, J., Polanec, S. and Prasnikar, J. (2004), "Self-selection, Export Market Heterogeneity and Productivity Improvements: Firm Level Evidence from Slovenia". Katholieke Universiteit Leuven, LICOS Discussion Paper 148/2004, May.
11. De Loecker, J. (2007), "Do Exports Generate Higher Productivity? Evidence from Slovenia". Journal of International Economics 73, pp. 69–98.
12. Delgado, M. A., Farinas, C. J. and Ruano, S. (2002), "Firm productivity and export markets: a non-parametric approach". Journal on International Economics 57 (2), pp. 397-422.
13. Feenstra, R. (2004), "Advanced International Trade: Theory and Evidence", MIT Press.
14. Freund, C. and Weinhold D., (2002), "The Internet and International Trade in Services", American Economic Review Papers and Proceedings 92 (2), pp. 236-240.
15. Freund, C. and Weinhold D., (2004), "The Effect of the Internet on International Trade", Journal of International Economics 62, pp. 171-189.

16. Head, K. and Mayer, T. (2015), "Gravity Equations: Workhorse, Toolkit, and Cookbook", chapter 3 in *Handbook of International Economics*, Vol.4. ed. by Gita Gopinath, Elhanan Helpman and Kenneth Rogoff, pp: 131-195.
17. ITU – International Telecommunication Union (2009), "Measuring the Information Society: The ICT Development Index", Geneva.
18. Keita, M. (2015), "Does ICT development flatten the globe? Evidence from international trade costs data", *American Journal of Trade and Policy*, Vol. 2, No. 3, pp. 153-160.
19. Lechman, E. (2016), "Technology Driven Internationalization. Central-Eastern European Perspective", Submitted to Springer. Electronic copy of the version: 15.09.2016 available at: <http://ssrn.com/abstract=2839386>
20. Liu L. and Nath H. K. (2013), "Information and Communications Technology and Trade in Emerging Market Economies", *Emerging Markets Finance & Trade*, 49(6) 49, pp. 67-87.
21. Mattes, A., Meinen, P., and Pavel, F. (2012), "Good Follow Bytes: The Impact of ICT on EU Trade", discussion paper N 1182, DIW Berlin.
22. Oliner, S. Sichel, D., Stiroh, K. (2007), "Explaining a Productive Decade." *Brookings Papers on Economic Activity* 2007, 1: 81–137.
23. Portugal-Perez, A. and J. Wilson. (2010), "Export Performance and Trade Facilitation Reform: Hard and Soft Infrastructure," *World Bank Policy Research Working Paper* 5261.
24. Silva, J. M. C. S. and Tenreyro, S. (2006), "The Log of Gravity", *The Review of Economics and Statistics* 88, pp. 641-658.
25. Renda, A. (2016): "Selecting and Designing European ICT Innovation Policies". Joint Research Centre Science for Policy Report, EUR 28205 EN; doi:10.2791/077076.
26. Rose, A. and van Wincoop, E. (2001), "National money as a barrier to international trade: the real case for currency union", *American Economic Review*, 91(2), pp. 386–90.
27. Śledziwska, K., Wloch, R., Akhvlediani, T., Gyodi, K., Zieba, D. (2016), CEE country reports "Digital Transformation of small and medium-sized enterprises" (in Bulgaria, Croatia, Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovenia). Commissioned by Google.
28. Thiemann, F., Flemming, E., & Mueller, R. A. E. (2012), "Impact of information and communication technology (ICT) on international trade in fruit and vegetables: A gravity model approach". Paper prepared for presentation at the International Association of Agricultural Economists (IAAE) Triennial Conference, Foz do Iguaçu, Brazil, 18-24 August, pp. 1 – 14.
29. Tinbergen, J. (1962), "Shaping the World Economy: Suggestions for an International Economic Policy". New York: Twentieth Century Fund. The first use of a gravity model to analyze international trade flows.
30. van Ark, B., O'Mahony, M. and Timmer, M.P. (2008), "The productivity gap between Europe and the U.S.: Trends and causes". *Journal of Economic Perspectives*, vol. 22(1), pp. 25–44.
31. Wang, C., J., Pearson, A. (2014), "Productivity in the Slow Lane? The Role of Information and Communications Technology", *Federal Reserve Bank of Boston, Current Policy Perspectives*, 14-10.

ENHANCING DIGITALISATION FOR SMES POST-COVID-19 RESILIENCE

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ABSTRACT

The purpose of this paper is to argue the importance of SMEs' digitalisation enhancement for building their resilience in the post-COVID-19 uncertain global business environment. In the qualitative analysis we introduce the prospective trends of new digital global business reality in the post-COVID-19 period, digital technologies and their functionalities, the state of digital technologies adoption among European micro, small and medium-sized enterprises (SMEs) and the existent governmental and European Union's (EU) support to SMEs' digitalisation. In the quantitative analysis we explore the extent of digitalisation in the EU, focusing on business digitalisation in Slovenia and Croatia. We found that both, Slovenia, and Croatia are on a promising path towards SMEs' digitalisation, however, some gaps need to be diminished. We propose some requisite policy responses.

Keywords: Digitalisation, SMEs, COVID-19 pandemic, resilience, Slovenia, Croatia

1. INTRODUCTION

The outbreak of the COVID-19 pandemic has caused worldwide socio-economic crisis on an unpredictable scale. Enterprises search for solutions to recover and become more resilient to new, similar shocks in the future, which will probably emerge (see Delivorias & Scholz, 2020). Resilience enables seizing new or revealed opportunities for systemic improvements after the crises, caused by unavoidable disruptions of contemporary interconnected socio-economic systems (Hynes et al., 2020). Quarantines and lockdowns during COVID-19 pandemic forced enterprises to accelerate digital transformation. In the digital age, digitally enabled enterprises are capable to withstand pandemics and maintain agility and since they benefit from enhanced insights, they are less dependent upon location and market forces (KPMG International, 2021). Micro, small and medium-sized enterprises (SMEs) play a major role in most economies, accounting for most businesses worldwide, and being essential contributors to job creation and global economic development. In 2020, slightly more than 21 millions SMEs were active in the EU-27, accounting for 99.8% of all enterprises in the EU-27 non-financial business sector (NFBS) (European Commission, 2021). 93% of these SMEs were micro enterprises. In 2020 EU-27 SMEs created 53% of the total value added and 65% of the total employment of EU NFBS (European Commission, 2021). Evidence show that SMEs have been particularly hard hit with the COVID-19 pandemic (see Belitski et al., 2021). 70-80% of SMEs in OECD countries experienced between 30 to 50 % drop in revenues/sales and the share of SMEs employment in the sectors, most affected by the crisis, was 75% on average in OECD economies (OECD 2020, 2021). European SMEs had difficulties in importing and exporting materials, goods, or services, were operating at a loss, faced more than usual late payments, had

difficulties sourcing alternative suppliers and paid more than normal prices for materials, goods, or services, lost their revenues etc. (European Commission, 2021). The SMEs disruptions caused by COVID-19 pandemic varied widely across SMEs sizes and Member States. Many SMEs were unable to reap the benefits of digital transition in the pre-COVID-19 times. However, OECD study (OECD, 2021) shows that since the start of the COVID-19 pandemic, up to 70 % of SMEs are making more use of digital technologies, although substantial differences exist between SMEs of various sizes, as well as between industrial sectors and between countries. Digitalisation should help SMEs to improve their operational efficiency (doing things better), to deploy predictive actions for operations (doing better things) and to produce new goods or provide new services for differentiated customer experience (doing new things) (IBM, 2021). This paper is structured as follows: in the second chapter we present the post-COVID-19 global digital business reality, the third chapter is describing SMEs digitalisation, in the fourth chapter the policy support towards SMEs digitalisation is presented, and the fifth chapter is conclusion with suggestions to policymakers.

2. POST-COVID-19 GLOBAL DIGITAL BUSINESS REALITY

Key characteristics of COVID-19 business reality are increased digitalisation of customer service, shift to e-commerce, greater use of self-service, contactless delivery options, outsourced information technology (IT), use of online platforms, remote work arrangements and increased focus on safety, cleanliness and health. Enterprises are striving to attain the capability to connect digitally with customers, suppliers, and employees to be able to compete in these new economic and social circumstances. It is requisite for them to address key challenges related to customer-orientation, digital acceleration, more reliable and responsive supply chain operations, new ways of working and flexible ecosystem of workforce (KPMG, 2021). Enterprises must create customer-centric business models, based on selling and engaging through integrated digital channels and offering relevant, personalized, and differentiated customer experience. Data analytics should be used for formulation of customer strategies and tactics across marketing and sales to understand changed customer needs and preferences. Digital technology infrastructure should be rapidly built to connect various enterprises' departments and functions. Based on digital connectivity, supply chain and operations should become more reliable and responsive to ensure continued access to products, materials, people, and services. Enterprises should embrace strategic digital reskilling initiatives to become agile, scaling up or down swiftly, entering new markets and leaving old ones.

3. SMEs DIGITALISATION

3.1. Available digital technologies¹

SMEs can use numerous basic and advanced digital technologies or their combinations for various purposes. Enterprise resource planning (ERP) systems are software-based tools for managing and integrating companies' internal and external information flows. ERP systems enhance companies' back-office business functions efficiency, and strategic planning. Radio Frequency Identification (RFID) technologies enhance companies' efficiency in production and logistics. They are used for product identification, person identification or access control. Companies use them for monitoring and control of industrial production, supply chain and inventory tracking and tracing. Customer Relationship Management (CRM) and supply-chain management (SCM) software tools enhance companies' front-office integration and supply chain operations. CRM and SCM software help managing a company's interactions with its customers and suppliers. Cloud computing (CC) help enhance companies' information technology (IT) systems and capacities.

¹ Adapted upon OECD, 2021.

