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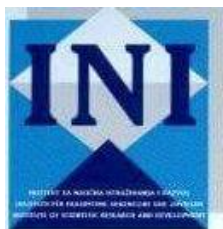
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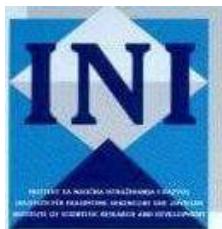


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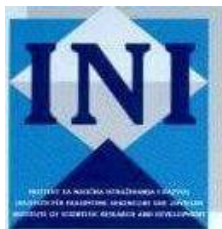
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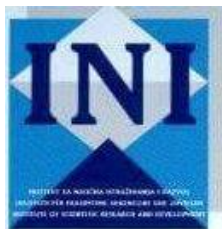
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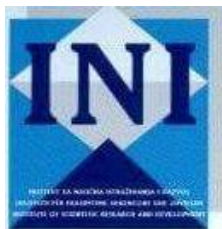


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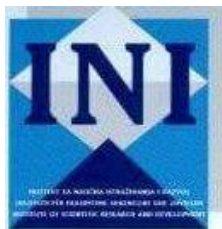
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The Corporate Governance Analysis and Performance of Human Resource during the Covid-19 Crisis

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ABSTRACT

All businesses are facing difficult economic and financial situations, many countries are facing bankruptcy situations of many activities, many economies are failing because they are unprepared for what awaits them. The COVID-19 situation brought the whole world to its knees. SMEs are most affected, as in the game of competition and market they fight for survival. These are the hypotheses that we will analyze in this scientific paper. We want to focus on a worrying issue for small Albanian businesses, and help these entrepreneurs find new ways and solutions to save them from bankruptcy. In this paper, the basic methods of conducting research are the combination of quantitative method and qualitative method. Qualitative research generally includes data in the form of words, descriptions, while quantitative research uses numbers and measures things. The decision to choose between quantitative research, qualitative research, or both depends on a number of factors, but the most important are: the field of research, the problem of research, and the perspective of the researcher. In the case of this paper, this combination has been realized as the analysis of the literature and the evaluation of the measures by the Albanian government towards university education requires the qualitative method. On the other hand, quantitative methods are needed to measure the effectiveness of these measures. In the analysis of our work we will focus on the concrete situation, as from the research we have seen that many small businesses (about 67% have gone bankrupt) Let us not forget that SMEs are the backbone of a country's national economy, and Albania is in great need of their economic and social impact. Therefore, we as professors of these disciplines request that through this research to bring in the focus of analysis the emergency situation in our country with the desire to serve entrepreneurs in new ideas of reviving their businesses.

Key words: *National economy, Albania economy, Covid 19 and social impact*

Introduction

All organizations today exist to fulfill a key mission in their life cycle and a set of specific objectives. If an organization wants to fulfill its mission and objectives, it must first act. When organizations are large and complex, organizational activities are more difficult to define and coordinate. The analysis of this scientific paper that we are presenting, focuses on the role of SMEs in the economy of a country like Albania, its organization and its most important forms, bringing it with a practical case study. SMEs are the pillars of the economy, pose challenges for managers and are very important for those organizations that strive to achieve excellence in today's highly competitive environment and tomorrow's management.

The development of SMEs and their contribution to long-term economic stability depends on their size and structure. This allows them to have the flexibility and ability to adapt to the conditions of fierce competition in the conditions of well-developed markets. Small and medium business management enterprises are considered as the "Moving Force" of modern economies due to their multiple contribution in terms of technological innovations, job creation, export promotion, etc. In Albania, until recently there was no clear definition of micro-enterprises. Moreover, unlike many countries in Central and Eastern Europe which had a steady activity of the private sector, in Albania before the 90s there was no sign of this sector because it was prohibited by law. The birth and development of the private sector in Albania occurs with the collapse of the centralized economy system and the opening of the doors to the market economy. In this period, small and medium enterprises had a special development, which in the 20-year history of economic transition that our country has experienced, have played a crucial role in the economic

development of the country. During the transition to a market economy, as for any other country, small and medium business is the backbone of the country's economy. Small businesses act as catalysts in terms of economic growth, as well as for the development of other such areas. such as arts, human resources, manufacturing and the sports sector.

Studies show that SMEs are important because their potential to create new jobs and distribute wealth, which has multiple effects on a country's socio-economic activities, ultimately results in socio-effects. -economic in the development of a country's activities. The development of the private sector is essential in ensuring the continuity of economic growth. Of course, given that the vast majority of the private sector consists of small and medium enterprises, it is understandable that the multidimensional support of their development is at the heart of the development philosophy of this sector. The development of small and medium enterprises is a primary element for creating a sustainable economic development, reducing poverty and alleviating social problems by bringing about a more equal distribution of income and an increase in employment.

Small businesses are often very innovative companies. They can introduce new products, new management styles and new promotional strategies. A large number of new products are created precisely by small businesses. On the other hand, an increasing number of small businesses make society and the economy more flexible. This can facilitate technological innovations, provide new opportunities or ideas, and enable the development of skills for implementing these ideas. As in many countries of the world and especially in transition countries like Albania, small businesses constitute the main pillar of the economy. Small and medium enterprises in Albania occupy over 98% of enterprises and employ about 80% of the workforce.

The purpose of this paper is to analyze the financing strategies used mostly by small and medium businesses in the city of Tirana, Vlora, Durres, Fier, and to analyze the financing challenges that these businesses face most at a time when economic growth is negative.

More specifically the objectives of this study are:

- a. To present the financing methods which are mostly used by small businesses in the city of Tirana, Vlora, Durres Fier.
- b. To present the level of investments made by small and medium businesses.
- c. To present the challenges and barriers faced by small businesses in the city of Tirana, Vlora, Durres, Fier.
- d. To present the level of loans received by small businesses in the city of Tirana, Vlora, Durres, Fier.
- e. Analyze the impact that the tax burden has on credit to enable the expansion and incentive of businesses.

In the study hypothesis we will focus on the research question such as: What strategies do small businesses use in Albania in order to increase profit and attract new customers?

- a. What are the most successful SMEs in Albania and the strategies they use?
- b. What impact is the COVID-19 pandemic having on these businesses?

In order to fulfill the purpose of the study and return an answer to the research question, the hypothesis of this study is set out below:

Literature Review on SME's and their characteristics

The role of SMEs in developing countries such as Albania is essential for revenue generation and economic growth. The definition of SMEs is important for two reasons. First, researchers need to make sure that the issue they are studying is the same as that of other researchers in the field. Second, small and medium-sized government policy makers need to have a clear and concise definition in order to ensure that all funds spent are properly oriented. For example, if a government policy could be to help small businesses with their health insurance problems, a business with 100 employees would have very different problems compared to a business with no

employees, except owner. (Osteryoung & Derek, 1993)

They can be an important factor in fostering competition. and market efficiency. SMEs also improve the efficiency of local markets and productively use limited resources such as capital. Small and medium enterprises are very important for the Albanian economy. They make up about 99% of all companies registered in the country. They contribute to increasing competition and the presence of Albanian product in European markets. SMEs are the leading private enterprises that continuously generate employment and contribute to sectoral restructuring, service development and the production of goods.

Methodology

Research can be considered exploratory or confirmatory. Confirmatory research tests hypotheses. The results of these tests aid in decision making, suggesting a specific course of action. Exploratory research takes different approaches. They may be needed to develop ideas, leading first to the development of research hypotheses.

Some researchers often discover the reactions and activities of respondents using marketing research methods. Marketing research is a systematic process of planning, collecting, analyzing and interpreting data and information related to marketing problems. There are various methods that enable researchers to "enter into the mind of the consumer", through primary data.

A questionnaire consists of a set of questions which are presented to the respondents. Because of its flexibility, the questionnaire is the most common instrument used to collect primary data. Before completing them in the field, researchers develop and test to all small and medium businesses in the city of Fier, Vlora, Tirana, Durrresi, them to adjust the questionnaires from uncertainties. The form, wording and sequence of the questions can affect all the answers.

The closed questions give all the possible answers to be interpreted and organized in tables easily. For this study, a questionnaire structured by me was developed and implemented, with the help of the leading pedagogue, and was addressed to all small and medium businesses in the city of Fier, Vlora, Tirana, Durrresi, which include questions in which information was collected based on objectives, questions. research and hypotheses raised in this study.

In this study, due to the nature of the research, structured questionnaires were used in the survey, which were completed through social networks, where the interviewer is not in front of the respondent and thus the respondents are explained in advance in the initial description of the questionnaire which is its purpose and the reason why we chose that citizen. In the case of my paper, the respondents are students as they are affected by this situation.

Secondary data. For the realization of this study a methodology was used that combined primary data with secondary ones. Among the secondary data, an important place is occupied by the contemporary literature on the impact of the pandemic in the world and its impact on businesses, especially SMEs, taking Albania as a concrete case.

Primary data. Special attention was paid to the primary research conducted online which is a novelty for this study. Often times the information needed to solve the problem is not found in the internal or secondary data so we have to rely on the primary data. The research was designed in such a way as to ease the cost of gathering information and at the same time to achieve satisfactory results that would help to draw the most accurate conclusions. Primary data include the questionnaire conducted with the help and advice of the lead lecturer. After structuring it and working on Google Dosc, it was possible to provide primary data.

The questionnaire, as explained above, was piloted, so there was no ambiguity regarding the questions posed in the completed questionnaires. It was then built into Google Forms and distributed electronically to applications such as: email, linkedin, facebook, instagram, whatsapp. The disadvantage of this technique was that the owners / managers could not be contacted in shopping malls, supermarkets, markets, streets, houses, workplaces as the situation itself does not allow us to be close to other people and have close contact with them. Maybe this was a limitation to fill out more questionnaires, but the important thing was that his goal was achieved.

Data Analysis

This study, by its very nature, has focused on descriptive analysis. The most basic statistical analysis is descriptive analysis. Through this analysis we make the initial transformation of the data, in order to describe the basic characteristics such as: central tendency, distribution and densities. One of the most effective ways of presenting information, especially numerical ones, is to construct and present the data obtained through graphs. This, also because many people are confused by the appearance of numbers.

Below is the data analysis of the distributed questionnaires.

In the first question the respondents were asked what kind of activity their SME takes place. In the following graph we notice that the activity which predominates more in the city of Tirana, Vlora, Durres Fier, is the activity of services. Knowing that this city is held for tourism, we can say that the answer was expected.

See Tab 1 below:

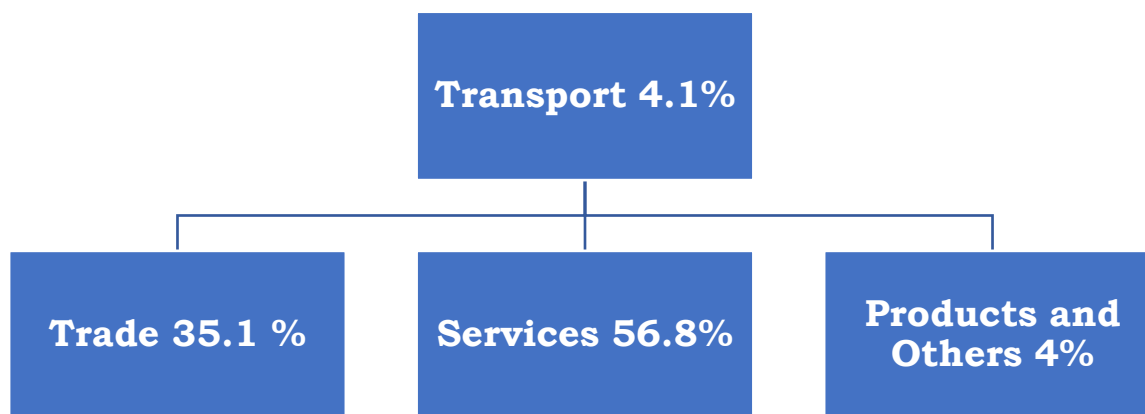
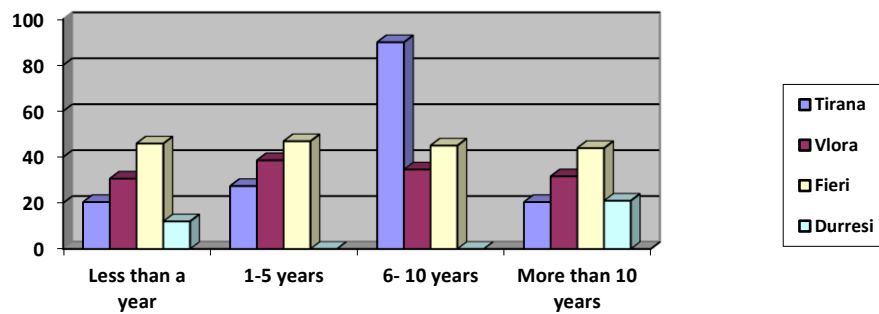


Table 1: *The percentage of activities according to the field of activity of SME perform*

In the following question we want to know the contribution that SMEs make in our country. We saw it in the third chapter where SMEs in Albania served as catalysts and regulators of the Albanian economy. Also their indicators were more positive sides and opportunities, than negative sides and threats. Therefore, in the second question of the questionnaire, the respondents were asked how many years they have been operating in the Albanian market. From the graph below we see that the highest percentage is occupied by the period 1-5 years with 51.4%.

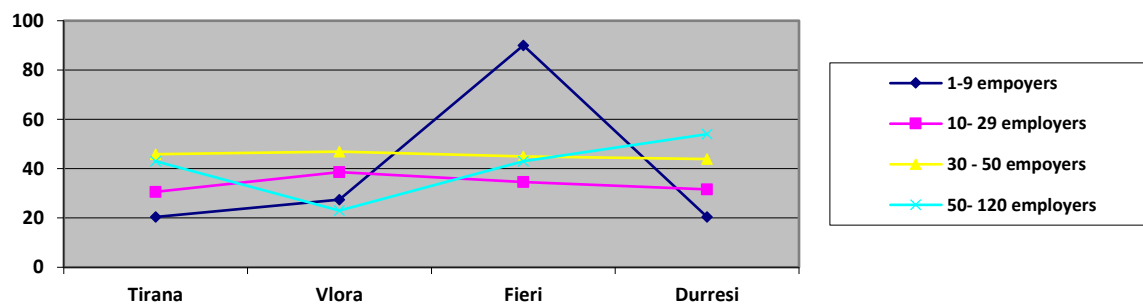
See Graph 1 below.



Graph 1: Separation of group activities according to the time created

In the next question, respondents were asked about the number of employees in their business. What we notice is that the highest percentage is occupied by the group 1-9 employees. We can say that it is an appropriate number and expected response given that the activity exercised were mostly service.

See Graph 2 below.

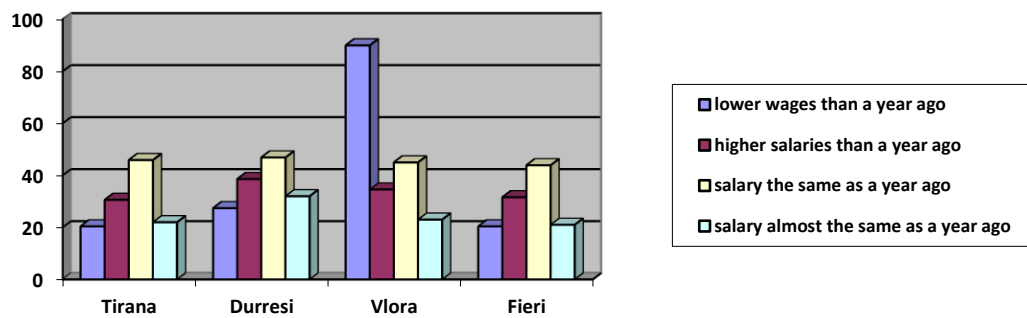


Graph 2. Number of employees in the cities where the study is conducted. Division into categories with maximum density.

