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C O N T E N T S

Articles and Statements

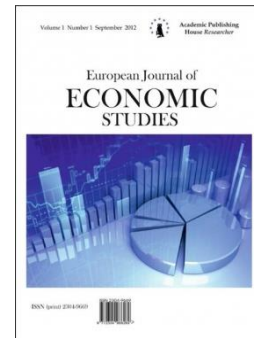
Educational Youth Tourism in Russia as a Basis for the Formation of the Labor Potential of Regional Staff V.A. Fomenko	104
Exploratory Analysis of Blockchain Application in Trade Finance S. Halilbegovic, A. Arapovic, N. Celebic, T. Atovic	110
Implementation Effects of “IFRS 9 Impairment Modelling for Financial Instruments” on Regulatory Capital Banks in Federation of Bosnia and Herzegovina S. Halilbegovic, E. Šaković, A. Arapovic-Omerbegovic, N. Celebic	120
Facing the Global Competitiveness Challenge and Quality of Business Freedom in Georgia Z. Mushkudiani, B. Gechbaia	131
Ungrounded Concern of Societies Regarding Possible Negative Outcomes of Shale Gas Extraction İ. Pak, F. Katman	136
On the Non-Economic Policy and the Post-Communist Experience of Georgia V. Papava	143

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Articles

Educational Youth Tourism in Russia as a Basis for the Formation of the Labor Potential of Regional Staff

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Abstract

This article discusses the prospects for the development of the labor potential of youth with the help of the existing system of educational youth tourism in Russia and specifically in the Krasnodar Territory as a particularly developed region in the historical, cultural, entertaining, Olympic and sports fields. The analysis of the concepts of «education», «tourism», «youth» is carried out with the help of regulatory sources and its own interpretation of the definition of «educational youth tourism» is given. Various youth forum sites of the Krasnodar Territory are characterized in terms of the effectiveness of influencing the labor potential of youth. The analysis was made of the functioning environment of the tourist cluster of the Krasnodar region in the field of educational youth tourism and its impact on the labor potential of young people in the Kuban region, taking into account competitive conditions in the global tourism market (natural and climatic conditions of increased comfort, unique cultural and historical resources; accessibility for wide layers and/or wealthy population; well-developed communication systems and financial infrastructure; study of tourist demand; information I support tourists in the place of stay) and the functioning environment of the tourist cluster of the Krasnodar region.

Keywords: regional economy, labor potential, youth forums, Krasnodar region, youth, tourism industry, specialists, managerial staff, tourist cluster.

1. Introduction

Educational youth tourism is a strategically important area in the development of the labor potential of the personnel of the tourism industry of the Russian Federation. The modern Russian tourism industry needs educated, moral, entrepreneurial people, capable of independently making responsible decisions in a choice situation, capable of teamwork, characterized by mobility, constructiveness, able to creatively adapt to the environment, that is, all the necessary skills that determine a high level of manifestation and implementation the labor potential of personnel in the relevant industry. Krasnodar region is particularly distinguished among the subjects of Russia in the tourism sector through a formed and developing tourism cluster, which has a powerful system of social and educational youth forums and platforms that help young people achieve certain successes in their endeavors, become competitive specialists, volunteers, and public figures.

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2. Study Area


The basis of the study proposed in the article was the author's independent empirical activity, scientific publications of Russian scientists and open Internet data in the field of developing the labor potential of the region under the influence of educational youth tourism, the tourism economy of the Krasnodar Territory, and the promotion of youth forums. In the process of writing this article, the following research methods were used: observation, systems approach, comparison, analysis and synthesis.

3. Discussion

One of the developing types of tourism product produced by the regulatory and regulatory subsystems of the Krasnodar region (the Ministry of Resorts, Tourism and Olympic Heritage of the Krasnodar region; the Department of Youth Policy of the Ministry of Education, Science and Youth Policy of the Krasnodar region) (Center for Tourism and Excursions KK, 2019) in the structure of the tourist cluster is educational youth tourism. Some areas of educational tourism began to develop in Europe in the second half of the 20th century, while Russia – towards the end. The beginning of the 2000s was marked by the fact that the World Tourism Organization has determined the strategic importance of educational youth tourism for the development of states in the field of improving the professional and personal qualities of future specialists and managers against the backdrop of growing momentum, globalization (Krasnodarstat, 2019).

The term «educational youth tourism» includes three distinct components that need to be considered (Federal Law «On Education», 2019; Federal Law «On the Basics of Tourist Activities», 2019).

Table 1. The system of components of «educational youth tourism»

	Tourism	Education	Youth
Source	Federal Law № 132-FL «On the Basics of Tourist Activities in the Russian Federation» dated November 24, 1996	Federal Law № 273-FL «On Education in the Russian Federation» of December 29, 2012	Decree of the Armed Forces of the Russian Federation dated 03.06.1993 № 5090-1 «On the Main Directions of State Youth Policy in the Russian Federation»
Definition	Temporary departures (trips) of citizens of the Russian Federation, foreign citizens and stateless persons from a permanent place of residence for recreational, educational, professional, business, sports, religious and other purposes without engaging in paid activities in the country (place) of temporary residence	A single purposeful process of education and training, which is a socially significant good and carried out in the interests of a person, family, society and the state, as well as the totality of acquired knowledge, skills, values, experience and competence of a certain volume and complexity for intellectual, spiritual and moral, creative, physical and (or) professional development of a person, satisfaction of his educational needs and interests.	The category of youth in Russia includes citizens from 14 to 30 years old. However, young scientists are shifting within this age to 35 years
			
EDUCATIONAL YOUTH TOURISM			
Tourist trips of citizens aged 14 to 35 for a period of 24 hours to 6 months, tours for the purpose of education, curiosity and other cognitive interests in the form of courses, forums, internships, festivals, camps without engaging in activities related to income from sources in the country (place) of temporary stay			

Thus, one of the aspects of the educational youth tourism methodology is a systematic approach that allows us to identify the concept of educational youth tourism as a combination of the components of three separate concepts – education, tourism and youth (Ivanova, 2017; Ponomareva, 2015). Educational youth tourism, which includes the totality of the above components, is basic for the development of the labor potential of future workers in the tourism industry, which already confirms the existence of relevant events with many thematic shifts (Adashova, Kosareva, 2017).

On the territory of the Krasnodar Territory there are all-season platforms that collect not only the youth of the Kuban region, but also are all-Russian and international (Fomenko, 2019). Among the largest should be noted:

1. «Slavic krugosvetka» – a profile water camp trip.

Description: passing the course of initial tourist training, practical training in rafting on sports and tourist vessels, which takes place during the first day of stay in the camp. Practical classes include topics such as canoeing, boarding and disembarking, the correct position of the rower, the technique of sailing and mooring, techniques for rational rowing and steering, the pace, the rhythm of rowing in various conditions, the interaction of the crew, the technique of movement against the current. Age of participants is from 14 to 17 years.

2. «Territory of tourism» – a school of primary tourism training for young people.

Description: training of specialists and organizers for work with youth in the field of tourism, holding seminars with specialists of youth affairs bodies of the Krasnodar region in the field of organizing tourism activities at the age of 14 to 30 years.

3. «Region 93» – campground.

Description: the formation of conditions for the perception by young people of the socio-political, economic and moral principles necessary for the implementation of the main directions of state youth policy in the territory of the Krasnodar region, training in the preparation of promising projects that have a clear social orientation and an obvious economic result, the development of project thinking, training and consolidation of practical project management skills, preparation of a balanced and effective team of young leaders with high competitive potential, popularization of various types of creativity, sports and tourism, contributing to the diverse development of youth from 14 to 30 years (Region 93, 2019).

4. «Mayak» – sports and fitness camp.

Description: the main program of the camp is based on the implementation of thematic shift programs, sports, tourist and leisure programs. Directions – hiking, parkour, swimming, yachting, general physical training, game sports. Age – 14-17 years.

When assessing the competitiveness of the tourist cluster of the Krasnodar Territory in the direction of educational youth tourism and whose impact on the development of the labor potential of the region, we characterize the environment in which the cluster developed and operates, compare it with the competitive conditions on the world and Russian markets (Yudina, 2015; Medyankina, 2018).

Table 2. Analysis of the functioning environment of the tourist cluster of the Krasnodar region in the field of educational youth tourism (Ivanov, 2019; Sundukova, 2018)

Conditions of competitiveness in the global tourism market	The environment of functioning of the tourist cluster Krasnodar region
Conditions for factors of production	
Natural and climatic conditions of increased comfort, unique cultural and historical resources	The conditions correspond to international standards – the presence of unique natural complexes and places, a rich and diverse culture, world heritage sites, world-famous tourist images for the development of educational tourism

Accessibility for the general public and/or wealthy population	Potential conditions meet world requirements – the presence of a well-developed international transport system Remoteness of some areas from the main ones generating tourist flows
Convenient access to objects of tourist interest, developed communication systems and financial infrastructure	The conditions comply with international requirements. A developed network of roads and their good condition make it difficult to access objects of tourist interest. Satisfactory level of communication outside large urban areas. Average complexity of financial instructions
Demand state	
Study of tourist demand	There is a need to create a better system for continuous market research, a system for collecting, processing and analyzing statistical information
Focus on specific consumer groups	Lack of focus on the combined tourism products and clarity in understanding target segments
Taking into account changing consumer preferences in the market	In Krasnodar region tourism is mainly developing for the purpose of recreation and entertainment. However, the European leisure travel market, which generates wide tourist flows in KK, has reached saturation. Tourism products offered on the market should change over time under the influence of fashion, taking into account safety requirements and based on knowledge in the field of marketing and advertising
Tourist information support at the place of stay	There is a need to create an information system in tourism
Sustainable Strategy, Structure and Competition	
Intense competition between service enterprises, leading to: – an increase in the number of firms professionally working in the market; – in-depth market segmentation; – improving the quality of service	The severity of competition varies depending on the market for tourism products. The difficult entry of new events into the market of educational youth tourism, the result is a slow increase in investment in the development of the labor potential of staff and poor diversification of supply in the emerging product/market segments
Related and supporting industries	
The presence of a critical mass of enterprises of related and supporting industries	In the structure of educational youth tourism, the number of participants increases with each season. New resorts are appearing for which the training of personnel is of particular importance. Links between tourism industry enterprises and supporting sectors are developed

Superior basic services and infrastructure	Tourism in the Krasnodar region is elitist and economical in nature and is designed for high-income and medium-income segments of the population. However, even the highest quality service by local standards in some regions does not meet international standards. The service culture in some supporting industries is not high enough. In the peripheral areas, the general infrastructure is underdeveloped
Ease of movement around the country	High quality transport services

Currently, the formation of a number of regional and local tourist clusters in the direction of the development of educational youth tourism with the goal of improving the labor potential of the region's personnel in the tourism industry does not stop in the Krasnodar region (Toktamysheva, 2018). In essence, the system of interconnected organizations and institutions that is developing within the framework of special economic zones on the basis of public-private partnerships in the field of educational youth tourism can be considered as a developing regional tourist cluster (Ramtun, 2016).

4. Conclusion

In the framework of the study of the impact of educational youth tourism in the Krasnodar Territory on the labor potential of future specialists and managers of the tourist industry, through such large youth sites as «Region 93», «Slavic krugosvetka», «Tourism Territory», «Mayak» the components of the system of «educational youth tourism» using official sources were identified, the definition of «educational youth tourism» was identified and formulated. Analysis of the functioning environment of the tourist cluster of the Krasnodar region in the field of educational youth tourism was carried out taking into account the conditions for factors of production, demand, sustainable strategy, structure and competition, related and supporting industries.

Thus, the study of educational youth tourism presented in the article by the author in Russia and the Krasnodar Territory as the basis for the formation of the labor potential of the region's personnel shows the development of the tourism cluster in this direction, since it assumes a positive effect on the economy of the Kuban region.

References

Adashova, Kosareva, 2017 – Adashova T.A., Kosareva N.V. (2017). Obrazovatel'nyi turizm kak perspektivnoe napravlenie razvitiya rossiiskogo v'ezdnogo turizma [Educational tourism as a promising direction for the development of Russian inbound tourism]. *Industriya turizma: vozmozhnosti, priority, problemy i perspektivy*, T. 10, №1, pp. 65-73. [in Russian]

Federal'nyi zakon «Ob obrazovanii», 2019 g. – Federal'nyi zakon ot 29 dekabrya 2012 g. № 273-FZ (s izmeneniyami ot 26 iyulya 2019 g.) «Ob obrazovanii v Rossiiskoi Federatsii» [Federal Law dated December 29, 2012 № 273-FL (as amended on July 26, 2019) «On Education in the Russian Federation»]. «Sobranie zakonodatel'stva Rossiiskoi Federatsii», 31 dekabrya 2012 goda, № 53 (chast' 1), st. 7598. [in Russian]

Federal'nyi zakon «Ob osnovakh turisticheskoi deyatel'nosti», 2019 g. – Federal'nyi zakon ot 24.11.1996 g. № 132-FZ (s izmeneniyami ot 06.06.2018 g.) «Ob osnovakh turisticheskoi deyatel'nosti v Rossiiskoi Federatsii» (s izmeneniyami i dopolneniyami, vveden v silu s 01.07.2009 g.) [Federal Law dated 24.11.1996 № 132-FL (as amended on 06.06.2018) «On the Basics of Tourist Activities in the Russian Federation» (as amended and supplemented, entered into force on 07/01/2019)]. «Sobranie zakonodatel'stva RF», 02.12.1996 g., № 49, st. 5491. [in Russian]

Fomenko, 2019 – Fomenko, V.A. (2019). The Formation and Influence of the Constituent Elements of the Labor Potential of Staff on the Development of the Tourism Industry. *Sochi Journal of Economy*, 13(1), pp. 11-16.

Ivanov, 2019 – Ivanov, V.D. (2019). Obrazovatel'nyi turizm kak perspektivnoe napravlenie molodezhnogo turizma [Educational tourism as a promising area of youth tourism]. *Fizicheskaya kul'tura. Sport. Turizm. Motornyi otdykh*, T. 4, №1, pp. 98-102. [in Russian]

Ivanova, 2017 – Ivanova, Yu.O. (2017). Obrazovatel'nyi turizm kak perspektivnoe napravlenie razvitiya turizma v regionakh [Educational tourism as a promising direction for the development of tourism in the regions]. *Vzglyad molodykh uchenykh na problemy ustoychivogo razvitiya. Sbornik nauchnykh statei po itogam III Mezhdunarodnogo kongressa molodykh uchenykh po ustoychivomu razvitiyu: v 10 tomakh*. Pp. 313-318. [in Russian]

Krasnodarstat, 2019 – Ofitsial'nyi sait Upravleniya Federal'noi sluzhby gosudarstvennoi statistiki po Krasnodarskomu krayu i Respublike Adygeya [Official website of the Office of the Federal State Statistics Service for the Krasnodar Region and the Republic of Adygea]. [Electronic resorce]. URL: <http://krsdstat.gks.ru/> [in Russian]

Medyankina i dr., 2018 – Medyankina, N.Yu., Bibina, E.N., Lomakina, N.A. (2018). Kul'turno-poznavatel'nyi turizm kak vazhnaya chast' ekskursionnoi sfery molodezhnogo turizma [Cultural and educational tourism as an important part of the excursion sphere of youth tourism]. *Tendentsii razvitiya turizma i gostepriimstva v Rossii. Materialy studencheskoi nauchno-prakticheskoi konferentsii*. Izdanie S.V. Dusenko, N.V. Kosareva. Pp. 204-209. [in Russian]

Ponomareva, 2015 – Ponomareva, T.V. (2015). Obrazovatel'nyi turizm kak innovatsionnyi metod obrazovatel'nogo protsessa [Educational tourism as an innovative method of the educational process]. *Molodoi uchenyi*, №12, pp. 792-795. [in Russian]

Ramtun, 2016 – Ramtun, D. (2016). Servisno-orientirovannyye metody v obrazovatel'nom turizme: instrument povysheniya effektivnosti metodov obucheniya [Service-oriented techniques in educational tourism: a tool for strengthening the effectiveness of educational methods]. *Sotsial'noe vremya*, № 1 (5), pp. 142-145. [in Russian]

Region 93, 2019 – Ofitsial'nyi sait Kubanskogo molodezhnogo foruma «Region 93» [Official site of the Kuban youth forum «Region 93»]. [Electronic resorce]. URL: <https://region-93.ru/> [in Russian]

Sundukova, 2018 – Sundukova, T.O. (2018). Obrazovatel'nyi turizm v podgotovke budushchikh spetsialistov v sfere turizma i gostepriimstva [Educational tourism in the training of future specialists in the field of tourism and hospitality]. *Vestnik sovremennykh issledovaniy*, №10.1 (25), pp. 119-121. [in Russian]

Toktamysheva, 2018 – Toktamysheva, Yu.S. (2018). K voprosu o trudovom potentsiale Rossiiskoi Federatsii [To the issue of the labor potential of the Russian Federation]. *Razvitie teorii i praktiki upravleniya sistemami ekonomiki, potrebleniya i kooperatsii; razvitie teorii i praktiki upravleniya khozyaistvuyushchimi sub"ektami i publichnymi sub"ektami. Materialy mezhdunarodnykh nauchno-prakticheskikh konferentsii*. Pod nauchnoi redaktsiei K.V. Pavlova O.V. Kotlyachkova, A.V. Tikhonova, D.V. Kondrat'eva. Pp. 101-104. [in Russian]

Tsentr turizma i ekskursii KK, 2019 g. – Ofitsial'nyi sait Gosudarstvennogo byudzhethnogo uchrezhdeniya «Tsentr turizma i ekskursii» v Krasnodarskom krae [The official website of the State Budgetary Institution «Center for Tourism and Excursions» in the Krasnodar Region]. [Electronic resorce]. URL: <https://ctekrd.wixsite.com/utur>. = [in Russian]

Yudina, 2015 – Yudina, T.A., Balanyan, M.N. (2015). Molodezhnyi turizm kak faktor razvitiya mezhdunarodnogo turizma v Krasnodarskom krae [Youth tourism as a factor in the development of international tourism in the Krasnodar Territory]. *Teoriya i praktika obshchestvennogo razvitiya*, №5, pp. 18-22. [in Russian]

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Exploratory Analysis of Blockchain Application in Trade Finance

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Abstract

This study is using exploratory analysis to explain blockchain technology application and its importance in trade finance for call centers and dispatcher companies. The plan is to process the Internet sources that are gathered involving blockchain, call centers and booking business and move little deeper in the world of call centers, including direct information and statistics from the managers of Inmotion Ltd. This study will review the actual introduction of blockchain as young technology, the importance of blockchain applications and its content, and within analysis and discussion part this research will try to propose the solution to this or similar company, that has an access to a huge number of human resources as the most important asset for their business.

Keywords: blockchain applications, trade finance management, dispatch industry.

1. Introduction

This study is analyzing Blockchain technology application and its importance in trade finance. As the topic name says, it will focus on a certain industry which is dispatcher and call center companies in Bosnia and Herzegovina. The main purpose of these companies is that they serve as intermediary of trade between customers and their deliverers, and that makes them as a guarantee that trade and delivery will happen. Usually, call center companies in BiH have their origins in Germany which part of job contains speaking only in German, but this will be an overview of a young call center company doing its business in USA from BiH with background of the company based in United States of America.

Blockchain is still young technology which is involved in numerous challenges. It has the potential to change many aspects of financial services sector, the economy overall and it introduces new ways to intermediate capital and risk to financial firms. This means that Blockchain will change, improve and secure many more sectors and every aspect of economy in total. However, the technical and social infrastructure supporting the technology is still significantly underdeveloped.

Blockchain consists of a number of technologies that work together to create a financial book of recorded data objects called blocks. These blocks provide a framework for digital currencies, such as bitcoin, to conduct secure online transactions. Meaning that Blockchain has one block from where it starts, and every next block contains its own data, its own hash and hash from previous block accept the first one. That gives the operations or transactions security with which this concept would change and improve everything in the near future.