It refers to information-communication technology (ICT) services accessed over the internet, including servers, storage, network components and software applications. CC offers access to extra processing power or storage capacity, as well as databases and software, in quantities that suit and follow companies' needs. Big data (BD) analytics refers to the use of techniques, technologies, and software tools for the analysis of vast amounts of data, generated by activities carried out electronically and through machine-to-machine communications. It could find a broad range of applications within a company, supporting it in decision making and strategic planning, administration, production, logistics, marketing, and sale. Social media (SM) help increase companies' customer base, business visibility and outreach. They are primarily used for external interactions including developing companies' images and marketing products, as well as to obtain or respond to customers' opinions, reviews, and questions. They are also used to collaborate with business partners or to recruit employees. E-commerce refers to the sale or purchase of goods or services conducted over computer networks by methods designed specifically for the purpose of receiving or placing orders. It takes place through a range of different commercial relationships, involving any possible pairing of consumers (B2C, C2B), businesses (B2B) or governments (B2G). There exist various types of online platforms. The first type of online platforms is being used for marketing, advertising, branding, customer services and external communication. Online advertising on web browsers and social media platforms (e.g. Google, Facebook, Twitter) and marketplaces online platforms (e.g. Alibaba, Amazon) is currently the dominant form of advertising in many OECD countries. The second types of online platforms are aggregators that allow incumbent service providers to reach their potential customers more effectively. These platforms do not create a new market but do make matchmaking in the existing market more efficient thanks to the network effects. There are several examples of these platforms in hospitality industry and entertainment industry (e.g. Uber Eats, booking.com, Netflix, Youtube, mobile games on Apple Store). The third type of online platforms are market disruptors that create new markets, by bringing in new service providers and increasing competition for incumbents in the same industry (e.g. Airbnb, B&Bs). The fourth types of online platforms offers easier access to financial institutions and finance from non-traditional sources (for example German's Campeon, peer-to-peer lending and crowdfunding (e.g. Kickstarter, Funding Circle). Financing solutions have also started to offer some large online marketplaces platforms, such as Amazon and Alibaba. The fifth types of online platforms support e-payments. Firms might decide to use online payment platforms to receive and make transfers for their products and services (Visa or MasterCard). They can also open accounts on new digital payment platforms that offer online payment services (e.g. PayPal). The sixth types of online platforms supports communication, remote working, teleconferencing and paper-less business operations. Firms can also use online digital platforms for many of their communication needs, as they offer attractive network effects with hundreds of millions of users (Whatsapp, Skype, Viber, Zoom, Google Meet, MS Teams). The seventh type of online platforms are useful for research and development, as well as design exploration. One relevant case of innovation platforms is the digital applications marketplaces or "App stores" on which firms can build and offer their products (e.g. App Store and Play Store). The openness of digital platform architecture allows developers and programmers to access the Application Programming Interface (APIs), providing an environment in which innovative products can be developed (e.g. on GitHub can be developed new business applications, website functionalities, games etc.). The Internet of Things (IoT) is a network of wide range of interrelated devices that are embedded with sensors, actuators and other necessary electronics that allow them to collect and exchange data over a network via Internet (Trend Micro, 2019). IoT can not function without artificial intelligence (AI), which analyses and makes sense of these data with minimum human intervention. Enhanced capability of sensors and advances in data processing, such as computer vision can be used to provide predictions.

The main business applications of AI relate to automation, image/face recognition, natural language processing, data analytics and decision making. Blockchain is a database that is replicated over a peer-to-peer network. It is often referred to as a digital ledger technology (DLT), as it can be used to store any type of information (and so of transactions and value) in an unalterable public record that is distributed in the network. The blockchain industry is developing rapidly in many sectors beyond financial services. Several blockchain solutions have been already developed for multiple sectors, such as healthcare, environment, cybersecurity, supply chain management, international trade, digital identity, creative industry, voting, human resources management etc. and many solutions are in their experimental phase.

3.2. Adoption of digital technologies

Digital uptake is related to the way of value creation within the firm and the sector in which it operates (OECD, 2021). Business surveys conducted worldwide since the beginning of the COVID-19 pandemic (see OECD (2021) and European Commission (2021) found a rapid deployment of teleworking and digital sales channels among SMEs. One third of EU-27 SMEs had adopted or were planning to adopt basic digital technologies but not advanced digital technologies, and a quarter of EU-27 SMEs had already introduced advanced digital technologies or were planning to do so (European Commission, 2021). The need to digitalise and to use advanced digital tools increased significantly with the size of SMEs. Micro enterprises continued to lag in the digital transformation, dragged back by a lack of internal resources and awareness. There exist significant cross-industry differences in usage of digital technologies. Regarding the types of digitalised activities, it was found (OECD, 2021) that SMEs digitalised administration and marketing functions first. They increased online interactions with the government, electronic invoicing, e-commerce and using social media. In knowledge-intensive sectors firms use all types of digital technologies and some aspects of the digital transformation are almost fully completed, whilst diffusion rates in other sectors are much lower. Numerous SMEs digitalise their business functions by outsourcing digital solutions, due to weak internal resources and capabilities.

3.2.1. The Digital Economy and Society Index scores

The Digital Economy and Society Index (DESI) tracks the evolution of EU Members States digital performance across dimensions of connectivity, human capital, use of internet, integration of digital technology and digital public services, based on their various normalized values in the composite index (European Commission, 2021d). Therefore, SMEs digitalisation is a part of it. Overall, according to DESI, Finland, Sweden, and Denmark were the most digitalised economies and societies in the EU in 2020, since they achieved the highest scores, whereas Slovenia and Croatia were placed on 16th and 20st place, respectively (see Figure 1).

Figure following on the next page

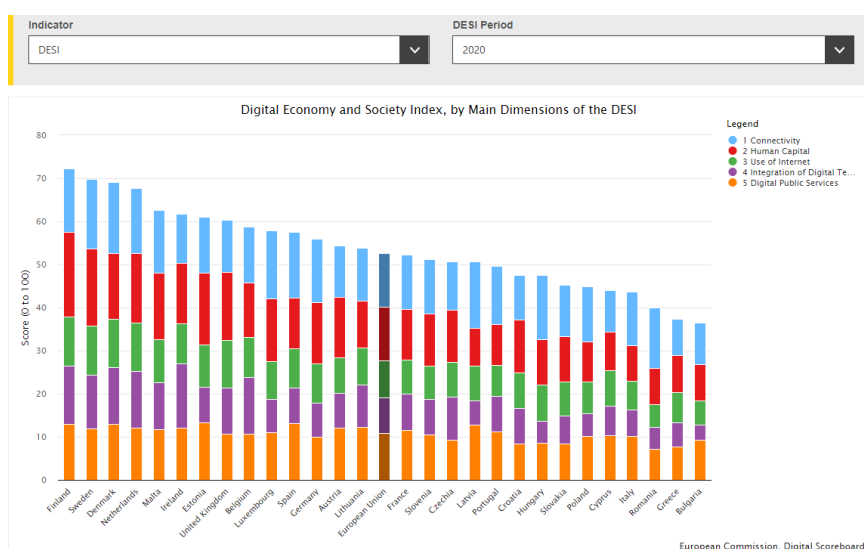


Figure 1: Digital Economy and Social Index for EU-28 in 2020
(Source: European Commission, 2021d.)

Concerning SMEs digitalisation, the most relevant DESI sub-indicator is business digitalisation, calculated as the weighted average of the normalised values of indicators on Electronic Information Sharing (16.7%), Social media (16.7%), Big data (33.3%) and Cloud Computing (33.3%)², although it considers all businesses, not only SMEs. The Figure 2 shows that the highest business digitalisation was achieved in Finland, Netherlands and Belgium in 2020, whereas Slovenia and Croatia were placed as 17th and 15th, respectively.

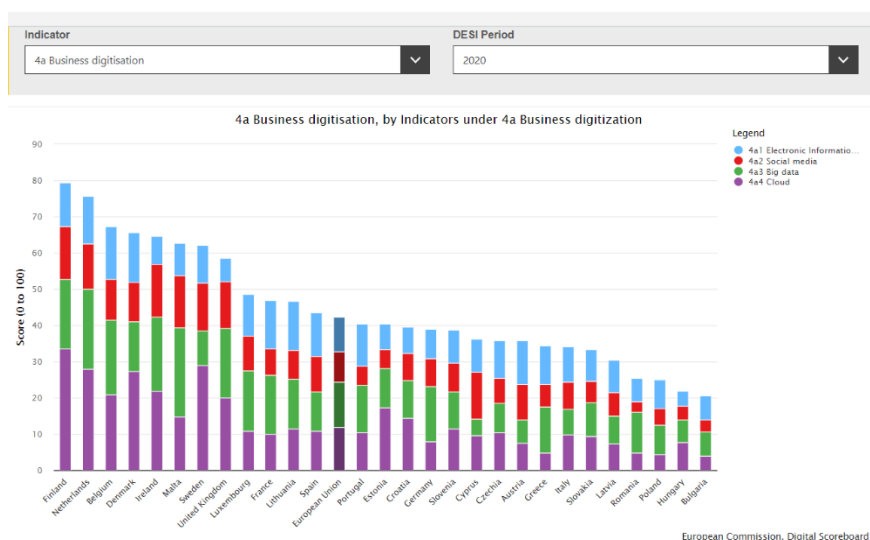


Figure 2: Business digitalisation of EU28 in 2020
(Source: European Commission, 2021d.)

Slovenia achieved the highest score in Cloud Computing (11.4), Big Data (10.3), Electronic Information Sharing (9.1) and Social Media (7.95) in 2020 (Figure 3).