The next question belongs to the second section called “Financial Performance of SMEs. The impact of SMEs on the economy is very high so they are a very important link, but what can we say about the financial resources of businesses in Tirana, Vlora, Durres, Fieri? We will see the answers in the next questions.

In the first question of the second section, respondents were asked about their income, compared to the previous visa. So how much was their income last year?

See Graph 3 below.



Graph 3. The indicators of wage movement during the covid- 19 situation

While in the following question they are asked about the current year. So how much are their sales this year? These questions are conducted in order to see the importance of SMEs in our country and the support that should be given to them by the government. From the figure below we see that the respondents have high confidence and have expressed that this year, despite the pandemic caused by COVID-19 their sales will increase.

This question therefore relates precisely to this pandemic. Are SMEs in the city of Tirana, Vlora, Durres, Fier affected by the COVID-19 pandemic? Below is a table with the most common answers given by the interviewees.

See the Table 2 below.

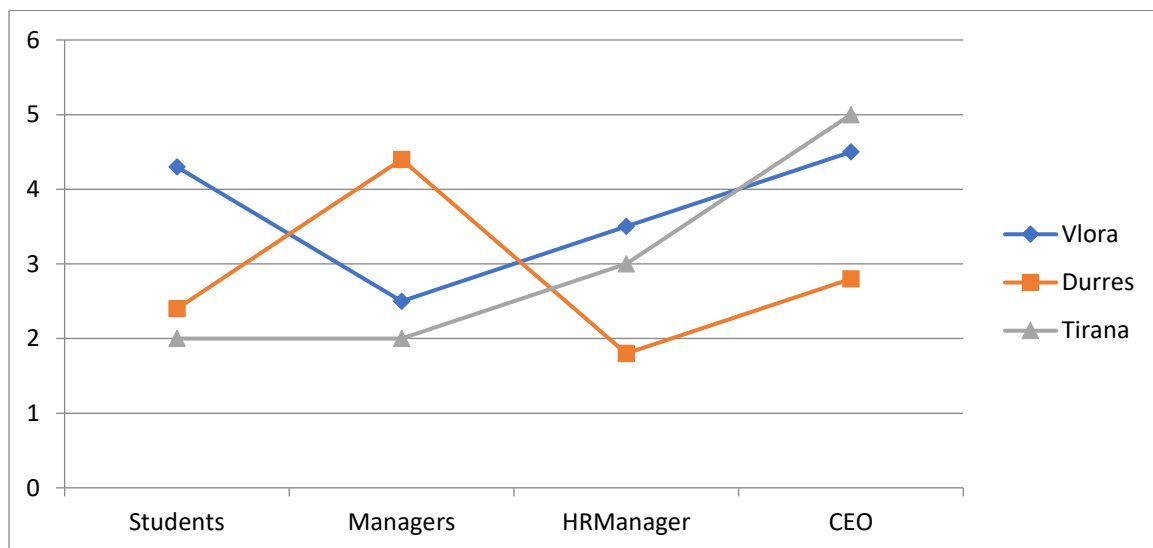
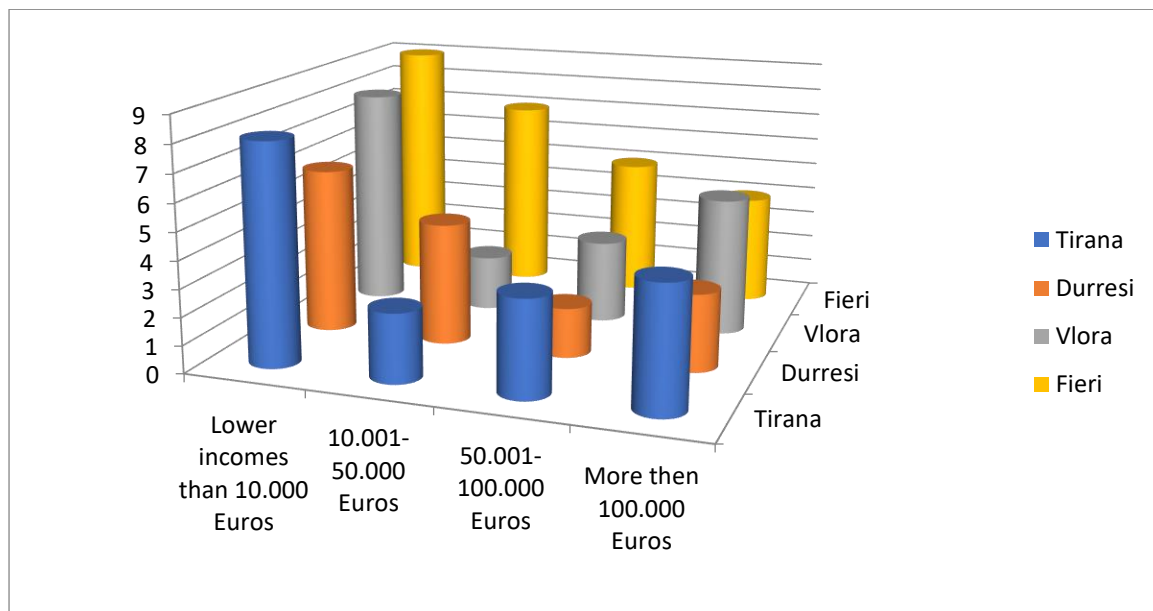


Table 2: The Number of respondents interviewed in this study

While in the next question, the respondents were asked about investing in their business after the pandemic. They have been given several alternatives of money in Euro currency, and the highest percentage is occupied by the group "less than 10,000 Euros". See Graph 5 below.



Graph 5. The interviewees source of fundings, less than 10.000 euros or more than 100.000 euros

In the next question, the interviewees were asked about the source of funding. What we see is that almost half of them 48.6% use equity, which may come from their SME, or may be savings over the years. What we see is that the Loan and Credit alternatives are close in percentage to each other.

The following question is an open-ended question, so no alternatives are provided where respondents can select. It relates to the tactic of attracting new customers. SMEs in the city of Tirana, Vlorë, Durrës Fier responded that they used these tactics: See the following table where the respondents are 180 people.

<i>Answers</i>	<i>Density</i>
<i>Marketing</i>	21 answers
<i>Reducing prices</i>	25 answers
<i>Maximum cleanliness conditions</i>	12 answers
<i>Hard work</i>	18 answers
<i>Menu expansion and service quality</i>	4 answers
<i>Communication and courtesy with the client</i>	12 answers
<i>To add products to my store</i>	32 answers
<i>To always be as close as possible to the customer by meeting his requirements for the service he requires, with new and quality goods</i>	54 answers and 2 responses are indifferent

Table 6: *Te new idesa and tactics of attracting new customers*

Analysis and Findings

In many cases with sources of personal financing, borrowed from families or relatives, but in the vast majority of banking and financial institutions of the country. Entrepreneurial activities achieved a significant increase in 2017-2018, but the covid situation 19 found them unprepared. Many enterprises closed down as shown in the analysis of the questionnaires, many others applied dismissals, losing staff or significantly reducing salaries. In our findings, 23.9% of entrepreneurial activities were subjected to the credit system, to use these funds, for non-bankruptcy, for the continuation of staff payments as they did not want to remove qualified staff from work. The departure of staff for these entrepreneurs is considered a greater loss than the pandemic situation.

Conclusion

SMEs in Albania are classified based on the number of employees and annual turnover and / or annual balance sheet. In terms of the economic importance that small and medium enterprises have, we can say that they have a great weight in the economy of a country. They contribute to growth, job creation and social development which is to be appreciated. They are considered the "locomotive of economic growth". Although the purpose and objectives of the goal have been of a different direction, based on the results and conclusions, we can say that the paper can be a good support base for policy-making on SMEs in this crisis period for all.

In addition, the paper can help both entrepreneurs and policy makers as follows:

Entrepreneurs:

- ✓ to reconceptualize their enterprises and to orient themselves by creating an ambitious environment for increasing the value of their businesses.
- ✓ To evaluate data on current sources of financing, used by small business entrepreneurs and access to credit.
- ✓ To serve as a basis to further give some suggestions for taking the necessary actions for the sustainable development of this sector, as well as to increase the level of welfare.

The future of Albania is promising, not only that the leaders are recovering from this situation of difficulty, but also that this situation will serve for the birth of new innovative ideas. In the practice of fair management, a very motivating expression has been used "After every failure and decline, there is a flourishing situation, after every crisis there is a new economic birth" and so it will happen in SMEs in Albania.

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The Influence of Covid-19 on Strategic Planning for Sustainable Development

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ABSTRACT

Sustainable development is increasingly threatened by globalization, which, due to global integration, unification and improvement of human organization, creates progress that is accompanied by profit. This is the case in the most developed countries while the less developed countries are lagging behind. The United Nations Development Program (UNDP) has stated that the level of education, health and living standards in the world (global human development), this year will find itself on a downward trajectory since 1990, when the term was first introduced. The pandemic that erupted this year called COVID 19 is having a negative impact on global human development. The consequences of COVID are noticeable in all countries from the most developed to the poorest.

This paper aims to describe the strategic planning of sustainable development in Montenegro, with an emphasis on the period since the outbreak of the COVID pandemic. The review will be based on three aspects: economic, social and environmental, on which the analysis of sustainable development is based.

Keywords: Planning; Sustainable Development; Strategy;

Introduction

Sustainable development has become one of the key elements in the formation and implementation of development policies in the world. It can be formulated as a development that meets current needs without compromising the ability of future generations to meet their own needs. Sustainable development is a goal-oriented, long-term, comprehensive political process that affects all spheres of life. The concept of sustainable development implies the harmonization of economic, social and environmental requirements. The goal of sustainable development strategies is to balance three important factors as the basis of sustainable development: sustainable economic growth, economic and technological development, sustainable development of society based on social balance, environmental protection based on rational management of natural resources.

"In 2015, the members of the United Nations adopted 17 goals of sustainable development, including a world without hunger and poverty, but also gender equality and expanding access to education and health care. According to the agreement, these goals should be achieved in 2030."¹

National Strategy for Sustainable Development in Montenegro

Montenegro is one of the first countries in the world to fully accept and integrate the requirements of the United Nations (UN) set out in the UN Agenda for Sustainable Development until 2030. The National Strategy for Sustainable Development (NSSD) in Montenegro identifies as priority issues:²

¹ <https://www.bizlife.rs/gejts-zbog-pandemije-37-miliona-siromasnih-vise/>

² Đurović, Knežević, Komar, Vulić, Galli & Gligorić, 2016

- improving the state of human resources and strengthening social inclusion;
- support for values, norms and patterns of behavior important for the sustainability of society;
- preservation of natural capital;
- introduction of green economy;
- management for sustainable development and
- financing sustainable development.

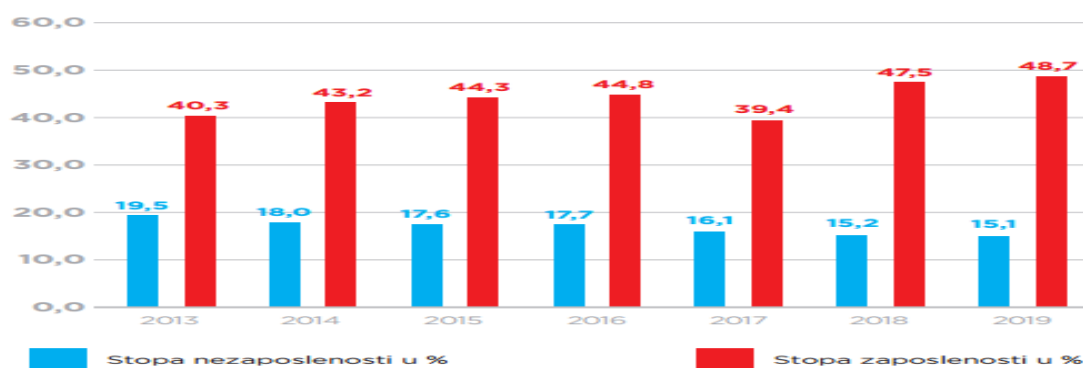
In this way, it is possible that the overall development of Montenegro is based on responsibility and putting knowledge and technological innovation in the service of national resource management. The implementation of the NSSD by 2030 is a part of economic management that is mandatory only for EU member states, higher for countries that are in the negotiation process for EU membership, including Montenegro.

With the help of European and domestic experts, the sustainability of natural and social resources in Montenegro was assessed. Systematic indicators of national development sustainability have been introduced: human development index, ecological footprint, domestic material consumption (DMC), development productivity (RP) and space consumption. Based on the results in the time period from 2006-2015. year, there is a noticeable increase of + 45% of the ecological footprint (growth of economic activity due to natural resources) of Montenegro. Consumption of resources in Montenegro is lower than in many European countries (Finland, Sweden, Norway, Croatia, Hungary and others). European countries have reduced resource consumption through technological innovation, and have achieved economic growth with the best access to and use of natural resources.

The NSSD has defined a model for reducing domestic material consumption by 20% by 2020 compared to the 2005-2012 average, through increased productivity and more efficient use of raw materials, enabling the finalization of raw material processing and production processes, putting domestic labor, services and services, primarily in the sectors of tourism, agriculture, food production, industry, wood processing. All social actors are invited to contribute to the achievement of this demanding goal.³

The NSSD has defined the framework for economic growth so as not to jeopardize the sustainability of natural resources. It was planned to double Montenegro's GDP in 15 years, and per capita income in 2030 should reach around € 11,500. This means that the number of employees should increase to 65% (from the previous 52.5%) by 2025, or 57.5% by 2030 in order to realize the previously defined plans.

The tourism sector has the largest number of employees in Montenegro. It was expected to increase from 10.3% (data from 2015) to 13.8% (by 2026). That is a total of 26,000 jobs in the field of tourism, which would certainly



³Figure 1 Employment and unemployment rate (in%)
Đurović, Knežević, Komar, Vulić, Galli & Gligorić, 2016.

lead to a reduction in the unemployment rate (17.6% in 2015). The goal is to approach the single-digit value of the unemployment rate, which is the case with EU members. According to the Labor Force Survey from 2019, the average unemployment rate reached 15.1%, or a total of 37,176 unemployed persons, which is slightly lower than the data for the previous year (Figure 1).

Source: Directorate for Statistics - Monstat (www.monstat.org)

The successful implementation of the NSSD in Montenegro was disrupted by the outbreak of the global Pavid pandemic¹⁹, which caused a number of changes in the planned plans. The following chapter provides an overview of these changes that are currently visible with a critical review based on information available to the public.

The influence of Covid-19 on strategic planning for sustainable development

The economic and social consequences of the COVID-19 pandemic are noticeable in all countries of the world. The crisis is taking place at a time characterized by a high level of digitalization that helps in the decision-making process for adaptation to new circumstances by both the government and businessmen and ordinary citizens. One thing is inevitable, the virus has shaken the whole world and pointed to the need for digital transformations.

Each of the countries has adjusted in accordance with its capabilities to adopt measures to protect their economies and the social status of their citizens. International organizations, as well as the European Union, have come out with their aid packages to endangered countries.