Call center that is used as an example is Inmotion Ltd. Inmotion is a logistics solutions provider and the company is able to coordinate shipments using all types of transportation

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including: over the road, air, ocean, intermodal, cartage and LTL shipments. Inmotion is the operational support portion of our operations in BiH and it has several branches in several cities like Bihać, Velika Kladuša, Sarajevo and Tuzla.

In call centers and dispatcher companies, trade finance is most common financial service and tool with which they operate. Trade finance includes payment, lending, the issuance of letters of credit, factoring, export credit and insurance. Companies involved with trade finance are importers and exporters, banks, insurers, credit agencies and service providers.

2. Literature review

In the data that is collected, the concept of blockchain is explained in the book „The Impact of Blockchain Technology on Finance: A Catalyst for Change“, which is written by five author and is very young being published in 2018 at „International Center for Monetary and Banking studies“ (ICMB). Talking points are Blockchain beginnings and what the Blockchain is, the book describes Blockchain technology basics, Blockchain opportunities and challenges and most important part for this study, the part of Blockchain technology and finance. In that part they focused on where Blockchain could have impact like payments, digital identity, primary securities issuance, security clearing and settlement, derivatives, post-trade reporting and trade finance. This book also features the parts of public policy considerations and regulation of crypto-finance and broader potential economic impact (Casey, 2018). While talking about steps to introduce Blockchain, we examine the article from blockgeeks.com in 2018 which gives us an inside look from famous experts that Blockchain is an incorruptible digital ledger of economic transactions and that it can be programmed to record not just financial transactions but virtually everything of value. As revolutionary as it sounds, Blockchain is truly a mechanism to bring everyone to the highest degree of accountability. There will be no more missed transactions, human or machine errors, or even an exchange that was not done with the agreement of the parties involved. Above anything else, the most critical area where Blockchain helps is to guarantee the validity of a transaction by recording it not only on a main register but a connected distributed system of registers, all of which are connected through a secure validation mechanism (blockgeeks.com).

The researchers at Harvard were also taking their look at Blockchain revolutionary purpose. They begin their review with a slogan that says: „It will take years to transform business, but the journey begins now.“ According to these authors, contracts, transactions, and recordings of them are among the defining structures in our economic, legal, and political systems. They protect assets and set organizational boundaries, they establish and verify identities and chronicle events and they govern interactions among nations, organizations, communities and individuals. „They“ in these sentences refer to every governed and authorized body in the world. Blockchain promises to solve all these problems and could dramatically reduce the cost of transactions and, if adopted widely, reshape the economy (Iansiti, 2017). Blockchain is decentralized architecture and distributed computing paradigm that has recently attracted attention from all sectors of society, believed by the authors that written the research named „Blockchain, bank credit and SME financing“ (Wang, 2018).

The commentary „4 effects of blockchain on financial services“ is written in the form of article and is published at the blockchaintechnews.com in July 2017. They stated that Blockchain is best suited for the environments where is shared information and distrust or a need for validation between two parties. Bearing this in mind, they set out some thoughts on aspects of financial services likely to be impacted by the development of Blockchain technology. Four types of financial services that Blockchain effects are: Payments and clearance, Capital markets, Operations and Currency (Christensen, 2017).

According to Subbiah, one of the authors of the book „The Age of Blockchain: collection of articles“, Blockchain is a revolutionary database that goes away with the weaknesses of traditional solutions for storing big data. It provides a transparent record of the entire business network, allowing buyers and sellers of each transaction to track where the transaction is in its lifecycle (Subbiah, 2018). Blockchain as a technology is more of a ledger recording "agreements" and it is a system which contains a continuously growing list of records, called blocks, which are linked and secured using blockchain-based encryption. We will deal with similar case to our topic and the author Abbaspour in his published chapter, focuses on Blockchain technology for mining industry and presents a case with dispatching inside of it. According to him mining industry has been always

one of the targets for hackers. In addition, it is dealing with receiving and recording huge amount of data, that are in need to be securely stored and easily be available. In this chapter published in September 2018, some of this is presented and processed as well as the case study of a truck dispatching system based on Blockchain concept (Abbaspour, 2018).

The paper written by Tsai in 2016 presents system-related issues for Blockchain in financial applications. At first it presents the design of Blockchain without consideration of any application scenarios and issues such as performance, security and scalability, leading to specific Blockchain designs. Sample Blockchain scenarios are analyzed and this lead to additional designs. Specifically, as written here, two new kinds of Blockchain emerge: for storing information at transactional level and for storing account information. By splitting traditional Blockchain into these two Blockchains, it allows one to optimize the system with respect, scalability and privacy (Tsai, 2016). The article „5 blockchain technology use cases in finance“ written by Jacob Boersma, one of the managers in Deloitte which branch is in Netherlands, discussed about Blockchain use in banking industry and in finance overall. This author highlighted topics like „What is Blockchain technology“, „Speeding up and simplifying cross-border payments“, „The future of share trading“, „The benefits of smart contracts“ and „How to improve online identity management“, and gave five particular articles with covering mentioned fields of finance and giving the separate view of every single one particularly (Boersma, 2018).

A papers that are published almost 20 years ago, explained the call center importance and use in modern era. According to this paper the importance of call centers in the economy has grown dramatically since 1878, when the Bell Telephone Company began using operators to connect calls. In the United States, more people work in call centers than in, for example, agriculture from 1997 (Pinedo, 1999). The article „Determining the Trade-Offs between Service and Sales in Retail Banking Phone Centers“ explores the trade-offs between service and sales in call center operations in retail banking and develops an analytical approach to quantify the costs and benefits of moving toward a sales-focused operation. It is shown that in addition to its visible costs, such as training and technology to build support systems for sales activities, cross-selling can have damaging effects on customer service due to the additional load it creates on the system. It is further demonstrated that designing the right process and adopting human resource practices that support this design are critical in determining the success of a cross-sell program (Halilbegovic, 2018).

The chapter „Call Center“, written on Research Gate at April 2017 by three authors is covering a little preview of how call centers are doing their business and this source is relatively new because of youth expansion of this industry. As for these authors the call center handles sales calls for an insurance company and needs real-time performance data for his group based on a number of key metrics. They explain a dashboard which runs on a large wall-mounted display so that the manager and members of the call center can monitor it periodically throughout the day. People like to have feedback on their performance, recognition for success, and they like to know where they stand (Wexler, 2017). According to Sato, call center is a division that specializes in dealing with customers. Early studies on call centers regarded them as a strategically important areas that, despite some negative aspects, were acknowledged to possess a certain level of expertise and to have a high degree of autonomy as interfaces for customers. However, this view gradually changed, with call centers coming to be seen as workplaces presented by harsh working conditions and isolated from the other divisions of the company (Sato, 2018).

3. Methodology

Choosing a exploratory approach and analysis:

This research paper adopts a exploratory research approach and will use that methodology. It is the approach to analyze data sets to discover their main, visual characteristics. A statistical model can be used or not, but this approach is mainly for exploring and discovering what some data can tell us beyond the formal modeling or hypothesis testing task. This technique often uses multiple disciplines in one study. The plan for the analysis is to explore two different call center eras from around year 2000 and today, to compare situation in USA with call center in BiH and what effect would be caused to apply Blockchain into call centers. There are advocates that are considering that applying Blockchain technology can exclude and turn off the brokers in the world.

If that happens, it creates the collapse in call centers. This study tries to give a way on how to use Blockchain to make a business world easier, but not to destroy the job of millions of people.

In Bosnia and Herzegovina these things go slower, so mentioned jobs are safe for now. Brokers, bookers and dispatchers in call centers can do their job regularly. It is the matter of time on when Blockchain will come to BiH, but it is not for sure that we are that much developed to use it in every department of our economy. Many people in charge are certainly afraid of the technology and some of them does not even have a clue what this technology brings to the table.

Sources, data, materials from Internet and direct visit to Inmotion:

The literature review in this study starts by the sources from the Internet about Blockchain, Blockchain for beginners, the truth about Blockchain, going through the articles of what are Blockchain uses in financial services overall, then using the sources connected with trade-offs in call centers, the purposes of call centers and dispatcher companies, contain of trade finance and etc.

The plan is to process these Internet sources that are mostly mentioned in the section above and move little deeper in the world of call centers, including some direct informations and statistics from the managers of Inmotion Ltd. company. The information from company that is included in this research is provided by office and human resource manager of Inmotion Ltd. They have given a plan on technology importance and effect on the business in total now and in the near future, in what state are the financial statements of the company and particularly how they manage employment as their biggest asset and revenues after they book transactions and operations. After meeting with them and collecting the important information, the idea is to see if the company can manage to not fall behind from competitors, we will see if the company is planning to determine the use or threat of Blockchain technology and how that will effect all of their many aspects of business.

Going through articles on research browsers and pages there is no specific topic with the similar name as this research paper. Including in the search of the particular parts of this topic, there is a way to find some connections, but the rareness of the researches on this specific subject makes this research more complicated to write.

Categorization and analysis of the sources from Inmotion company and Internet:

The aim was to create a research paper or a study which would have processed one example of business in Bosnia and Herzegovina, which is increasing highly in the last 4–5 years. This data and these sources material is for the business that has global implications. The data used is not old too much with some exceptions.

The company that is covered is not older than 3 years, the books used are inside of last 4-5 years and articles are usually new and only few months old. This confirms that the parts of topic that were mentioned, as the dispatcher/call center companies and Blockchain technology, are growing simultaneously. Besides the Internet sources, the insert of Inmotion Business Plan and their first-hand examples of business will be included and provided with an inside look of how the booking system actually works. That data will be helpful to conclude how the Blockchain can react on every detail in this business.

Organization of the data with application of Blockchain:

This research paper is starting with the introduction and it mainly focuses on Blockchain technology. Even there are some data and sources that were used to close up the intention of what will be written in this study. The books and the articles were used to define the Blockchain technology. The study continues with mentioning the sources from which data is mostly collected and later in references will be mentioned every data and material source gathered for the sake of this research. The large part of analysis and discussion will be the information and data collected from intervening directly to the origin for this idea and topic.

That data is also mixed to round up what have been tried to be put up close. After going through the analysis and discussion, the study will go into the conclusion. This will give the answer to use Blockchain or not to use it in this business, and will create the clear view for owners and investors future activities for this type of business. The Blockchain itself will overtake the world in the following years and we must consider the existance of call center jobs.

Blockchain application in this research:

As it is already mentioned, all of the data will be analyzed with exploratory research approach. It will gather the information and theory but also the data directly from the company and will be insured that data is analysed and represented. This approach will explain and show on

what way is Blockchain technology is going to effect and influence this business, make it easier, more reliable, secure, unhackable, fast, with less contributed energy, organized, mark, noble and worthy. The methodology is the part where is the reveal of the procedure and where did data, material and sources of the topic were gathered. The conditions of this paper are limited and it faces particular restrictions, the procedure is possible by using already provided materials, variables and statistical informations. This study focused on one of the world's most expandable territory in finance by using the trade finance, and global topic of Blockchain technology.

Even so Bosnia and Herzegovina is undeveloped country, ignoring Blockchain technology and its use would sink our level of development even deeper. Postponing the aquisition of this technology can only result in downfall, because this country is full of non-legal actions, bribe, criminal, thefts and etc. As a targeted country and classified as the environment where non-valid information and distrust is present in every aspect of business, the appointment of Blockchain should be as soon as possible.

This special topic is the type of one that should be more covered and researched because more and more people are engaging into this businesses. By taking each part of the topic, the study tries to conclude everything into one unity and try to minimize the wideness of it. Blockchain will provide the security in almost all fields of life and this research pointed out the one that is very rare in mentioning and processing.

4. Analysis and discussion

In the study from 1999 named „Determining the Trade-Offs between Service and Sales in Retail Banking Phone Centers“, the authors are taking their view of call centers at the start of a new century. Call centers, also known as phone or customer service centers, have become one of the most important delivery channels for service firms throughout the world. In these centers, customer service representatives with direct access to their firm's databases provide service to customers over the phone. For some companies, call centers take on a support role next to a major physical delivery network, and for others it is the sole delivery channel that constitutes the firm's entire customer interface. The 1990s has seen a growing focus on phone centers, as alternative low-cost service delivery channels across a variety of industries. This growth has been enabled by developments in telecommunication and information technology that have allowed phone centers to route incoming calls to the appropriate agents, to perform standard queries or transactions automatically in voice response units, and to access and update central customer databases, thereby enabling the online performance of many transactions. This approach attempts to explore the issue of compatibility between service and sales, when viewed from an operations standpoint. Specifically, this study is considering a call center that is primarily designed for low-cost, high-quality customer service. This type of a center will strive to keep customer wait times at a minimum, thereby reducing the number of abandoned calls, while achieving the goals with the smallest number of well-trained service representatives as possible (Aksin 1999).

At the next figure we see the company and their code, adress, phone and branch in the first section where it stands as Buchanan Logistics, INC. In second section we see the trucking company which is Landstar Ranger from Jacksonville Florida, with contact, phone and order date. At third and fourth section we have commodity, weight, trailer (type of transporter), refference, then customer company which is Autozone DC, their adress and date of expected delivery. That section contains refference numbers and last section contains payment, carrier freight pay and total carrier pay.

This is one example used from Inmotion Ltd. to overview how traditionally the load is booked. This receipt is the check provided for trucking company and the actual profit that broker or dispatcher collect for the company is the difference from what is the payment price provided on the check for customer company. If the whole payment from customer company is 2600 \$, the payment for the trucking company is 2000 \$, and the profit of the booker is 600 \$.

BUCHANAN LOGISTICS, INC. MC# 431807		www.buchananhauling.com	
4625 Industrial Rd Fort Wayne, IN 46825			
Phone 260-471-1877	Ext: 2507	24/7 & Afterhours 260-469-0521	Page 1
FAX:		Email: marias@buchananhauling.com	Buchanan Order # 1980514
Carrier: LANDSTAR RANGER	FL 32224-9137	Contact: Tom	
JACKSONVILLE		Phone: 210-876-0023	
Order Date: 07/27/2018 1611		Fax:	
Driver Name:	Commodity: HAZARDOUS CHEMICALS		
Driver Cell:	Weight: 39824.0	Trailer: VAN OR REEFER	
Carrier Tractor:	Temperature range:		
Carrier Trailer:	Reference: 776720234		
PU 1	Name: AUTOZONE DC 55 CROSSDOCK	Date: 07/28/2018 1700	
	Address: 2350 AIRPORT RD		
	TERRELL	TX 75160	Driver Load: N
Reference number:	ZZ	SOLO	
Reference number:	AO	1963006	
Reference number:	PO	77188872	
Reference number:	PO	77190304	
Reference number:	PO	77191050	
Reference number:	PO	77192373	
Reference number:	PO	77192390	
Reference number:	PO	77192770	
Reference number:	PO	77192390	
Reference number:	PO	77190304	
Reference number:	PO	77191050	
Reference number:	PO	77188872	
Reference number:	PO	77192770	
Reference number:	PO	77192373	
Reference number:	PO	77180272DI	
Reference number:	PO	77182170DI	
Reference number:	PO	77185969DI	
Reference number:	PO	77192166DI	
Reference number:	PO	77180272DI	
Reference number:	PO	77190304	
Reference number:	PO	77191050	
Reference number:	PO	77192373	
Reference number:	PO	77192390	
Reference number:	PO	77192770	
Reference number:	PO	77192390	
Reference number:	PO	77190304	
Reference number:	PO	77191050	
Reference number:	PO	77188872	
Reference number:	PO	77192770	
Reference number:	PO	77192373	
Reference number:	PO	77180272DI	
Reference number:	PO	77182170DI	
Reference number:	PO	77185969DI	
Reference number:	PO	77192166DI	
Reference number:	PO	77180272DI	
Reference number:	PO	77182170DI	
Reference number:	PO	77185969DI	
Reference number:	PO	77192166DI	
Reference number:	PO	77192082	
Reference number:	PO	77192082	
Reference number:	PO	77190063	
Reference number:	PO	77190063	
Payment	Carrier Freight Pay:	\$2,600.00	
	Total Carrier Pay:	\$2,600.00 USD	
Instructions			
Special instructions here			

Fig. 1. Transaction Receipt (Buchanan Logistics, INC. – Landstar)

As written in the book „The Impact of Blockchain Technology on Finance: A Catalyst for Change“, Blockchain technology can reduce the cost of trust, something that manifests itself in numerous ways within the financial system. These costs range those associated with vault doors, cybersecurity, settlement procedures, user identification, compliance teams, security guards and anti-fraud regimes, to the excess amounts that banks and other centralised institutions can charge customers.

Trust exists in the fundamentals of deposit banking, custody, insurance and secondary market trading. Depositors must trust the safety of their money at a bank. Market participants trust that their trades will be executed fairly according to a transparent set of rules. Financial institutions must trust costly back-office processes to reconcile centralised ledgers and accounting systems. In an effort to address these various costs, Distributed Ledger Technologies are being explored by institutional actors such as large banks, exchanges, clearing houses and central banks, as well as by

new firms seeking to disrupt existing business models. Incumbent firms are hoping the technology can help them lower costs and risks, particularly for back-office or post-trade functions. Start-ups are aiming to provide the public with better and lower priced services while possibly capturing part of the significant economic rents within the financial services sector (Casey, 2018).

The authors wanted to close up that financial services sector, like other important sectors of global economy, has faced numerous challenges and showed some flaws. History is loaded with banking and financial sector crises. Tens of millions of people around the globe lost their jobs or their homes as a result of the 2008 financial crisis. Even there is a need to carefully explore and consider how application of Blockchain technology will affect financial stability, it is also worth exploring how this technology, might help build a more flexible and stable financial sector. The 2008 financial crisis is the latest reminder of the long history of large risk in the financial sector. Current methods for clearing and settling transactions, even improved from earlier generations, remain costly with many reconciliation and risks. Furthermore, many financial products have high transaction costs in many parts of the world.

In the next figure we can see similar transaction as the previous, but here is an example of detailed summary of rate, commodities, stops, accessorials and equipment used in this transaction. This paper that shows a customer agreement, contains invoices and total revenue, description of commodities, address of stops, and in the upper section there are informations about the load. We see that the profit of this booker is 450 \$. If we want to use Blockchain technology, in this case there will be included a load information section and only a revenue for delivering company.

Landstar - AUZ Customer Rate Confirmation Agreement
The CUSTOMER and CARRIER agree that they are bound by all of the conditions contained herein. CUSTOMER hereby agrees that in the event its acknowledgment and acceptance is transmitted to CARRIER through an affirmative e-mail message, the CUSTOMER hereby agrees that such form of acknowledgment and acceptance constitutes a writing signed by both parties.