² Electronic Information Sharing is measured by the share of all enterprises that have in use an ERP software package, Big Data, however, by the share of all enterprises analysing big data from any data source, Social Media by the share of all enterprises using two or more social networks, enterprise's blog or microblog, multimedia content sharing websites and wiki based knowledge sharing tools, and Cloud Computing by the share of all enterprises, purchasing at least one of the particular cloud computing services (European Commission, 2021c)

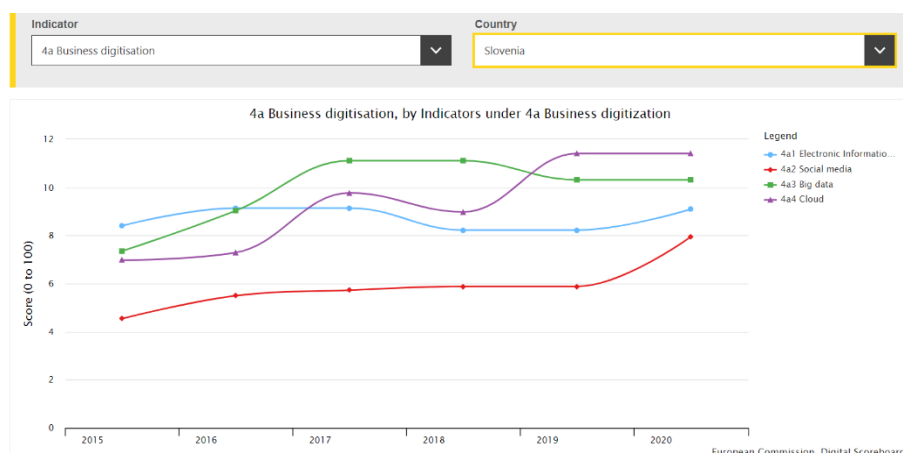


Figure 3: Business digitalisation of Slovenia in 2020.
(Source: European Commission, 2021d.)

Croatia achieved, however, the highest score on Cloud Computing (14.5), followed by Big Data (10.4), Social Media (7.46) and Electronic Information Sharing (7.21) (Figure 4).

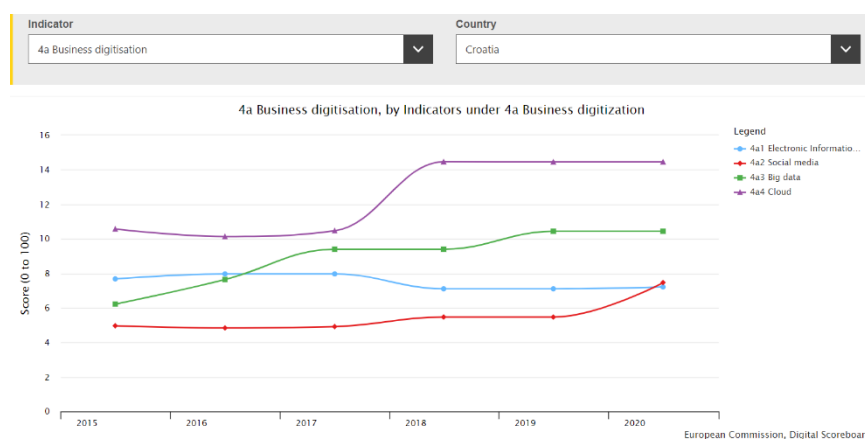


Figure 4: Business digitalisation of Croatia in 2020
(Source: European Commission, 2021d.)

Although both countries have made progress in some fields of business digitalisation, there is still a lot of space for improvements.

3.3. Key advantages

Digitalisation allows SMEs to overcome the size-related barriers and to gain several advantages, such as lowering transactional costs, reducing investment in ICT equipment, delivering and sourcing efficiently, improving productivity, raising integration and interaction, creating economies of scale, sharing knowledge, spurring innovation, supporting internationalisation, managing transactions at a distance, reducing information asymmetries, facilitating access to financial services, undertaking greener practices, increasing international competitiveness etc. (Bergamaschi et al. (2020), Kutnjak et al. (2019), Cenamor, Parida, & Wincent (2019), Savastano, Amendola, & D'Ascenzo (2018), Wittkop, Zulauf, & Wagner (2018), Costa et al. (2020); cited upon OECD (2021); ILO, 2021. More sophisticated digital technologies, such as AI and IoT solutions can alter completely the SMEs business models and practices, with numerous positive effects alongside various business functions (Duobao (2019), Agrawal, Gans and Goldfarb (2018); cited upon OECD, 2021)).

3.4. Key challenges

Despite the clear benefits, digitalisation pose several challenges to SMEs. Some of them are very basic, like a lack of key digital infrastructure, such as fast internet connection, and a lack of required mind-set and digital skills (Andrews, Nicoletti and Timiliotis (2018), Gal et al. (2019); cited upon OECD, 2021 and European Commission, 2020). The others are related to a lack of awareness and knowledge about the availability, advantages, and effective integration of digital technologies with business models and processes (European Commission, 2020); (Waldman-Brown (2020), Peillon and Dubruc (2019), Kilimis et al. (2019); cited upon OECD, 2021). SMEs managers are uncertain about the benefits and risks and faced with mistrust in these technologies. For example, dependency on online platforms can expose SMEs to lock-in effects, and unforeseen operational risks, such as sudden changes to platforms' policies and server outages (Mims (2021), Porter (2020), The Economist (2021); cited upon OECD, 2021). In addition, online platforms may not allow user businesses direct access to their customer data, limiting the businesses' understanding of their customer pool (Wiener-Bronner (2020); cited upon OECD). Additionally, different online platform fees may erode SMEs' profitability and deteriorate their competitive position in comparison to larger businesses with greater bargaining power that are able to negotiate for lower fees (Dua et al., 2020; cited upon OECD, 2021). As SMEs go digital their degree of exposure to online attacks is likely to increase dramatically, and if being affected, the costs can be disproportionate and can spread deeply into SMEs supply-chains.

4. POLICY SUPPORT TO SMEs DIGITALISATION

Considering the state of digital technologies' adoption among SMEs, several advantages as well as challenges of their usage, the awareness making and support to SMEs digitalisation should be strengthened in contemporary dynamic and uncertain global economy. Policy makers have a key role in helping SMEs to adapt their culture and processes to the digital world. Policy interventions span across a broad range of areas, including awareness campaigns, training and technology assistance, access to finance, support for the development of SME-tailored digital solutions, establishing data centres, experimentation platforms and networking programmes, regulatory reforms, e-government and one-stop-shops, and investment in ICT infrastructure.

4.1. Governments' support

Governments encourage digitalisation of SMEs with various policy approaches. They introduce new policies or adjust existing ones to accelerate the availability and use of digital tools in SMEs. Policy interventions are mainstreamed across different ministries and agencies that have responsibility in the field. Key cross-cutting actions include raising the awareness of the digital technologies' benefits, tailored technical advisory support services in combination with financial support and supporting skills development through mentoring, training, education (European Commission, 2021). The same governmental interventions were implemented during the COVID-19 pandemic (Cirera et al., 2021; cited upon OECD 2020, 2021; ILO, 2021). Some governments also adjusted regulatory framework and legislation to support the deployment of new working arrangements and business models, based on digitalisation. (OECD, 2021). However, the extent to which certain measures would be useful to SMEs varied across countries and enterprises' sizes.

4.2. European Union's and OECD's support

The European Union (EU) support digital transformation of SMEs with various policies (European Council, 2021): facilitating digital single market through digital sovereignty, strengthening and modernising the rules for digital services on online platforms, building data economy by ensuring data sharing and data reuse across sectors and borders as a basis for new

digital innovations, adapting EU countries taxation systems to the digital age, promoting innovations in AI research and deployment and encouraging the ethical and human-centric approach to this technology, supporting enabling technologies, like for instance cloud computing, high-performance computing and quantum technologies, assuring fast and ubiquitous digital connectivity across the EU and enhancement of cybersecurity to ensure greater trust in digital technology and protect secure cyberspace, enabling secure public electronic identification (e-ID) to enable access to public, private and cross-border digital services, supporting the improvement of digital education and upskilling of workforce and improving access to justice and increasing the effectiveness of court proceedings. Within the EU Multiannual Financial Framework 2021-2027 these policies will be supported by the Digital European Programme (DEP) that will provide funding in five key capacity areas (European Commission, 2021a): supercomputing, artificial intelligence, cybersecurity, advanced digital skills and ensuring a wide use of digital technologies across the economy and society. The DEP funds will be complemented with other EU programmes, such as the Horizon, the Connecting Europe Facility, the Recovery and Resilience Facility, the Structural Funds etc. DEP envisaged the establishment of the network of European Digital Innovation Hubs (EDIH) (European Commission, 2021b), based on the already existing network of Digital Innovation Hubs (DIH) that started to develop across the EU five years ago as one-stop shops to support the framework conditions for the digital industrial revolution with piloting, testing, and experimenting with digital innovations (European Commission, 2021b). EDIHs are planned to have both local and European functions. EU funding will be made available for hubs that are already supported by their Member States. Herewith the DEP intends to increase the capacities of the selected hubs to cover activities with European added value, based on networking the DIHs and promoting the transfer of expertise. EDIHs will focus on the introduction of new approaches, processes, and procedures aided by advanced technologies such as artificial intelligence, super-computing (HPC) and cyber security. Currently, there are more than 600 DIHs in various evolutionary stages (in preparation, fully operational and potential), technologies, providing services all over the EU-27 member states, and additional more than 80 DIHs in eleven non-EU member states (European Commission, 2021c). More than 330 DIHs are nominated for European DIH in the EU and additional 6 DIHs in Norway. In Slovenia there are 12 DIHs in various evolutionary stages and 3 candidate DIHs for European DIH, in Croatia, however, there are 17 DIHs and 5 candidate DIHs for European DIH. European Institute of Innovation and technology (EINT) that delivers digital innovations to the market by mobilising a pan-European ecosystem of top European corporations, SMEs, start-ups, universities and research institutes, will contribute to the network of EDIHs through its project Manufacturing Industry Digital Innovation Hubs (MIDIH) (MIDIH, 2021). There are several other EU actions and mechanisms to support SMEs digitalisation, like for instance European Alliance for Apprenticeships, Digital Skills and Jobs Coalition along with the launch of Digital Education Action Plan 2021-2027. OECD supports digitalisation by the D4SMEs Global Initiative that aims to promote knowledge sharing and learning among governments, large businesses, industry experts and the SMEs themselves on key thematic areas of relevance for SME digitalisation, including enabling framework conditions, firm-level triggers, new digital technologies and applications, and digitally- driven transformations in supply chains and business models (see OECD, n.d.)

5. CONCLUSION

The COVID-19 crisis has served as an accelerator of SMEs' digitalisation. Companies were forced to move their operations online and to implement digital tools with the aim to remain in business and to overcome disruptions in supply chains. Digital practices learnt during the COVID-19 pandemic crisis will enable SMEs to achieve greater resilience for future disruptions. Adoption of digital technologies is inextricably linked with the green transition.