Impact of Covid 19 and strategic planning of sustainable development in Montenegro

A developed and competitive state is based on three key strategic goals, namely:⁴

- Healthier Montenegro is a center of biomedical development through new technologies, production of medicines, herbs and organic food and the provision of specialized health services (such as innovative and standard therapeutic and rehabilitation programs) as a finished product, attracting a special group of patients and researchers from the region and wider.
- Sustainable Montenegro means environmentally responsible and efficient economy in terms of use and conservation of natural resources and intergenerational level of well-being. Space as the most important resource of the state must be valorized so as not to devastate it, while the development of transport infrastructure and rehabilitation of environmental "black spots" must rely on innovative solutions and new technologies.
- Modernized and digitalized Montenegro and in that sense the development and application of ICT is crucial for economic development. The foundations of this direction are related to better infrastructure, e-economy and information security. ICT is also defined as a horizontal sector that provides information technology support to selected priorities.

Covid's impact on the economy can be viewed from a variety of perspectives, including underutilization of human and physical capital, lower commodity prices, fewer tourists, disruption of international trade, capital outflows from emerging markets, credit rationing and greater uncertainty. There are predictions that this crisis will bring the Montenegrin economy into recession due to a huge drop in tourist traffic. "The World Bank estimates the economic decline in 2020 in the range of -6.6% to -8.9%, in the worst case - up to 75% of jobs affected by social distancing measures."⁵

⁴ UNDP

⁵ UNDP

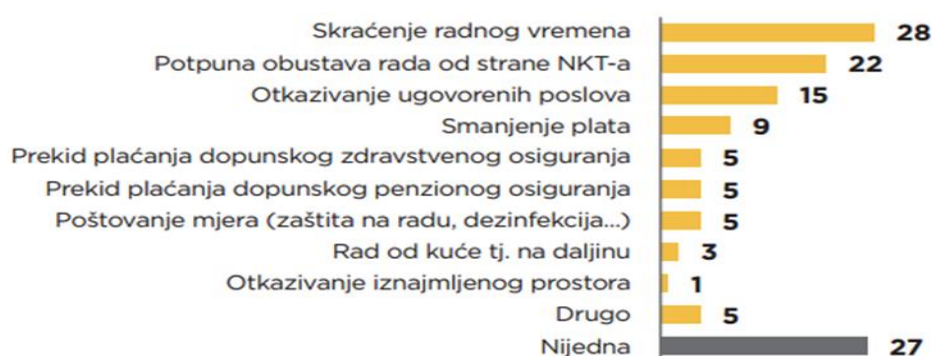
In Montenegro, revenues from tourism account for more than 20% of GDP. The sharp decline in tourism is exacerbated by other elements, such as Montenegro's inability to issue currency, limited fiscal protection and high public debt. The level of public debt limits the fiscal space to respond to the crisis, . The severity of the crisis was immediately visible in the fact that the number of unemployed increased from 35,429 to 40,361, giving an unemployment rate of 17.4%.⁶ 16,000 fewer employees were registered in April 2020 compared to April 2019. A drop of 8% is assumed that half of the tourist season will be affected by the COVID-19 pandemic.⁷

Increased poverty is caused by worsening economic conditions. According to the World Bank, depending on the length of the crisis, poverty could increase by between 1.5 and 3 percent. Micro, small and medium enterprises are the most endangered due to the cessation of work due to the pandemic (they have the lowest liquidity and rate of return), and this is not only the case in Montenegro but also globally. There is a change in working hours and a drop in income, which causes workers to be sent on unpaid leave or reduced wages. Reducing sales and increasing losses are some of the consequences of the crisis.

"Among the companies that had lower sales compared to the same period in 2019, more than half of them have over 75% lower sales compared to the same period last year, and 4 out of 10 companies have a 100% reduction in sales. Losses of over 75% are present mainly in service companies."⁸

In order to cope with the crisis most effectively, companies in Montenegro have taken certain measures and changed the way they do business by shortening working hours, reducing the volume of work, taking loans or taking advantage of savings. 28% of companies shortened their working hours while 22% of companies completely suspended operations (Figure 2).

Figure 2 The first decision taken by companies in response to COVID19 Source: UNDP



There are few companies that have decided to invest in new equipment (software or digital solutions) in order to cope with the challenges posed by the crisis. Most companies, 73% do not use digital sales platforms, and half of them do not have a significant share of online sales.

Policies and measures to assist MSME governments in countries in the fight against COVID

Croatia:

Introduction of the Agreement (state) on debt suspension. For example. all enforcement proceedings for the settlement of claims against all debtors shall be suspended for a period of three months; working capital loans and liquidity maintenance with a repayment period of up to three years. Introducing delays in loan repayment;

⁶According to the Employment Bureau

⁷EBRD, Regional Economic Prospect Report, 2020.

⁸ UNDP

new liquidity maintenance loans are granted to economic entities for current business needs such as payment of salaries, payment of overheads and other operating costs; increasing the scope of the guarantee fund for export insurance by including the tourism sector.⁹

Bosnia and Herzegovina:

Establishment of a guarantee fund in order to preserve and improve the level of liquidity companies. FBiH Development Bank to prepare a proposal for a decision on the establishment of a credit line to improve the liquidity of vulnerable companies. · Banks and individuals will be granted a moratorium on loan payments, ie delays in loan repayment for a period of at least three months. USD to support the country in its work due to the consequences of COVID-19. 60% flat tax on the total income of small entrepreneurs with one or two employees (Republika Srpska).¹⁰

Northern Macedonia:

The Development Bank of Northern Macedonia also provided direct financial assistance in the form of interest-free loans in the amount of € 3,000 to € 30,000 to micro, small and medium enterprises. Interest-free loans to economic entities in the amount of 5.7 mil. €, plus 6 mil. € (March 22). · Subsidizing the Mandatory Social Security Contributions (SDSO) of employees in the tourism sector, transport sector, hospitality sector, and other companies affected by coronavirus during April, May and June 2020. The subsidy for compulsory social insurance would be up to 50% of the average salary paid in 2019. The National Bank's base interest rate was reduced to 1.75%. · The amount of default interest prescribed by law will be reduced to 5% (10% in the previous period) and to 4% (8% in the previous period). · Reduction of salaries of civil servants and employees in the public sector in April and May 2020 currently amounts to MKD 14,500 (€ 235). Presidents and members of municipal councils, members of management and supervisory boards of public institutions will work free of charge. · The implementation of the Law on Enforcement Procedure will be temporarily suspended until the end of June. Bailiffs will be obliged to suspend all actions taken in the enforcement procedure (all enforcement). · Moratorium on loan payments: loan users are entitled to a delay in loan repayment for the next three months. · Companies will be protected from bankruptcy during the crisis.¹¹

Conclusion

COVID-19 showed that national governments and international organizations were not ready to face a deadly global pandemic. With the exception of a few countries, many countries have failed to stop the spread of the virus, while some were on the verge of complete collapse due to inadequate reactions to the pandemic (Italy and Iran). Although the COVID 19 pandemic is still current, it can be concluded that this crisis will be more severe due to the consequences of the crises brought by SARS, bird flu, Ebola and other viral diseases in recent decades.

The epidemic is likely to cause the greatest damage to globalization trends in the world. The world is losing the ability to respond to global economic, social, environmental and medical challenges. For some time now, the four freedoms that underpin the EU have been threatened: the free movement of people, goods, services and capital.

⁹ UNDP

¹⁰ UNDP

¹¹ UNDP

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Attracting investments in the Tourism Sector in Ulcinj, Montenegro

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ABSTRACT

The goal of this paper is to raise awareness regarding the lack of investments in the tourism sector in the Municipality of Ulcinj, Montenegro. Ulcinj, located in the southern coastal region of Montenegro has tremendous potential for becoming an elite tourist destination. However, for decades now it is being neglected of its tremendous potentiality of thriving in the tourism arena. A careful and thorough analysis of the stakeholders tasked with promoting the tourism sector will be given in this research project. Detailed analysis of the public opinion which will be gathered via survey, will be displayed throughout this project. Expert opinion, which was gathered via interviews, will be displayed thoroughly in alignment with the scope of this research. Policy recommendations will be incorporated in order to diminish the scale of the abovementioned issue.

Keywords: Investments, Tourism Sector, Ulcinj, development, social sciences

Introduction

Investments are necessary in the context of boosting the prosperity and livelihood of society. Despite this, investments can contribute positively to fostering economic growth, both at the local and national levels. Considering the broad scope that the term ‘investment’ can cover, it is necessary to point out that this paper will elaborate thoroughly and solely upon investments in the tourism sector in Ulcinj, a coastal city located in the southern region of Montenegro. Renowned organizations such as the World Bank and World Economic Forum, “strongly believe this sector can boost competitiveness, expand economic opportunity and provide a pathway to prosperity in client countries” (Hornberger & Nevill, 2011). There is a lot of truth in what has been said by Hornberger & Nevill, considering that Montenegro is a client country in itself, with a significant amount of its annual revenue coming from the tourism sector. More specifically, “Montenegro has generated €1 billion and €16 million in tourism revenue in the first eleven months of this year” (Boka News, 2019). Yet, the most important aspect that needs to be looked upon is how much of that revenue came from the Municipality of Ulcinj and are those numbers (wherever they may be) satisfactory, both at the local and national level? If not, why is that the case, and what reforms need to be implemented in order to effectively amplify the potential that the territory of Ulcinj can offer? Attaining an adequate level of growth and upgrade in the tourism sector is necessary and significant for Montenegro as a whole. However, in order to attain success at the national level, it is profoundly important to effectively utilize every aspect of available potential at the municipal level. Ulcinj, for decades now has been undermined of its tremendous potentiality in the Tourism Sector. In this sense, throughout this paper, I will look upon the investment history of Ulcinj. Additionally, I will be elaborating upon the necessity of attracting investment in Ulcinj, as that will have a tremendous positive impact on other sectors within the society, both in the short and long term at the national and municipal level. Careful analysis of the stakeholders responsible for the task of promoting the sector of tourism will be done. Their successes and failures will be presented evenly throughout this project, while potential alternatives will be presented as well as recommended.

Background Information

Lack of investments in the tourism sector are a prominent issue in Ulcinj. Distinct factors throughout time have managed to affect tourism growth in Ulcinj. Being a city that has gone through different political system changes since the beginning of the 20th century, Ulcinj has undergone many peaks and lows in many areas, especially in the tourism sector. The tourism sector of Ulcinj has always lacked a constant steady growth rate, which has happened mainly as a result of a lack of professional state and municipal planning and a high reliance on private local investments. Private investments have contributed to maintaining a hospitality culture and developing the tourism sector. However, typically these types of investments have been carried out by local individuals, local businesspeople, which do not

necessarily possess the expertise of conducting investments, which are best for the development of the city's tourism sector as a whole. It is necessary to state that it is collaborative efforts of both the private and the public sector which will inherently determine Ulcinj's prosperity in the tourism sector. Still, that is not the case in Ulcinj. These two distinct sectors work independently of one another with minimum relationship for legal purposes mainly, therefore explaining the stagnate situation.

The privatization of publicly owned zones and the destruction of former elite hotels have also had a diminishing effect on the tourism sector in Ulcinj. After World War II, during the 2nd Yugoslav era, tourists around the world, especially Germans started to shift their attention to the lowest southeastern point of then Yugoslavia, namely Ulcinj. Attractive sandy beaches, mesmerizing landscape, delicious Mediterranean cuisine, and the hospitality of Ulcinj upon many other things stood as symbols of tourism in Ulcinj. Hotel Jadran (fig. 1.0) was demolished after earthquake damages in 1979 (fig 1.1). Still, even to this day, the place remains unconstructed since it was acquired by the public enterprise 'Morsko Dobro' (Sea Wellness) company. The earthquake damages could have been repaired and Hotel Jadran would remain to this day. Now, after 41 years, the place serves for parking during the summer season, whereas during the winter remains deserted (fig. 1.3 and 1.4). Hotel Galeb (fig. 1.5) was demolished in 2008 and was purchased since then by 'Roksped', a private company. Now after 12 years, the spot remains unconstructed and serves solely as a parking zone (fig. 1.6).

A leading role in promoting tourism development in Ulcinj has its Tourism Organization. Ulcinj's Tourism Organization (TO Ulcinj) "mission is to promote the tourist offer and establish the image of Ulcinj as an attractive tourist destination, as well as to inform and promote tourism in the city as a leading economic branch in accordance with the city development strategy" (Ulcinj's Tourism Organization 2009). It was founded in 2009. Yet, how effective is this organization in promoting the tourist offer in a 3-month peak demand period during summer? While it's a great organization, founded for great purposes, it lacks effective cooperation with the municipality as well as the public, whose interest it seems to advocate.

While covering the part on 'what hasn't been done' is essential for this research project, it is also far more important to look at 'what has been done' to foster tourism. During the past two decades, there have been only a few successful investments in the municipality of Ulcinj, all of which have been started and completed in the last 5-10 years. One of these investments is the road Ulcinj – Skadar, which is a great project but does not fit rather directly in the scope of investments in the tourism sector. The other one is the Karisma Hotels (see fig. 1.7), which has proven to be quite successful in terms of attracting customers as well as employing hundreds of Ulcinjaks (term used to call a local citizen of Ulcinj). It offers 353 rooms which "are tastefully designed in a contemporary modern style and are located in two, three and four-story buildings" (Karisma Hotels Adriatic Montenegro, 2019). Yet even Karisma Adriatic Hotels and Resorts is not a new 'built from scratch' resort. It is mainly the restoration of the former Hotel Bellevue, with the construction of a few additional outdoor pools. Resource optimization has proved to be a really important factor when it comes to construction. Apart from that and from private investments from local citizens, not much has been done to foster growth in this sector by the municipal and the national government. According to the Secretariat for Finance and Budget, Ulcinj municipality has 16,009,500 euros available under its disposal for the 2020 year (Municipality of Ulcinj, 2020). Considering this amount, there is not much that one can expect in terms of local municipal investments, at least not at the desirable and needed scale. That is why it is relevant and important to address this issue at the national level as well. With a GDP of 5.04 billion euros (World Bank, 2020), a budget of around 2.1 billion annually, how much does Montenegro actually allocate towards investments in Ulcinj? In the past decade, there has been no significant investment in Ulcinj by the government of Montenegro. Instead, the government officials seem to adjust their attention in alignment with the development of other coastal cities of Montenegro, especially Budva.

There are different areas of unutilized potential to foster tourism. Ulcinj is rich in natural resources, possessing a mesmerizing 13 km sandy beach coastline, Valdano's region filled with iconic olive trees, sulfuric sea water containing healing substances, salt resources (former salt factory) etc. When speaking of hotels and resorts, a typical example displaying the unutilized potential in Ulcinj can be seen in the attached figure below (fig. 1.8). It is important

to state that the only current resort Karisma stands at the beginning edge of the 13-kilometer long beach. There are no other investments of similar nature or of the same scale in the remaining coastline. The area remains unconstructed and investments seem to be highly aspirational and out of reach currently.