FREIGHT BILL NUMBER: 5323586

Date: 7/27/2018
 Confirmation Effective Date: 7/27/2018
 Expiration Date: 7/27/2018

Load Number: 14756282
 Load Count:
 Load Type: TL

Agency Information
 Name: AUZ
 Address: 412 N BENTON ST
 City, State ZIP: WINNEBAGO , IL 61088-9574
 Contact: Tommy
 Email: tom.sh@taylor-corp.net
 Phone: (210) 876-0023
 Fax:

Billing Information
 Company: GILTNER LOGISTICS SERVICES INC
 Address: PO BOX 5128
 City, State ZIP: TWIN FLS, ID 83303-5129
 Contact:
 Email:
 Phone: (208) 644-9090
 Fax:

Load Origin
 Company: QUALICHEM INC.
 Name: KELLY
 Address: 2003 SALEM INDUSTRIAL
 City, State ZIP: SALEM ,CU, VA 24153
 Pickup Date/Time: 7/31/2018 13:00
 Loading Instructions:
Load Destination
 Company: TORONTO LUBE SERVICE
 Name:
 Address: 3175 14TH AVE, UNIT #2
 City, State ZIP: MARKHAM, ON L3R0H1
 Dropoff Date/Time: 8/1/2018 08:00
 Unloading Instructions:

JIT: No COD on Commodity: No Total Miles: 507

Rate Summary		
Invoice Line Haul	Invoice Accessorial	Total Revenue
\$2,000.00	\$450.00	\$2,450.00

Commodities									
Pcs	Description	Dimensions	Cargo Value	HighRisk	Rate	Line Haul	Miles	Weight	Rate Type
	HAZMAT NON-HIGH RISK OR AA5E			No	\$2,000.00	\$2,000.00	507	41621	Flat

Stops			
Address	City, State	Zip	Date, Time
2003 SALEM INDUSTRIAL	SALEM ,CU, VA	24153	7/31/2018 13:00
3175 14TH AVE, UNIT #2	MARKHAM, ON	L3R0H1	8/1/2018 08:00

Accessorials		
Description	Quantity	Revenue
SORTING & SEGREGATION	1	\$100.00
FUEL SURCHARGE	1	\$250.00
DEADHEAD	1	\$100.00
	Total:	\$450.00

Equipment				
Trailer Type	Trailer	Truck	Operator(s)	Container
VAN	69864	209185		

Additional Comments
 Tommy Shelby (tom.sh@taylor-corp.net)

Confirmed By: _____ Date: _____

Fig. 2. Booking Agreement (Landstar, INC)

Blockchain is best suited for environments where is shared information and distrust or a need for validation between two parties. Financial markets are likely to see a large shift in the processing of transactions. Blockchain and digital currencies make it possible to eliminate certain elements of distrust in transactions, the middleman or in this case any booker of the load. This simplifies the clearing process, and will change the role of intermediaries. The impact is likely to be seen on a variety of transactions including legal arrangements and simple person-to-person wire transfers, as Blockchain allows users to introduce a wide range of validation mechanisms.

As said by Christensen and Dennis, Blockchain technology makes it possible to transfer value more efficiently, the flow of capital is likely to shift as well. One of the major applications of Blockchain technology will be in back office functions and internal operations such as reconciliation or clearing processes. According to them, it is expected that these internal, back-end types of applications of Blockchain are what large financial institutions will likely invest in initially. Generally, Blockchain is expected to improve internal banking processes such as reconciliation and know your client processes. Blockchain and digital currencies are expected to change the way parties transact in coming years (Christensen, 2017).

After traditional booking, here is an improvised solution for the millions of jobs of bookers and intermediary servicers like dispatchers, brokers and many others. Pictures as a platform for this solution are taken from „Blockchain, bank credit and SME financing“, the article written by Wang, Lin, Luo at Research Gate. The idea is to use all three sides that we mentioned in traditional dispatch/call center job, but with the Blockchain as a measure of everything done correctly and according to the law. Trucking company will get their share, customer company their delivery, and intermediary company will get some share because of the service, instruction, information and every effort used to help a delivery or transaction happen (see Figures 3, 4.)

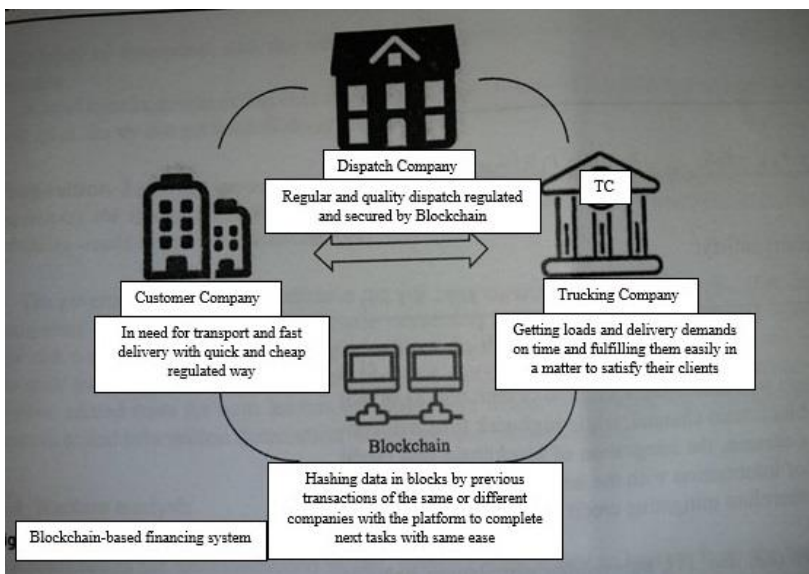


Fig. 3. Blockchain-based financing system

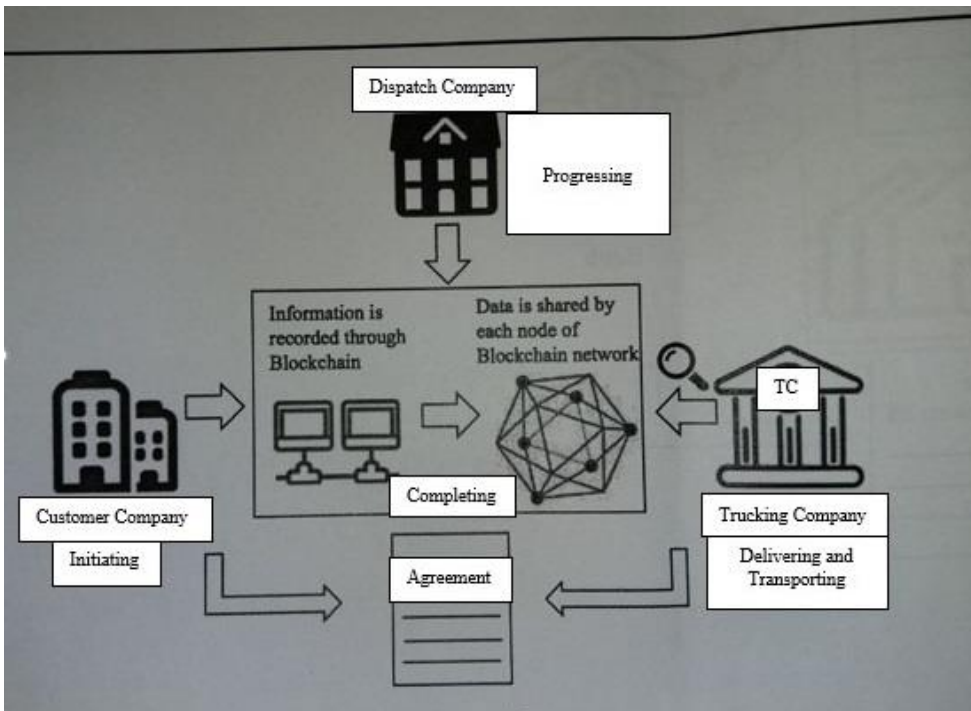


Fig. 4. Blockchain application in Dispatcher business (Wang, 2018)

This industry, the author Abbaspour has been referring to call centers, is known as an industry with a high turnover and has always been one of the targets for hackers. In addition, it is dealing with receiving and recording huge amount of data, which are need to be securely stored and be easily available. This forces managers and engineers to look for the safest and most efficient way to fulfil their requirement. Blockchain technology, which is also known as the distributed ledger, can highly resolve this problem (Abbaspour, 2018).

5. Conclusion

This research has determined the effect of Blockchain technology regarding trade finance in call center companies, and particularly regarding call center named Inmotion Ltd. in Bosnia and Herzegovina. Inmotion Ltd. is an intermediary logistics service and solution provider. This company is able to coordinate shipments using all modes of transportation.

This study reviewed the actual introduction of Blockchain as young technology, the importance of Blockchain and its content. Inside of Blockchain is one block from where it starts, and every next block contains its own data, its own hash and hash from previous blocks accept the first one. It is secure way of doing business in the future and it has a big importance in trade finance.

Trade finance is the type of finance that includes payment, lending, factoring, insurance and etc. It is one of the most important features in dispatch/call center companies and it could be largely involved in this technology.

This research continued with literature review that contained all sources mentioning important parts of the topic. This exact topic or similar is not processed in any well known research, site or library and it could be done only by using these sources and putting them together. The methodology of this study is presenting exploratory approach which is mentioned in the topic also. That approach gives the ability to explore the myriad of options and this study focused on analyzing the situation of one company if Blockchain technology is applied with the traditional booking business.

That traditional booking was the concern of large part of analysis which contained the original transactions and bookings from Inmotion Ltd. Analysis and discussion contain the improvised solution to this or similar company, that has an access to a huge number of human resource as the most important asset for their business. Dispatcher, brokers and other bookers could extinct if this technology applies, but the milion of jobs should not be jeopardized.

Blockchain could give the trade finance and its supporters either positive or negative outcome, but the goal of this study can be used to save or change something to do with this industry.

References

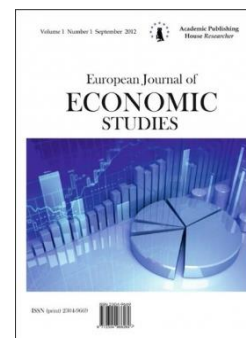
- [Abbaspour, 2018](#) – *Abbaspour H.* (2018). Potential benefits of blockchain technology for mining industry: with a case study of truck dispatching system in open pit mines. Research Gate.
- [Blockgeeks.com, September 2018](#) – Blockgeeks.com, September 2018. What is Blockchain Technology? A Step-by-Step Guide For Beginners.
- [Boersma, 2017](#) – *Boersma J.* (2017). 5 blockchain technology use cases in financial services. [Electronic resource]. URL: Deloitte.com
- [Casey et al., 2018](#) – *Casey M., Crane J., Gensler G., Johnson S., Narula N.* (2018). The Impact of Blockchain Technology on Finance: A Catalyst for Change. ICMB.
- [Christensen, Dennis, 2017](#) – *Christensen K., Dennis J.* (July 10, 2017). 4 effects of – blockchain on financial services. Fasken Martineau DuMoulin.
- [Iansiti, Lakhani, 2017](#) – *Iansiti M., Lakhani K.R.* (2017). The truth about the Blockchain. Harvard Business Review.
- [Halilbegovic, Sabic, 2018](#) – *Halilbegovic S., Sabic E.* (2018). Attracting foreign direct investments in developing countries: Why Bosnia and Herzegovina should learn from China. *EcoForum Journal*, Vol. 7, Is. 3.
- [Landstar, INC](#) – Booking data received from Inmotion Ltd.
- [Pinedo, Seshadri, 1999](#) – *Pinedo M., Seshadri S.* (1999). Call Centers in Financial Services: Strategies, Technologies, and Operations.
- [Sato, 2018](#) – *Sato H.* (2018). Are call centers sweatshops? Research Gate.
- [Subbiah et al., 2018](#) – *Subbiah K., Ferrarini B., Maupin J., Hinojales M., Guhathakurta R., Kulshrestha S, Wright D.* (2018). The Age of Blockchain: A Collection of Article. IndraStra Open Access.
- [Tsai et al., 2016](#) – *Tsai W.T., Blower R., Zhu Y., Yu L.* (2016). A System View of Financial Blockchains. IEEE.
- [Wang et al., 2018](#) – *Wang R., Lin Z., Luo H.* (2018). Blockchain, bank credit and SME financing. Springer Nature.
- [Wexler et al., 2017](#) – *Wexler S., Shaffer J., Cotgreave A.* (2017). Call Center, Research Gate.

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Implementation Effects of “IFRS 9 Impairment Modelling for Financial Instruments” on Regulatory Capital Banks in Federation of Bosnia and Herzegovina

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Abstract

IFRS 9 introduces new impairment rules in order to respond to G20’s complaint about the complexity and the lack of efficiency of the IAS 39 standard. According to (FASB, 2016) the main issue was a delayed recognition of credit losses on loans and other financial instruments, which resulted in the late recognition of credit losses. This new standard is mandatory from January 1st 2018. In this article, we’ll investigate effects of the implementation of this new regulatory requirement on financial institutions in Bosnia and Herzegovina and compare them with effects they had in Croatia. By doing so we will be able to differ mentioned effects in EU countries with the countries that they claim to become EU members. Although, the new IFRS 9 impairment requirements is supposed to shift up the credit loss allowances of many banks and financial institutions, the effect appraisal will demonstrate that the effect is less critical than anticipated by the European Banking Authority in both EU or non-EU countries. The thesis will demonstrate that the implementation of the new IFRS 9 impairment requirements is supposed to shift up the credit loss allowances of many banks and financial institutions.

Keywords: credit risk, expected credit loss, fair value measurement, loan loss provisions, probability default.

1. Introduction

Novotny-Farkas stated the contrasts between the approaches to loan loss accounting, it is valuable to pick a benchmark to which accounting routines can be compared (Novotny-Farkas, 2016). Benston and Wall said a characteristic benchmark is the economic value of the loan, which ostensibly gives the most helpful data to primary users of financial statements, i.e., investors and bank supervisors (Benston and Wall, 2005). The economic value represents the present value of the expected cash flows from the borrower. Initially, when loans are recorded at their economic value, there is no need for a loan loss allowance because the contractual interest rate covers all expected losses over the life of the loan. Upon arrival of new information, the economic value of the loan should be adjusted for changes in the expectation of a borrower’s default probability and changes in interest rates. Amid recession in 2008, the delayed recognition of credit losses on loans and other financial instruments was acknowledged as a weakness in the current accounting standards. Particularly, the existing model IAS 39 which was an ‘incurred loss’ model which delays the recognition of credit losses, until there is evidence of a trigger event. This was intended to confine an entity’s ability to make saves that can be utilized to help profit amid hard times.

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Under the current incurred loss approach of IAS 39, banks have risk costs when there is 'objective evidence' that impairment have occurred. IAS 39 paragraph 59 provides a non-exclusive list of 'trigger events' that are indicators of impairment. Reporting entities are not permitted to fuse the effects of future events occurring after the balance sheet date, regardless of whether they are expected. General loan loss provisions for unspecified credit risks as permitted or required under a few residential accounting standards in Europe are not acknowledged under the IAS 39 rules. (Hoogervorst, 2014) said combined with an exceptionally prohibitive frame of mind towards advance loss provisioning, the utilization of the losses is recognized just before default occurs (i.e., too late). Basically, this implies advance loan losses are only considered when the Probability Default (PD) is close to 100 %. Accordingly, when bank has data accessible about future losses, the institution isn't permitted to fuse this data for accounting purposes. To figure the present estimation of expected losses that are esteemed to be caused the original effective interest rate must be utilized as the rebate rate. According to (Gebhardt, Novotny-Farkas, 2011), from the continuum of possible estimates of expected losses, incurred losses represent the lowest boundary. Preceding the financial crises, the two accounting authorities, the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB), had effectively arranged to update and improve their respective standards on accounting for financial instruments. According to (Ančić, 2018) the context and the difference in the introduction of the new standard were:

- Procyclical nature of Fair Value (FV) evaluation, described as "system error" discovered shortly before (2007) and during the financial crisis (2008 and 2009). In the crisis, markets became inactive and it's becoming impossible to perform reliable market valuation of financial instruments. Depreciation induced relaxation of the FV evaluation. Where the valuation was possible, there was an accelerated depreciation of the financial assets/liabilities. During the crisis FV rating was suspended for selected financial instruments (enabled retrospective reclassifications financial instruments) because there was information asymmetry in the market,

- Lack of unambiguous and precise definition of fair values, within the IASB's previous framework. Undefined reliability of FV financial instruments in real terms. Definitions in certain IASB standards contain the condition of "normal market conditions". FV is essentially the hypothetical market price of financial instruments in idealized conditions. The reliability and objectivity of the FV estimation are reduced the hierarchy, while the research-analytical effort is growing. Market participants always understand FV financial instruments market relevance, they do not know how much the methodology of its determination is based in a case at reliable market prices,

- IAS 39 is basically a backward-looking standard. Standard request the proof of loss ("loss trigger") to reduce the value of financial instruments. Prudential regulators claim that standard allow banks to overestimate the profit and size of their assets. Balance of banks, which due to the heavy burden of overvalued assets were (due to very low leverage meters) insolvent, they were shown as healthy. The adoption of the IAS39 impairment model on the valuation of credit placements (through Loan Loss Provisioning) resulted in the late recognition of credit losses, that is, the significant downgrade of the quality of the portfolio ("too-little, too-late" problem).

- Excessive complexity of IAS39 standards. Difficulties in understanding, applying and interpreting the requirements of an existing standard. As results when testing the impairment of financial assets, banks used different events as evidence of impairment or treated the same events in different ways. There is an insufficient reduction in similar financial assets between different banks.

If we consider, all the mentioned differences and the differences that will be further explained in the continuation of the paper, between new and previous standard, it would be logically to expect that new IFRS 9 impairment requirements is supposed to shift up the credit loss allowances of many banks and financial institutions.

2. Literature review

IAS 39 "*Financial Instruments: Recognition and Measurement*" has been approved in December 1998 (applicable to the financial statements opened as of 1 January 2001). It was revised in October 2000 and December 2003. This last revision is applicable to the financial statements

with effect from 1 January 2005. IAS 39 follows IAS 32 “*Financial Instruments: Disclosure and Presentation*” to which it is related to. According to Obert the latter was approved in March 1995 and revised in December 1998, October 2000 and December 2003 (Obert, 2004). In November 2009, that the International Accounting Standard Board (IASB) and the Financial Accounting Standard Board (FASB), chose to introduce the new accounting standard because of demand done by the G20, investors, regulatory bodies and prudential experts in the improvement of the accounting requirements for financial instrument. The IASB in this way distributed an Exposure Draft (ED) “*Financial Instruments: Amortised Cost and Impairment*, which was a solitary arrangement of worldwide standard and proposed an impairment model dependent on losses rather than incurred losses, for every single financial asset recorded at amortised cost. The fundamental target of this draft was to determine standards for the estimation at amortized cost of financial assets and liabilities that will give valuable data to clients of financial reports for the assessment of the amounts, timing and uncertainty of their future cash flows. IASB said this ED likewise finishes and improves the standards by recognising, classifying, measuring, presenting and providing disclosures about financial assets and liabilities present in IAS 32 “*Financial Instruments: Presentation*”, IAS 39 “*Financial Instruments: Recognition and Measurement*” and IFRS 7 “*Financial Instruments: Disclosures*” (IASB, 2009). According to Deloitte the fulfilment of the first phase of the project where connected directly to the suggestion of the G20 Leaders and other stakeholders to simplify accounting for financial instruments, but KPMG stated question often asked is whether the standard may be amended in the near future as result of the Boards efforts to achieve convergence ((Deloitte, 2009; KPMG, 2009). This model obliges entities to perceive expected credit loss (ECLs) over the lifetime of a financial asset since initial recognition, by incorporating these losses in the calculation of the effective interest rate (EIR). By utilizing this method, the loss allowance will be founded on the whole lifetime of the financial asset thus ‘match’ the recognition of credit losses. Resulting changes in credit loss expectations would be reflected in later adjustments to profit or loss based on the original EIR. According to IASB with this technique, two issues emerged (IASB, 2009):

- the Board was more in favour of a model that would differentiate the initial estimates of ECLs from the future changes in these estimates; and

- the Board was also worried about the operational difficulties and cost that the implementation of the model would generate. Because of these requirements, the IASB chose to make the distinction between the determination of the expected credit loss and the effective interest rate, which will prompt a different measurement of loss allowance for both ECL and EIR. The latter will not be adjusted for initial expected credit losses anymore. According to IASB this technique will diminish the operational cost that could emerge because of the enormous change in the implementation (IASB, 2009). In any case, there is still a few worries about this draft. The IASB is persuaded that discounting ECL by using the original EIR will generate a double-count of the ECL compute at initial recognition. Thus, the IASB presumed that distinguishing lifetime ECLs on initial recognition was not reasonable. According to EY the fundamental arrangement was along these lines to follow a dual-measurement model that would require an entity to recognise (EY, 2018: 7):

- “A portion of the lifetime ECLs from initial recognition as a proxy for recognising the initial ECLs over the life of the financial asset and;

- The lifetime ECLs when credit risk has increased since initial recognition (i.e., when the recognition of only a portion of the lifetime ECLs would no longer be appropriate because the entity has suffered a significant economic loss”.