At the systemic level, the resilience of an economic system relies also on its long-term sustainability. Overcoming digital gaps, which could allow SMEs to fully embrace the benefits of the digital transformation, cannot be met by SMEs alone. Policy makers have a strong role to play. Due to the socioeconomic importance of SMEs, a failure to support them in the process of post-COVID-19 recovery through digitalisation could have negative long-term effects on economies. It is pertinent to support SMEs in building the culture of data, from its collection, to management, protection, and analysis. Governments should raise awareness among SMEs about the benefits of digital tools, particularly more sophisticated ones (such as AI and blockchain), where the digital gap among SMEs is the largest. They should further support reskilling of SMEs managers and workers and ensuring a participatory approach for redesigning work processes and training for implementation of new digital solutions. SMEs should also receive more evidence on the return on investment of moving to new digital technologies and on sectoral impact, with concrete business cases. Governments should also inform SMEs about the existence of international platforms, supporting digital transition and the possibilities of SMEs knowledge sharing and mutual learning. Further research could address innovations in digital business solutions, particularly in the field of artificial intelligence and blockchain applications, and their positive impacts on SMEs' activities and processes. It would be also reasonably to follow the contributions of EU's Digital Innovation Hubs Network to European SMEs' digital transformation, as well as the innovations in the approaches and technologies for prevention and mitigation of cybersecurity risks.

LITERATURE:

1. Belitski, M., Guenther, C., Kritikos, A. S., & Thurik, R. (2021). *Economic Effects of the COVID-19 Pandemic on Entrepreneurship and Small Businesses*. IZA Discussion Paper No. 14630. Retrieved from <https://ftp.iza.org/dp14630.pdf>
2. Delivorias, A., & Scholz, N. (2020). *Economic impact of epidemics and pandemics. European Parliament Briefing*. Retrieved from [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646195/EPRS_BRI\(2020\)646195_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646195/EPRS_BRI(2020)646195_EN.pdf)
3. European Commission (2021). *Annual Report on European SMEs 2020/2021. Digitalisation of SMEs. SME Performance Review 2020/2021*. Retrieved from <https://op.europa.eu/en/publication-detail/-/publication/4b9b0f42-dade-11eb-895a-01aa75ed71a1/language-en/format-PDF/source-search>.
4. European Commission (2021a). *Shaping Europe's digital future. The digital Europe Programme*. Retrieved from <https://digital-strategy.ec.europa.eu/en/activities/digital-programme>
5. European Commission (2021b). *Digital Innovation Hubs Network*. Retrieved from <https://dihnet.eu/>
6. European Commission (2021c). *Smart Specialisation Platform. Digital Innovation Hubs*. Retrieved from <https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs>
7. European Commission (2021d). *Digital Economy and Society Index*. Retrieved from <https://digital-agenda-data.eu/>
8. Hynes, W., Trump, B., Love, P., & Linkov, I. (2020). Bouncing forward: a resilience approach to dealing with COVID-19 and future systemic shocks. *Environment Systems and Decisions*, 40(2), 174-184.
9. IBM (2021). *Digital Transformation Assessment COVID-19: A catalyst for change* <https://www.ibm.com/downloads/cas/MPQGMEN9>
10. ILO (2021). *Small goes digital - How digitalization can bring about productive growth for micro and small enterprises*. Retrieved from https://www.ilo.org/wcmsp5/groups/public/--ed_emp/---emp_ent/---ifp_seed/documents/publication/wcms_808632.pdf

11. KPMG International (2021). *Going Digital, Faster. Global Survey into the impact of COVID-19 on digital transformation*. Retrieved from <https://home.kpmg/xx/en/home/services/advisory/management-consulting/kpmg-connected-enterprise/going-digital-faster.html>
12. OECD (2020). *Coronavirus (COVID-19): SME policy responses. OECD Policy Responses to Coronavirus (COVID-19)*. Retrieved from <http://www.oecd.org/coronavirus/policy-responses/coronavirus-covid-19-sme-policy-responses-04440101/>
13. OECD (2021). *The Digital Transformation of SMEs*. Retrieved from <https://www.oecd.org/publications/the-digital-transformation-of-smes-bdb9256a-en.htm>
14. OECD (n.d.). *OECD Digital for SMEs Global Initiative*. Retrieved from <https://www.oecd.org/going-digital/sme/>
15. Trend Micro (2021). *Internet of Things*. Retrieved from <https://www.trendmicro.com/vinfo/ph/security/definition/internet-of-things>

DIGITAL TRANSFORMATION OF PUBLIC SECTOR: THE CASE STUDY OF VOJVODINA GOVERNMENT

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ABSTRACT

The main aim of this study is to propose the strategy for digital transformation of public sector based on investigation of Government of Vojvodina public authorities. Regarding different characteristics of national culture, the construct validity of research methodology developed in one society will be investigated for a Serbian sample. The key factors that determined company's potential to become a digital organization have been proactive leadership and investment. Further, the four key factors named digital-first mindset, digitized practices, empowered talent, data access and collaboration tools. The research instrument was self-assessment questionnaire to assess how organization is digital mature? The research sample comprised of 30 managers in Government of Vojvodina. The research finding revealed that observed public organization was in Engaging stage before COVID 19 pandemic. Therefore, an adequate strategic choice was digital strategy that is focused on operational efficiency in customer data and/or to improve collaborative tools. The optimal business model is data-powered model. Recommendations for policymakers will be presented. Limitations and avenue for future studies, too.

Keywords: *strategy, digital transformation, Government of Vojvodina, COVID19 pandemic, organizational culture*

1. INTRODUCTION

Be the first at the market it is not longer guarantee for commercial success. With cost-effective innovation it is not concern about additional funds, management have to focus on product, service, marketing, competitiveness rather than financing (Kontic, 2002). The first step in digital transformation is developing the technological capabilities. To become profitable, organization needs to have unused technological capabilities in order to exploit economies of scope through innovation (Kyläheiko et al., 2011). It is necessary to identify and develop the most appropriate business model. The analysis of the best practice of a number of successful companies in digital transformation revealed five digital models (World Economic Forum, 2016, p. 19): customer-centric, extra-frugal, data-powered, sky net, and open and fluid. Moreover, in next paragraph, the main characteristics of aforementioned models will be explained. *Customer-centric model* focuses on transformation of front-office processes in organizations with decentralized structure. It can be applied in various industries. In organizations with standardized structure best fit extra-frugal model that provides a high-quality service at a low costs (World Economic Forum, 2016, p. 19). *Data-powered model* uses software intelligence. The main proposition to implement this model is an agile organizational culture focused on innovation. *Sky net model* is based on artificial intelligence to increase productivity and flexibility of organization. Therefore, it can be used in the companies with engineer-led organizational culture. *Open and fluid model* is characterized by constant dialog with external world. The best known companies that used this model are Facebook and PayPal. In today's turbulent environment, an innovation has become the mainstay of every organization. Innovation has become increasingly complex due to changing customer needs, extensive competitive pressure and rapid technological change (Kontic, 2008). Regarding the implementation of technological changes, Serbia failled behind Chech Republic and Hungary, but the competitive engeneers in information technology (IT) sector represent the potential to improve technological implementation.

For example, Belgrade gets intelligence containers. Mechanism through solar energy compresses garbage. When container is filled, the data has been sent to mobile platform in operation center then they are organized to empty containers. This paper contributes to the existing literature by empirical testing a questionnaire used by MIT Center for Digital Business and Capgemini Consulting (Bonnet et al., 2015) in one public organization from Serbia. Regarding different characteristics of national culture, the implementation of research methodology developed in one society will be investigated for a Serbian sample.

"A specific challenge regarding public sector's digital transformation involves the ability to hire new types of talent and integrate digital related tools, methods, strategies and culture not only into strategies and plans but also in daily habits. This ability is challenged by the scarcity of talent in specific fields: data analysts and data scientists are often recruited by private companies with more attractive wage offers. The need for new profiles exceeds strictly digital-related jobs, and have to do with new ways of designing and delivering services: from user experience and user interface experts to ideation and strategic vision catalysts, a wide array of skills and expertise play a role. None existed when public administrations appeared; most did not exist five years ago.

Beyond the cultural challenges, organisations face major technical challenges of migrating from legacy systems, many of which involve critical data or perform essential functions. The disparities in adaptive capacity and "technology debt" can be quite large between startups and large organisations.

In addition, governments are also coping with how to address emerging technologies, such as blockchain and artificial intelligence. The challenge for governments is three-fold: how might governments incorporate these new technologies for their own public purposes, how should governments address the use of these technologies in the private sector; and how do these new technologies affect the functions, expectations upon and role of governments in societies that are transforming. "Disruption" is often associated with digital transformation and emerging technologies since they can affect integral organisational infrastructure, create extreme disparities between organisations, impact human and organisational relationships, affect markets, set new implicit rules and create entirely new forms of value."

(Internet source: <https://oecd-opsi.org/guide/digital-transformation/>)

Organizations have to ensure that their corporate strategies are innovative to build and sustain competitive advantage (Kontic, 2008). The main purpose of research is to assess organization's readiness for digital transformation and to propose innovation strategy for digital transformation during and after COVID 19 pandemic. To achieve the goal, following research questions have formulated:

- 1) Does one tool developed in one national culture can be used in transitional environment such as Vojvodina?
- 2) Which is successful strategy for digital transformation of public sector after and during COVID 19 world pandemic?

Besides introduction and conclusion part, the paper is structured into three sections. The next section is devoted to review of past research; the third one is devoted to the research methodology. The fourth section elaborated results and discussion.