Figure 1.0 Hotel Jadran ('Lajme nga Ulqini, 2011)



Figure 1.2 Hotel Jadran 1979 after earthquake (Adrovic, 2020)



Figure 1.3 – Remaining's of Hotel Jadran in 2020



Figure 1.4 – The remainings of Hotel Jadran in 2020



Figure 1.5 – Hotel Galeb. (A stroll through the pine forests of Ulcinj, 2020)



Figure 1.6 – Hotel Galeb (Adrovic, 2017)



Figure 1.7 – Karisma Hotels (UL Info, 2019)



Figure 1.8 – Karisma Hotel location on Long beach (*Karisma Hotels Adriatic Montenegro, 2018*)

Methodology

This section of the project will explain in detail the methodology of research used. The aim of this research project is to analyze the issue of the lack of investments in the tourism sector in Ulcinj. In order to effectively discuss the abovementioned issue of lack of investments, both primary and secondary research methods have been utilized. The primary research conducted consists of interviews and surveys. Interviews were conducted with credible individuals for the topic, whose information will be incorporated more thoroughly in this project paper, considering that there are no sufficient secondary data with a specific focus on the lack of investments in Ulcinj. Surveys have been utilized in order to get a better comprehension of the public opinion regarding the situation of investments in the tourism sector in Ulcinj. For linguistic preferences of Ulcinj's society, the surveys have been distributed in Albanian. Additionally, the secondary research consists of credible national and international academic journal articles on investments in the tourism sector, government documents, newspaper articles, academic journals, and academic books (acquired through RIT Library).

Primary Research Conducted

Interviews with local and national experts have been a specific focus for authenticating this research project. Due to the pandemic situation of COVID-19, two interviews have been conducted on an online platform. Two of the interviews were done over a call, whereas the remaining other through email in the question/answer structure. The interviewees fall into different respective professions, ages, and gender. Through these, a more holistic, educated, and analytical view of the nature of the problem was collected.

1st Interview: The first interview was conducted with a highly credible individual in the realm of public policy, who has a master's degree in legal sciences and an astonishing CV of volunteer work throughout the Balkans. On many occasions, this person has been awarded different merits for the work conducted in the realm of academia and so forth. Interviewee 1 is originally from Ulcinj. He has continuously been involved with Ulcinj and to its prosperity as a city. He has been part of various deals and signed memorandums, whose purpose revolved around establishing a solid business environment for attracting investments in Montenegro. Interviewee 1 believes that by working in this field, one will give rise to opportunities for foreign direct investment of the Montenegrin Diaspora in Montenegro. Throughout the interview, he has managed to effectively explain the history of tourism in Ulcinj through three distinct time frames, 20th Century First Yugoslavia, after World War 2 Yugoslavia, and the rise of pluralism during the 1980s. Throughout these three-time frames, he has managed to discuss the political changes that Ulcinj had undergone while also linking them with the tourism sector. Interviewee 1 has provided insightful information in regards to the underutilized potentiality in the tourism sector in Ulcinj. He has elaborated upon the rise of tourism culture among Ulcinjaks through the years. Additionally, he stands as a strong critic among Ulcinj's public and private sectors, and emphasizes the lack of collaboration between the two, to establish a solid foundation for conducting business and therefore attracting investments. His comments will be displayed more thoroughly in the *Analysis* section of this project.

2nd Interview: The second interview was conducted with an individual of importance when speaking of the tourism sector in Ulcinj. Interviewee's 2 insight on the issue of lack of investments in the tourism sector is highly credible and important for this research project. Being among the board of trustees for one of Ulcinj's leading organizations whose purpose revolves around the engagement of the tourism sector in Ulcinj, interviewee 2 has been asked a couple of questions, through which has managed to effectively display this organization's short, long term goals in the tourism sector. Furthermore, interviewee 2 discussed the correlation between the municipal government and the organization.

3rd Interview: The third interview was conducted with a senior citizen of Ulcinj, who has expertise in the tourism sector, construction, and business. Interviewee's 3 insight on the issue of lack of investments is highly credible for

this research project. The interviewee's 3 lifetime expertise in these three areas will add profound value to this research project.

Survey Conducted

A survey of seventeen questions has been formulated and distributed through various online platforms. The survey has been formulated, both in English and Albanian. Because of linguistic preferences, the survey has been distributed mainly in Albanian and the responses gathered will have to be translated to English for this research project. The main focus of the survey was to get better comprehension regarding the public opinion on the issue of lack of investments in the tourism sector in Ulcinj. Because of the current pandemic of Covid19, convenience sampling was the only available sampling method utilized. As a result, 89 individuals responded. The responses to the survey will be elaborated in-depth in the Analysis section of this project.

Limitations on data gathering

Due to the pandemic of CoVid-19, and the strict government policies that followed afterwards in order to diminish the scale of the pandemic, the only available means of conducting, both interviews and surveys, was on an online platform. Through this means of gathering information, the possibility of doing systematic, random or strata sampling has been quite difficult, given the extraordinary circumstances of the pandemic. Therefore, with convenient sampling method through an online platform, various important aspects of the interview process might have been lost or underrepresented. Still, taking under account the current pandemic, I can say that I did some sort of selection even with convenience sampling, considering that a vast majority of respondents have been directly contacted by me. Additionally, again referring to the pandemic, there were limitation on interviews conducted, namely the interview process. In-person interviews are far more effective than online interviews, when it comes to collecting information. When speaking of secondary research, the main issue relied upon the fact that there are no academic sources concerning Ulcinj in the context of investments in the tourism sector. Even when it comes to Montenegro as a whole, there are only a few sources, which do not necessarily tackle the issue of lack of investments in the tourism sector. Therefore, international academic documents were used as substitutes for explaining detailed information in regards to investments in the tourism sector. RIT Library was one of the main databases in which these sources have been found.

Analysis of results

This section of the thesis project will elaborate upon the data gathered from the various research that has been conducted. The information gathered from interviews, surveys, and other research methods will be displayed in this section in detail, providing evidence that the lack of investments in the tourism sector in Ulcinj is a prominent issue that needs to be addressed properly.

Ulcinj's Tourism Sector evolution through three distinct time frames

As abovementioned, Interviewee 1 has managed to concisely elaborate upon the history of Ulcinj's tourism sector since the era of former Yugoslavia. Former nationalistic and political tendencies of former Yugoslavia, post WW2 Yugoslavia, and the rise of pluralism during the 80's have undermined Ulcinj of its tremendous potentiality, said Interviewee 1. Up until the end of 19th century Ulcinj plays a key role as a trading center and a shipping port, standing as a linking point for the whole region with the western hemisphere, especially Europe. With the beginning of the 20th century and the rise of first Yugoslavia, the key shipping port is reallocated in Bar, Montenegro. It is through this period, namely the beginning of 20th century that the municipality of Ulcinj shifts the attention towards the development of tourism. It is through this period that Ulcinj begins forming its well-known hospitality culture. It is not until after World War 2 that tourism begins to rise as a leading economic growth sector for Ulcinj. During 1950's and 60's, the construction of hotels begins in Ulcinj (Interviewee 1). It is during this time that is comprehended that

Ulcinj offers the best terrestrial relief for tourism development in Montenegro. Bay of Kotor has ineffective road and highway routes which make it difficult to access the city, as well as lacks in offering variety in the tourist offer. Budva, located near Bay of Kotor, does not offer nearly a third of that which Ulcinj offers. Yet, somehow most of investments meant for tourism development leaned primarily towards these two cities. During the 1970's and 1980's, coastline Riviera's begin forming. Ulcinj's Riviera stands as a beacon for tourism development. However, that glory does not last long, when the political leaders decide to shift the main cell for tourism development in Budva's Riviera (Interviewee 3). With the 1979 earthquake things begin to take a diminishing scale for Ulcinj in terms of tourism development. Many hotels which were state owned are privatized and left unconstructed. Some are even demolished, under the justification that they suffered serious unrepairable damages (Hotel Jadran, See Figures 1.1 and 1.2). Yet, since then and with the privatization of the property, no construction has happened. During the 80's, the rise of different interest groups give birth to pluralism and the overall development of the tourism sector as well as the city as a whole is left aside for selfish interests of distinct interest groups (Interviewee 1). From 1980's and until 1990's, Ulcinj begins displaying its potential in the tourism sector with a variety of tourists and the longest seasonal work ever recorder, which began ultimately around April and lasted until October. Still, this did not last long, due to the nationalistic tendencies within former Yugoslavia which ultimately led towards war, beginning with the Slovenian secession from Yugoslavia in 1991. This is the period in which Ulcinj suffers a serious downfall in terms of tourism development (Interviewee 1). The situation remains relatively the same up until year 2000, after which the tourism sector of Ulcinj is saved by Albanian/Kosovar tourists. After 2006, with the independence of Montenegro from then Serbia, or what has left from Yugoslavia, the tourism sector of Ulcinj 'suffers' inexperienced and nonprofessional local investments (Interviewee 1). Since then, the situation has remained the same in terms of prospering the tourism sector. Ulcinj's hospitality culture has been cultivated over the decades, however investments are not following in the same direction.

The role of Ulcinj's Tourism Organization and challenges faced

Ulcinj's Tourism Organization was formed 10 years ago as an institution in itself within the Municipality of Ulcinj, with the aim of promoting the best tourist offer of Ulcinj in regional and European tourist fairs. The organization is a self – financing organization. The main and most fundamental activity of Ulcinj's TO is the promotion of the best tourist offer of Ulcinj, the hotel and private sector when it comes to accommodation, as well as the presentation of all natural resources, cultural and sports activities that aim to increase the level of the tourist offer as well as the length of the tourist season in the city of Ulcinj (Interviewee 2). Another important activity of this organization is monitoring the tourist season on a daily, weekly, monthly and annual basis (Interviewee 2). This monitoring is presented in terms of statistics in which the number of guests visiting the city is displayed in detail. Cooperation with local and state institutions and the non-governmental sector for the improvement and extension of the tourist season.

Ulcinj has tremendous potentiality in utilizing its natural resources. The city is blessed with access to the Adriatic sea through unique beaches - sandy beaches, gravel and quarry beaches (long beach about 13 km, Valdanos beach, beaches in the pine forest), the river Buna with the island of Ada, the Lake of Shas with the Cultural-historical area and the old town of Ulcinj (Kalaja), which is approximately 2500 years old, and immense salt resources (Interviewee 2).

All of the above are factors that we should make the most of for ensuring sustainable development in the most unique way possible, while taking under account that they are special values that not every city withholds (Interviewee 2). Global demands of vacationers from year to year change, and Ulcinj is no longer dealing with "vacationers who want to spend their vacation only on the beaches, but with vacationers-guests who want to have an active vacation. The demand for emphasizing towards natural attractions and resources are the factors that we need to evaluate in investments in cultural tourism in a multiethnic and multicultural city. We must emphasize and need to invest more in gastronomy to preserve the tradition", Interviewee 2 added. Opportunities for the development of active tourism, i.e. water sports, as well as investment in rural tourism and agro tourism are needed. These are adducts that are not currently sufficiently valorized for promoting Ulcinj's original values towards the development of the tourism sector (Interviewee 2).

Having a leading position in an organization whose purpose is to prompt development in the tourism sector, Interviewee 2 said that there has been ongoing interest of potential investors to invest in Ulcinj, however specific names could not be given due to the inability of concretizing these investments. Interviewee 2 continued to stress the diminishing effects that the privatization of former publicly owned hotels has had negative consequences for the whole sector.

Interviewee 2 also added that it is necessary to use sustainable exploitation of resources in order to ensure reliable development. The municipal government should focus on attracting investment that is sustainable and should think long term (Interviewee 2). As per Ulcinj's TO, focusing on promoting active, cultural, gastro, health and rural tourism should be amidst the top of the agenda (Interviewee 2). Additionally, investments in the public sector in the coming years should be a priority, because only with the attraction of investments in this sector we can achieve that which is vital to the tourism sector, namely prolonging the duration of the tourist season from 3 months to 12 months, Interviewee 2 added.

Unfortunately, for the past decade there have not been any significant investments in Ulcinj (Interviewee 2). There are improvements, especially to some extent in the private sector. For example, local investments on private accommodation and their constant upgrades to meet global changes. Some of these investments include, the construction of small to medium hotels, which have preserved and encouraged the hospitality culture that Ulcinj withholds. Still, these investments won't suffice to bring major change in the tourism sector, and move Ulcinj towards attaining a spot as a top notch tourism destination. (Interviewee 2). Instead, investment plans should give "prime priority to developing the types of accommodation that can earn as high an income as possible, can operate for a long season and can create many jobs and training places per guest bed" (Montenegro Tourism Development Strategy, 2020).

Ineffectiveness of Ulcinj's current and former local administration

1. To attract investments and provide solid investing conditions

With the rise of different interest groups, and a never-ending desire for power, Ulcinj has long been prey of ineffective and incredible individuals in positions of municipal leadership (Interviewee 3). As a result of selfish interests, the development of Ulcinj became stagnate and risked facing a diminishing route. Unfortunately, the policies of the last 20 years, political leaders, have been incapable of creating and establishing conditions for attracting potential investors in the public sector. Lack of city's developmental plans and detailed urban plans, as well as lack of investment in infrastructure are key factors that have caused stagnation in the city's overall development. Additionally, the central government of Montenegro has not been agile to attract real investors in the public sector in the city of Ulcinj (Interviewee 2). Their inability to establish solid foundation upon which investment could be confidently made, have started to take a negative toll on the overall prosperity of the city (Interviewee 2).

2. To control and establish measures for planned construction in the private sector

It is evident that the scale of expansive private investments of local residents is unregulated and unmonitored by the local government (Interviewee 2). As much as it has preserved the hospitality culture through decades, as much it may begin having negative consequences on the tourism sector (Interviewee 3). The main strategy that the government officials should focus on is improving the city's infrastructure, roads, pedestrian stands, bicycle stands, electricity and water supply, as well as cleanliness (Interviewee 2). A correlation between the private and the public sector needs to happen, in order to see flourishing in the tourism sector as well as in other areas (Interviewee 3).

DEG Master Plan 2001

During 2001, German's started shifting their attention toward Montenegro's coastline, with major investments, especially in Ulcinj. This interest is still apparent currently after 19 years, taking under account Germany's Federal

Association for Economic Development and Foreign Trade (BWA) interest in investing in “the tourist development potential of Montenegro with special emphasis on Ulcinj, destination which arouses great interest of German guests”, according to Montenegro Government (Government of Montenegro, 2019). Apparently, Ulcinj showed promising foundation for investment that would ensure both return on investments, as well as it could be the next elite tourist destination point. Still, leaving aside the current interests it is important to learn from past initiatives which have not been fully implemented. The DEG Master plan, formulated in 2001, was created by the German company DEG (German Investment Cooperation), whose plan was to conduct major investment throughout Montenegro’s coastline as well as Croatia’s. This masterplan was adopted by the Montenegrin government as its official tourism policy. Two cities of Montenegro are included in this masterplan for investing, namely Bay of Kotor and Ulcinj. “Project 'Ulcinj' exemplarily lays down longterm development plans for the longest undeveloped sand-beach on the Adriatic coast into a high-quality bathing destination. With a long-term goal of up to 35,000 beds, Ulcinj will become one of the largest touristic development projects in the Mediterranean” (Euroinvest, 2002). It is clear that the profound potential for tourism development that Ulcinj withholds as a city is already noted by major international investment companies. Yet, there is clear evidence on the ineffectiveness of concretizing these investment plans since 2001. This has happened mainly as a result of neglecting to establish solid foundations for carrying these investments as well as the inability of the local and national government to attract customers. Possibly the reason why DEG masterplan for Project Ulcinj has suffered lack of investment could be due to unrealistic and highly expensive sale tenders that have been established. “An area of about 19.5 km² (14.5 km² without the Island of Ada)” has been available for sale (Bickert et al, 2011). The plan was “to build six hotel-groups and mixed forms of accommodation offering a total of 25,000 to 27,000 beds”, with areas of leisure such as a golf course and a bird-watching zone included in the tender (Bickert et al, 2011). The tendered area for sale estimated costs of 1.2 billion with the Island of Ada Bojana. However, “after years of unsuccessful tendering” (Bickert et al, 2011), the Committee in charge of the tender decided to close the tender in 2009. The unrealistic prices as well as the inability of the government to become flexible in terms of establishing common ground for doing business with potential investors have led to the current situation of lack of investments in Ulcinj.