Deloitte stated after update regarding new requirements which address the problem of volatility in profit or loss arising from an issuer choosing to measure its own debit at fair value in January 2011, the FASB decided to develop an alternative expected credit loss model and realised a supplementary document on impairment (Deloitte, 2010). In December 2012, the FASB proposed an update, *Financial Instruments Credit Losses* that would require an entity to recognise a loss allowance for ECLs from initial recognition at an amount equal to lifetime ECLs. In March 2013, the International Accounting Standard Board (IASB) published its third Exposure Draft (ED); *Financial Instruments: Expected Credit Losses* (ED/2013/3), on impairment of financial assets, based on the common project with the FASB. This draft proposed that entities should recognise two different loss allowance or provision depending on the situation faced:

- For financial instrument that had not yet seen a significant increase in credit risk since initial recognition, entities should recognise an amount of loss allowance equal to 12-month ECLs;
- For financial instrument that had seen a significant increase in credit risk, entities should recognise a loss allowance equivalent to lifetime ECLs. According to EY this new model was designed for three specific purposes, namely to (EY, 2018: 7):

(a) *“Ensure a more timely recognition of expected credit losses than the existing incurred loss model;*

(b) *distinguish between financial instruments that have significantly deteriorated in credit quality and those that have not; and*

(c) *better approximate the economic expected credit loss.”.*

In July 2014, the IASB finalised and released the impairment requirements after having read some arguments of the 2013 ED proposals. The aim of these changes was to provide additional clarifications and further guidance to help entities implement the proposed requirements. These changes resulted in the development of the final version of IFRS 9 *“Financial Instruments”*, which is effective since January 1, 2018. According to EY new standard brought together the classification and measurement, impairment and hedge accounting phases of the IASBs project to replace IAS 39 Financial instruments (EY, 2014). Onali and Ginesti conducted a survey conducted at 5400 companies showed positive market reaction to 13 announcement dates related to IFRS 9 (Onali, Ginesti, 2014).

IFRS 9 separates between three phases of credit risk. Stage 1 incorporates financial instruments with no huge increment in credit risk since initial recognition, or financial instruments that have low credit risk at reporting date. The largest piece of banks' performing loan portfolio will be delegated in Stage 1. For these assets, year Expected Credit Losses (ECLs) are perceived in profit or loss. Year ECLs are normal credit losses that outcome from default occasions that are conceivable inside a year after the reporting date. The recognition of year ECLs means to mirror that the yield on the instrument incorporates an arrival to cover those credit losses anticipated from when a financial instrument is first recognized. Stage 2 incorporates financial instruments with “significant deterioration in credit quality” since starting recognition, yet with no target proof of impairment. A noteworthy extent of financial assets that are right now revealed under the mark “Financial assets past due, but not impaired” in Bank financial statements would to a great extent fall into Stage 2 under IFRS 9. For Stage 2 resources lifetime ECLs must be perceived. This accounting treatment depends on the reason that an economic loss emerges when ECLs significantly exceed initial expectations. By perceiving lifetime ECLs following a huge increment in credit risk this economic loss is reflected in the fiscal summaries. At long last, Stage 3 contains financial instruments for which target proof demonstrates impairment at the reporting date. For Stage 3 assets, lifetime ECLs are perceived. Stage 3 credit exposures are like those considered to be separately impaired under IAS 39, while Stage 1 and 2 credit exposures will basically replace those exposures that are on the whole assessed for impairment under IAS 39. In this way, the acknowledgment of lifetime ECLs will happen sooner than under IAS 39, i.e., as of now when there is a huge increase in credit risk (Stage 2), yet before genuine default (Stage 3). At initial recognition, the loan loss allowance would be nil and in this manner developed over the life of a financial asset. This would viably ‘match’ the recognition of credit losses for that of the credit spread in the interest rates charged. This model would come nearest to the economic valuation of the loan (then again, actually changes in market interest rates would not be perceived). This model was seen as operationally excessively difficult, it has not been executed.

The IFRS 9 three-stage model results in a ventured profile when contrasted with the more continuous profile of the ED 2009 model. At first, the IFRS 9 demonstrate exaggerates the loan loss provisions, at that point – as credit risk (PD) increases – it downplays the loan loss allowance, and when deterioration in credit quality is esteemed significant, it again exaggerates the allowance. Deloitte stated new impairment requirements IFRS 9 *“Financial Instruments”* which are based on an expected credit loss model, indicates that an entity shall recognise a loss allowance for expected credit losses on the following (Deloitte, 2013):

- Financial assets (bank deposits, loans, debt securities and trade receivables) measured at amortised cost (AC);
- Financial assets mandatorily measured at fair value through other comprehensive income (FVTOCI);

- Lease receivables under IFRS 17 “Leases” or IFRS 16 “Leases”;
- Contract assets under IFRS 15 “Revenue from Contracts with Customers”;
- Loan commitments that are not measured at fair value through profit or loss (FVTPL);
- Financial guarantee contracts that are not measured at fair value through profit or loss (FVTPL).

For financial instruments, it is necessary to determining the type of a particular financial instrument and adequate treatment in terms of IFRS 9, which are “full” and “partial”.

Fair value is defined in the standard (IFRS 13, 2011: 6) “Fair Value Measurement”, as followed: “The objective of a fair value measurement is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions.” According to IFRS 13, fair value can be defined in different ways depending on the subject that we are working on. Fair value can also be defined as the asset and liabilities value of a subsidiary firm when its financial statements are consolidated with the parent company (IFRS 13, 2011). This accounting treatment is strange because original cost is used to value assets in most cases. When the parent company buys an interest from its subsidiary firm, the assets and liabilities of this branch are recorded at fair value. IFRS 13 stated the financial situation of the two companies, which in fact are one company, is also translated into its true value. Additionally, fair value can also be defined as a valuation method of assets (IFRS 13, 2013). Sometimes, executing a company valuation can be challenging for accountants (i.e. determine the fair value of an asset that is not active on the stock exchange). According to IFRS 13 in those cases, accountants usually use the discounted cash flows generated by the asset to determine its fair value (IFRS 13, 2013). The fair value of certain investments may also be based on the market value on which the security is traded. Market makers present in the stock exchange are providing a bid and ask price for each security. For instance, if the investment is a stock, the investor can thus sell the stock at the bid price to the market maker or buy the stock from the marker maker at the ask price. The most trustworthy method to determine an investment’s fair value is therefore to list the security on an exchange. SY said the loss allowance will be measured by using the ECL calculation model (SY, 2017). As referenced already, lending institutions need to appreciate, figure and investigate the loss that may happen as result of lending to a company that may default, in particular, the expected credit loss (ECL) which is gotten by multiplying three of the following component, the probability of default (PD), the loss given default (LGD) and the exposure at default (EaD). Probability of Default (PD) is one of the primary key risk parameter vital for the evaluation of credit risk. It is characterized in the Capital Regulatory Requirement document (CRR) as the chance of default of a counterparty over a one year term or over outstanding time to maturity relying upon it is possible that we are applying individually the 1-year PD or the lifetime PD. Basically, this is the probability that a loan will not be repaid completely and will fall into default. Financial institutions need to register PD for each borrower by contemplating the credit history of the borrower and the idea of the investment. PD can be gotten by utilizing external ratings agencies, for example, Standard and Poor (S&P) or Moody’s. Nonetheless, banks are still recommended to utilize internal rating methods. PD is expressed in a percentage of the total amount of the loan and can be ranged from 0 % to 100 %. To give an example, an organization A with a PD of 55 %, will be considered as less risky than an organization B with a 75 % PD, on the grounds that the organization A is less vulnerable to go into default than the organization B that is bound to be considered as risky (Risk Articles, 2017). Exposure at Default (EaD) is the second parameter for the evaluation of credit risk and shows the total sum that a bank or another financial institution is exposed to at the time of a credit’s default, to be specific outstanding amount. It is estimation of the exposure at a future default date, considering expected varieties in the exposure after the reporting date, including reimbursements of principal and interest, and expected draw downs on committed facilities. Loss Given Default (LGD) is the third key parameter for the evaluation of credit risk. It expresses the percentage of a financial exposure that a bank or other similar institution may lose if a borrower goes into default. The LGD depends on the contrast between the contractual cash flows due and those that the bank would hope to get, including from any collateral. It tends to be gotten by registering the loan-to-value (LTV) which characterizes as the estimation of the asset purchased. This is the proportion of the credit amount to the amount of the collateral which is an assurance provide for the money lender by the borrower as security for reimbursement of an advance, to be relinquished in case of a default.

In the analysis of the effects of the implementation of IFRS 9 of the impairment model on the Bank in Federation of Bosnia and Herzegovina, we will use report made by Banking Agency of the Federation of Bosnia and Herzegovina (FBA) "Information in the banking system entities of the Federation of Bosnia and Herzegovina as of 31.12.2018". To compare the effects of the implementation of IFRS 9 in the Federation of Bosnia and Herzegovina with the situation in EU (Croatia), I will use report of the National Bank of Croatia „Banks Bulletin No. 31“. For an adequate analysis and presentation of the Classification of financial instruments and Components of credit risk and the valuation of financial instruments, we will use presentations "Implementation of IFRS 9 standards, Classification of financial instruments (2018)" from Mr. Stjepan Ančić CEO at Croatian company Op2m, which is specialized for financial analytics, business consultancy and project management.

3. Methodology and hypothesis

As per EBA after the production of the report on the primary European Banking Authority in 2016, with regards to the anticipated usage of IFRS 9 in the European Union (EU), the EBA propelled, in November 2016, the second phase of the exercise to acquire more information on some particular area as banks further build up their methodologies for the execution of IFRS 9 (EBA, 2017). The second EBA practice is increasingly centered and works around the targets of the main exercise, to be specific picking up a superior comprehension of the stage of preparation for the execution of the Standard, the evaluated effect of IFRS 9 on regulatory own funds, the cooperation between IFRS 9 and other prudential necessities, and usage issues identifying with IFRS 9. The example was like that in the principal exercise, comprising of around 50 organizations over the European Economic Area (EEA). The assessment result exhibits that the assessed increment of arrangements contrasted with the present dimensions of arrangements under IAS 39 is 13 % on average (18 % in the first exercise), and up to 18 % for 75 % of respondents (30 % in the first exercise for 86 % of respondents. To the extent the estimation of the total quantitative impact of IFRS 9, the results show that CET 1 are assessed to reduce, by 45 bps (59 bps reduction in the primary exercise), and by up to 75 bps for 86 % of respondents (75 bps diminishing in the main exercise for 79 % of respondents), because of the effect of the prerequisites of IFRS 9. It is assessed that absolute capital proportion will diminish, by and large, by 35 bps (45 bps abatement in the main exercise), and by up to 50 bps for 76 % of respondents (75 bps reduction for 79 % of respondents in the principal work out). Be that as it may, just like the situation when utilizing measurable measurements, it ought to be noticed that a portion of the appraisals identifying with the complete example of respondents were not the same as the previously mentioned evaluations. The main research question of my work is: How implementation of "IFRS 9 Impairment modelling for financial instruments" affects regulatory capital of Banks in the Federation of Bosnia and Herzegovina in general. Along main question, based on case study Bank data, or to be more precise Asset Class Segmentation of Corporate clients we will investigate Expected Credit Loss (ECL) of each client type impact on overall capital of the Bank. At long last we will compare final results/effects in first year of IFRS 9 implementation in Bosnia and Herzegovina and Croatia. According to the above hypotheses, a research framework would be built based on that. Firstly, I would test the relationship between Expected Credit Loss (ECL) and overall capital of the Bank (main Hypothesis) and as additional 11 researches questions Expected Credit Loss (ECL) of each client type impact on overall capital of the Bank. In order to do so, I will use statistical tool SPSS which is a widely used program for statistical analysis in social science. It is also used by market researchers, health researchers, survey companies, government, education researchers, marketing organizations, data miners, and others. I will use following statistics which is included in software: Descriptive statistics, Bivariate statistics: ANOVA, Correlation Prediction for numerical outcomes: Linear regression, Pearson correlation index.

4. Data analysis and commentary

The research is based on data analysis of the following reports as of 31.12.2017 and 31.12.2018 on capital adequacy and classification of assets from Federal Banking Agency: Form 1 – Table A, Form 1 – Table C, Form 2 – Table A1. Those reports are constituent's part of "Decisions on reports submitted by the Bank to the Banking Agency of the Federation of Bosnia and Herzegovina" ("Official Gazette of the Federation B&H", No: 103/17).

As a major aspect of this paper, the bank on which we will based our examination is a private bank situated in the Bosnia and Herzegovina. For reasons of secrecy, chosen bank will be called "the Bank". The Bank has been dynamic as a private bank for more than 20 years by offering services and products to private individuals and companies on all territory of Bosnia and Herzegovina. Since the Bank must stay unknown, we won't unveil additional data. The bank portfolio is consisted of financial instruments, for example, generally stocks, bonds and cash money. The Bank that we put together our examination (among others) has in its portfolio three distinctive assets classifications: corporate and government bond, retail credits, corporate credits. We have chosen to take corporate credits with the goal to complete investigation and ECL movements between 2013–2018, shown separately on all Asset Class Segmentation types of Corporate clients. In order to analyse capital changes we took all financial statements of subject Bank for period 2013–2018, from The Sarajevo Stock Exchange. To compare final results/effects in first year of IFRS 9 implementation in Bosnia and Herzegovina and Croatia we will use reports made by Banking Agency of the Federation of Bosnia and Herzegovina (FBA) on "Information in the banking system entities of the Federation of Bosnia and Herzegovina as of 31.12.2018" and report from National Bank of Croatia „Banks Bulletin No. 31“. The research model consists of two variables ECL (independent, multidimensional because it is measured using 3 dimensions (PD, LGD and EAD), and it is treated as one variable – independent and regulatory capital that is a dependent variable. The original plan was to do two Regressions analyses in the SPSS. The first one would be for the period 2013–2017 to show the effects of ECL which was calculated according to the earlier regulatory capital methodology, and the second for the period 2018 and we planned to check the effects of the ECL (calculated according to the new standard) on the regulatory capital with 72 (6 years) observations in total. In the second analysis, we have 12 observations (12 months in year 2018), which is consistent with the book Regression Modelling Strategies by (Harrell, 2015) sufficient for Regression analysis. Recommendations for further research: we will add that the same study and analysis is recommended to repeat after several years of application of IFRS 9 in order to have the most reliable proofs and evidence of ECL effects on Regulatory Capital. Before proceeding with the example, large bank are able to define the PD according to the type of clients and in that way obtain more precise data broken down by groups of clients. Bigger banks with more sophisticated risk – modelling and risk – management systems can opt for what Basel II calls the "internal rating – based approach", or IRB. The IRB enables a bank to utilize its own internal historic data to calculate the credit risk of its loans and investments. In "our" Bank, Corporate segment represents long-term partnerships with legal entities and services support in the field of market and investment banking, where institutional buyers (especially banks, insurance companies, asset management companies, central governments, regional governments) and group trading activities in focus. Based on Asset Class Segmentation, Corporate clients can be assigned with group specific type-code snippets clients. In the following table, we can see client types proposals according to the Asset Class Segmentation in the corporate segment:

Table 1. Asset Class segmentation in the corporate segment

0	Regional authority institutions
1	Local Large Companies
2	Corporate Middle Market
4	Banks
5	Insurance and Leasing
7	Brokers, Microcredit organizations
8	Group clients
9	Small enterprises
10	International Corporate Clients
11	Corporate Middle Market (Public enterprises, institutions, politic parties)
12	Related legal entities
13	Central Government
14	Private Individuals

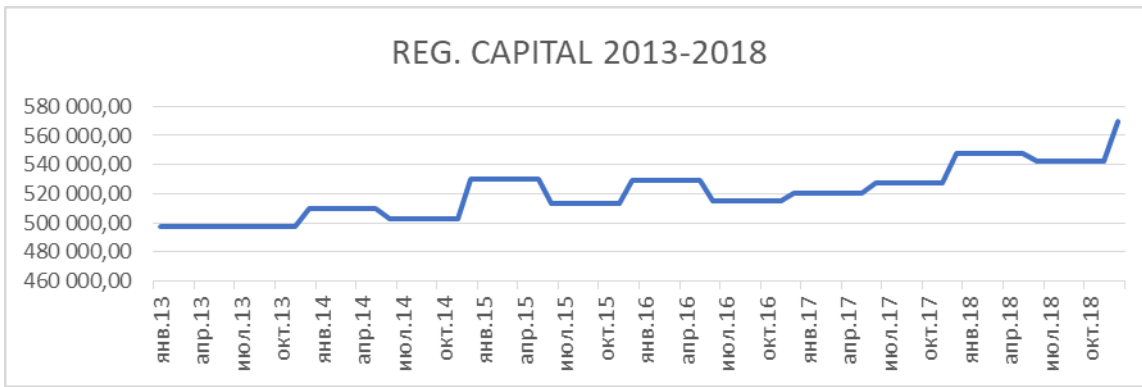


Fig. 1. Regulatory Capital in 000 BAM

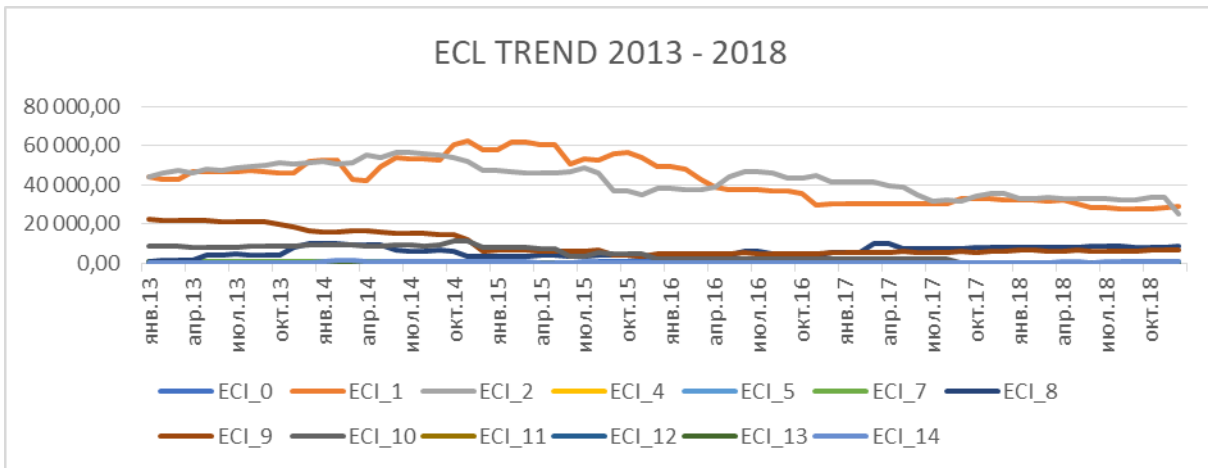


Fig. 2. ECL Trend 2013 – 2018 in 000 BAM

Table 2. Linear Regression Correlations

	REG. CAPITAL	
Pearson Correlation	REG. CAPITAL	1.000
	ECL_0	.413
	ECL_1	-.503
	ECL_2	-.800
	ECL_3	.
	ECL_4	-.703
	ECL_5	-.553
	ECL_6	.
	ECL_7	-.797
	ECL_8	.401
	ECL_9	-.716
	ECL_10	-.757
	ECL_11	-.617
	ECL_12	-.388
	ECL_13	.538
	ECL_14	.256
	ECL_ALL	-.756

Pearson correlation index is mostly negative which support our thesis that the decrease in ECL initiate increase in Regulatory Capital, analogously increase in ECL would come down to a reduction in regulatory capital. The most important are the negligible correlations in the two largest independent variables ECL_1 Local Large Companies (-0,50) and ECL_2 Corporate Middle Market (-0,80). In contrast to this analysis, Regression Analysis of the Impact of ECL on Regulatory Capital in 2018 is positive in the largest exposures or amounts of ECL in groups: ECL 0 = Regional Authorities (0.71), ECL 5 = Insurance companies and leasing (0.84), ECL 2 = Corporate medium market (0.90). However, we can conclude that correlation between this two variables need to be negative which means that increase in ECL must reduce Regulatory Capital in addition we

will reject this analysis because the number of observed observations is insufficient. Previously mentioned is clearly indicated by the model summary with R and R² at level 1 and Capital increase in 2018 is clearly initiated by some other factors which affect capital.