2. REVIEW OF PAST RESEARCH

Based on relevant case studies, authors identified a process of digital transformation in selected industries that consisted of three phases: pointing to existing products and/or services, decomposing existing business model and constructing new model (Remane et al., 2017, p.41). The environmental circumstances and organizational dynamic can be essential parts of framework for assessing readiness for digital transformation (Sanchez, 2017). Organizational success depends on industry structure. The main factors are: rivalry, threat of substitutes, bargaining power of customers, bargaining power of suppliers, and threat of new entrants (Porter, 1991). Resources and capabilities of organization can be the following: scale of operations, data talent, collaborative culture, cumulative learning, and innovation capacities (Sanchez, 2017). Strategy, not only technology pushes organizations into digital transformation (Lanzolla & Anderson, 2008). Based on extent literature analysis and multiple case studies, author identified four key factors of digital transformation strategies: use of technology, change in value creation, structural changes, and financing (Matt et al., 2015). The journey towards becoming digital organization can be described through four key stages (Bonnet et al. 2015, p. 7):

- **Stalling** - Characteristics of the organizations in this phase are inflexibility, and inability to deliver the results.
- **Initiating** - The organizations start developing digital capabilities through investments in new knowledge and relationships.
- **Engaging** - The organizations have various digital capabilities, and develop collaboration across the organization.
- **Self-Reinforcement** - These organizations are very flexible, able to conduct quickly reorganization and/or self-organization.

Proactive leadership and investment are the key factors that determined company's potential to become a digital organization. The four key factors are (Bonnet et al. 2015, p. 8): digital- first mindset, digitized practices, empowered talent, data access and collaboration tools. The first step in building a digital mindset is to explain benefits of the digital transformation to key stakeholders. The next stage for leader is to be a role model to employees, then to introduce monetary as well as non-monetary rewards to encourage digital change. The first step is to define future skill requirements conducting by human resources and IT teams. Then they performed gap analysis between desired and current skills of the employees. The next steps is to overcome the gap, followed by development of monitoring system. The necessary digital skills are analysis of meta data, use of social media, and mobile devices (Bonnet et al. 2015, p. 5). One longitudinal study included 400 large companies revealed that most observed companies have used social media to implement various changes such as customer demands, internal processes and their business models (Westerman et al. 2017, p. 2).

3. METHODOLOGY

Self-assessment tool developed by Bonneti et al. (2015) has been used in previous study (Kontic&Vidicki, 2018). The questionnaire comprises 32 questions to assess organization's stage in an aforementioned model. The questionnaire is translated into Serbian language and distributed to 30 managers in one Province in Vojvodina Government. All of them filled the questionnaire due to survey insiders. Respondents are asked to indicate their current views of internal factors divided by items in their organizations on the scale from 1 - disagree strongly to 5 - agree strongly. Main question was: How digitally Mature is Your Organization?

The original scale comprised a score between 1 to 6 for each item. However, the overall score legend has been modified. Therefore, the overall score legend is following:

- 10-20.5 STAILLING STAGE
- 20.5-30.5 INITIATING STAGE
- 30.5-40.5 ENGAGING STAGE
- 40.5-50 SELF-REINFORCEMENT STAGE

Manual presented by the authors of the original study had been used (Capgemini Consulting, 2013, p. 14):

- 1) *"Assign a score between 1 and 5 on each item;*
- 2) *Calculate the score per factor by averaging the scores for items under that factor;*
- 3) *Sum the average scores calculated to arrive at the overall score for Organization;*
- 4) *Compare the overall score with the overall score legend to understand organizations digital maturity;*
- 5) *To identify which factor requires most improvement, and*
- 6) *To undertake a relative comparison between the average scores per factor".*

The research took place in March 2017 directly in Government's facilities. For the purpose of data analysis, descriptive statistics was computed. Data analysis was conducted using Microsoft Office Excel.

4. RESULTS AND DISCUSSION

The results of analysis on key factors have been showed that the average score per factor had data access and collaboration tools (i.e. 3.71), followed by talent (3.27), practices (3.25), and digital-first mindset (3.17). The potential areas to improve are:

- 1) Collaborative learning in Organization (the lowest an average score per factor 2.81), and
- 2) Employees' technology experience (average score per factor was 2.82).

Regarding different characteristics of national culture, the implementation of research methodology developed in one society has been investigated for a Serbian sample. The main purpose of research was to assess organization's readiness for digital transformation and to propose innovation strategy for digital transformation. The main question was how to innovate with lower costs, how to retain talents? In previous study, four-stage digital model: 1. Stalling, 2. Initiating, 3. Engaging, and 4. Self-reinforcement has been implemented. Based on Self - assessment guide, Organization is in Engaging stage (33.67/50). The Organization has developed experience across digital-first mindset, practices, and talents. In this stage of development, Organization has used technology to standardize business operations. At engaging stage, organization transformation is underway (Soule et al., 2017). Therefore, organization's experience is growing. These characteristics determinate digital strategy that is focused on operational efficiency in customer data and/or to improve collaborative tools. Management of the Organization can implement data-powered operating model that is build around processes in analytics and software intelligence (World Economic Forum, 2016, p. 19). This model has been implemented in Google. Data-powered organizations have an agile organizational culture with main goal to innovate through empirical experimentation. The success of this model is measured by return on investment. To get organizations digital ready three activities are essential: upgrade, lead, and engaging.

5. INFLUENCE OF COVID 19 ON DIGITAL TRANSFORMATION

After the outbreaks of the COVID 19 pandemic and restrictive measures introduce by Governments, digital transformation became a necessity for survival of the organization.

Moreover, in October 2020, the European Commission adopted the Economic and Investment Plan for the Western Balkans that aims to boost long-term economic recovery, with an emphasis on green and digital transition. Also, this plan aims to encourage regional integration of the countries of the Western Balkans to the European Union. Based on the Digital Agenda for the Western Balkans, this investment plan offers an opportunity to accelerate digitization of governments, public services and businesses, in line with EU values and legal framework. It has been more than a year since COVID 19 changed world economy. During the pandemic, consumers were dramatically turned to online channels and organizations are responded in the same way. The pandemic of COVID 19 created a new narrative when we're talking about the way we do business, keeping that in mind the changes that companies have undergone in all sectors (Jashari, 2020). The competitive position of organizations have been dramatically changed due to world pandemic. At this new, and unusual position, management looking for ways to improve productivity, offer the best possible services to their customers, to facilitate communication and access to consumers through new channels sales. Among other things, they should work on workflow optimization, and just to be innovative and provide competitive advantages, as the only one option to remain relevant in the business. The COVID 19 pandemic brought society and business subjects to the point where they adapt to the new technologies are no longer an option, but a necessity. Moreover, with the right steps and procedures, digital transformation can be seen as a benefit (although belated) as a result of a pandemic. COVID19, among other things, changed its vision and the orientation of the management of the companies themselves. In normal circumstances, the organization's focus is on increasing revenue and market share, while in this so far unprecedented situation, organizations were struggling to control costs, maintain their liquidity and survive. Even today, COVID 19 continues to bring crisis after public health, as well as a crisis with severe economic consequences. It is important that the private sector as well as public sector in Serbia, on the road to economic recovery, include digital transformation as a way to prove successful in managing the consequences of a pandemic.

6. CONCLUSIONS AND RECOMMENDATIONS FOR POLICY-MAKERS

To conduct digital transformation and mitigated economic damage caused by a pandemic, results of previous study, as starting point in diagnosis and this brief analysis makes the following recommendations policy-makers in Serbia:

- Focusing on digitalization of administration and reduction bureaucracy;
- Financing of organizations, in terms of digitalization their business processes and increase e-commerce business;
- Implementation of Digital agenda for the Western Balkans and Economic and the Western Balkans Investment Plan; and
- Harmonization of all key actors activities, to make better use of digital support schemes for organizational transformation.

This paper contributed to the existing literature by validation of a self-assessment questionnaire for digital transformation in Government of Vojvodina and provides guidelines for policy-makers in Vojvodina and Serbia. Limitation of this study is conducting research in one public organization from transition environment. Next study will be based on OECD DIGITAL GOVERNMENT TOOLKIT (<https://www.oecd.org/governance/digital-government/>).

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LITERATURE:

1. Bonnet, D., Puram, A. D., Buvat, J., KVJ, S., & Khadikar, A. (2015). Organizing for digital: why digital dexterity matters. Capgemini Consulting, 16pp. https://www.capgemini.com/consulting/wp-content/uploads/sites/30/2017/07/digital_orgns_cover_08-12.pdf
2. Jashari, E. (2020). UTICAJ KOVIDA-19 NA DIGITALNU TRANSFORMACIJU DIGITALNA TRANSFORMACIJA – STUB EKONOMSKOG OPORAVKA. AUTORSKO PRAVO ©Privredna komora Kosova i Fondacija Konrad Adenauer
3. www.kas.de/documents/286052/0/
4. Kontic, L. (2002). Innovation - condition for survival. Belgrade: Zaduzbina Andrejevic.
5. Kontic, L. (2008). Innovation - challenges for future. Belgrade: Zaduzbina Andrejevic.
6. Kontić, L., & Vidicki, Đ. (2018). Strategy for digital organization: Testing a measurement tool for digital transformation. *Strategic Management*, 23(1), 29-35.
7. Kyläheiko, K. J., Jantunen, A., Puumalainen, K., Saarenketo, S. & Tuppur, A. (2011). Innovation and internationalization as growth strategies: The role of technological capabilities and appropriability. *International Business Review*, 20 (5), 508-520.
8. Lanzolla, G., Anderson, J. (2008) Digital transformation. *Business Strategy Review*, 19(2): 72-76.
9. Matt, C., Hess, T. & Benlian, A. (2015). Digital transformation strategies. *Business and Information Systems Engineering*, 57 (5), 339-343.
10. Remane, G., Hanelt, A., Nickerson, R.C., Kolbe, L.M. (2017) Discovering digital business models in traditional industries. *Journal of Business Strategy*, 38(2): 41-51.
11. Sanchez, M.A. (2017). A framework to assess organizational readiness for digital transformation. *Dimension Empresarial*, 15 (2), 27-40.
12. Soule, D. P. (2017, March 18). Becoming a Digital Organization: The Journey to Digital Dexterity. Retrieved from SSRN: <http://ssrn.com/abstract=2697688>
13. Waller, S. (2017, March 18). Be digital Ready. Retrieved from Simon Waller: simonwaller.live
14. Westerman, G., Tannou, M., Bonnet, D., Ferraris, P., & McAfee, A. (2012). The Digital Advantage: How digital leaders outperform their peers in every industry. MITSloan Management and Capgemini Consulting, MA, 2, 2-23.
15. World Economic Forum WHITE PAPER (2016). Digital Transformation of Industries, January.
16. OECD OPSI <https://oecd-opsi.org/guide/digital-transformation/>
17. OECD DIGITAL GOVERNMENT TOOLKIT (<https://www.oecd.org/governance/digital-government/>).