Survey Results

Profile of Respondents

Attaining public opinion in regard to the issue of lack of investments was necessary. This has been achieved through the distribution of online surveys. As a result, 131 people responded. According to figure 2 below, 47.3% were between the ages of 18-25, 22.1% between the ages of 43-51, 14.5% between the ages of 34-42, and 10.7% between the ages of 26-33. As can be seen from the survey responses the majority of respondents fall between ages 18-25, which also shows that the majority of the public opinion which has been gathered by the survey will be that of a younger generation in Ulcinj.

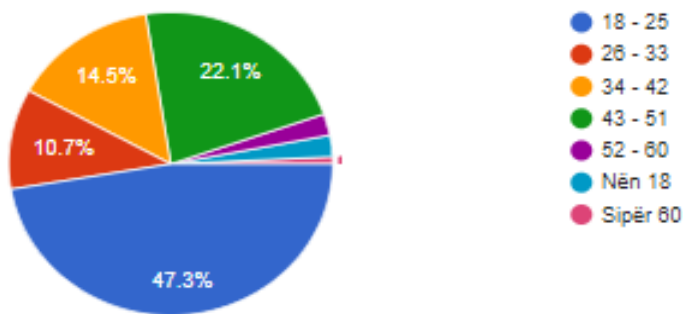


Figure 2: The age of the respondents

Translation of Figure 2 from Albanian to English

Nen 18 – Under 18

Siper 60 – Over 60

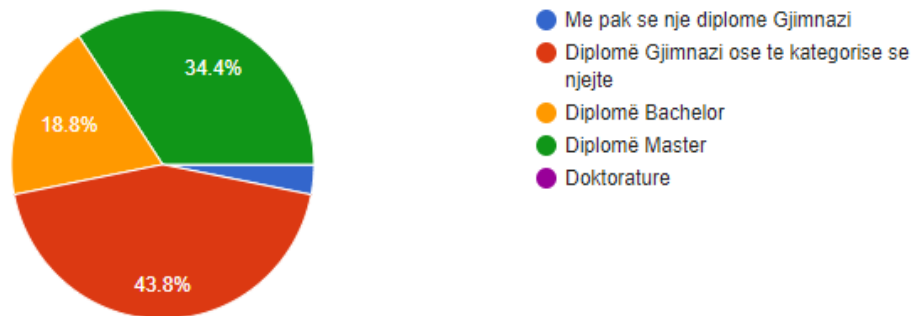


Figure 3: Respondents level of education

Translation of Figure 3 from Albanian to English

Me pak se nje diplome Gjinnazi – Less than a High School Diploma

Diplome Gjinnazi ose te kategorise se njejte – High School Diploma or equivalent

Diplome Bachelor – Bachelor's Diploma

Diplome Master – Master's Diploma

Doktorature – Doctorate Degree

As can be seen from Figure 3, 43.8 % of the respondents have a High School Diploma as their latest achievement in education. 34.4 % have achieved a Master's degree, whereas 18.8 % a Bachelor's degree. Based on these statistics, one can comprehend that the nature of the answers has been submitted by possibly educated individuals.

Tourism-related practices

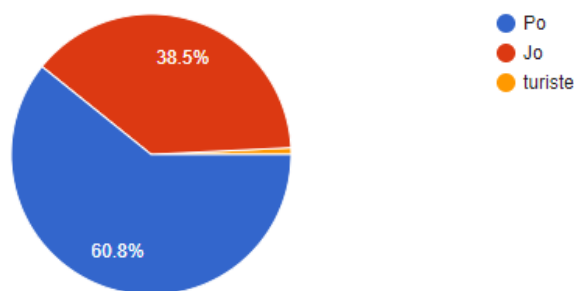


Figure 4: Accommodation owing individuals

Translation of Figure 4 from Albanian to English

Po – Yes

Jo – No

Turiste - Tourist

Figure 4 display the percentage of individuals within Ulcinj's society who own, or run a tourism related business. As can be seen, 60.8% of respondents do own or run a tourism related business, whereas 38.5% reported that they don't. 1.5 % reported that they come to Ulcinj as tourists only, meaning that they are individuals originally from Ulcinj but live elsewhere.

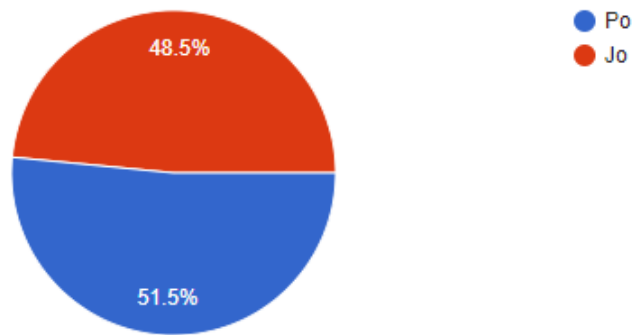


Figure 5: Tourism practices

Translation of Figure 5 from Albanian to English

Po – Yes

Jo - No

When asked the question of “Are you an employee of a tourism-related business”, 51.5% answered yes, whereas the remaining 48.5 answered no. This displays that the 48.5% that answered no, either run or own another business, or that they work on other areas which are not directly linked with tourism.

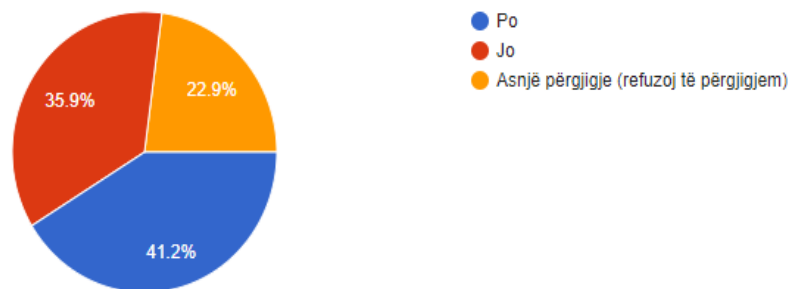


Figure 6: Income from tourism

Translation of Figure 6 from Albanian to English

Po – Yes

Jo – No

Asnje pergjigje (refuzoj te pergjigjem) – No answer (Refuse to answer)

41.2 %, that is the majority of the respondents reported that they earned the majority of their income during peak tourism season, which currently begins at the beginning of June and lasts until the end of August (Interviewee 3). This means that the majority of the annual income that surveyed individuals attain comes from the tourist season which lasts a 3 months period. This being stated, it is clear that work towards making the tourist season longer is needed. (Figure 6)

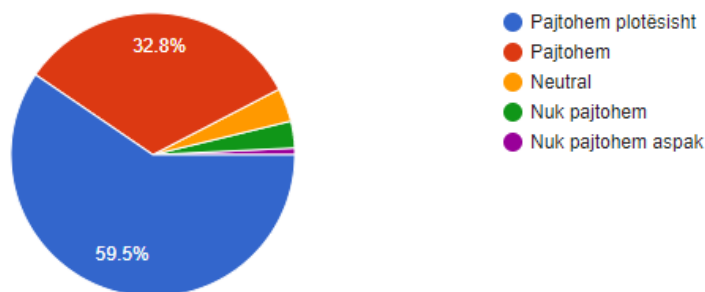


Figure 7: Importance of investing in the tourism sector

Translation of Figure 7 from Albanian to English

Pajtohem plotësisht – Strongly agree

Pajtohem – Agree

Neutral – Neutral

Nuk pajtohem – Disagree

Nuk pajtohem aspak – Strongly disagree

When asked, if the tourism sector is the most significant sector which needs to be invested upon in order to ensure economic growth, 59.5% of respondents said that they absolutely agree, and 32.8 % agreed (Figure 7). This displays that the public interest is profoundly focused on developing the tourism sector, as that they believe will contribute in the overall economic development of the city.

Additionally, when asked, which subsector of the tourism sector should be invested more thoroughly, 68 responded that the most important sub-sector should be Accommodation, meaning that investments should be allocated towards the construction of Hotels, Resorts, etc. Attractions came in a close second, with 62 respondents believing that this subsector is the most important one that will ensure economic growth. (Figure 8)

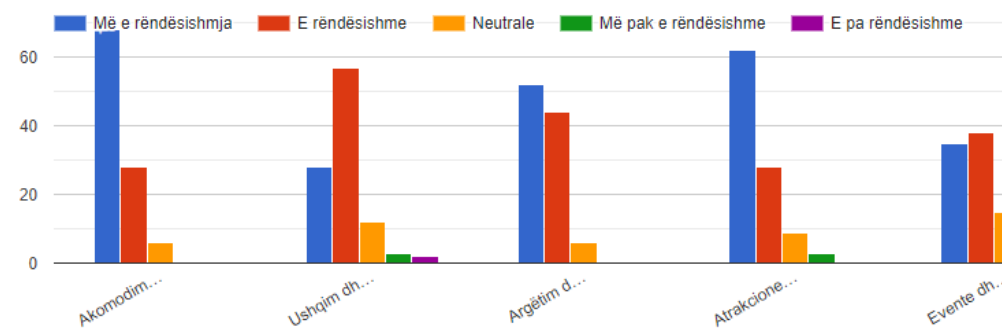


Figure 8: Subsector of the Tourism sector

Translation of Figure 8 from Albanian to English

Me e rendesishmja – Most important

E rendesishme – Important

Neutrale – Neutral

Me pak e rendesishme – Less important

E pa rendesishme – Not important

Public opinion in regards to the local administration

Another core value of this survey was to get a better comprehension of the public in regards to the local administrations that have been in office in the last 10 years. As can be seen in Figure 9, the majority of respondents, namely 53.4% believe that the municipal government has been ineffective in attracting investments in the last 10 years in Ulcinj. 9.9% believe that the leadership was very ineffective, whereas 9.2% said that they were effective.

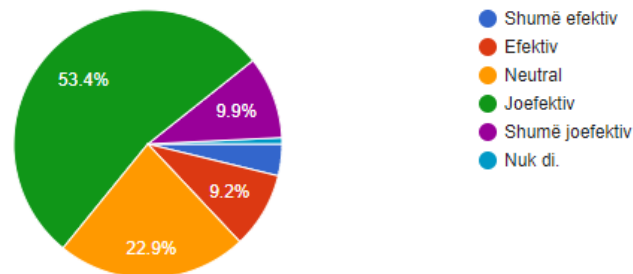


Figure 9: The effectiveness of the municipal government in the past 10 years

Translation of Figure 9 from Albanian to English

Shume efektiv – Very effective

Efektiv – Effective

Neutral – Neutral

Joefektiv – Ineffective

Shume joefektiv – Very ineffective

Nuk e di – I do not know

Furthermore, when wanting to get better comprehension of the public opinion in regards to the demolition of elite hotels in the Riviera of Ulcinj, 72.5% believe that the demolition has happened due to political reasons. Being the only major Albanian dominated municipality in Montenegro, Ulcinj may have been prey of distinct political aspiration, and that is clearly embedded in the society's consciousness (Figure 10)



Figure 10: Demolition of elite hotels

Translation of Figure 10 from Albanian to English

Pamundesia per te terhequr investiture te mundshem – Inability of attracting potential investors

Arsye ekonomike – Economical reasons

Arsye politike – Political reasons

Nuk e di – I do not know

Infrastruktura e dobët deri tek ato hotele – Weak infrastructure of hotels

Te mirat detare, vjedhja dhe korrupcioni I tokave shqiptare ulqinake – ‘Sea wellness’ organization, theft and corruption of Ulcinjak Albanian lands

Shitja ne menyre te paligjshme, politik... - Selling in unlawful way, politics...

Keqperdorime dhe korrupcion financiar – Misuse and financial corruption

Also, in the survey, individuals were asked what are some of the reasons that there is a lack of investments in Ulcinj? 47.3% said for political reasons, 28.2% said because of municipal ineffectiveness, and 9.9% said because there is a lack of investment potential. One interesting comment was also because of religious and nationality racism, as well as sold politicians (Figure 11).

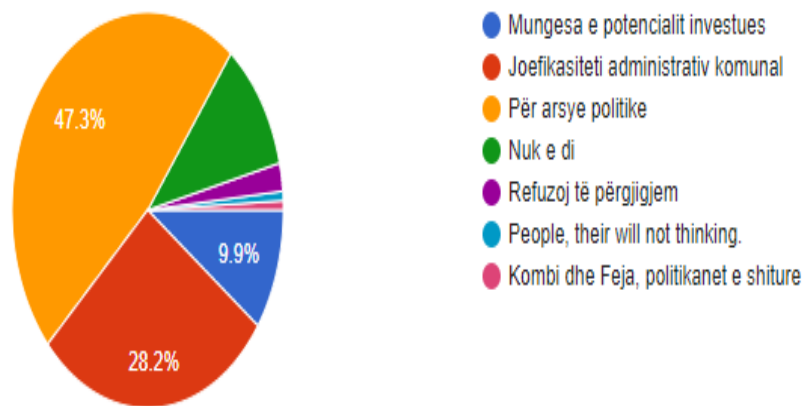


Figure 11: Lack of proper investments in Ulcinj

Translation of Figure 11 from Albanian to English

Mungesa e potencialit investues – Lack of investment potential

Joefikasiteti administrativ komunal – Ineffectiveness of the local administration

Arsye politike – Political reasons

Nuk e di – I do not know

Refuzoj të përgjigjem – Refuse to answer

Kombi dhe Feja, politikanet e shitur – Nationality and religion, corrupt politicians

Future prospects of tourism industry according to public opinion

When asked “do you believe that there will be an increase in the number of visitors in Ulcinj over the next 5 years”, 45.7 % responded maybe, 31.8% responded yes, and 22.5% responded no. This clearly indicates that the public opinion regarding the future of tourism is highly uncertain, which is quite unfortunate for a city whose major income comes from tourism-related practices (Figure 12)

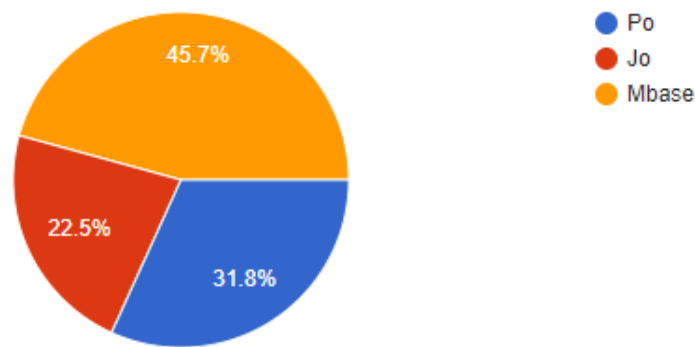


Figure 12: Tourism in the future

Translation of Figure 12 from Albanian to English

Po – Yes

Jo – No

Mbase - Maybe

Additionally, in order to predict the near future, surveyed individuals have been asked if there has been an improvement in revenues from a time span of 5 years. 53.5 % answered that their tourism-related revenues remained the same, 27.1% said that revenues improved, and 6.3% said that the revenues deteriorated. Considering this, and the stagnate circumstances that Ulcinj is facing in terms of investments in the tourism sector, it is highly predictable that there won't be any major improvements in the tourism sector. If the situation remains as it is, Ulcinj's economy will begin deteriorating, leading to other diminishing effects in other areas within the society.