Table 3. Model Summary

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.946	.894	.870	6056800.2284628

As can be seen from [Table 3](#), the value of our R² is very high 0.894, which means that 89.4 % of the total variance in Regulatory Capital has been 'explained'.

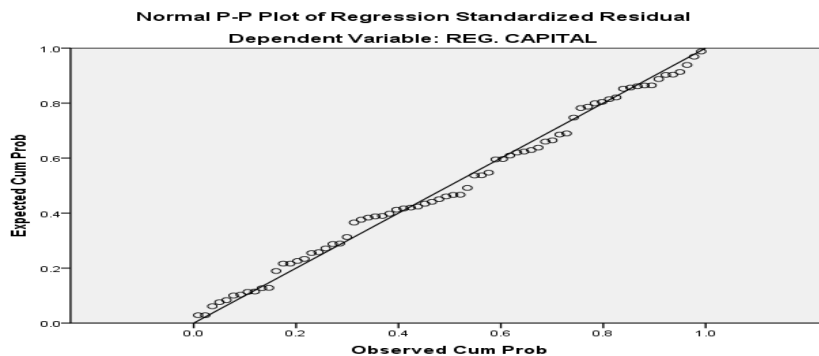


Fig. 3. Linear Regression Histogram

Our model is very accurate, there's a strong correlation between the model's predictions and its actual results. This means that it is possible to predict Regulatory Capital movement based on ECL trend.

5. Conclusion

The general conclusion is that the implementation of IFRS 9 did not have significant effects on the Bank in Federation Bosnia and Herzegovina (FB&H). In accordance with the "Information in the banking system entities of the Federation of Bosnia and Herzegovina as of 31.12.2018", the regulatory capital of the Banks in FB&H was reduced by approx. 90 million KM (approx. 45 million EUR), that accounted for 0.68 % of the total assets of credit institutions as at 31 December 2017. In the same time the total capital increased by 3 % compared to 2017 on 3 billion KM (approx. 1,5 billion EUR). It should be noted that in this report, the regulator does not provide more information and explanations for these effects, such as the structure of the impairment of the balance sheet exposure in the portfolio that is subjected, divided by the impairment phases, the portfolio and the type of effects, the provision for off-balance sheet exposures, the change in fair value for assets which is measured at fair value, etc. Due to the lack of data, we will not be thrown away, but we think that the lack of a legal solution in this area greatly complicates the work of the regulator who will in the short term have to pass a legal solution by which how much is it possible to standardize IFRS 9 in the FB&H Banks. The implementation of IFRS 9 in the Bank, which was an example of the analysis, did not have the effect of reducing regulatory capital, which was successfully absorbed by a significant reduction in NPLs (bad loans) resulting in a continuous reduction in ECL throughout all observed periods, the profits paid indirectly and the lack of new regulations by regulators. It should be kept in mind that the Bank has implemented the IFRS 9 standard, high capital adequacy measured by the applicable regulatory methods, a high retained profit that evidently absorbed all the negative effects of new standard implementation. Proof of the claim that the implementation of the new standard didn't affect regulatory capital of this Bank, remains in date which shows there was no significant increase in the ECL, especially on the performance portfolio that included stage 1 and stage 2 where the increase in ECL was expected.

According to report from National Bank of Croatia „Banks Bulletin No. 31“ initial application of IFRS 9 in Croatian credit institutions resulted in losses in the amount of 1.4 billion HRK (approx 200 million EUR) recorded directly in capital, of which the largest part of the amount was related to the increase in impairment values and provisions. The effect of applying the new standard was not negligible, but the banking system has been able to absorb this loss without difficulty. The major part of the negative impact of the initial application of IFRS 9 was on additional impairment of the balance sheet exposure in the portfolio to which they are subject the calculation of expected credit losses. It can be concluded that the effect of the initial application of IFRS 9 was not negligible, but that the same banking system was able to absorb this loss without difficulty. Indeed, the new standard did not lead to a reduction in regulatory capital banking system.

References

- Ančić, 2018 – Ančić, S. (2018, September). Implementation of IFRS 9 standards, Classification of financial instruments. Paper presented at the meeting of Raiffeisen Bank dd BiH, Sarajevo.
- Banking Agency of Federation BiH, 2019 – Banking Agency of Federation BiH (2019). Information in the banking system entities of the Federation of Bosnia and Herzegovina as of 31.12.2018. [Electronic resource]. URL: <https://www.fba.ba/bs/informacija-o-subjektima-bankarskog-sistema-federacije-bih-sa-stanjem-na-dan-31122018> (accessed May 6, 2019).
- Benston, Wall, 2005 – Benston, G.J., Wall, L.D. (2005). How should banks account for loan losses. *Journal of Accounting and Public Policy*, 24(2): 81-100. DOI: 10.1016/j.jaccpubpol.2004.12.005
- Deloitte, 2009 – Deloitte (2009). IASB issues IFRS 9 'Financial Instruments. [Electronic resource]. URL: <https://www.iasplus.com/en/news/2009/November/news5269> (accessed May 6, 2019).
- Deloitte, 2010 – Deloitte (2010). IASB issues additions to IFRS9 for financial liability accounting. [Electronic resource]. URL: <https://www.iasplus.com/en/news/2010/October/news6194> (accessed May 6, 2019).
- Deloitte Touche Tohmatsu, 2013 – Deloitte Touche Tohmatsu (2013), IFRS 9: Financial Instruments – high level summary. [Electronic resource]. URL: <https://www2.deloitte.com/ru/en/pages/audit/articles/2016/ifrs-9-financial-instruments.html> (accessed May 6, 2019).
- Ernst, Young, 2018 – Ernst & Young (2018). Applying IFRS – Impairment of financial instruments under IFRS 9 [Electronic resource]. URL: [https://www.ey.com/Publication/vwLUAssets/ey-Apply-IFRS-9-FI-Impairment-April2018/\\$FILE/ey-Apply-IFRS-9-FI-Impairment-April2018.pdf](https://www.ey.com/Publication/vwLUAssets/ey-Apply-IFRS-9-FI-Impairment-April2018/$FILE/ey-Apply-IFRS-9-FI-Impairment-April2018.pdf) (accessed May 6, 2019).
- Ernst, Young, 2014 – Ernst & Young (2014). IASB issues IFRS 9 Financial Instruments – classification and measurement. [Electronic resource]. URL: <http://app1.hkicpa.org.hk/correspondence/512/Devel86-FI-CM-Jul2014.pdf> (accessed May 6, 2019).
- European Banking Authority, 2017 – European Banking Authority (2017). EBA Report on results from the second EBA impact assessment of IFRS 9. [Electronic resource]. URL: <https://eba.europa.eu/documents/10180/1720738/EBA+Report+on+results+from+the+2nd+EB+A+IFRS9+IA.pdf> (accessed May 6, 2019).
- Financial Accounting Standard Board, 2016 – Financial Accounting Standard Board (2016). Financial Instruments—Credit Losses (Topic 326), [Electronic resource]. URL: https://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176168232528&acceptedDisclaimer=true (accessed May 6, 2019).
- Gebhardt, Novotny-Farkas, 2011 – Gebhardt, G., Novotny-Farkas, Z. (2011). Mandatory IFRS Adoption and Accounting Quality of European Banks. *Journal of Business Finance & Accounting*, 38(3-4): 289-333. DOI: 10.1111/j.1468-5957.2011.02242.x
- Harrell, 2015 – Harrell, F.E. (2015). Regression Modeling Strategies. Springer Series in Statistics. DOI: 10.1007/978-3-319-19425-7
- Hoogervorst, 2014 – Hoogervorst, H. (2014). Closing the Accounting Chapter of the Financial Crisis', Speech delivered at the Asia-Oceania Regional Policy Forum (New Dehli). [Electronic resource]. URL: <https://www.ifrs.org/-/media/feature/news/speeches/2014/hans-hoogervorst-march-2014.pdf> (accessed May 6, 2019).
- International Accounting Standard Board, 2009 – International Accounting Standard Board (2009). Exposure Draft: Financial Instruments: amortised cost and impairment. [Electronic

resource]. URL: <https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FProject%20Documents%2F178%2FED%20Financial%20Instruments%20-%20Amortised%20Cost%20and%20Impairment.pdf&AspxAutoDetectCookieSupport=1> (accessed May 6, 2019).

International Accounting Standard Board, 2011 – International Accounting Standard Board (2011, p.6), IFRS 13 – Fair Value Measurement”. [Electronic resource]. URL: <https://www.iasplus.com/en/news/2011/May/news6909>, accessed May 6, 2011.

KPMG, 2009 – KPMG (2009). First Impressions: IFRS 9 Financial Instruments [Electronic resource]. URL: <https://home.kpmg/content/dam/kpmg/pdf/2010/01/First- Impressions-O-0912.pdf> (accessed May 6, 2019).

National Bank of Croatia, 2018 – National Bank of Croatia (2018). Banks Bulletin No. 31. [Electronic resource]. URL: <https://www.hnb.hr/documents/20182/2561265/ebilden-o-bankama-31.pdf/b1ec2e1b-fa07-49ce-bfef-6e04ca2739cc> (accessed May 6, 2018).

Novotny-Farkas, 2016 – *Novotny-Farkas, Zoltán* (2016). The Interaction of the IFRS 9 Expected Loss Approach with Supervisory Rules and Implications for Financial Stability. [Electronic resource]. URL: <https://ssrn.com/abstract=2817983> (accessed May 6, 2019).

Obert, 2004 – *Obert, R.* (2004). IAS 39: Instruments financiers: comptabilisation et évaluation [Electronic resource]. URL: <http://www.focusifrs.com/content/view/full/3397> (accessed May 6, 2019).

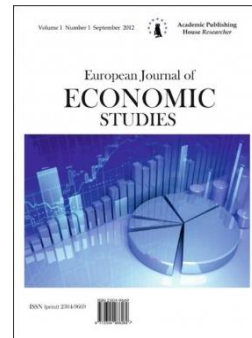
Onali, Ginesti, 2014 – *Onali, E., Ginesti, G.* (2014). Pre-adoption market reaction to IFRS 9: A cross-country event-study. *Journal of Accounting and Public Policy*, 33(6), 628-637. DOI: 10.1016/j.jaccpubpol.2014.08.004

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Facing the Global Competitiveness Challenge and Quality of Business Freedom in Georgia

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Abstract

In this paper, we address the issue of the global competitiveness which is being launched at a time of rising income inequality, mounting social and political tensions, and a general feeling of uncertainty about the future. Growth remains persistently low: commodity prices have fallen, as has trade; external imbalances are increasing; and government finances are stressed. However, it also comes during one of the most prosperous and peaceful times in recorded history, with less disease, poverty, and violent conflict than ever before. Despite the difficult economic situation, the fundamental principles of competitiveness should not be forgotten and should not be sacrificed to short-term needs. The future is competitive economies that, given local factors, tend to increase productivity and build on present and future prosperity. The issue of competitiveness of individual regions and countries, as globalization processes deepen, remains relevant.

Keywords: global competitiveness, business freedom, economic sector, financial organizations.

1. Introduction

Since the 80s of the 20th century, the process of globalization has been determined by the development of the world economy, its main priorities and trends. At the same time, the current stage of world economic globalization is characterized by the role of international financial and economic organizations and the role of transnational companies in the functioning of the national economy by reducing the role of a sovereign state (Gechbaia, 2014). Consequently, economic globalization leads to both development opportunities and certain problems. Therefore, the responsibility of the government of any country is to find effective ways to maximize profits from the process of economic globalization

The study aims to:

- analyse the fundamental conditions for the effective functioning of business sector in Georgia;
- identify efficiency gains based on an assessment of the strengths and weaknesses of the business sector;
- improve methodological and methodical basis of business competitiveness, taking into account the current characteristics, trends, problems and opportunities of globalization;
- develop adequate recommendations and build roads for their practical implementation in Georgia.

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Identified objectives:

- Analyse existing methodologies and theoretical approaches in the field of competitiveness assessment;
- Assess the impact of the globalization process on the determinants of business competitiveness;
- Identify the factors determining business competitiveness in Georgia;

2, Literature Review

Various aspects of competitiveness of Georgian economy are assessed in Georgian economic science. The analysis of the determining factors of low competitiveness of domestic products both in the international arena and within the country is given, the priorities of economic competitiveness have been pointed out, cause-effect relations between economic competitiveness and sustainable development of the economy have been identified. In these work, considering the objectives of the research, different widely accepted methods and theoretical approaches have been used (Abralava, 2005, Baratashvili, Zarandia, 2007). Despite the considerable amount of research by Georgian scientists on the topic of competitiveness, it is necessary to continue an in-depth study of this area, help improve methodologies for assessing competitiveness, identify the factors that determine the competitive advantage of one side or another, establish the cause-effect relation between the level of competitiveness and the level of economic involvement of the country in international economic processes, find ways and carry out improving the competitiveness of business, etc. Based on the aforementioned, taking into account the current trends of globalization and prioritization of business efficiency to increase Georgia's competitiveness, the need to develop mechanisms and tools for effective regulation of business structures, necessity to define effective tools for their internal planning and control, analyse existing business risks in Georgia, etc., this attaches importance and significance to the discussed topic taking it an object of study (Abralava, 2001, Macagonov, 2007). At the present stage of economic development, the success of a company, industry, business, economy and the whole country is largely determined by the competitive advantage in the sphere of production.

Representatives of the classical economic school viewed the country's economic competitiveness in the context of the concepts of absolute advantage and/or comparative advantage. For example, the concept of absolute superiority belongs to A. Smith. According to this concept, a country exports goods if the expenses incurred in that country are small. D. Ricardo perfected this formulation as the concept of comparative advantage, according to which market forces address the resources of the country where they can be used more productively, which means that the country may be able to import goods even when it is able to produce these goods themselves and with less expenditure.

The World Competitiveness Index has been set by the World Economic Forum since 2005. This index measures the macroeconomic environment of the country, the state of the country's institutions and the level of technological readiness of the country. The rating is based on publicly available statistical data on the one hand, and, on the other hand, on the results of its own research conducted by the World Economic Forum, which, in turn, takes into account analysis of the information presented by individual entrepreneurs in special questionnaires. According to this indicator, the productivity level of the country is determined by its competitiveness, which represents the combination of separate institutions, factors and policies. The more competing economic system, the higher the level of living in the economy as well as the level of life, and the most importantly - the coefficient of the return on investment, which is one of the main indicators to assess economic potential. In addition, the above-mentioned coefficient determines the investment attractiveness of the country.

According to Hecksher-Olin theory, all countries have similar technologies, but they have a different ratio of factors of production, namely land, labor, natural resources and fund. The country benefits from those areas where factors, that are excessive, are used intensively. Products from these sectors are exported. The country also imports products and services for the production of which the country is experiencing a comparative shortage of factors. For example, a country with such a high level of cheap labor as Korea, exports labor-intensive goods. Countries rich in natural raw materials and arable land are exporting products from these sectors. Sweden's historically

strong position in the steel industry is explained by the fact that the iron ore obtained there contains very few phosphoric admixtures that allow for higher quality steel (Lekashvili, 2012).

The Global Economic Competitiveness Report of the World Economic Forum 2018–2019 presents the Competitiveness index of 137 Countries. The report comprises three main components of the development of a single country, such as: basic requirements, efficiency enhancement factors, and driving factors for innovation. All these three compilers incorporate 12 components;

Components of basic requirements include:

1. Institutions;
2. Infrastructure;
3. Macroeconomic stability;
4. Health Care and Primary Education

Components of the efficiency enhancement factor include:

5. Higher education and training;
6. Effectiveness of the commodity market;
7. Effectiveness of the labor market;
8. Development of financial markets;
9. Technological readiness;
10. Market size

The components of innovation and development are as follows:

11. Business development;
12. Innovations;

Significant methodological changes were made in the Global Competitiveness Index Rating of 2018. Various indicators and components were removed from the rating and replaced by new ones. The country's assessment scale has been changed and the maximum 7 points score has been replaced by 100 points. GCI rating countries are evaluated in 4 directions which, in turn, combine 12 indicators. These indicators, in turn, consist of 98 components. In 2018 the position of Georgia is favorable to 2017 – 57th place, with 66.8 points (improved by 1.4 points) Human capital – 65th place, with 72.1 points (improved by 0.7 points), Market – 75th place, with 55.4 points (reduced by 0.1 points), Innovative ecosystem – 72nd place, with 47.4 points (improved by 2.7 points).

The positions of Georgia in frames of the world's competitiveness indicators changed according to years (see Table 1 and Table 2).

Table 1. Georgia in the World Competitiveness Index

Year	Position of Georgia	Points
2018-2019 Index	66 th place	4.28 points
2017-2018 Index	67 th place	4.3 points
2016–2017 Index	59 th place	4.3 points
2014–2015 Index	69 th place	4.2 points
2013–2014 Index	72 th place	4.2 points
2012–2013 Index	77 th place	4.1 points

Source: The table was compiled by the author of the article based on data from the World Economic Forum <https://www.weforum.org/reports>

According to the Global Competitiveness Index published in October 2018, Georgia has advanced one step ahead compared to the previous year and moved from 67th to 66th position with total 60.9 points. Last year, the rating system comprised 7 points, while Georgia's total score was 4.28.

According to the Global Competitiveness Report for 2018, of the 110 components of the criteria that were presented in the indicators in the previous year, 55 increased indicators, 35 reduced, and 15 remained unchanged.

According to the position, significant indicators characterized by reduced rates are the following: the financial system (-25 position), stability of banks (-12 positions), venture capital availability (-19 position), market growth (-13 position), debt dynamics (-26 Position), trade tariffs (-1 position), macroeconomic stability (-24 position) and payroll flexibility (-6th place).

Improved components are: judicial independence (+4 positions) recruitment and separation practice (+7 positions), reliability of police service (+2 positions) and women in the labor market (+43 positions);

According to the latest reports, Georgia is among the top ten countries leading in 8 criteria. In the 2018 Global Competitiveness Index, there are 9 components are presented. The best positions the country occupies in the top ten list of the world are as follows: Electrification (first place), labor tax (first place), student-teacher ratio in primary education (second place), shareholders management (third place) Time for starting business (fourth place), trade tariffs (fifth place), service transparency standards (sixth place), use of foreign labour (sixth place), public expenditure (tenth place);

According to the index, the lowest indicators of Georgia are: social capital (126th place), quality of vocational training (131st place), qualification of the graduates (123rd place), finding and hiring employees (111th place), insurance premiums (122nd place), market capitalization (121st place), credit crunch (119th place), workforce diversity (116th place).

According to the figures, one of the main problems of the country is education and low qualification. This, in turn, hinders the development of other areas that require highly qualified personnel and innovations. On the other hand, the biggest challenge is the financial system and the sphere of innovation.

It will be interesting to see where Georgia is in the most difficult situation in 4 categories of the last report, according to 12 indicators, and, in general, what positions are represented in these categories. It is also interesting to see if the general picture of positioning of the indicators converges with the general picture of subindicators.

According to these indicators, the problem of financial system is indeed one of the four categories in the Global Competitiveness Index of 2018 and it coincides with the picture presented in subindicators. Also, indicators of market size and innovative opportunities indicate that the country is not in a very pleasant situation. Evaluating the general picture, it should be noted that among the four categories – the fourth category is the most problematic. The fourth category includes the market and financial ecosystems, and combines 4 indicators in total, among which three indicators with the lowest positions.

Recently, the Government of Georgia has implemented a number of reforms which affected some indicators of individual components of the country's competitiveness. However, the above-mentioned reforms have not been fully and properly reflected in the presented international rating. Consequently, in the light of the integration process, systemic reforms should be implemented efficiently.

Index of Economic Freedom (Heritage Foundation). Since 1995, Index of Economic Freedom has been set by the largest research organization of the United States – "The Heritage Foundation". Index of Economic Freedom estimates the economic freedom of 180 countries annually considering quantitative and qualitative components. Each component is rated on a 100-point system. Each component will be given the same weight/value for the individual country estimation, and the arithmetic mean will be determined.