THE IMPACT OF DIGITALIZATION ON CUSTOMER SATISFACTION AND CUSTOMER LOYALTY: LITERATURE REVIEW

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ABSTRACT

Corona crisis has drastically increased the process of digitalization all over the world. Suddenly, almost over night, public and private sector transferred their operations online due pandemic restrictions. Therefore, with the aim to search how digitalization in times of corona crisis influenced customer behavior and loyalty we did a systematic literature review searching two relevant databases; Web of Science and Scopus, using the search term ("digitalization") AND ("Customer satisfaction" AND ("customer loyalty)). The aim of the paper was twofold; i) to investigate the influence of digitalization on customer satisfaction and customer loyalty in times of corona crisis and ii) to provide an overview of the research literature in these areas. The results of the research indicate that there is a lack of papers addressing the impact of digitalization on customer satisfaction and loyalty. However, analysed papers dealing with the issue indicate that customer satisfaction and loyalty can be gained through addressing different factors like securing app security, positive corporate image, word of mouth, or different factors that discourage customers from going digital and using services.

Keywords: digitalization, customer satisfaction, customer loyalty, COVID-19

1. INTRODUCTION

Digitalization has changed buying experience as well as processes in companies, consequently, customer satisfaction and loyalty. Specially, this happened rapidly during corona crisis when companies all over the world embraced digital platforms to overcome the pandemic problems caused. Global pandemic has accelerated the use of technology in every day private and business life. Digitalization brought the emergence of new digital products and services. These new products and services are created with great flexibility and according to customer requirements (Almeida, Santos, Monteiro, 2020). Almost, overnight change, going from analog to digital business, disrupted market game and influenced on changing the consumers' expectations as well as their behaviours (Verhoef et al. 2021). Given the fact that the transitioning process to operating online happened more forcefully than willingly this paper aims to explore the effect digitalization had on consumer satisfaction and loyalty. The paper consists of three parts. First part of the paper represents the review on the literature lightening the terms digitalization, customer satisfaction and customer loyalty. The second part presents the methodology of conducting the systematic literature review about the digitalization and its effect on customer behaviours (satisfaction and loyalty), as well as the results. And the final part consists of limitations, recommendations and conclusion.

2. LITERATURE REVIEW

The digitalization of business and the related transformation of companies is an area that has gained much attention in the business world in the last few years and its influence is seen in consumers behaviours such as satisfaction and loyalty. Accordingly, this part of the paper addresses a short review on terms digitalization, customer satisfaction and customer loyalty.

2.1. Digitalization

Digitalization was happening before the global pandemic emerged, however the pandemic has drastically increased the speed of adopting new technologies. Over night, the whole world moved to operating online. With pandemic in the process and the world, on the verge of implementing 5G technology, companies, managers and people are standing on “digital doors” that offers new opportunities, whose effects we shall yet see. Consequently today, almost every business in the world is considering or has already moved to online platforms. Digitalization represents “the use of digital technologies and of data in order to create revenue, improve business, replace/transform business processes and create an environment for digital business, whereby digital information is at the core” (citing Clerck, 2017 in Reis et al. 2019). The use of digital technologies changes business processes and business models which represents high investment costs to companies. However, companies today need to innovate their business models by adopting new technologies (Parida, Sjödin & Reim, 2019) since evidence shows increase in business performance and creation of new value along the company’s supply chain (Büyüközkan and Göçer, 2018). This created new value will finally be perceived as satisfying or not by customer and will influence on firms performance, at the end.

2.2. Customer satisfaction and customer loyalty

Satisfying customer is one of the ultimate goals that organisations seek. Many researches deal with analysing the attributes of customer satisfaction within different industries. Therefore, the key features of customer satisfaction depends on the industry and the type of service provided. However, satisfied customer leads to loyal customer and profitability (ZorBari-Nwitambu, 2017). In order for companies to achieve sustainable competitiveness, customer loyalty becomes an important factor to address in today's competitive environment since customers are active recipients of products and services. Therefore, retaining customer nowadays represent complex strategy for companies since they may be perceived as an asset since loyal customer impacts companies success (Shankar and Jebarajakirthy, 2019). Customer loyalty consists of two dimensions, attitude and behavior (Leninkumar, 2017) or emotional and rational factors (Iglesias, 2020). It represents customer’s willingness to build a long-term relationship with a specific brand, and recommend it to other people voluntarily (Markovic et al. 2018.) Doing business online and using online platforms and apps certainly adds to building a customer loyalty base (Cobelli and Chiarini, 2020). Nowadays, when everything is online, firms need to address many barriers in retaining its customers since digitalization enabled availability of buying products and using services globally so physical barriers are a minor problem, but now companies have to be more creative in providing good customer experience through different online and digital sources.

3. RESEARCH APPROACH AND THE RESULTS

To analyse the impact of digitalization on customer satisfaction and customer loyalty, the systematic literature review was conducted in order to summarize findings in the research field. The search was limited to two years period which represents the corona crisis period. Figure 1 represents the methodological approach for the systematic literature review.

First, we identified relevant databases for our research, and we have decided to focus on the peer-review journals that are cited in Scopus and WoS (SSCI and SCI papers). Tables 2 and 3 present our search strategies in WoS (SSCI and SCI) and Scopus, with the period (2020 – 2021). We conducted a search using the scientific databases Web of Science (WoS) and Scopus in September 2021. Through the first part of the search, we checked WoS and Scopus using keywords: “DIGITALIZATION” AND “CUSTOMER SATISFATION AND CUSTOMER LOYALTY”. The main focus was on peer-reviewed papers in journals in English language. This approach resulted in 169 papers (157 in Scopus and 12 in WoS).

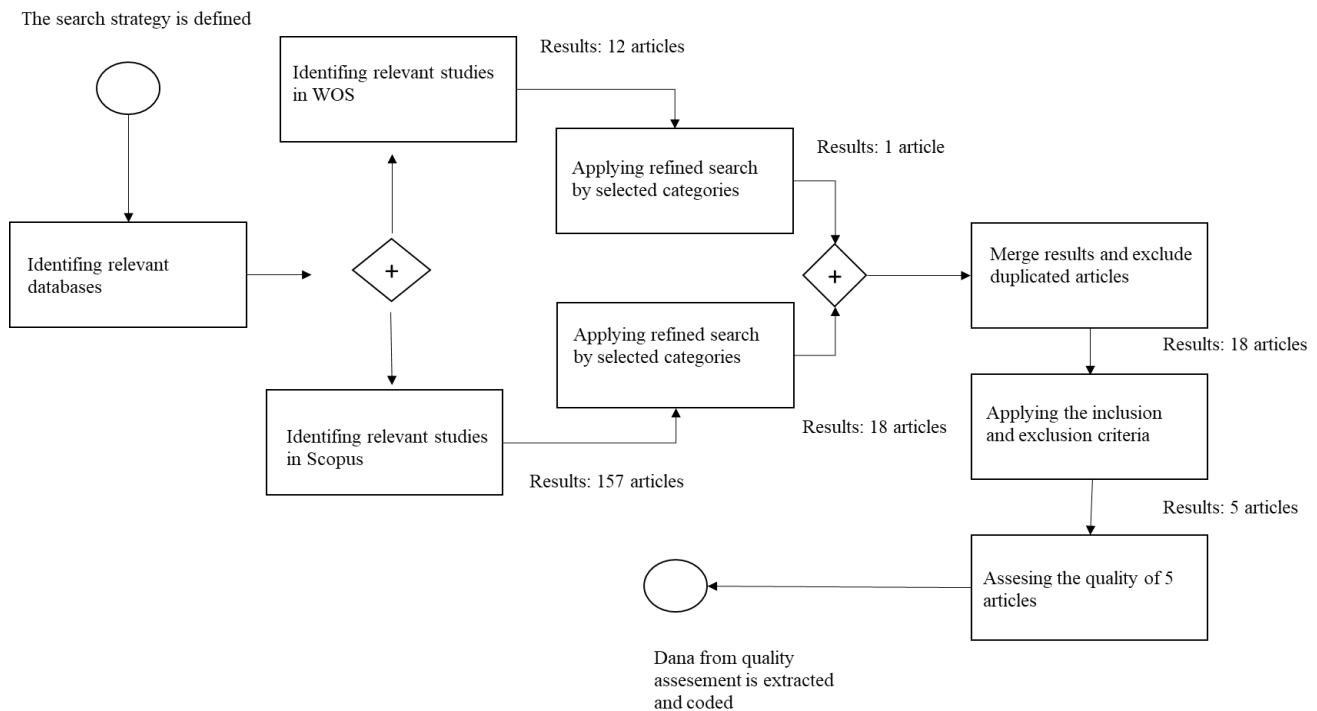


Figure 1: The selection process for the literature review
(Source: Author's work)

In the second step, the search strategy was refined. Since different scientific research areas analyse digitalization and customer satisfaction and loyalty, we limited our research to papers published in the fields of business and economics. In WoS further categories were chosen: Business or Management or Economics (Sci-Expanded, Ssci, A&Hci, Cpci-S, Cpci-Ssh, Bkci-S, Bkci-Ssh, Esci, Ccr-Expanded, Ic.). Also in Scopus categories/areas are chosen: Business, Management and Accounting. This resulted in 19 papers (18 papers in Scopus and 1 paper in WoS) (table 1 and 2).