Summarized results from the survey

The majority of survey respondents are Ulcinj's younger generation between the ages of 18-25. Out of 131 respondents, the majority are educated, meaning that a large percentage of the respondents have attained a high school, bachelor's, and master's diploma. Therefore, it can be pointed out that the survey information which was gathered was conducted by educated individuals. Additionally, the majority of surveyed individuals responded that they own or run a business related to the tourism sector and that the majority of their annual revenues come from 3 months-long period of tourism. The majority of respondents stood as strong critics of the municipal government, saying that the leadership in the past 10 years in Ulcinj municipality has been very ineffective in developing the tourism sector. Also, the majority of the 131 respondents believe that the stagnate situation of Ulcinj in terms of its development as a tourist point, has happened mainly due to politicized aspirations, in which there have been specific comments from respondents pointing out discrimination in terms of religion and nationality. Last but not least, the future prospect for tourism development seems quite unknown to the eyes of the public, as they expressed deep concerns about the rise of tourism over the next 5 years.

Conclusion and Recommendations

The aim of this research project was to analyze the issue of the lack of investments in the municipality of Ulcinj. The study stressed the importance of attracting investments in a highly promising city such as Ulcinj, as that would have positive direct and indirect effects in other fields of Ulcinj's economy. A careful analysis of the stakeholders whose primary role is the development of the tourism sector of Ulcinj has been done. Their ineffectiveness has been shown in the *Background Information* section and has been elaborated upon thoroughly in the *Analysis* section of this research project. Primary and secondary data have been utilized as parts of the research methodology to authenticate this

research project. A survey of 24 questions has been distributed via an online platform due to the limitations that the current pandemic of COVID-19 has caused. Therefore, the most realistic sampling method that could have been accomplished given the circumstances, was convenience sampling. As a result, 131 responses were gathered. Their opinion was thoroughly displayed in the *Analysis* section of this project. Apart from this, three interviews were conducted with credible individuals as well as experts, whose opinions and information added immense value to this research. The information that was gathered from the interviews was elaborated thoroughly in the *Analysis* section. Additionally, the secondary data that was gathered to authenticate this research, consists of government documents, reports, books, newspaper articles, and academic journals.

The results gathered from conducting, both primary and secondary research have justified that there is a lack of investments in the tourism sector in the municipality of Ulcinj. Furthermore, the results have shown that, both the society as well as respective experts who have leading roles in the tourism development in Ulcinj, express dissatisfaction in regards to the stagnate and deteriorating tourism sector, which is where it is because of local and national ineffectiveness to attract potential investing opportunities. There is clear evidence pointing out the lack of cooperation between the stakeholders. This lack of cooperation is evident at the local and national levels.

Based on the abovementioned, the following represent recommendations that will diminish the scale of the issue of lack of investments in the tourism sector and foster growth.

Establishing good public relations and cooperation of the local administration and national government

Ulcinj municipality, apart from the municipality of Tuzi, is the only Albanian-dominated municipality in Montenegro. This being said, for the past 20 years, the respective administrations which held office in Ulcinj, have not managed to effectively establish cooperation with the national government. Not only this, but it has not managed to effectively establish cooperation between distinct organizations whose task is promoting the development of the city. This has resulted in many negative consequences, with a major one being public indifference to politics, both at the local and national level (as has been affirmed in the survey result). As such, private uncontrolled and unmonitored investments which have been carried by local individuals have occurred. These sort of investments however, will at some point become an anti-value for the city's development. In this sense, the local administration should begin establishing good ties with the public and incorporating the public to some extent into matters that will drive prosperity in the city. Routine monitoring and regulation should be incorporated by the local administration. Additionally, the local administration should stress the importance of attracting investments in the tourism sector with the national government, as that will have overall positive effects not only at the municipal level but also at the national.

Reopening of mini-tenders that will increase the possibility of attracting investments

As has been shown throughout this thesis project, the previous master plan created by DEG (German Investments Corporation) and adopted by Montenegro as a tourism policy has failed in implementation. This has happened mainly as a result of the ineffectiveness of the national government to establish proper foundations for these investments to be made. The tender of 1.2 billion euros for the 13 km Long Beach region for example, is not feasible for many investors. The tender is very expensive, and is attainable by a very small market (Bickert et al, 2011), which in turn limits the scale and variety of potential investors. A reopening of tenders should be done. However, instead of incorporating the whole region of the Long Beach for sale, the government should decide to lease certain areas within the long beach for a period of years at reasonable price. This would draw more investing opportunities in Ulcinj. Again, it is important to point out towards the national governments willingness to actually attract investments in this part of the country. Where there is a will, a way can be found.

Collaboration between Ulcinj's Tourism Organization, the local administration, and the society

The balance between these three components will lead to promising results in the tourism sector. It is necessary to continue building up the hospitality culture that the city has carved for over a century now. There is no better way to do that than to have cooperation between the local administration, tourism organization, and the society. Interviewee

2 has reported that the number of guests that have entered Ulcinj in 2019 was 366.365, which totaled up to 2.086.385 night stays. However, it is necessary to point out that the number of guests that have entered Ulcinj the last year is considerably higher than what has been actually recorded, due to the unwillingness of certain guests to register in touristic points, Interviewee 2 added. This being said, if Ulcinj's whole society, including here the respective leading organization tasked with the promotion of the tourism sector, builds a unified approach towards the development of the city, then one can expect the situation to change for the better. Individual interests should not be completely ignored, as democracy is built upon the importance of the individual, free market, and capitalism. However, individual interests should not overshadow the greater good of society.

Being a country that generates a considerable amount of revenue from tourism, it is necessary for Montenegro to build a strong chain of coastal tourist attraction points. Equal importance to the development of each and every coastal city should be given and should be prioritized in the policymaking agenda. Investments in Ulcinj, will not only enhance the possibility of attracting tourists and thus promoting the economy at the local and national level but will also have positive effects, both directly and indirectly in other areas, therefore contributing to the overall prosperity of Montenegro as a whole.

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Appendices

Appendix 1: Informed consent for Interviewee 1

INFORMED CONSENT FORM FOR SOCIAL SCIENCE RESEARCH

RIT KOSOVO

Title of project: Attracting Investment in the Tourism Sector in Ulcinj, Montenegro

Researcher Name: Arian Marini, RIT Kosovo (A.U.K) Student

Shpëtim Robaj Street

Prishtinë 10 000, Kosovo

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Purpose of this project: To raise awareness regarding the issue of lack of investments in the tourism sector in Ulcinj. Additionally, this research project aims to provide background information regarding the issue, display the public opinion in regards to this subject, and explain the role of distinct stakeholder's in the tourism sector. Policy options will be presented and policy recommendations will be incorporated with the purpose of attaining a solution for this respective issue. The information gathered in this interview will be used for research purposes only.

Procedure: You will be asked to answer 9 questions during this interview

Duration: It will take roughly 45 minutes to answer these questions

Confidentiality statement: The information gathered in this interview will be treated anonymously and for research purposes only. Your identity will remain confidential.

Voluntary participation: It is your decision if you wish to take the interview. You can withdraw from the interview at any time you wish to do so.

Signature of participant

----/----/----
Date

Signature of researcher

----/----/----
Date

Appendix 2: Informed consent for Interviewee 2

INFORMED CONSENT FORM FOR SOCIAL SCIENCE RESEARCH

RIT KOSOVO

Title of project: Attracting Investment in the Tourism Sector in Ulcinj, Montenegro

Researcher Name: Arian Marini, RIT Kosovo (A.U.K) Student

Shpëtim Robaj Street

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Purpose of this project: To raise awareness regarding the issue of lack of investments in the tourism sector in Ulcinj. Additionally, this research project aims to provide background information regarding the issue, display the public opinion in regards to this subject, and explain the role of distinct stakeholders in the tourism sector. Policy options will be presented and policy recommendations will be incorporated with the purpose of attaining a solution for this respective issue. The information gathered in this interview will be used for research purposes only.

Procedure: You will be asked to answer 17 questions during this interview

Duration: It will take roughly 1 hour to answer these questions

Confidentiality statement: The information gathered in this interview will be treated anonymously and for research purposes only. Your identity will remain confidential.

Voluntary participation: It is your decision if you wish to take the interview. You can withdraw from the interview at any time you wish to do so.

Signature of participant

----/----/----
Date

Signature of researcher

----/----/----
Date

Appendix 3: Informed consent for Interviewee 3

INFORMED CONSENT FORM FOR SOCIAL SCIENCE RESEARCH

RIT KOSOVO

Title of project: Attracting Investment in the Tourism Sector in Ulcinj, Montenegro

Researcher Name: Arian Marini, RIT Kosovo (A.U.K) Student

Shpëtim Robaj Street

Prishtinë 10 000, Kosovo

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Purpose of this project: To raise awareness regarding the issue of lack of investments in the tourism sector in Ulcinj. Additionally, this research project aims to provide background information regarding the issue, display the public opinion in regards to this subject, and explain the role of distinct stakeholder's in the tourism sector. Policy options will be presented and policy recommendations will be incorporated with the purpose of attaining a solution for this respective issue. The information gathered in this interview will be used for research purposes only.

Procedure: You will be asked 6 questions during this interview

Duration: It will take roughly 30 minutes to answer these questions

Confidentiality statement: The information gathered in this interview will be treated anonymously and for research purposes only. Your identity will remain confidential.

Voluntary participation: It is your decision if you wish to take the interview. You can withdraw from the interview at any time you wish to do so.

Signature of participant

----/----/----
Date

Signature of researcher

----/----/----
Date

Appendix 4: Interview questions for Interviewee 1

1. In your opinion, apart from private investments of the citizens of Ulcinj, do you think that Ulcinj lacks public investment in the tourism sector?
2. Were there potential investor in the Municipality of Ulcinj in the tourism sector in the past 10 years? If so, who were they?
3. In your opinion, how effective have the political leaders of the Municipality of Ulcinj been in attracting investments in Ulcinj in the last 10 years?
4. Do you think that the tourism sector is the main sector that should be favored for development in Ulcinj?
5. In which part of the tourism sector, do you think more should be invested? Some sub-sectors in the tourism sector are: Accommodation, Entertainment and Recreation, Food and Beverage, Artificial and Natural Attractions, Events and Conferences.
6. What comparison can you make for the current situation in terms of the development of the tourism sector in Ulcinj and that from about 15 years ago (i.e. since the establishment of the Tourism Organization of Ulcinj)? Has there been development?
7. Compared to previous years, have revenues (in Euro) improved from the tourist season on annual basis?
8. Do you believe there will be an increase in the number of visitors over the next 5 years?
9. What would be your proposal to change the situation of lack of development in the tourism sector?

Appendix 5: Interview questions for Interviewee 2

1. Who are you and what is your role in Ulcinj's Tourist Organization?
2. Can you tell us about the history of the establishment of this organization?
3. What are the main activities of this organization?
4. Based on the official website of the Tourism Organization of Ulcinj, one of the main activities of the WTO of Ulcinj is "Improving and promoting original values in the municipality of Ulcinj, which can precede the development of tourism." Can you explain what that means?
5. In your opinion, apart from private investments of the citizens of Ulcinj, do you think that Ulcinj lacks public investment in the tourism sector?
6. Were there potential investing opportunities in the Municipality of Ulcinj in the tourism sector in the past 10 years? If so, can you name some of them?
7. Is it part of the agenda of the Tourist Organization to attract potential investors in the tourism sector in the municipality of Ulcinj?
8. In your opinion, how effective have the political leaders of the Municipality of Ulcinj been in attracting investments in Ulcinj in the last 10 years?
9. What are the relations of the Tourist Organization with the local administration of Ulcinj?
10. What are the relations of the Tourist Organization with Ulcinj's society?
11. Do you think that the tourism sector is the main sector that should be favored for development in Ulcinj?
12. In which part of the tourism sector, do you think more should be invested? Some sub-sectors in the tourism sector are: Accommodation, Entertainment and Recreation, Food and Beverage, Artificial and Natural Attractions, Events and Conferences.
13. What comparison can you make for the current situation in terms of the development of the tourism sector in Ulcinj and that from about 15 years ago (i.e. since the establishment of the Tourism Organization of Ulcinj)? Has there been development?
- 13a. If so, can you name some of the investments that have contributed to the development?
14. Can you tell us how many visitors Ulcinj has during a summer tourist season?
15. Compared to previous years, have the revenues (in Euro) improved from the tourist season on annual basis?
16. Do you believe there will be an increase in the number of visitors over the next 5 years?
17. What would be your proposal to change the situation of lack of development in the tourism sector?

Appendix 6: Interview question for Interviewee 3

1. How has the tourism sector developed over the years in Ulcinj?
2. What are some important areas that have contributed to the development of the tourism sector of Ulcinj?
3. When did Ulcinj have its best tourist era?
4. What do you think of the distinct administrations that have been in charge of the municipality in the last 20 years?
5. Why do you think privatization of previously state-owned hotels has happened?
6. Why do you think Ulcinj is facing a lack of investments in the tourism sector for decades now?

Appendix 7: Survey questionnaire

1. What is your age?

Under 18

18-25

26-33

34-42

43-51

52-60

Over 60

2. Do you think Ulcinj has tremendous unused potential in terms of investments in the tourism sector?

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

3. Do you think there is lack of investment in the tourism sector?

Strongly agree

Agree

Neutral

Disagree

Strongly Disagree

4. How effective has the Municipal leadership been in attracting investment opportunities in Ulcinj?

Very effective

Effective

Neutral

Ineffective

Very ineffective

No answer (refuse to answer)

5. Are you aware of investments plans in Municipality of Ulcinj?

Very aware

Aware

Not aware

6. Do you have the chance to look at these investment plans in detail? (e.g. via the municipal webpage)

Yes

No

Other:

7. Do you know how many of these investment plans have started?

All of them

Some of them

None of them

I don't know

8. Do you know have many of these investment plans have been accomplished?

All of them

Some of them

None of them

I don't know

9. How did these investments effect your tourism related practices?

Significantly improved

Improved

Same

Worsened

Significantly worse

Other:

10. How often do you come across investment plans in the official municipal webpage on yearly basis?

Very often

Often

Occasionally

Rarely

Never

11. Do you think that the tourism sector is the most important sector that needs to be invested in Ulcinj?

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

12. What part of Tourism sector do you believe needs to be invested more thoroughly to ensure economic growth?

(Rank in terms of importance from 1 to 5, in which 1 is the most important) Some of these subsectors include: Accommodation (Hotels, Resorts, and Apartments etc), Food and beverage, Adventure and Recreation, Attractions (Museum, landscape, monuments, amusement parks, zoo etc), Events and Conferences.

Most important

Important

Neutral

Less important

Not Important

13. Do you think that investments from abroad are a significant factor in ensuring development in the tourism sector?

Yes

No

Maybe

14. Do you believe initiatives of local citizens towards private investments on accommodation infrastructure are among the most important in contributing in the development of Ulcinj's Tourism Sector?

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

15. Do you think that these private investments have contributed immensely in the development of short term/long term jobs for local citizens?