The index is based on the four main criteria:

- Rule of law (protection of ownership, effectiveness of judiciary, level of corruption and government honesty);
- Government size (fiscal health, tax regime and public expenditure);
- Regulatory efficiency (simplicity of starting business, labor freedom and monetary freedom);
- Market openness (free trade, freedom of investment, access to finance).

According to the Index of Economic Freedom there are five levels/degrees of economic freedom:

- Free, 80–100 points;
- Mostly free 70–79,9 points;
- Moderately free, 60–69,9 points;
- Mostly unfree 50–59,9 points.
- Unfree

The [Table 2](#) presents the positions of Georgia in the Index of Economic Freedom.

Table 2. Positions of Georgia in the Index of Economic Freedom according to years

Year	Position of Georgia	Points	Level/degree of economic freedom
2018	8	75.9	Mostly free
2017	13	76	Mostly free
2016	23	72,6	Mostly free
2015	22	73	Mostly free

There are three procedures required to start a business in Georgia. It requires three days, no minimum capital required, and therefore the country has a good standing position in the "Freedom of Business" component of the "Regulatory Effectiveness" criterion (87.2, 16th place). However, there are some problems with the "monetary freedom" component (78.2 points, 92th place). There is a problem with the "freedom of labor" component as well. In particular, the level of unemployment is still high in the country, and there is no dynamism in the labor market.

Foreign trade is very important for the economy of Georgia. The total volume of export and import is 110 % of GDP. The average tariff rate is 0.7 %. That's why Georgia holds 9th place (88.9 points) in the "free trade" criterion. The situation with the "Financial Freedom" component is also hard (39th place, 60.0 points), which is due to the problems with the stock exchange (weak stock market).

3. Conclusion

Doing business rating. Doing Business Group of the World Bank annually publishes the ranking of doing business in different countries. Business rating is a quantitative indicator of business regulation and protection of property rights. The report aims to investigate the regulations of business activity in a particular country.

The report on the "doing business" prepared the Ministry of Economy and Sustainable Development of Georgia notes that positive changes have been achieved as a result of the institutional reforms and improvement of regulatory environment in the country.

Significant success and international recognition of Georgia is the result of reforms carried out by the Georgian government in 2013–2019. Over the past six years, 20 reforms have been implemented in the country to improve the institutional and regulatory environment.

It is important for Georgian companies to focus on differentiated approach strategies, as this policy will promote the enhancement of qualitative characteristics of Georgian products and introduction of innovations and new technologies. In order to increase the level of business competitiveness in general, it is advisable to develop clusters in Georgia and introduce business management practices in accordance with the principles of international management.

References

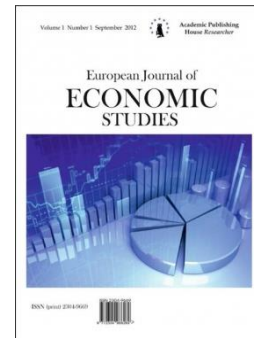
- [Abralava, 2005](#) – *Abralava, A.* (2005). National Economy and Globalization, Publishing house "Inovacia", Tbilisi.
- [Abralava, 2001](#) – *Abralava, A.* (2001). The way to the high-tech economy. Development of organizational and economic relations in the field of innovations. Tbilisi University Press.
- [Baratashvili, Zarandia, 2007](#) – *Baratashvili, E., Zarandia, J.* (2007). Georgia's Regional Development of Economics. Publishing House of Sokhumi State University, Tbilisi, 636 p.
- [Macagonov, 2007](#) – *Macagonov, I.F.* (2007). International Strategies for Economic Development, Kiev.
- [Gechbaia, 2014](#) – *Gechbaia, B.* (2014). Priorities and Trends in Economy of the Caucasus Region in the Time of Globalization (Competence, Problems, Challenges, Prospects). Monography.
- [Lekashvili, 2012](#) – *Lekashvili, E.* (2012). International and Regional Economic Organizations TSU. International and Regional Economic Organizations [Electronic resource]. URL: https://www.tsu.ge/data/file_db/economist_faculty/saertashoriso%20ekonomikuri%20organizaciebi.pdf
- [The European Union...](#) – The European Union and Georgia Information Centre [Electronic resource]. URL: <http://infocenter.gov.ge/euinfo-history/>
- [EU-Georgia Association Agreement...](#) – EU-Georgia Association Agreement Reading Guide [Electronic resource]. URL: <http://www.parliament.ge/uploads/other/22/22585.pdf>

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Ungrounded Concern of Societies Regarding Possible Negative Outcomes of Shale Gas Extraction*

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Abstract

The essential purpose of this article is to investigate the negative situations which may occur during Shale gas extraction which is considered as a new option for alternative energy sources. The study focuses on how ungrounded the societies' considerations and concerns are with regard to Shale gas extraction. The objective of the research is to investigate the possible negative outcomes of drilling during the process of extracting this type of energy and integrating it into the sector and as such, to reveal how ungrounded the concerns of some actors in the sector are. It is an undeniable fact that shale gas which has been popular particularly in recent years will be a significant force multiplier in today's energy world. This energy type which had not been put on the agenda before due to its requirement for high costs and advanced technology has started to be one of the top topics of sector's agenda with advanced technology thanks to reduced costs and increased need for energy. First of all, methods and techniques of shale gas extraction will be addressed in following stages of this study and subsequently possible problems will be set forth under different headings and it will be explained how negligible and insignificant these problems are.

Keywords: earthquake, greenhouse gas emission, horizontal and vertical drilling, hydraulic fracturing, water resources.

1. Introduction

In this century, success criterion has almost become synonymous with energy domination. What is energy domination? Conceptually it implies supply of energy that is needed by societies and the ability to achieve sustainability, competition and cost-effectiveness in energy supply and reflect it in production. Just like nations which become dependent on other nations as they are not self-sufficient in production, societies and event countries which cannot establish their own energy domination become dependent on other nations and countries and go into their orbit. Societies need energy to be able to maintain balance in production and sustain it for country's future. They try to diversify alternatives to meet their needs and they try to produce it cost-effectively. So it is a general principle to obtain general public opinion and consent to do this. Recently world's countries watch the silent revolution of United States of America with regard to Shale gas with admiration and try and desire to do the same in their own countries. However, they have some concerns as to "making matters worse while trying to be helpful" which is a Turkish proverb. So methods that are used on the world to extract this type of energy will be addressed in the second

* This article is based on the dissertation of the author entitled İsmail Pak, A New Option for Alternative Energy Sources: Shale Gas.

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part of this study and its effects which are considered to be negative will be addressed in the third part and in the fourth section, it will be discussed how ungrounded such considerations are.

2. Methods of Shale Gas Extraction

It has been discussed in detail in the dissertation study that shale gas is natural gas that is found trapped within small pores of sedimentary rock that is made of clay, quartz and calcite minerals. Sedimentary rocks which are named as shale have limited and low permeability in terms of gas and liquid materials that pass through them under normal conditions. The method that has been developed to extract such gas from rocks and use it economically is named as “hydraulic fracturing”. By using such method, regions with gas potential are located through long-continued investigations and underground natural gas is extracted by use of drilling technique. Extraction operation is carried out by pumping some chemical products and sand into drilling into borehole, opening cracks in form of shale, releasing hydrocarbons that are trapped therein and enabling flow of natural gas from shale into the borehole.

As technology has advanced, drilling techniques that have been used have also developed. Two prominent technological developments have enabled us to benefit from shale gas economically. One of these is the above-mentioned hydraulic fracturing and the other one is the most significant technique that induces such hydraulic fracturing, which is horizontal drilling technique. Hydraulic fracturing method reduces the high costs which had prevented extraction of such unconventional sources and maximizes natural gas and petrol production from these rocks which are called shale. After the rock type that is named as shale is reached through boreholes that are opened vertically, horizontal drilling technique begins to be used and operation continues horizontally. High amount of a mixture that comprises water, sand and chemicals is pumped in a compressed way into it and as such, the gas that is trapped in pores is released and comes out of the boreholes. This concept was developed for the first time for Barnett Shale unit in Ft. Worth basin that is located in mid-north of Texas, USA. The first borehole was opened in the field in 1981 for conventional purposes and by use of conventional methods. Approximately 100 boreholes were opened from 1981 to 1990 in order to make production from conventional reservoirs. Hydrofracturing method started to be used after 1997. As a result of it, exploration and production activities accelerated very rapidly in this basin and the number of boreholes used for production reached 6203 at the end of September, 2006. Amount of production multiplied upon excavation of horizontal boreholes as of 2002 and this field has become the largest one in Texas and second largest one in USA. According to the United States Geological Survey (USGS) reports for 2013, the field’s producible potential has been reported to be 26.2 tcf (Kemal, 2014).

The most significant component of horizontal drilling and hydraulic fracturing techniques is water. Approximately 20,000 litres of water is used to enable horizontal and hydraulic fracturing of a borehole (EIA, 2019). In addition, when it is considered that a borehole can be pierced for more than once, the amount of water used can reach high numbers; so much so that, it is known that China has been experiencing some problems regarding shale gas extraction due to excessive need for amount of water used for hydraulic fracturing operation (Hook, 2012). Some stages and criteria are also required for shale gas extraction besides vital importance for close proximity to a water source. Stages of shale gas extraction are listed and outlined below:

- * Geological and seismic researches process
- * Platform construction
- * Vertical drilling operations
- * Horizontal drilling operations
- * Perforation
- * Fracturing (Hydraulic Fracturing)
- * Waste management
- * Production process

* **Geological and seismic researches:** Geological and seismic researches are conducted to draw three dimensional maps of underground geological formations. With regard to the sites where studies will be conducted; appropriate rock structures are located first, appropriate thicknesses and depth of rock structure are identified and information is gathered as to which boreholes will be opened in which locations and how many boreholes will be opened.

* **Platform construction:** In order to open boreholes in pre-determined locations, site preparations are completed, assemblies are placed in certain distances on the ground and the platform must be constructed for the equipment.

Vertical drilling: It implies the vertical drilling that is conducted until the rock layer is reached while the earth crust is pierced towards the underground. However, concrete is laid between steel pipes and interwoven pipes for safety purposes to prevent internal collapse of drilling.

Horizontal drilling: It implies the drilling that is conducted horizontally up to one to two km in order to expand the surface area by rotating 90 degrees when the inner rock layer is reached vertically.

Perforation: It implies the operation of creating small holes on concrete coatings in the places that are emptied inside the horizontal drilling.

Fracturing: A mixture made of chemical substance, water and sand particles is pumped with high compression into the emptiness that is created after vertical and horizontal drilling. The purpose is to create capillary fractures to enable leakage gases that are trapped in rock structure.

Waste management: It implies the operation of storing the liquid mixture, which is used for drilling, when it resurfaces and re-purification to clean such liquid. This liquid mixture is very important. As tons of water is used for fracturing, water must be purified from the chemical substances it has and then released back into nature to prevent contamination of underground sources.

Production: It implies the demounting of all equipment, establishment of shale gas collection equipment and carrying out works as required for its transfer after drilling and fracturing operations are completed under ideal conditions.

The most common method that is used for shale gas exploration and extraction operations is “horizontal fracking”. In addition, vertical hydraulic fracking and rotary hydraulic fracking are used.

2.1. Vertical Drilling (Piercing-Opening a Hole)

Vertical hydraulic fracking is a drilling technology used by opening vertical pits on the surface. This method has been used for a long time and the term “vertical fracking” was used for conventional fracking methods before horizontal fracking. Vertical hydraulic fracking is a technique that does not use wide peripheral components although it contains some short horizontal components (Ahishali, 2013). At this stage, after the appropriate shale layers are located after investigations, preparations are made to bring it to a very large space, a site medium and this space equals 25 football fields approximately. Then the act of drilling begins after drilling platform is established with required assemblies. Drilling operation lasts from 3 to 6 weeks depending on the structure of underground resources. Water that comprises mud and particles and that comes out while drilling is poured into a very large pool. Concrete sheet block is created with 3 interwoven steel pipes to prevent contamination of underground water and blend of underground water with natural gas in following stages as earth’s layers are perforated during the operation of drilling. Concrete block body is used generally to coat the hole (borehole) on the inside. This operation has to be made essentially to protect the shale gas, which will come out after drilling, from underground waters (aquifers). The above-mentioned operations including laying the concrete, concrete sheet block and cementation have to be made based on certain principles. This is compliant with the current industrial standard stipulated by petrol and natural gas laws and the specifications used by American Petroleum Institute. These specifications set out the length, thickness, tensile strength and composition of coating for a specific situation and describes the most common method used for selecting petroleum and gas preservation.

2.2. Horizontal Drilling (Horizontal Hydraulic Fracturing-Fracking)

This stage is the cracking stage following continued horizontal drilling for one to two meters after piercing and advancing down to rock layers. Approximately 20 thousand cubic meter water, 1800 cubic meter sand and 100 tons of additives are used before going through with this stage. Additives which are prepared externally are as follows. The reason why mixture substances will be used and percentage rates of substances in the mixture will be indicated below. Usually water constitutes 97.5–98 % of general total volume in the mixture. Such water contains cracking liquid, minerals and bitter water that return from boreholes. 30 % to 70 % of such water is original

cracking liquid. Additionally, natural formation waters get mixed into such water and come out. 10 % to 40 % of water pumped after hydraulic cracking operation in shale gas production return. Quality of returning water changes depending on the place of borehole and depth; however, they are subjected to purification at different levels and are used after clean water is added. Returning water contains high amount of sodium, calcium and magnesium. Therefore, it must be purified before it is used or accumulated as waste. Endeavours are made to develop new technologies in order to minimize need for water in hydraulic cracking due to high cost of water purification. Such endeavours focus on finding new alternatives to water such as liquid propane, carbon dioxide, nitrogen gas and cracking by using sound waves without any liquid. Such methods concentrate on developing special equipment to open borehole. Returning water and formation water that comes out as a result of production is used in a purification system established in the borehole region, in purification system of local administrations in the region or in a private purification facility.

2.3. Rotary Drilling (Rotary Hydraulic Fracturing)

Rotary hydraulic fracturing is a drilling technology that uses a sharp and rotating drill in order to open holes on the earth's crust. Such technology uses liquid that is known as "mud" and such liquid generally contains minerals like barite, chalk (or hematite) and clay. Such mud liquid is petroleum-based and formed generally by use of petroleum products such as diesel or synthetic oil. Moreover; water and clay mixtures can be used to create mud (Glass, 2011). Actually it is the operation of realizing usual vertical drilling with a different technique.

3. Effects/Risks Of Shale Gas

Human beings have used their environment, and therefore natural resources, to meet their own needs since the very beginning and as such, have contaminated the environment and have been affected by the environment. When human-nature relations and environmental problems are considered from this perspective, it can be understood that the single and the biggest root of all ecological problems that occur is irresponsible use of nature to meet unlimited human needs. As a matter of fact; significant and irreparable damages are made to the nature in each stage of meeting such needs including supplying required raw materials, producing and consuming commodities and services and then transferring them to nature as waste. That's why the effects and risks of shale gas that is considered as alternative energy source will be discussed in this part of the study.

3.1. Earthquake Effect/Risk

One of the problems that occur in shale gas extraction activities is that several environmentalist organizations protest shale gas extraction operations claiming that shale gas causes environmental pollution. For that matter; France, Bulgaria and Czech Republic banned shale gas works claiming that it causes environmental problems and earthquakes. England, Spain and South Africa have stopped works (However, England abolished the decision and resumed shale gas extraction activities).

3.2. Its Effects on/Risks to Agricultural Fields

Borehole is opened almost at every kilometre for shale gas production works and this occupies large space on earth as it requires construction of connecting roads or new roads for logistic purposes. This is particularly important for places that are engaged with agricultural activities. It was considered by local folk as a significant source of income at first as it was an opportunity for them to lease or sell their lands to petrol companies but in years they started to think that such lands would not be as fruitful as they were before (due to low agricultural yield or pollution), they responded negatively.

3.3. Its Effects on/Risks to Air

Global warming is a long-term rise in the average temperature of the Earth. Such rise is so big that it affects ecological balance. The greatest effect of global warming is on the climate system. Climate change that is a result of global warming occurs when effects of global warming result in changes in concentrations of some gases that are naturally present in atmosphere and named as greenhouse gases and when, consequently, earth's temperature rises excessively and some ecological imbalances occur (Karakaya, Özçağ, 2004).

However, recently, there is significant increase in discussions regarding reduction of such subvention that are given to renewable energy generally in Europe including Italy, Spain and Germany. In this sense, such subventions may decrease in 2016. Some changes have started to occur in richness of natural gas and gas in USA. For example; greenhouse gas emissions have broken the record of reduction down to the lowest level of the last five years by decrease of

450 million tons. Such reduction is a first on the world in terms of global greenhouse gas emissions (Taner, 2012). America's current amount of emission is around 1990, which is an extremely positive level. It has been achieved especially after substitution of shale gas and charcoal (Biol, 2014).

3.4. Its Effects on/Risks to Water

There are several negative comments as to hydraulic fracturing method that is a common method used for shale gas extraction activities. Such comments generally focus on use of large amount of compressed water which is the basis of hydraulic fracturing method. The possibility that the chemicals contained in compressed water may contaminate the underground water causes local folk and especially environmentalists to get concerned. Another and probably the most significant concern which surfaces regarding hydraulic fracturing technology is related to potable water. As it was described while explaining how the hydraulic fracturing method works, a mixture that contains tons of special chemicals and millions of litres of water is used to extract natural gas from rocks that are located thousands of meters under the earth. Water used for this operation is contaminated later and therefore it has to be cleaned or destroyed so that it cannot damage the environment. Most people are concerned about the types of chemicals used for fracking and the possible contamination of underground water by such chemicals. In addition to this, there are several wrong opinions as to what liquids are used for hydraulic fracturing and how such liquids are collected and destroyed after they pumped into underground for shale gas extraction (Ahshahi, 2013).

Waste water that occurs as a result of shale gas production is divided into two categories. Water that is collected from boreholes within approximately 30 days following hydraulic fracturing is named as "returning water". The other one is the water that accumulates on the surface together with gas after start of gas production. Another subject of criticism is use of large amount of water during drilling works. People are concerned that they may have difficulty in accessing water which they need in many areas of life and that water ecosystem may be affected negatively during such works. As a result of hydraulic fracturing, significant amount of waste water comes out in addition to large amount of water consumption and as such waste water may contain unsolved chemicals, it has to be processed before it is used again (Yildiz, 2013).

The fact that waste water that comes out as a result of hydraulic fracking operation is purified generally in public purification plants and that such plants are not adequately equipped for Radioactive substance purifications has led to discussions in USA (Caruso, 2011).

While it is indicated that 0.75 % of the fluid resurfaces according to experiences of USA, returning water contains the chemicals used for implementation, heavy metals, salt and radioactive substances that are naturally contained in geological formations. It must be taken into consideration that while the amount of water used changes depending on the depth and length of horizontal boreholes, 2500 m³ is needed for a vertical borehole and such amount rises to 10 thousand – 25 thousand m³ for a horizontal borehole. In such case, the pressure of water that is needed for high-volume hydraulic fracturing on fresh water resources should be kept in mind and it should be taken into consideration that water that is trapped in underground formations surfaces as a result of drilling operations and as a matter of fact, large part of waste water comprises such "produced water". All of these factors contribute to enhanced significance of water management in hydraulic fracturing practices (Osborn et al., 2011).

4. The Reasons Why Such Concerns Are Ungrounded

4.1. Concerns About Earthquake

It is right to think that hydraulic fracturing may trigger small seismic activities and even small-scale earthquakes. However, these are generally small quakes which are felt in places where such fracturing operations take place, which do not harm people or the environment and which just cause traces of tracks on roads or small damages to buildings in some areas. Such activities lead to earthquake especially when fractured basins are faulted and easily triggered. For example, couple of small earthquakes were detected in places that are close to the injection point as a result of fracturing operation that was carried out in 2011 in Preese Hall-1 which is the first shale borehole of England. Such earthquake's magnitude was 2.3 and scale was 1,5 Richter. Cracks occurred on some roads while it did not cause any destruction on the surface.