Search strategy	Hits	Time span	Indexes
((digitalization) AND (customer satisfaction and customer loyalty))	12	All years	SCIEXPAND., SSCI, A&HCI, ESCI
Refined by: DOCUMENT TYPES: (ARTICLE) AND PUBLICATION YEARS: (2021 OR 2020) AND WEB OF SCIENCE CATEGORIES: (BUSINESS OR MANAGEMENT OR ECONOMICS) AND RESEARCH AREAS: (BUSINESS ECONOMICS)	1	2020-September, 2021 (time of pandemic)	SCIEXPAND., SSCI, A&HCI, ESCI

Table 1: WOS (SSCI, SCI) search strategy (2020-2021)
(Source: Author's own elaboration)

Search strategy	Hits	Time span	Indexes
(TITLE-ABS-KEY (digitalization)) AND (customer AND satisfaction, AND customer AND loyalty)	157	All years	Scopus
(TITLE-ABS-KEY (digitalization)) AND (customer AND satisfaction AND customer AND loyalty) AND (LIMIT-TO (OA , "all")) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020)) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (LANGUAGE , "English"))	18	2020-September, 2021 (time of pandemic)	Scopus

Table 2: Scopus search strategy (2020-2021)

(Source: Author's own elaboration)

In our analysis, we have included 19 papers (1 from WOS and 18 from Scopus). However, after merging all papers, we excluded 1 paper that was found in both databases. Therefore, 18 papers remained for the analysis. After reviewing the abstracts and keywords of all 18 papers, we eliminated papers that did not report the description of digitalization and consumer satisfaction and loyalty. We used the following criterion that the paper was considered relevant if it specifically covers the digitalization and its impact on customer satisfaction and loyalty (figure 1). Finally, after applying this exclusion criterion 5 publications remained, and they represent the basis for our further analysis. Next, we extracted and coded relevant data of surveys (e.g. authors, title, and journal, year of publication, digitalization, customer satisfaction, customer loyalty) for our analysis (Figure 1).

3.1. Research results

The objective of this work was to investigate the influence of digitalization on customer satisfaction and customer loyalty in times of corona crisis and ii) to provide an overview of the research literature in these areas. To achieve the set goals, numerous world literature was analyzed, which explores the field of digitalization its impact on customers satisfaction and loyalty.

Table following on the next page

	Author name, year	The name of the work	Research description	Connection between digitalization and customer satisfaction and customer loyalty
Scopus base				
1	Zouari, G., Abdelhedi, M., 2021	Customer satisfaction in the digital era: evidence from Islamic banking	Authors examine the impact of digitalization, as a service quality dimension, on customer satisfaction	Yes
2	Kolodziev, O., Krupka, M., Shulga, N., Kulchytsky, M., Lozynska, O., 2021	The level of digital transformation affecting the competitiveness of banks	Authors research the competitiveness of Ukrainian banks influenced by economy digitalization, the dynamic spread of electronic payments and e-commerce, as well as innovative technologies aimed at providing digital services	No
3	Baryshnikova, N., Kiriliuk, O., Klimecka-Tatar, D., 2021	Enterprises' strategies transformation in the real sector of the economy in the context of the COVID-19 pandemic	Assess the changes in the economic behaviour of companies in the context of the COVID-19 pandemic, to analyse business practices in adapting functional strategies to new risks, and to determine the directions for transforming functional strategies which includes digitalization	No
4	Entina, T., Karabulatova, I., Kormishova, A., Ekaterinovskaya, M., Troyanskaya, M., 2021	Tourism industry management in the global transformation: Meeting the needs of generation z	Authors examine the needs of Generation Z and determine the corresponding strategic vectors for the global market transformation using the tourism sector as an example.	No
5	Abebe, M.A., Tangpong, C., Ndofo, H., 2021	Hitting the 'reset button': The role of digital reorientation in successful turnarounds	Authors examine how the use of digital reorientation could help declining firms in that industry successfully turnaround their performance.	No
6	Zollo, L., Rialti, R., Marrucci, A., Ciappei, C., 2021	How do museums foster loyalty in tech-savvy visitors? The role of social media and digital experience	Authors created an conceptual model to better explore the underlying mechanisms between tourists' digital propensity—their positive attitudes towards digital innovation and new technologies—and their degree of economic support to museums.	Yes
7	Beckmann, M., Garkisch, M., Zeyen, A., 2021	Together we are strong? A systematic literature review on how SMEs use relation-based collaboration to operate in rural areas	Authors did a systematic literature review which resulted in defining strengths and weaknesses of SMEs (enterprise perspective) and the opportunities and challenges of rural areas (spatial perspective) including digitalization impact on SME	No
8	Endres, H., Huesig, S., Pesch, R., 2021	Digital innovation management for entrepreneurial ecosystems: services and functionalities as drivers of innovation management software adoption	Authors explore the influencing factors on the adoption of IMS, a specific class of software tools to support and digitalize innovation management methods and activities	No
9	Bouncken, R.B., Kraus, S., Roig-Tierno, N., 2021	Knowledge- and innovation-based business models for future growth: digitalized business models and portfolio considerations	Authors develop a conceptual matrix for portfolio considerations of firm business model digitalization and introduce seven contributions in this special issue on knowledge and innovation related to business and offer some recommendations.	No
10	Cobelli, N., Chiarini, A., 2020	Improving customer satisfaction and loyalty through mHealth service digitalization: New challenges for Italian pharmacists	Authors investigate the attitude of pharmacists, as small- and medium-sized enterprise (SME) owners, toward new technologies, and more precisely, toward the adoption of mobile apps for mobile health (mHealth).	Yes
11	Mahlamäki, T., Storbacka, K., Pyllkönen, S., Ojala, M., 2020	Adoption of digital sales force automation tools in supply chain: Customers' acceptance of sales configurators	Authors add to a new knowledge of how digital sales technologies can be used by customers for improved effectiveness and perceived value.	No
12	Nöjd, S., Trischler, J.W., Otterbring, T., Andersson, P.K., Wästlund, E., 2020	Bridging the valuescape with digital technology: A mixed methods study on customers' value creation process in the physical retail space	Authors investigated how value is created in the physical retail space and how the customer experience is influenced by digital technology.	No
13	Lindh, C., Rovira Nordman, E., Melén Hänell, S., Safari, A., Hadjikhani, A., 2020	Digitalization and International Online Sales: Antecedents of Purchase Intent	Authors investigate consumers' online purchasing behavior and address consumers' Internet skills, website perceived ease of use, and website trust as antecedents of purchase intent.	No
14	Purwanto, E., Deviny, J., Mutahar, A.M., 2020	The Mediating Role of Trust in the Relationship between Corporate Image, Security, Word of Mouth and Loyalty in M-Banking Using among the Millennial Generation in Indonesia	Authors research the factors that influence the millennial generation's loyalty to mobile banking applications	Yes
15	Schüler, M., Fee Maier, M., Liljedal, K.T., 2020	Motives and barriers affecting consumers' co-creation in the physical store	Authors investigate one strategy retailers might apply in the context of offering a more personalised and service-oriented offers: in-store consumer co-creation	No
16	Kazakov, S., Ruiz-Alba, J.L., Muñoz, M.M., 2020	The impact of information and communication technology and internal market orientation blending on organisational performance in small and medium enterprises	Authors examine the concept of internal market orientation (IMO) and its effects on organisational performance comprising job satisfaction and employees' loyalty in the small and medium enterprises (SMEs)	Yes
17	Princes, E., Manurung, A.H., So, I.G., Abdinagoro, S.B., 2020	A closer look at the consumer conformity in industry 4.0: Purchase intention redefined	Researcher argues that the previous studies on the factors influencing Purchase Intention, such as brand quality, service quality, advertisements, etc. are not relevant again in the era of Industry 4.0, and it is urgent that the business leaders address this issue to increase Purchase Intention.	No
18	Oesterle, S., Buchwald, A., Urbach, N., 2020	Investigating the co-creation of IT consulting service value: empirical findings of a matched pair analysis	Authors analyse the gap between organizations need for specific IT skills and a bottleneck between required and existing capabilities in order to cope with digital transformation.	No

Table 3: Literature review
(Source: Author's own elaboration)

Common to all researched papers is that they emphasize that fast digitalization has its impact on business process, especially on changing how organization operate and the effect digitalization has on company's performance as well the deficiency of existing capabilities to influence digital transformation. As seen, there is a lack of research that connects digitalization with customer satisfaction and loyalty, which opens an opportunity for further future deeper research in this area. Further, our research of relevant data basis on the influence of digitalization on customer satisfaction and customer loyalty found 2 papers dealing with customer satisfaction and 2 papers dealing with customer loyalty, and 1 paper that analyses both, satisfaction and loyalty (table 4).

Digitalization and customer satisfaction and customer loyalty - correlation	Paper ID	#of papers
Customer satisfaction	1, 3, 5	3
Customer loyalty	2, 3, 4	3

*Table 4: Correlation between digitalization and customer satisfaction and customer loyalty
(Source: Author's own elaboration)*

Zouari and Abdelhedi (2021) used the SERVQUAL model to analyse the impact of digitalization in banking sector on customer satisfaction. On the sample 145 bank customers and through the five service quality dimensions; reliability, tangibles, responsiveness, assurance and empathy they found a positive and significant relationship between the main dimensions of customer service quality and customer satisfaction. Only, for tangibles (presenting dimensions like the appearance of employees, physical facilities, and equipment) was not found the positive and significant influence to customer satisfaction. This paper notes the importance of the service quality-adjusted pattern which is most often interesting to managers in order to influence customer satisfaction. Cobelli and Chairini (2020) analysed in pharmaceutical industry the adaptation of mobile apps for mobile health (mHealth) since those apps are perceived as tools for improving customer satisfaction and loyalty. The authors used the narrative inquiry technique combined together with critical event analysis to measure participants experience with the apps. They identified four factors who can discourage the adoption of new technologies, that is; confusion to confidence, suspicion to trust, frustration to education, mistrust to cooperation. Authors suggest that that new technologies will influence business performance in general but the acceptance may be a big problem and will require great commitment of company's resources. In the paper of Purwanto, Deviny & Mutahar (2020) the focus was on the millennial generation's loyalty since evidence show that they adopt and use technology more frequently than other generations and represent a significant factor in the use of mobile banking. The focus was on corporate image, application security, word of mouth (WoM), and trust in gaining customer loyalty. The study findings on the sample of 395 users of mobile banking showed the positive and significant relationship between the corporate image, application security, and word of mouth and millennial generation loyalty in using mobile banking applications mediated through trust. Authors propose analyzing other variables in the future which influence more deeply the millennial generation loyalty, such as advertising, satisfaction, service quality, and risk perception. Zollo et al. (2021) explore the factors between tourists' digital propensity their positive attitudes towards digital innovation and new technologies and their degree of economic support to museums. Authors contribution lies in creating an conceptual framework based on the extended technology acceptance model (TAM2) which was tested on 201 museum visitors in Italy. Results showed that loyalty and identification derived from digital experiences and social media activities cause tech-savvy visitors to be more willing to economically support digital museums (Zollo et al. 2021: 13). Kazakov, Ruiz-Alba & Muñoz (2020) investigated on 316 SME employees the concept of internal market orientation (IMO) and its effects on organisational performance.