Short term yes, long term yes

Short term yes, long term no

Short term no, long term yes

Short term no, long term no

16. What are the reasons that there are no proper planned investments in the tourism sector in Ulcinj?

Municipal administrative ineffectiveness

Lack of investment potential

Political reasons

I don't know

No answer (refuse to answer)

Other:

17. What are the reasons that there has been no reconstruction of accommodation infrastructure in the demolished areas of Hotel Galeb and Hotel Jadran since 1979 (areas which have stood out as vibrant tourist accommodation points)?

Inability to attract potential investors

Political reasons

Economic reasons

I don't know

Other:

18. What do you think of Ulcinj's situation NOW in regards to investments in the tourism sector and that from 15 years ago?

Profound improvement

Improvement

Same

Worsened

Profoundly worse

Other:

19. Do you believe that there will be an increase in tourism in Ulicnj over the next 5 years?

Yes

No

Maybe

20. Do you attain the majority of your income during tourism season?

Yes

No

No answer (refuse to answer)

Other:

21. Do you own or run a tourism related business such as: Apartments, Hotels, and Motels?

Yes

No

Other:

22. Do you work as an employee for a tourism related business?

Yes

No

Other:

23. Throughout the past 5 years, how has your tourism related income been effected?

Significantly improved

Improved

Remained relatively the same

Worsened Significantly worse / No answer (refuse to answer)

OUTSOURCING AND LOCAL GOVERNMENT

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ABSTRACT

Outsourcing involves the transfer of an organization's regular business activities to an outside service provider that provides some services back to the organization. Outsourcing can offer certain advantages, but only if you do it right. Simply stated, it is the "make or buy" decision as applied to the information systems and technology functions.

The key question is if you should hire your own systems staff, acquire your facilities, develop your systems, maintain your hardware, develop your documentation, contract for your telecommunications network, or should contract such services to an outside specialist organization. This paper aims at local government and their learning about technology outsourcing and the key steps for evaluation and implementation. Although each government has its unique situation, exist some basic faze that enable local government to understand the drivers behind outsourcing, implementation considerations, and important steps to take. The first part of this paper intends to offer an overview of outsourcing, in general, and especially, of outsourcing in the public area and the factors that drive public organizations to outsource especially IT services. The second part strives to provide a picture of the current situation in the Shkodra local government and next evaluate the IT functions that need outsourcing, to create a communication plan.

Keywords: Outsourcing, local government, information technology.

INTRODUCTION

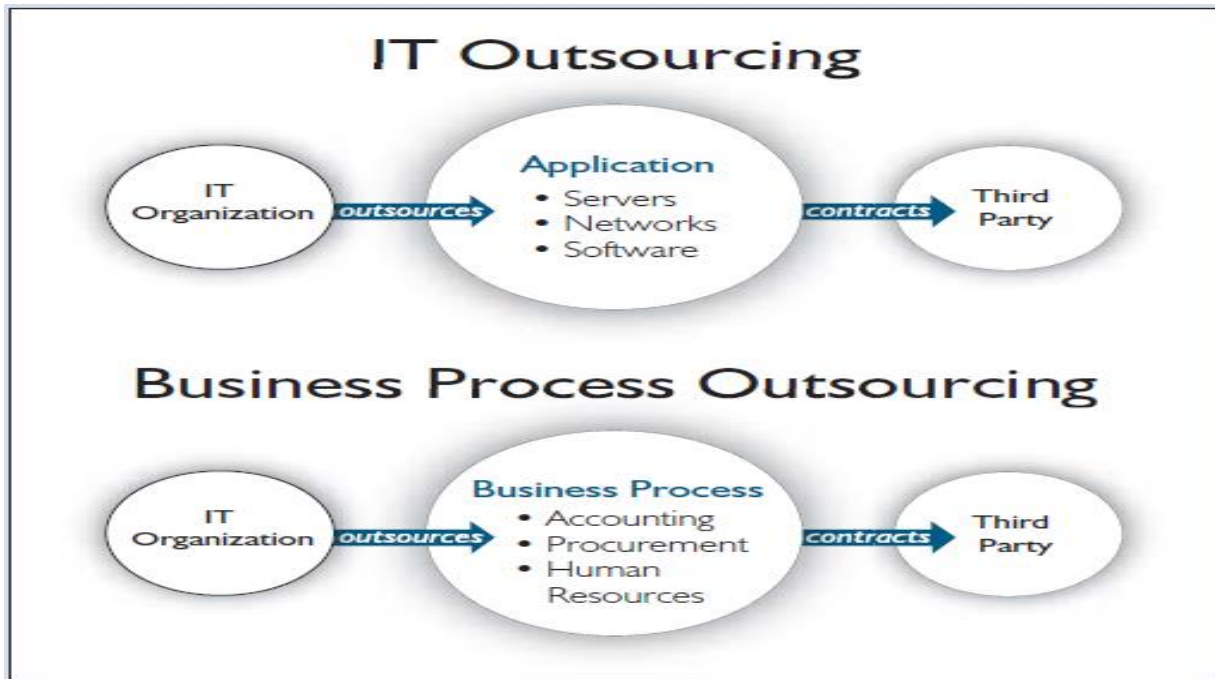
Outsourcing is used in a variety of different ways depending on the organization and the functions outsourced. The following definition is commonly used as purchasing an item or a service from an outside vendor to replace the performance of the task with an organization's internal operations. Another definition is “the transfer of components or large segments of an organization's internal IT infrastructure, staff, processes or application to an external resource” (Robinett, C. et. Al, 2006).

The term outsourcing is used inconsistently but usually involves the contracting out of a business function - commonly one previously performed in-house - to an external provider ((Overby, S., 2007). In this logic, two organizations may enter into a contractual agreement involving an exchange of services and payments. Simply put, outsourcing is the contracting of a third party to manage a business process more effectively and efficiently than can be done in-house (Aalders, R., 2002).

Outsourcing offers numerous advantages; however, there is also evidence that outsourcing often fails (Lacity, M. C. & Willcocks, L., 1997). The potential benefits include cost savings, efficiency gains, improved flexibility, access to world-class expertise, and focus on core competencies. However, outsourcing also poses numerous risks that must be managed for outsourcing to be successful (Kremic, T., 2006).

Outsourcing consists of two types of services (Robinett, C. et. Al, 2006):

- ITO: IT outsourcing, involves a third party who is contracted to manage a particular application, including all related servers, networks, and software upgrades.
- BPO: Business process outsourcing, which features a third party that manages the entire business process, such as accounting, procurement, or human resources.



Source: Authors

WHAT IS IT OUTSOURCING

Outsourcing is used IT outsourcing is defined as “a decision taken by an organization to contract out or sell the organization IT assets, people and/or activities to a 3rd party supplier, who in exchange provides and manages assets and services for monetary returns over an agreed period” (Kern T., & Willcocks L., 2000). ITO allows government entities to focus on their core mission, which is to serve citizens instead of managing technology. By outsourcing components of a business process to an outside vendor, management spends more time on its primary mission instead of managing the IT infrastructure. Traditional outsourcing objectives include reducing operational costs, improving IT flexibility, focusing on core competencies, and increasing operational efficiency (Robinett, C. et. Al, 2006). The most commonly outsourced IT functions for government entities include help desk support, desktop support, wide area network (WAN)/local area network (LAN) support, data operations and maintenance of servers, application services and development, and training. Three main outsourcing models are listed below (Kober, C., 2008.):

Complete outsourcing (including business process outsourcing, BPO):

- A company outsources all of its IT operations or entire business processes to external service providers.
- Partial outsourcing (out-tasking/managed services, application outsourcing/hosting, software as a service): A company outsources only individual IT services.
- Internal outsourcing (shared services)

Reasons for IT Outsourcing in the Local Government

Governments have used outsourcing for years especially in garbage waste collection. Well-managed outsourcing programs help the government reduce costs and increase effectiveness. Outsourcing helps government agencies build an image of a modernized organization which puts paramount importance on technological advances for effective governance (Mutiangpili, J., 2010). The literature shows that there are numerous potential benefits from outsourcing, in general:

- Increasing focus on core competencies.
- Saving money
- Increasing specialized skills to improve IT flexibility

- Obtaining predictability/reliability
- Improving service and operational efficiency
- Eliminating out-of-control functions or unnecessary resources

Increasing focus on core competencies. A good IT provider will help you to specify your needs and by adding their experience you can really focus on the real core of the solution, by the way, also your costs might be reduced¹. The public sector outsources to focus on the planning and monitoring of services and not to be distracted by routine activities. This, however, does suggest that IT is simply a support function that requires little management after it has been outsourced (Cox, M., et. Al 2011). Outsourcing allows government organizations to focus on their core mission activities for their citizens and deliver higher overall value and service levels.

Saving money. Cost reduction is considered the main advantage of outsourcing. It is expected a cost reduction of up to 60% but sometimes is difficult to reach this level². Outsourcing offers “significant, often immediate cost savings” (Child, J., 2005). Outsourcing helps organizations control costs. Contracting out has proven its capability to significantly improve service delivery and increase savings on public spending (Mutiangpili, J., 2010). Most leaders realize that savings is a long-term result and understand that outsourcing limits the costs to a set amount (Robinett, C. et. Al, 2006). In some cases, governments need aggressive modernization of hardware, software, and mission-critical applications and this can often lead to short-term needs to significantly increase investment in IT. The expertise of high-quality firms will help organizations invest efficiently and target spending where it will have the greatest impact. Outsourcing should not approach as a tactical cost-cutting solution; it must be a strategic decision (Aalders, R., 2002). Unless outsourcing is correctly selected and properly managed, there’s considerable potential for failure...(Bushell S., 2001).

Increasing specialized skills to improve IT flexibility. Governments can reduce overall IT risk by using suppliers with a reputation for delivering services and capabilities (Robinett, C. et. Al, 2006). Top-quality suppliers provide access to a wider and deeper set of skills and services. IT companies could assemble efficient specialists, with a lot of experience in the field and that can offer better solutions. Training your employees is a big cost and takes time to grow up, so, IT outsourcing can offer access to the latest knowledge (Robinett, C. et. Al, 2006). The most common IT specialized skills and services that local governments need to include are (Robinett, C. et. Al, 2006):

- Help Desk Support
- Desktop Support
- Maintenance/Repair
- Data Operations (Servers)
- Server Maintenance
- WAN/LAN Services
- Training
- Application Services and Development
- Consulting and Reengineering

Obtaining predictability/reliability. IT outsourcing offers more flexibility, by extending your development team with outsourced resources you will be more flexible; offering more reliability and stability, more productivity, because IT specialists are fully focused on the project (Aalder, R.,2002). Predictability of cost and service is another driver. Many contracts use a fixed-price contract in which the outsourcer provides negotiated levels of service for a fixed price³. Through outsourcing specific functions, local governments may get access to high-performing infrastructures but reliability is fundamental to ensure that citizens and the public receive the services they need.

Improving service and operational efficiency. Outsourcers make it easier for the business to manage IT effectively. They provide appropriate information and reports that ensure expenditure, progress and issues are visible and controllable (Robinett, C. et. Al, 2006). The service provider will also provide quality in output, partly from implementing the improved definitions of outputs, requirements, and change control, and partly from having staff with a higher level of skill and education than is found in many IT departments (Aalders, R., 2002). Improving service to the end-users is another driver of organizations considering outsourcing (Robinett, C. et. Al, 2006). The

¹ <http://itonews.eu/10-reasons-you-should-consider-it-outsourcing/>

² <http://itonews.eu/10-reasons-you-should-consider-it-outsourcing/>

outsourcer using industry best practices may bring innovative technology to allow for immediate features, storage and retrieval of data, and excellent customer relations management. Outsourcing allows for a quicker response to the needs of the public sector because third-party providers already have these experts and their previous industry experience to carry out such a project (Mutiangpili, J., 2010).

Eliminating out-of-control functions or unnecessary resources. Outsourcing can be used to impose discipline on “out-of-control” functions. The organization needs to understand its processes to communicate them to the outsourcer.

Government Concerns about Outsourcing

While local governments are realizing the benefits of outsourcing, they worry about eliminating jobs, the desire to avoid costly moves, and the fear of losing control of data (Robinett, C. et. Al, 2006).

Worrying About Eliminating Jobs. One of the reasons that organizations choose to outsource is to contain unwanted costs, but at the same time, the reason not to outsource is the fear of eliminating jobs.

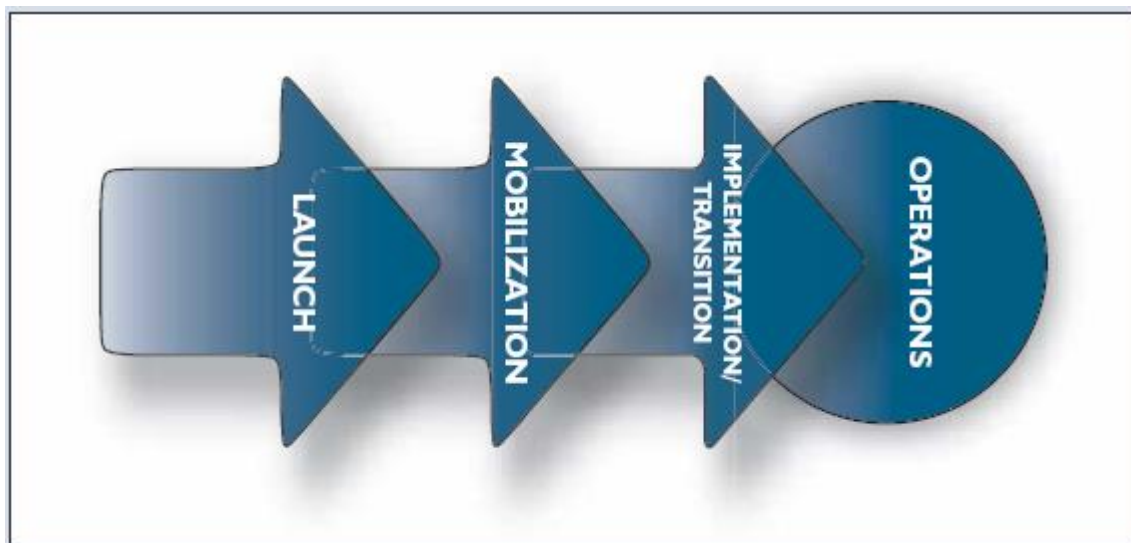
The Fear of Incurring High Costs. Fear of high costs impedes some organizations from moving to outsourcing. The opposite is generally the reality. Many agencies have found that even if the cost is the same as running the function in-house, the ability to fix future expenditures has value.

The Concern of Losing Control of Data. Another reason for avoiding outsourcing is because local governments don’t want to move the public information and data off-site. Data integration is very important for governments, especially with the rising demand for a unified database for citizens’ records (Mutiangpili, J., 2010). Outsourcing firms should be able to describe and demonstrate the skills and processes used to assure data security.

PHASES OF IMPLEMENTATION

Given that organizations vary in size, functional departments, business processes, organizational hierarchies, systems architecture, and applications, and more, the following phases provide leaders with a roadmap to a successful outsourcing implementation. The implementation consists of four key stages (Robinett, C. et. Al, 2006):

Launch, Mobilization, Implementation/Transition, and Operations.



Source: Authors

- Launch phase focuses on evaluating whether an organization should outsource. If the organization decides to move forward, this phase also includes building the right teams, creating communication and project management plans, and analyzing the system environment.
- Mobilization is when the teams develop the contract scope, service level agreements, and the statement of work to guide the project to achieve stated goals and results.