4.2. Concerns about Agricultural Fields

Considering that a borehole life of a shale gas field is 15 to 20 years, agricultural fields and life qualities of settlements which are within the domain will be relatively affected. Therefore, such

concerns will be eliminated if exploration and drilling activities for this energy type are carried out in places away from agricultural fields and respective legal terms are enforced.

4.3. Concerns about Its Effects on Air

Shale gas is an important factor in terms of climate change. Shale gas is one of the sources that will help us reduce global greenhouse gas emissions because when this energy type substitutes for charcoal, there will be significant reduction in greenhouse gases. China takes important steps in terms of energy efficiency and renewable energy. Such steps have become mandatory. However, although some carbon reduction mechanisms are under pressure, some initiatives such as USA's Climate Change Action Plan, China's plan for reducing charcoal within its local energy supply basket, Europe's strategic energy and climate-related discussions for 2030 and Japan's new energy plan discussions can enable us to limit CO₂ emissions in energy sources. According to the main scenario, it is foreseen that energy-induced CO₂ emissions will increase by 20 percent in 2035 despite the effects of all declared measures which will be taken by governments to increase energy efficiency, support renewable energy sources, limit subventions supplied to fossil fuels and, in some cases, to price carbon emissions. This indicates that our earth may be faced with average temperature increase of 3,6°C in the long run. This level is way above 2°C that was internationally agreed upon objective (Biol, 2013). Natural gas has been an important substitute for charcoal recently and will reduce greenhouse emissions significantly. However, there has to be significant reduction in future CO₂ emissions, natural gas must be regarded as just a transition stage rather than a final solution for a low-carbon future. On the long term, common (and profound) use of natural gas will probably lead to negative results in terms of climate change. Shale gas technology can support a final solution for climate change by both increasing economic capacity of renewable technology and substituting for charcoal abroad (Cohen, 2013).

4.4. Concerns about Its Effects on Water

When shale gas extraction activities that are carried out on the world are examined generally, it can be seen that companies take serious measures in order to prevent contamination of underground water through hydraulic fracturing, place emphasis on keeping potable water clean and carry out works in this regard. Risks which may occur due to shale gas extraction activities will be naturally reduced as technology advances. In this sense, "borehole case" which is one of the measures taken to minimize such risks is an important one. Borehole case is a layered wall that is generally made of cement and steel. This structure supports the borehole and is separated from the geological structure around the borehole. As such, contamination of potable water with hydraulic fracturing liquids can be prevented. The depth of underground water can be measured through legal regulations and it can be determined how much the borehole case must be expanded (Glass, 2011). Criticisms about the liquids used for hydraulic fracturing have increased as shale gas manufacturers abstained from revealing the liquid formula in order to protect their own technologies commercially in early 2000s. This situation was eliminated through pressure of public authorities and regulations and manufacturers became more transparent about the chemical substances that are used. Today, liquid that is used for hydraulic fracturing contain approximately 97 % water, 2 % sand and around 1 % friction modifier, antimicrobial and chemicals that prevent accumulation of waste. Chemicals that are used are polyacrylamide, bromine, methanol, naphthalene, hydrochloric acid, ethylene glycol, butanol and similar substances and it is stated that as such chemicals are diluted, they would be harmless even if they get mixed with potable water. On the other hand, it is a very low probability that hydraulic fracturing liquids be mixed with underground water aquifer through fractures because underground water trays are in 300-meter depth at most and shale formations where hydraulic fracturing is implemented take place at least at 2500 depth underground. Fractures that occur across the horizontal drilling extend 200 meters upwards at most and there are impermeable rock layers which have thickness of 1 to 2 kilometres between underground water sources and the top point of fractures even in hydraulic fracturing operations with the most superficial depth (Demirtaş, 2013). Therefore it is evident that shale gas which is considered as an alternative energy source to fossil fuels is less undeniably less harmful than other types in terms of water factor which is our essential resource and that its significance will increase even more in the following days due to advancing technology in today's world.

5. Conclusion

For countries, the most important thing is to meet their energy needs from an inexpensive cost, to ensure sustainability of energy supply and pave the way for convenient access to such resources. As we need green energy more and more every day in order to prevent increase in earth's temperature and to ensure sustainability, our world still meets its energy needs from fossil fuels. Shale gas that has an ever-increasing trend in energy sector is an important exit point in this regard. However; this type of energy cannot be quite understood by societies yet as it is a new type of energy and it requires state-of-the-art technology. As societies do not have adequate familiarity with this type of energy, they have prejudices and they tend to opt for conventional fuels. In the following days, maybe in years, such prejudices will be broken down and countries will do silent reform just like United States of America and will have taken important step in establishing their own energy domination with shale gas.

References

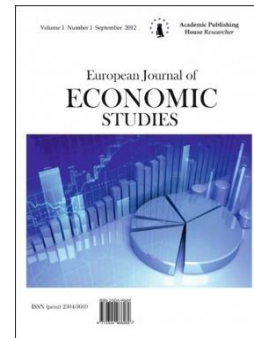
- Ahışhali, 2013** – *Ahışhali, M.A.* (2013). Kaya Gazı: Dünya Enerji Düzenine Etkileri ve Türkiye Potansiyeli. *Neuşehir Hacı Bektaş Veli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, c. 3, P. 1, pp. 12-34.
- Barrett, 2011** – *Barrett, P.M.* (2011). Yer altı Çözümü, Bloomberg Businessweek, 20-26 Kasım, pp. 66-73.
- Birol, 2014** – *Birol, F.* (2014). World Energy Outlook 2013 Tanıtım Konferansı, 20 Aralık 2013, İstanbul.
- Caruso, 2011** – *Caruso, D.B.* (2011). 44,000 Barrels of Tainted Water Dumped Into Neshaminy Creek. We're the only state allowing tainted water into our rivers. Associated Press.
- Cohen, 2013** – *Cohen, A.K.* (2013). The Shale Gas Paradox: Assessing the Impacts of the Shale gas Revolution on Electricity Markets and Climate Change. M-RCBG Associate Working Paper Series No 14, P. 88.
- Demirtaş, 2013** – *Demirtaş, Ö.* (2013). Enerji Piyasasındaki Son Gelişmeler ve Kaya (Şeyl) Gazı, İş Bankası İktisadi Araştırmalar Dergisi.
- Glass, 2011** – *Glass, K.* (2011). Shale Gas and Oil Terminology Explained: Technology, Inputs & Operations. Environmental and Energy Study Institute.
- Hook, 2012** – *Hook, L.* (2012). Country focus: China faces difficulties in shale gas production. Financial Times. [Electronic resource]. URL: http://dergi.usiad.net/61.Sayi/Bildiren_Sayi_61.pdf (Erişim Tarihi: 05.04.2014).
- Karakaya, Özçağ, 2004** – *Karakaya E., Özçağ M.* (2004). Sürdürülebilir Kalkınma ve İklim Değişikliği: Uygulanabilecek İktisadi Araçların Analizi.
- Kemal, 2012** – *Kemal, N.* (2012). Alternatif bir Enerji Kaynağı: Kaya gazı (Shale Gas). Kocaeli Sanayi Odası.
- Osborn et al., 2011** – *Osborn, S., Vengosh A., Warner N.R., Jacksona R.B.* (2011). Methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing. *Proc Natl Acad Sci USA*, 108(20): 8172-8176.
- Taner, 2012** – *Taner, A.C.* (2012). ABD, Geleneksel Olmayan Doğalgaz Türü Kaya Gazı Rezervleri Zenginliği İle Klasik Olmayan Doğalgaz Çeşidi Kömür Yataklı Metan Gazı (Coalbed Methane-CBM) Bolluğu Sayesinde Ulaşacağı Endüstriyel ve Ekonomik Kazanımlar. Fizik Mühendisleri Odası.
- Yıldız, 2013** – *Yıldız, D.* (2013). Kaya gazı devrimini Gücü: Su. Toprak Su Enerji Çalışma Grubu.
- EIA, 2019** – EIA (2019). Shale. [Electronic resource]. URL: <https://www.eia.gov/todayinenergy/index.php?tg=%20shale>
- World Energy Outlook, 2012** – World Energy Outlook (2012). [Electronic resource]. URL: https://www.iea.org/newsroomandevents/speeches/weo_launch.pdf (Erişim Tarihi: 21.04.2018).

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On the Non-Economic Policy and the Post-Communist Experience of Georgia

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Abstract

Economic policy is an integral part of public policy and is to be based on the accomplishments of economics. If an economic policy is not only far from economics, but in certain cases contradicts its basic postulates and rules, then such an economic policy carried out by the government represents a “non-economic policy.” Among the causes that lead to “non-economic policies,” first and foremost, is the unprofessional economic team of the government and false opinions entrenched in economics or economics lagging behind the processes unfolding in the economy. The present article offers the typology of a non-economic policy. The experience of post-Communist Georgia illustrates a number of clear examples when the governments in the country implemented non-economic policies which quite negatively affected the development of the country. As a result of developing a successful economic policy such economic reforms were carried out which allowed the country to overcome hyperinflation in the 1990s and macroeconomic stability was achieved. After carrying out currency reform, the national currency, the lari, was introduced. The reforms were fully based on economics. The main challenge is to approximate the economic policy to economics which can be achieved only in the case when economic policy-makers are highly skilled economists.

Keywords: economic policy, economics, economic reforms, economists, international financial institutions.

1. Introduction

The success of an economic policy largely depends upon the extent to which it reflects the modern accomplishments of economics.

There are such cases when an economic policy carried out by a country fails to be aligned not only with economics but is beyond common sense.

This paper aims at highlighting the nature of mistakes commonly made in the formation of economic policies and identifying their typology while analyzing the experience of post-Communist Georgia in developing economic policies and implementing them (Papava, 2012) in order to detect those key problems whose solutions are of high priority for achieving stable economic development in the country.

2. A Non-Economic Economic Policy and its Types

Economic policy, as a field of study and a scientific discipline, is one of the distinguished fields of modern economics (e.g., Bénassy-Quéré et al., 2010).

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Economic policy is a set of actions that governments take in the economy and includes taxation systems, national budgets, a monetary system, labor markets and foreign trade regulations, etc.

According to Ludwig von Mises: "... the best economic policy is to limit government to creating the conditions which permit individuals to pursue their own goals and live at peace with their neighbors. Government's obligation is simply to protect life and property and to allow people to enjoy the freedom and opportunity to cooperate and trade with one another" (Mises, 2006).

It does not cause raise any doubt that not only the "best economic policy" as referred to by Mises, but economic policy in general, should be based on the accomplishments of economics. In reality, it is unfortunate that oftentimes economic policy is clearly far from those accomplishments of economics. In other words, economics does not necessarily underlay economic policies.

Such an attitude of the government towards the economy and the consequent product cannot be called economic policy per se as it contradicts not only economics but even common reason; it would be more appropriate to name it "*non-economic economic policy*" or, more briefly, "*non-economic policy*."

I consider that there are the three types of non-economic policies.

Namely, ***the first type*** of non-economic policy is such when the persons defining economic policies do not take into account the knowledge offered by economics.

In the case of ***the second type*** of non-economic policy, the policy developers usually apply the knowledge created by economics but this knowledge is false.

In the cases of ***the third type*** of non-economic policy, some significant economic phenomenon has not yet been explored by economists and, therefore, the economic policy developers, regardless of their commitment, cannot use knowledge which is not yet available.

The first type of non-economic policy may be due to the following reasons:

1. Economic policy developers (especially in the developing countries) are not professional economists or have very poor qualifications and, consequently, lack knowledge of the basics of economics, not to mention its accomplishments;
2. Economic policy developers may be quite qualified economists but it does not suit them to integrate the accomplishments of economics into the economic policy on which they are working.

It is to be noted that it is quite often that politicians approach the country as if it were a company and they believe that managers, not professional economists, should hold senior positions of economic policy developers (Papava, 2018b). The simple truth that there is a principal difference between a country and a company (Krugman, 1996) is not recognized, regretfully, by most politicians. In reality, the place for managers is in businesses and not in politics.

When the decision makers of economic policy do not have economic education, this is usually balanced by the professionalism of those persons who prepare draft decisions for such senior public officials. This said, even in this situation it is quite possible that senior public administrators will disregard the above mentioned draft projects and abide only by political expediency.

Even if the decision makers of economic policy are equipped with a special economic education, there are frequent cases when they rely not so much on the knowledge accumulated in economics but make decisions based only on political expediency.

This phenomenon, when political expediency is preferred over applying economics in drafting economic policies, is explained by the well-known "public choice theory" (Buchanan, Tullock, 1962).

The second type of non-economic policy is caused by the mistakes made by economists. A textbook example of this is the global financial and economic crisis in 2007–2009 when the approaches that the economists came up with in order to regulate economy, unfortunately, turned out to be false (Cliffe, 2019; Stiglitz, 2010).

The relation between economics and economic policy (more precisely, public policy) may be compared to that of biology and medicine, or that of physics and engineering based on which we can infer that some mistakes made in medicine are not the fault of biology. Similarly, it is unjustifiable to blame physics for engineering errors (Hausmann, 2019). Such an interpretation is clearly not correct, since if a source of error is found in biology, it will consequently affect medicine.

Similar cases in regard to economics and economic policies are not rare, regretfully. For instance, the so-called Modern Monetary Theory (MMT) is drawing quite the attention and a relevant textbook has already been published based on this theory (Mitchell et al., 2019). This so-called revolutionary theory holds that a budget deficit does not have any impact, and the gap between national budget expenditures and tax revenues does not result in inflation, if it can be filled by money emission. An obvious weakness of this theory is that it is built on a closed economy in which there is no place for foreign trade and the outflow and inflow of capital into the country do not take place and there is no problem of a fluctuating exchange rate. Although the leading economists in the world openly criticize MMT (e.g., Krugman, 2019a, 2019b; Rogoff, 2019), there is a growing expectation that this theory will be followed in the not so distant future, provided that leftist politicians will come into power in the USA, Australia, the UK, Canada and in some EU countries, and even in Japan (Moiseev, 2019).

A vivid example of the third type of non-economic policy is the transition from the command economy to the market economy in the absence of relevant economic theory (e.g., Papava, 2005). Only the generalization of the experience accumulated as a result of reforming markets in the post-Communist countries (Åslund, 2007) made it possible to develop a more or less comprehensive framework of the economic theory of transitioning from the command to the market economy (e.g., Hare et al., 2013).

Not less important is the phenomenon of cryptocurrency emerging all over the world in the absence of a more or less well-reasoned theory about it (Papava, 2018a: 95-97). Although cryptocurrency; namely, bitcoin, has been around for ten years already and there are many publications on the topic (e.g., Stolbov, 2019), the economic nature of cryptocurrency has not yet been fully understood (Simanovski, 2018). According to Robert Shiller, Nobel prize winner in economics, the economic mechanism of cryptocurrency emission has been unclear so far (Shiller, 2018).

Notably, under the conditions of the post-Communist transformation, the third type of non-economic policy has been crucial while the first type of non-economic policy comes to the forefront upon completion of the transition to a market economy.

It is known that the nature of economic policy varies from the Laissez-Faire economy to the command economy which is characteristic for Communist-oriented economies. The essence of transitioning to a market economy during the post-Communist period is moving from the second extreme condition to the first extreme one; in other words, the economic policy of moving to a market economy implies the behavior of a government when the extent of its intervening in managing the economy not only decreases gradually but also changes in essence and it attempts to create such an institutional environment in which the relevant regulatory authorities offer businesses a more or less formalized framework for their activities.

3. Initial Non-Economic Policy of Post-Communist Georgia

In 1990–1991, the economic policy carried out by the Georgian Government was distinguished with timid attempts to liberalize the Communist methods of the economy's governance. Hence, it is not surprising that the government announced during that period that Georgia was to introduce state capitalism. It is noteworthy that moving from a command economy to a market economy based on state capitalism actually meant keeping the non-market foundations of the economy or moving to a market economy by only changing the 'façade.'

A revolutionary turning point of the government's interference in managing the economy started in 1992 which was mainly accompanied by the almost universal, general liberalization of prices and allocating agricultural plots free of charge (Papava et al., 1998). At the same stage, the banking sector was practically subject to a complete liberalization as a result of which issued loans reached immense scales. Thereafter, commercial banks were established although supervision by the central bank, the National Bank of Georgia (NBG) over the activities of the banks, was not carried out. Similarly 'impressive' was introducing a clearing mechanism of purchasing natural gas from Turkmenistan which enriched the corrupted public servants and accumulated the state debt of Georgia to more than USD 400 mln. It is notable that as of 2001 the clearing mechanism was reactivated in order to pay off the debt to Turkmenistan.

Such actions of the government vis-à-vis the economy cannot be called economic policy as they contradict not only economics but common sense as well.

The non-economic policy carried out in Georgia in 1992–1993 created fertile soil for hyperinflation which imposed a major threat to the country's statehood (Gurgenidze et al., 1994).

It is noteworthy that at the time of the collapse of the Communist regime and the disintegration of the Soviet Union, as mentioned above, there was no theory of moving from a command economy to a market economy (Papava, 2005). Considering this, we may not blame the economic policy developers at that time that they did not apply a relevant economic theory as it was not even laid out. Therefore, it is apparent that at the beginning of the post-Soviet period, the third type of non-economic policy was in place.

Georgia started carrying out radical economic reforms at the beginning of 1992 by applying a Polish version of the well-known method of “Shock Therapy” (Balcerowicz, 1995). Namely, the Georgian version of the so-called “Balcerowicz Plan” (Aleksashenko, 1990: 21) which was named after Leszek Balcerowicz, the Vice Prime Minister and Minister of Finance of Poland in 1990s, was implemented.

During that time in Georgia, English or any Western-European language was spoken by a very limited number of persons and actually the only foreign language which the majority of the population spoke was Russian which enjoyed the status of the state language during the Soviet period. The above referred “Balcerowicz Plan” was translated into Russian for the reforms to be carried out in Russia starting January 1992 and a month later the Georgian Government had it translated into Georgian for the economic reforms to be carried out in the country.

For Georgia, the “Balcerowicz Plan,” unfortunately, was doomed for failure as unlike Poland and Russia, Georgia did not have one of the main instruments for the “shock therapy” which is a national currency. Further, the government made a number of mistakes (Khaduri, 2005; Papava, 1996) which led to the discretization of “shock therapy” in Georgia.

The goal of the economic reforms in the country in 1994–1995 was to create macroeconomic stability which was not only achieved (Papava, 2011) but it also made it possible to successfully introduce the national currency, the lari (Kakulia, 2008).

4. Non-Economic Policy of Georgian Libertarianism

In 2003, a few months later after the so-called Rose Revolution, the Georgian Government invited a Russian oligarch, Kakha Bendukidze, an ethnic Georgian businessman with whom the recognition of libertarianism as the official ideology in the economic policy of the Georgian Government is associated. Having been the Chief Executive Officer of the industrial holding, ‘United Engineering Plants,’ he was quite closely related to the regime of Putin which is only natural, considering that the factories that composed the holding were producing quite complex equipment and machinery, including equipment for nuclear power.

Official public statements made by the government and their promotion abroad created an attitude that the post-revolutionary reforms were assessed as libertarian at the international level as well (e.g., Burakova, 2011; Burakova, Lawson, 2014; ESI, 2010; Gilauri, 2017; Udensiva-Brenner, 2010).

This opinion was reinforced by abolishing numerous licenses and permits necessary to start a business in Georgia and the rules for the remaining ones were simplified along with an essential simplification of the system of issuing various documents by the government, reducing the tax burden and moving to electronic system of paying taxes, etc. It was these types of reforms that resulted in Georgia holding one of leading positions in the well-known ranking of the World Bank's Doing Business (Papava, 2009a).