The authors developed a novel *i*IMO theoretical framework that indicates the proliferation of ICTs in SMEs. Findings show that *i*IMO influences the improvement of employees' job satisfaction which then leads to employee loyalty.

4. CONCLUSION

The paper provided a review of literature addressing digitalization and its influence on customer satisfaction and customer loyalty. Some limitations of the article considers the term digitalization we choose as the search term because synonyms were further excluded from this search. Further only articles written in English language were chosen, which excluded works written in other languages. Finally, we limited to last two years in the search (2020,2021), as the time of global pandemic has massively influenced digitalization and going online which laid the foundations for the study of the problem analysed. For the systematic literature review two notable databases (WOS and Scopus) in the field of economics were analysed, which excluded other papers in other databases. Also period taken into research includes time of the pandemic, the beginning of 2020 and 2021. The research deals and explores the problem some companies face by going digital and the effect it has on customer satisfaction and customer loyalty. For example in pharmaceutical company the problems of trust, confusion to confidence, or frustration to learn how to use new apps, discourages customers from using them so customer is not satisfied with the offered possibility. On the other hand, some evidence from using the mobile banking apps which researches millennial generation as a population who uses often technology gives positive evidence about customer loyalty where trust of its consumers was built through positive corporate image, app security and word of mouth. This literature review may stimulate awareness in deeper analyzing the problem of digitalization and using new technologies and their impact on customer satisfaction and loyalty. Based on the literature review, the evidence about the analysed problem is scarce, however considering the limited time of the pandemic (less than 2 years) we expect that this field of interest is yet to come since the effect of digitalization and adaptation of new technologies and their influence on consumer are present on a daily basis, but yet not enough analysed through academic literature. The fact is that experiencing service online and off-line is not the same experience for the customer and this results in different satisfaction which can influence customer loyalty. The fact is that digitalization is our today, and not the future, anymore and companies will have to find new creative digital solutions for retaining its customers, their satisfaction level and gain their loyalty. Therefore we expect in upcoming years, a broader research development about the effects the digitalization on consumer satisfaction and loyalty.

LITERATURE:

1. Abebe, M. A., Tangpong, C., Ndofor, H. (2021). Hitting the 'reset button': The role of digital reorientation in successful turnarounds. *Long Range Planning*, 102102.
2. Almeida, F., Santos, J. D., & Monteiro, J. A. (2020). The challenges and opportunities in the digitalization of companies in a post-COVID-19 World. *IEEE Engineering Management Review*, 48(3), 97-103.
3. Baryshnikova, N., Kiriliuk, O., Klimecka-Tatar, D. (2021). Enterprises' strategies transformation in the real sector of the economy in the context of the COVID-19 pandemic. *Production Engineering Archives*, 27.
4. Beckmann, M., Garkisch, M., & Zeyen, A. (2021). Together we are strong? A systematic literature review on how SMEs use relation-based collaboration to operate in rural areas. *Journal of Small Business & Entrepreneurship*, 1-37.
5. Bouncken, R. B., Kraus, S., Roig-Tierno, N. (2021). Knowledge-and innovation-based business models for future growth: Digitalized business models and portfolio considerations. *Review of Managerial Science*, 15(1), 1-14.

6. Büyüközkan, G. & Göçer, F. (2018). Digital supply chain: literature review and a proposed framework for future research, *Computers in Industry*, 97 (2018), p. 157-177
7. Cheng, F. F., Wu, C. S., & Chen, Y. C. (2020). Creating customer loyalty in online brand communities. *Computers in Human Behavior*, 107, 105752.
8. Clerck, J.: Digitalization, *Digital Transformation: The Differences*. i-SCOOP (2017)
9. Cobelli, N., Chiarini, A. (2020). Improving customer satisfaction and loyalty through mHealth service digitalization: new challenges for Italian pharmacists. *The TQM Journal*, 33 (6), 1541-1560.
10. Endres, H., Huesig, S., & Pesch, R. (2021). Digital innovation management for entrepreneurial ecosystems: services and functionalities as drivers of innovation management software adoption. *Review of Managerial Science*, 1-22.
11. Entina, T., Karabulatova, I., Kormishova, A., Ekaterinovskaya, M., & Troyanskaya, M. (2021). Tourism Industry Management in the Global Transformation: Meeting the Needs of Generation Z. *Polish Journal of Management Studies*, 23(2), 130-148.
12. Hagberg, J., Sundstrom, M., Egels-Zandén, N. (2016): The digitalization of retailing: an exploratory framework. *International Journal of Retail & Distribution Management* 44(7), 694-712 .
13. Iglesias, O., Markovic, S., Bagherzadeh, M., Singh, J. J. (2020). Co-creation: A key link between corporate social responsibility, customer trust, and customer loyalty. *Journal of Business Ethics*, 163(1), 151-166.
14. Kazakov, S., Ruiz-Alba, J. L., & Muñoz, M. M. (2020). The impact of information and communication technology and internal market orientation blending on organisational performance in small and medium enterprises. *European Journal of Management and Business Economics*, 30 (2), 129-151.
15. Kolodiziev, O., Krupka, M., Shulga, N., Kulchytskyy, M., & Lozynska, O. (2021). The level of digital transformation affecting the competitiveness of banks.
16. Lindh, C., Rovira Nordman, E., Melén Hånell, S., Safari, A., Hadjikhani, A. (2020). Digitalization and international online sales: Antecedents of purchase intent. *Journal of International Consumer Marketing*, 32(4), 324-335.
17. Mahlamäki, T., Storbacka, K., Pylkkönen, S., & Ojala, M. (2020). Adoption of digital sales force automation tools in supply chain: Customers' acceptance of sales configurators. *Industrial Marketing Management*, 91, 162-173.
18. Markovic, S., Iglesias, O., Singh, J. J., Sierra, V. (2018). How does the perceived ethicality of corporate services brands influence loyalty and positive word-of-mouth? Analyzing the roles of empathy, affective commitment, and perceived quality. *Journal of Business Ethics*, 148, 721–740.
19. Nöjd, S., Trischler, J. W., Otterbring, T., Andersson, P. K., Wästlund, E. (2020). Bridging the valuescape with digital technology: A mixed methods study on customers' value creation process in the physical retail space. *Journal of Retailing and Consumer Services*, 56, 102161.
20. Oesterle, S., Buchwald, A., Urbach, N. (2020). Investigating the co-creation of IT consulting service value: empirical findings of a matched pair analysis. *Electronic Markets*, 1-27.
21. Parida, V., Sjödin, D., Reim, W. (2019). Reviewing literature on digitalization, business model innovation, and sustainable industry: Past achievements and future promises.
22. Princes, E., Manurung, A. H., So, I. G., & Abidinagoro, S. B. (2020). A closer look at the Consumer Conformity in Industry 4.0: Purchase Intention redefined. *Polish Journal of Management Studies*, 22.

23. Purwanto, E., Deviny, J., & Mutahar, A. M. (2020). The Mediating Role of Trust in the Relationship Between Corporate Image, Security, Word of Mouth and Loyalty in M-Banking Using among the Millennial Generation in Indonesia. *Management & Marketing*, 15(2), 255-274.
24. Reis, J., Amorim, M., Melão, N., Cohen, Y., & Rodrigues, M. (2019, July). Digitalization: A literature review and research agenda. In *International Joint conference on Industrial Engineering and Operations Management* (pp. 443-456). Springer, Cham.
25. Schöler, M., Fee Maier, M., & Liljedal, K. T. (2020). Motives and barriers affecting consumers' co-creation in the physical store. *The International Review of Retail, Distribution and Consumer Research*, 30(3), 289-310.
26. Shankar, A., Jebarajakirthy, C. (2019). The influence of e-banking service quality on customer loyalty: a moderated mediation approach. *International Journal of Bank Marketing*.
27. Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889-901.
28. Zollo, L., Rialti, R., Marrucci, A., & Ciappei, C. (2021). How do museums foster loyalty in tech-savvy visitors? The role of social media and digital experience. *Current Issues in Tourism*, 1-18.
29. ZorBari-Nwitambu, M. B. (2017). Positive Word of Mouth and Profitability: The Experience of Banks in Port Harcourt-Nigeria. *International journal of managerial studies and research*, 5(5), 42-48.
30. Zouari, G., & Abdelhedi, M. (2021). Customer satisfaction in the digital era: evidence from Islamic banking. *Journal of Innovation and Entrepreneurship*, 10(1), 1-18.

APPENDIX

List of selected papers

Paper ID	Paper reference
1	Zouari, G., & Abdelhedi, M. (2021). Customer satisfaction in the digital era: evidence from Islamic banking. <i>Journal of Innovation and Entrepreneurship</i> , 10(1), 1-18.
2	Zollo, L., Rialti, R., Marrucci, A., & Ciappei, C. (2021). How do museums foster loyalty in tech-savvy visitors? The role of social media and digital experience. <i>Current Issues in Tourism</i> , 1-18.
3	Cobelli, N., & Chiarini, A. (2020). Improving customer satisfaction and loyalty through mHealth service digitalization: new challenges for Italian pharmacists. <i>The TQM Journal</i> .
4	Purwanto, E., Deviny, J., & Mutahar, A. M. (2020). The Mediating Role of Trust in the Relationship Between Corporate Image, Security, Word of Mouth and Loyalty in M-Banking Using among the Millennial Generation in Indonesia. <i>Management & Marketing</i> , 15(2), 255-274.
5	Kazakov, S., Ruiz-Alba, J. L., & Muñoz, M. M. (2020). The impact of information and communication technology and internal market orientation blending on organisational performance in small and medium enterprises. <i>European Journal of Management and Business Economics</i> .

*Table 5: List of selected papers
(Source: Author's work)*



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