However, the dynamics of a generalized indicator, the gross domestic product (GDP) per capita, demonstrates that these types of economic reforms should not be regarded as successful. Namely, by this economic indicator Georgia lagged behind its immediate neighbor, post-Soviet Armenia, which did not have a libertarian government (the economic growth of neighboring Azerbaijan is not comparable since it was a result of oil and gas production and export). Specifically, according to the World Bank data in 2003, the GDP per capita in Georgia was little bit more than in Armenia and in 2010 this indicator made only 95.5 % of the same indicator for Armenia (WB, 2019).

In parallel to the reforms identified as libertarianism, the government of the National Movement (NM) ruling party systematically violated ownership rights and did not shy away from coercing businessmen to transfer part of their profits to non-budget funds (certainly, it did not

apply to the businesses close to the government members) and the judicial system was directly under the control of the Prosecutor's Office (Papava, 2013). Regretfully, no comment was made by so-called 'Libertarians,' who were members of the government, regarding these anti-libertarian facts. Hence, the façade of the reforms carried out by the NM was Libertarian but its content was neo-Bolshevik (Waal, 2011: 13).

It is well known that any person, as a rule, is Libertarian since no one wants anyone else to interfere in his business or they do not want their rights to be restricted. A true Libertarian is a person who, most of all, is Libertarian for everybody else as well and, thus, is generally Libertarian.

It was characteristic for the team in the government which rallied under the Libertarianism flag that most of them, like their leader, Kakha Bendukidze, did not have an economic education. Being unaware of the basics of economics, it was the easiest way for them to share Libertarian opinions: when one does not know about economic failures and how to overcome difficulties, it is very easy to recognize the maximum non-interference of the government in the economy as the only principle justified.

Thus, the difference between so-called 'Libertarians' and true libertarians is that for Georgians, Libertarianism was not an informed, conscious choice based on economics. Actually, Georgian Libertarianism was used to conceal their lack of knowledge of economics (Papava, Taphladze, 2015).

All of this allows us to conclude that Georgian Libertarianism by its essence is the first type of non-economic policy.

5. Non-Economic Policy of Primitivism

A vivid example of the primitivism of non-economic policy is the *4-Point Plan* initiated by the Georgian Government from 2016 and consisting of the following points: 1. Economic Reform, 2. Education Reform, 3. Spatial Planning and 4. Governance Reform.

Although the name of Point 1 of the Plan is very general, it was reduced to exempt businesses from profit taxes in case they would reinvest their profits.

Point 2 meant that the vocational education system would be oriented on a dual or a work-based approach according to which educational institutions and potential employers were to implement the training programs jointly while university education would be oriented on the actual needs of the economy which would be identified by analyzing labor market data.

Point 3 aimed at facilitating the development of cities and villages and the development of transportation infrastructure connecting the regions in the country with the final objective to make Georgia a four-seasons tourist destination.

Point 4 envisaged the increased effectiveness of governance.

Due to the undeveloped real economic sector in Georgia, unfortunately, the country consumes more than it produces and, consequently, its import has exceeded its export three times over the years with imported products accounting for 80% of the consumer basket (as well as the food basket). As a result, a non-manufacturing and consumer economic model was developed in Georgia (Papava, 2015).

Given the circumstances, the first three points of the Plan mainly facilitate the development of existing business; in other words, it facilitates the expansion of the networks of hotels, restaurants and credit institutions. Unfortunately, these points are not oriented on the economy of the future; namely, on establishing and developing a real sector of the economy oriented on a knowledge based economy. Consequently, the Four-Point Plan of the government promotes the maintaining and reinforcing of the above mentioned non-manufacturing and consumption economic model.

According to Point 4 of the government Plan, the Ministry of Environment was merged with the Ministry of Agriculture which is clearly a conflict of interest. Later on, the Ministry of Education and Science was merged with the Ministry of Culture and Sports which made it difficult to administrate the new entity. As a result, the goal to increase the effectiveness of governance actually remained unimplemented.

The 4-Point Plan of the government is a vivid example of a primitivistic approach in economics (Papava, 2017b) and it rejects even the fundamentals of economics. Thus, we have here the first type of non-economic policy.

Another clear example of economic primitivism was the privatization of the building of the Ministry of Economics and Sustainable Development. The privatization of the building carried out at the initiative of this Ministry brought USD 9,45 million into the state budget. A Chinese company, Hualing, a new owner of the building, decided to turn it into a hotel.

After the privatization, the Ministry continued to be in the same building (and the owner was paid rentals) until there was a fire in the building. Due to the fire, the Ministry of Economics had to pay a fine to the owner of the building, the Chinese company, and moved out to a new rental building.

Selling buildings for the purpose of turning them into hotels started by the Government of Georgia composed by NM members, although at first they decided upon a new location for a Ministry and then later they would move out and privatize the building it used to occupy. In 2007, the Ministry of Agriculture was moved to another building owned by the state; in the case of the Ministry of Justice a new building was built for the Ministry and only after it the Ministry moved out from the old building.

Since 2015, the Ministry of Economics and Sustainable Development has not had its own building and has had to rent other buildings for its personnel.

Such decisions of the government are senseless and, to say the least, this can be evaluated as the government's pseudo business (Papava, 2017a).

6. Conclusion

A major cause of non-economic policy is distancing economics from economic policies. This said, it is not excluded that the recommendations offered by economists maybe false or they might not yet have studied a given economic phenomenon or a process. Consequently, we have three types of non-economic policies.

During post-Communist Georgia, at its initial stage of economic reforms, the third type of non-economic policy was prevalent since there was no economic theory as to how to move from a command economy to a market economy.

At the later stages of economic development in Georgia, the non-economic policy carried out in the country was of the first type when the decision makers of economic policy rejected even the basic principles of economics. It was quite often mainly caused by the unprofessionalism of policy decision makers.

A logical question to ask is the extent to which we are protected from the new precedents of non-economic policies.

Conditionally, we may break down the guarantee to be protected from non-economic policy in two parts: the first one is the professionalism of the government's economic team and, secondly, the close cooperation of this team with international financial institutions (IFIs). In addition to the professionalism of the government's team, the professionalism of the management of the NBG is of equal importance and this should also be reinforced by close cooperation with IFIs. However, we should be conscious that IFIs are also not protected from mistakes (e.g., Eichengreen, 2008; Gregorio et al., 1999) and corresponding examples are available in post-Communist Georgia as well (Papava, 2003a, 2003b, 2009b).

It needs to be underlined that in parallel with considering the accomplishments of economics while developing economic policies, it is necessary to take into account the cultural factors as well (e.g., Bedianashvili, 2018; Guiso et al., 2006; Mokyr, 2016; Tambovtsev, 2018; Vidishcheva, Gunare, 2019) which is a separate issue to be studied.

References

- Aleksashenko, 1990 – Aleksashenko, C. (1990). Ekonomicheskaja reforma: polskii put' [Economic Reform: Polish Way]. *Mirovaja ekonomika i mezhdunarodnye otnoshenija* [World Economy and International Relations]. no. 7. [in Russian]
- Åslund, 2007 – Åslund, A. (2007). *How Capitalism Was Built: The Transformation of Central and Eastern Europe, Russia, and Central Asia*. New York, Cambridge University Press.
- Balcerowicz, 1995 – Balcerowicz, L. (1995). *Socialism, Capitalism, Transformation*. Budapest, CEU.
- Bedianashvili, 2018 – Bedianashvili, G. (2018). Knowledge Economy, Innovative Entrepreneurial Policy and Culture: Systemic View. *Materials of the International Scientific-*

Practical Conference: "Modern tendencies of development of economy and economic science." Tbilisi, Paata Gugushvili Institute of Economics Publishing House.

[Bénassy-Quéré et al., 2010](#) – Bénassy-Quéré, A., Coeuré, B., Jacquet, P., Pisani-Ferry, J. (2010). *Economic Policy: Theory and Practice*. New York, Oxford University Press.

[Buchanan et al., 1962](#) – Buchanan, J.M., Tullock, G. (1962). *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor, University of Michigan Press. [Electronic resource]. URL: <http://www.econlib.org/library/Buchanan/buchCv3.html>

[Burakova, 2011](#) – Burakova, L. (2011). *Pochemu u Gruzii poluchilos [Why at Georgia it Turned Out]*. Moscow, United Press. [in Russian]

[Burakova, Lawson, 2014](#) – Burakova, L., Lawson, R.E. (2014). *Georgia's Rose Revolution: How One Country Beat the Odds, Transformed Its Economy, and Provided a Model for Reformers Everywhere*. Guatemala, Universidad Francisco Marroquín.

[Cliffe, 2019](#) – Cliffe, M. (2019). What Economists Still Need to Learn. *Project Syndicate*, September 9. [Electronic resource]. URL: https://www.project-syndicate.org/commentary/macro-economic-models-three-lessons-2008-crisis-by-mark-cliffe-2019-09?utm_source=Project+Syndicate+Newsletter&utm_campaign=aabf9c90ac-sunday_newsletter_15_9_2019&utm_medium=email&utm_term=0_73bad5b7d8-aabf9c90ac93567601&mc_cid=aabf9c90ac&mc_eid=e9fb6cbcco

[Eichengreen, 2008](#) – Eichengreen, B. (2008). *Globalizing Capital: A History of the International Monetary System*. Second Edition. Princeton, Princeton University Press. [Electronic resource]. URL: http://library.aceondo.net/ebooks/HISTORY/Globalizing_Capital_A_History_of_the_International_Monetary_System__Second_Edition_.pdf

[ESI, 2010](#) – ESI (2010). *Reinventing Georgia: The Story of a Libertarian Revolution*. Berlin–Brussels–Istanbul, European Stability Initiative. [Electronic resource]. URL: https://www.esiweb.org/index.php?lang=en&id=322&debate_ID=3

[Gilauri, 2017](#) – Gilauri, N. (2017). *Practical Economics: Economic Transformation and Government Reform in Georgia 2004-2012*. Cham, Palgrave Macmillan.

[Gregorio et al., 1999](#) – de Gregorio, J., Eichengreen, B., Ito, T., Wyplosz, C. (1999). *An Independent and Accountable IMF*. Geneva Reports on the World Economy 1. Geneva, ICMB.

[Guiso et al., 2006](#) – Guiso, L., Sapienza, P., Zingales, L. (2006). Does Culture Affect Economic Outcomes? *Journal of Economic Perspectives*, vol. 20, no. 2. [Electronic resource]. URL: <https://pubs.aeaweb.org/doi/pdf/10.1257/jep.20.2.23>

[Gurgenidze et al., 1994](#) – Gurgenidze, L., Lobzhanidze, M., Onoprishvili, D. (1994). Georgia: From Planning to Hyperinflation. *Communist Economies & Economic Transformation*, vol. 6, No. 2.

[Hare et al., 2013](#) – Hare, P., Turley, G., eds. (2013). *Handbook of the Economics and Political Economy of Transition*. London, Routledge.

[Hausmann, 2019](#) – Hausmann, R. (2019). Don't Blame Economics, Blame Public Policy. *Project Syndicate*, September 1. [Electronic resource]. URL: https://www.project-syndicate.org/commentary/blame-public-policy-not-economics-by-ricardo-hausmann-2019-08?utm_source=Project+Syndicate+Newsletter&utm_campaign=d58b1700af-Sunday_newsletter_8_9_2019&utm_medium=email&utm_term=0_73bad5b7d8-d58b1700af-93567601&mc_cid=d58b1700af&mc_eid=e9fb6cbcco

[Kakulia, 2008](#) – Kakulia, M. (2008). Before and After the Introduction of the Lari: Georgian National Currency in Retrospect. In: E.M. Ismailov, ed. *Central Eurasia: National Currencies*. Stockholm, CA&CC Press.

[Khaduri, 2005](#) – Khaduri, N. (2005). Mistakes Made in Conducting Economic Reforms in Postcommunist Georgia. *Problems of Economic Transition*, Vol. 48.

[Krugman, 1996](#) – Krugman, P. (1996). A Country Is Not a Company. *Harvard Business Review*, January–February. [Electronic resource]. URL: <https://hbr.org/1996/01/a-country-is-not-a-company>

[Krugman, 2019a](#) – Krugman, P. (2019). Running on MMT (Wonkish). *The New York Times*, 25 February. [Electronic resource]. URL: <https://www.nytimes.com/2019/02/25/opinion/running-on-mmt-wonkish.html>

[Krugman, 2019b](#) – Krugman, P. (2019b). What's wrong with functional finance? (Wonkish). *The New York Times*, 12 February. [Electronic resource]. URL: <https://www.nytimes.com/2019/02/12/opinion/whats-wrong-with-functional-finance-wonkish.html>

- Mises, 2006 – von Mises, L. (2006). Economic Policy. Thoughts for Today and Tomorrow. Third Edition. Auburn, Ludwig von Mises Institute. [Electronic resource]. URL: https://eet.pixel-online.org/files/etranslation/original/Economic_Policy_von_Mises.pdf
- Mitchell at al., 2019 – Mitchell, W., Wray, R., Watts, M. (2019). Macroeconomics. London, Macmillan Education.
- Moiseev, 2019 – Moiseev, R. (2019). Khaip vokrug (ne)denezhnoi (ne)teorii [Hype Around (Non)Monetary (Non)Theory]. *Voprosy ekonomiki*, No. 9. [in Russian]
- Mokyr, 2016 – Mokyr, J. (2016). Culture of Growth. The Origins of the Modern Economy. Princeton, Princeton University Press.
- Papava et al., 1998 – Papava, V., Beridze, T. (1998). Ekonomicheskie reformy v Gruzii [Economic Reforms in Georgia]. *Rossiiskii ekonomicheskii zhurnal*, No. 1. [in Russian]
- Papava, 1996 – Papava, V. (1996). The Georgian Economy: From ‘Shock Therapy’ to ‘Social Promotion’. *Communist Economies & Economic Transformation*, Vol. 8, No. 2.
- Papava, 2003a – Papava, V. (2003). Splendours and Miseries of the IMF in Post-Communist Georgia. Laredo, We-publish.com.
- Papava, 2003b – Papava, V. (2003). On the Role of the International Monetary Fund in the Post-Communist Transformation of Georgia. *Emerging Markets Finance & Trade*, Vol. 39, No. 5.
- Papava, 2005 – Papava, V. (2005). On the Theory of Post-Communist Economic Transition to Market. *International Journal of Social Economics*, Vol. 32, No. 1/2.
- Papava, 2009a – Papava V. (2009). Anatomical Pathology of Georgia’s Rose Revolution. *Current Politics and Economics of the Caucasus Region*, Vol. 2, Is. 1.
- Papava, 2009b – Papava, V. (2009). The “Rosy” Mistakes of the IMF and World Bank in Georgia. *Problems of Economic Transition*, Vol. 52, No. 7.
- Papava, 2011 – Papava, V. (2011). On the First-Generation Post-Communist Reforms of Georgia’s Economy (A Retrospective Analysis). *The Caucasus & Globalization*, Vol. 5, Is. 3-4.
- Papava, 2012 – Papava, V. (2012). Economic Reforms in Post-Communist Georgia: Twenty Years After. New York, Nova Science Publishers.
- Papava, 2013 – Papava, V. (2013). Economic Achievements of Postrevolutionary Georgia: Myths and Reality. *Problems of Economic Transition*, Vol. 56, No. 2.
- Papava, 2015 – Papava, V. (2015). Necroeconomics of Post-Soviet Post-Industrialism and the Model of Economic Development of Georgia and Russia. *Journal of Business and Economics*, Vol. 6, No. 5. [Electronic resource]. URL: www.academicstar.us/UploadFile/Picture/2015-7/20157313847837.pdf
- Papava, 2017a – Papava, V. (2017). Features of Governmental ‘Business’ in Post-Soviet Georgia. *Eurasia Review. Journal of Analysis and News*, June 27. [Electronic resource]. URL: <https://www.eurasiareview.com/27062017-features-of-governmental-business-in-post-soviet-georgia-oped/>
- Papava, 2017b – Papava, V. (2017). Primitivism as a Trait of Georgia’s Modern Economic Policy. *The Central Asia-Caucasus Analyst*, May 4. [Electronic resource]. URL: <http://cacianalyst.org/publications/analytical-articles/item/13444-primitivism-as-a-trait-of-georgia%E2%80%99s-modern-economic-policy.html>
- Papava, 2018a – Papava, V. (2018). The Economics in Crisis and the Main Directions for Transformation of Economic Science. *Transformations*, no. 3-4 (98-99). [Electronic resource]. URL: http://www.e-transformacje.com/archiwum/transformacje_3-4_2018.pdf#page=96
- Papava, 2018b – Papava, V. (2018). Why Georgia Needs Economists. *Rondeli Blog*, October 12. [Electronic resource]. URL: <https://www.gfsis.org/blog/view/871>
- Papava, Taphladze, 2015 – Papava, V., Taphladze, T. (2015). Pseudo-Libertarianism in Post-Revolutionary Georgia. *Bulletin of the Georgian National Academy of Sciences*, Vol. 9, No. 2.
- Rogoff, 2019 – Rogoff, K. (2019). Modern monetary nonsense. *Project Syndicate*, March 4. [Electronic resource]. URL: <https://www.project-syndicate.org/commentary/federal-reserve-modern-monetary-theory-dangers-by-kenneth-rogoff-2019-03?barrier=accesspaylog>
- Shiller, 2018 – Shiller, R.J. (2018). The Old Allure of New Money. *Project Syndicate*, May 21. [Electronic resource]. URL: https://www.project-syndicate.org/commentary/cryptocurrencies-scientific-narrative-by-robert-j--shiller-2018-05?utm_source=Project+Syndicate+Newsletter&utm_campaign=c4c50cbcd2-sunday_newsletter_27_5_2018&utm_medium=email&utm_term=0_73bad5b7d8-c4c50cbcd2-93567601

Simanovski, 2018 – *Simanovskiy, A.Yu.* (2018). K voprosu ob ekonomicheskoi prirode kriptovaljuty [On the Issue of Crypto-Currency Economic Nature]. *Voprosy ekonomiki*, no 9. [in Russian]

Stiglitz, 2016 – *Stiglitz, J.* (2010). Needed: A New Economic Paradigm. *Financial Times*, August 20. [Electronic resource]. URL: <https://www.ft.com/content/d5108f90-abc2-11df-9f02-00144feabdco>

Stolbov, 2019 – *Stolbov, M.I.* (2019). K desjatiletiju rynka kriptovaljut: tekushchee sostojanie i perspektivy [The 10th Anniversary of the Cryptocurrency Market: Its Current State and Prospects]. *Voprosy ekonomiki*, no. 5. [in Russian]

Tambovtsev, 2018 – *Tambovtsev, V.L.* (2018). Innovatsii i kultura: vazhnost' metodologii analiza [Innovations and Culture: Importance of the Analysis Methodology]. *Voprosy ekonomiki*, no. 9. [in Russian]

Udensiva-Brenner, 2010 – *Udensiva-Brenner, M.* (2010). Kakha Bendukidze Analyzes Georgia's Economic Strategy: How Georgia Handled Its Economy After the War and the Economic Crisis. *Harriman Institute*, April 7. [Electronic resource]. URL: <https://harriman.columbia.edu/event/kakha-bendukidze-analyzes-georgia%E2%80%99s-economic-strategy-how-georgia-handled-its-economy-after>

Vidishcheva, Gunare, 2019 – *Vidishcheva, E. V., Gunare, M.* (2019) Experience of Cultural Branding Development: Foreign and Russian Models. *European Journal of Economic Studies*, Vol. 8, Is. 1: 85-94. [Electronic resource]. URL: http://ejournal2.com/journals_n/1554815732.pdf

Waal, 2011 – *de Waal, T.* (2011). Georgia's Choices: Charting a Future in Uncertain Times. Washington, D.C., Carnegie Endowment. [Electronic resource]. URL: https://carnegieendowment.org/files/georgias_choices.pdf

WB, 2019 – *WB* (2019). GDP per capita (current US \$). *The World Bank*. [Electronic resource]. URL: <https://data.worldbank.org/indicator/ny.gdp.pcap.cd?end=2003&start=1960>