- In the Implementation/Transition phase, organizations transition the operations to the outsourcer while focusing on knowledge transfer, managing the vendor relationship, and managing the project to customer satisfaction.
- Operations sets the stage for maintenance and support to ensure outsourcing will be sustained in the future. This phase also looks at how to evaluate the process to ensure the end-user is satisfied with the results.

AN OVERVIEW ON IT OUTSOURCING IN SHKODRA LOCAL GOVERNMENT

Local government portals are designed and developed by a third-party service provider, but the maintenance and management are realized by internal IT staff.

Two networks have servers: the first one is the tax network that has two servers. The first server administrates the network and the connected PC; in the second server is installed the local tax program, which manages the tax collection in this institution.

The tax software is built by DATECH financed by USAID. It is a national software but adjusted for the local Shkodra government. It helps to collect information about small business taxes and different family bill payments.

The second network, the Civil Status Department has configured the national registration program of civil status. The software of the Civil Status Department is built by an Austrian company financed by the Albanian government. It covers services for birth and marriage certificates, registrations, etc.

The development of the above-explained networks required initially a fixed expense and then after the development and installation of those particular IT systems, the local government felt it most appropriate to manage everything by itself. They felt that was no longer a need for the deployment of an integrated team to remain contracted by the government agency. The networks nowadays are operated, managed, and maintained by local government internal IT staff. This kind of management has some problems because the systems need more up-to-date and more specialized operations.

The local government might outsource its IT management because it is cheaper by contracting a third party than it would be to build its own in-house IT management team. IT outsourcing could be used for all kinds of functions, ranging from maintenance, infrastructure, and IT support. Outsourced IT support can be a time and cost-effective solution to the digital needs of the local government. An alternative solution is to choose the option of partial outsourcing thus to outsource partially IT support. This might involve hiring a single specialist or a small team while also employing a professional IT support service. Partial outsourcing can also take the form of distributing IT duties thus in-house teams are given responsibility for certain aspects of system maintenance while other tasks are allocated to the IT support service. On the other hand, a small municipality local government could gain the most from fully outsourcing their IT support and this usually involves hiring an external agency to manage their IT systems, ensuring that all updates are made, security measures are implemented and all data is stored and backed up safely.

The local government must focus on its long-term development goals and it would be more appropriate to use outsourcing as a way to manage and operate its systems. To improve the situation in our local government, we suggest as follows. Some services that local governments may contract out are data management; infrastructure management; customer support (Mutiangpili, J., 2010):

- Data Management; functions that fall under data management include data entry, maintenance of databases, data back-up/recovery, and data protection. Handling them manually occur numerous incidences of human error. The only way to minimize these inconveniences is through the use of advanced technology and automation.
- Infrastructure Management; government agencies can outsource infrastructure management functions to third-party IT services providers. Service providers must be contracted to maintain and manage multiple networks, security systems, standardized emails infrastructures, storage systems, and data centers, etc.
- Customer Support; a delivery center may be used to receive and respond to inbound queries, either through calls or electronic forms filled up online, regarding a specific problem about local government.

In conclusion, we suggest to Shkodra local government to sign a contract that provides a full IT managed service that included desktops, servers, infrastructure, applications support and management, 24x7 services monitoring, and helpdesk.

The benefits to the local government from this kind of outsourcing will be efficiency in the performance of public

service and the strengthening of this institution politically; because outsourcing can improve services which people directly interface with; the people will be able to appreciate the improvements of local government implements. Outsourcing provides a wider avenue for governments to gain public approval and citizens' satisfaction – factors that are fundamental in strengthening government institutions (Mutiangpili, J., 2010).

CONCLUSIONS AND RECOMMENDATIONS

- The common reasons for outsourcing include reducing operational costs, improving IT flexibility, focusing on core competencies, and increasing operational efficiency.
- Outsourcing in the public sector is now being used as a means of delivering value rather than simply reducing costs (Daly, G., 2001).
- The local government can focus on new application areas that drive better constituent services, increase use of the Internet, and leverage IT capabilities to better serve the city.
- The local government must choose to outsource its IT infrastructure to focus on improved service delivery, not on installing software and networks.
- IT may focus on applying technology to business needs instead of asset management. By outsourcing the local government will gain data protection and 24-hour service.
- Outsourcing helps centralize IT infrastructure, brings consolidation and standardization which increases efficiency.
- Building and maintaining a collaborative environment between the government and the outsourcer is the largest factor for long-term success.
- Because outsourcing can improve services that people directly interface with, the people are better able to appreciate the improvements that government agencies implement. In this sense, outsourcing provides a wider avenue for governments to gain public approval and citizens' satisfaction – factors that are fundamental in strengthening government institutions (Mutiangpili, J., 2010).
- What public sector outsourcing essentially offers is an opportunity to streamline government functions and ultimately enhance its capabilities in achieving the government's bottom-line – efficiently and effectively serving the country's people.

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Impact of Engineering Equipment for Quality Management

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ABSTRACT

Through this paper it is intended to analyze the managerial level and its impact on the products of engineering equipment. The elements that push the production of products using engineering equipment are: presentation of human needs for material goods, analysis of demand and needs, knowledge of the means for their realization, organizational and managerial skills in production, as well as production, sales and product distribution considering meeting customer need. All this procedure therefore has its origin in a request or "problem", and the result should bring the most adequate solution without misuse of resources. This following topic addresses four key points, which are: (a) Legal businesses and business classifications, (b) Legal application in business management, (c) Business economics of productive organizations and (d) Quality management and classification in engineering products

Introduction

Productivity is one of the most important stages of economization. It must meet as fully as possible the human, personal and general needs, which are ever-increasing. Thus, productivity has simultaneously become a condition for the existence of people and human societies, and a major carrier of prosperity and social progress.

In order for production to be able to respond as accurately and easily as possible to the requirements and tasks that are set, the need has arisen for a theoretical and practical study of production issues. As productivity is the interest of social activity, it must be studied comprehensively, to find its features, to follow and analyze the directions of its development, as well as to determine the laws of its most successful development with volume in the direction it has taken.

The study of all these problems should be done as comprehensively as possible, with the participation of experts of all profiles and on a scientific basis. For a more detailed analysis of all the problems of economics, and thus of productivity, in the first place should be engaged economic sciences. However, in addition to economic sciences, no less important task in studying and finding the orientation of the further development of social economics and thus production have other sciences such as social and legal sciences, as well as natural and technical sciences and art. . Among the social and economic sciences, which directly or indirectly have to deal with research and study of economic developments and thus short-term or long-term social needs, which also nurture the orientation of economization, undoubtedly occupy an important place in the sciences of economic policy. Economic policy must study the laws of social development and must provide the most appropriate forms of interconnection between productive forces and productive relations, including the social economy from every point of view.

In the modern economy, among the many problems that require adequate solutions, a special place is occupied by issues such as those related to social reproduction (social reproduction). Among them as the most relevant for our studies here are the problems, namely issues related to production (technical and economic part of business), and then other issues related to production, such as: distribution, exchange and spending. New forms of economic activity of the company are developed through separate organizational units called economic enterprises, respectively economic organizations. The productive activity of the company takes place through separate productive economic organizations, the so-called productive enterprises, respectively the productive working organizations or simply the productive organizations.

The industrial productive activity of the company through the industrial productive organizations is called industrial production. The term "industry" is of Latin origin and means: diligence, diligence, diligence and hard work in general, as creativity. Industrial production represents the process of obtaining material goods by applying mechanical work, wherever and whenever the conditions exist. The ever-increasing presence of mechanical work in industrial production is ensured by the uninterrupted exchange and development of tools and work items. Industrial production must provide products for both personal use and for common and general social use, as well as for the further purposes of industrial production. For this reason, the process of obtaining material goods with industrial production must be well thought out and purposeful, because the way and speed of obtaining usable values in industrial production gives many products but also consumes many tools and labor items. Therefore, if the process of obtaining material goods in an industrial way is not well thought out large losses of labor, time, energy and tools occur.

Industrial production consists, therefore, of the change of form and appearance, first of all of the natural goods, and later of those items which are separated from the bosom of nature, and which from the beginning of human action have, enclosed in itself the considerable amount of work. The results of industrial production are called industrial products osc simply products. In parallel with industrial products, with usable material goods, or usable material values, in industrial production are also announced "unusable industrial products" - production services (transport, information, nutrition, etc.).

Work tools (machines, tools, installations, etc.) and work items (facilities), means of production, means of production are exchanged and developed inseparably. The means of production form the material basis of industrial production. The mode of industrial production depends on the relationship between the productive forces and the productive relations. The more developed the means of production and the more perfect the productive forces and productive relations, the more suitable will be the conditions for meeting the human needs of a society with industrial products, both in terms of variety and in terms of quantity and quality.

QUALITY MANAGEMENT AND CLASSIFICATION IN ENGINEERING PRODUCTS

1.1 Why quality management is needed

Quality management - the activity of managers and employees of an enterprise, which aims to continuously improve product quality. Moreover, it can be performed not only by senior management but also by ordinary staff.

Product quality management should be present in every organization, because it is this system that allows you to formulate the goals and objectives of the enterprise, and also provides the necessary conditions for production and resources that contribute to the production of products that meet the set standards. .

The quality management system in the enterprise should function at all stages of the product life cycle, starting from the idea and preparation of project documentation. Once the product is put into operation, the information collection continues in order to make the next series of products more perfect.

The object of quality management is production, the subjects are the heads of the enterprise (not only the top managers, but also the heads of departments).

1.2. The main functions of quality management

- Planning;
- Organization;
- Coordination;
- Motivation;
- Control.

The quality management process in different organizations is carried out in its own way. However, there is a generally accepted scheme that defines the main actions of leaders at different levels.

Quality management and administration form a certain hierarchical system. For example, the senior manager must fully interact with the external environment, i.e., respond in a timely manner to any changes in standards, as well as monitor for innovations in the legislation governing this issue. Furthermore, he is obliged to draft a policy and define an action plan that will aim at improving the products.

The middle level manager must fulfill the duties of senior management regarding compliance with quality standards. It's the bosses of this level who directly control the entire production process. That is, senior management sets the strategy, and middle managers build short-term action algorithms based on it. Thus, a multifaceted quality management system is formed.

Such quality management has certain features.

- a strategy aimed at improving products is reflected in managers at all levels;
- motivating employees to achieve high quality products;
- the production process is flexible in order to quickly adapt to changing standards and customer needs;
- the issuance is carried out in accordance with international criteria;
- quality management system in line with modern approaches and theories;
- all products must be certified.

Modern quality management presents many challenges for manufacturers, the implementation of which ensures its proper level. Despite the fact that following international standards is a voluntary initiative, a growing number

of firms are joining it to strengthen their market position. Quality management objectives can be described as follows:

- improving the quality level, as well as ensuring product safety;
- improving the production process to achieve the highest economic results;
- creating a positive image in the market, which will significantly increase sales;
- gaining a significant advantage over competitors;
- investment attraction;
- entry into new markets;
- in case of following international standards - export of products abroad.

The company manager should be aware that ensuring a high level of quality is essential not only for the end customer but also for the enterprise itself. For what A competent quality management organization, as well as following all national and international standards, open new markets for products, therefore, they allow to achieve maximum profit.

1.2.1. Why quality management

Modern quality management presents many challenges for manufacturers, the implementation of which ensures the right level of product quality. Although following international standards is a voluntary initiative, a growing number of firms are joining it to strengthen their market position. Quality management objectives can be described as follows:

- improving the quality level, as well as ensuring product safety;
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- creating a positive image in the market, which will significantly increase sales;
- gaining a significant advantage over competitors;
- investment attraction;
- entry into new markets;
- in case of following international standards - export of products abroad.

1.2.2. Quality management system

Enterprises have a certain structure, which means the interaction of all levels of management to ensure the proper quality of products. This is one of the preconditions dictated by modern market conditions. This phenomenon is known as a quality management system, which is guided by a number of principles:

- there should be a clear interaction between the heads of the various departments;
- quality management should use a systematic approach;
- it is necessary to distinguish between the product development process and its direct production process;
- this system must perform a limited number of functions that clearly separate it from the others available in the enterprise.

1.2.3. Quality management methods

Quality is a fairly broad and broad category, which has many features and aspects. One of these features can be considered the quality management method, a list of which is as follows:

Administrative methods are some directives that are mandatory. These include:

- regulations;
- regulations;
- standards;
- instructions;
- management orders

1.2.4. Basic principles

The principles of quality management are the basis of the system of international standards, and they can be described as follows:

- the production strategy must be completely customer-oriented (this applies not only to the assortment, but also to the level of quality of the goods);
- the management of the enterprise is responsible for providing the necessary conditions to achieve a certain level of quality;
- all company staff - from top to bottom - should be involved in the product quality improvement process, for which a motivation and incentive system should be used;
- quality management should be based on a systematic approach, which is the perception of all departments of the enterprise in their inseparable relationships;
- it is unacceptable to set final quality limits, but it is worth being guided by the principle of continuous improvement of its level;
- the adoption of any decision relating to changes in production technology to improve product quality must be justified by the figures characterizing the economic feasibility of introducing certain innovations;
- in an effort to improve the quality of the final product, it is worthwhile to demand the same from suppliers of raw materials, supplies, and machinery and equipment.

Compliance with these principles is key to an effective quality management organization.

1.2.5. The main elements that affect the quality of final products are:

- Elements of productivity
- investments
- Work organization
- Organizing protection at work
- SUPply
- Organization of creation
- plannIng

- selling

1.3. Elements of productivity

In order to create certain material goods, it is necessary to have certain elements of production. In the work process these elements are announced in the role of:

- work tools,
- work items, and
- workforce

1.3.1. Work tools

With work tools man acts on work items to create usable material goods. Narrow-minded and broad-minded work tools are distinguished. Work tools in the narrow sense are those tools that one uses directly in the work process. Wide means of labor include those passive means of work, without which the process of reproduction can not take place.

Without active and passive working tools no modern productive process can take place. In the work process work tools can participate in:

- the direct form of work, when they are acted upon directly on the objects of work, and in
- indirect form of work, when they do not act directly on the work items, but help the development of the work process.

According to the physical shape of the work tools are divided into:

- Land for production, auxiliary and construction purposes,
- Buildings for production, auxiliary and residential purposes,
- Operating and energy machines,
- Ancillary equipment, operating or supply,
- Means of transport (internal and external),
- Tools, apparatus, instruments, models,
- Inventory (manufacturer and auxiliary).

Although there is a similarity between knowledge of working tools and knowledge of fixed assets, however, this knowledge must be distinguished, because we have the inequality:

$$M_{th} > M_p$$

Where are:

M_{th} - the basic tools of the manufacturing organization, and

M_p - the working tools of the production organization.

1.3.2. Work items

Work objects (objects) which are used in industrial production organizations are either direct natural fruits, or are natural fruits on which a work process has been carried out, but in order to obtain the desired products they must be processed.

Depending on the degree of work done, work items are classified into:

- manufacturing material,
- semi-finished products,
- parts (of products), and
- unfinished products.

According to the commitment in the production processes of industrial production, the material is divided into:

- basic material,
- auxiliary material, and in
- supplementary material.

1.3.3. Working force

Man, work tools and work items participate in the work process. In order for a person to be able to produce any number of necessary products with the work tools he has and from the work items he has at his disposal, he must have skills and opportunities. certain physical and intellectual.

Man's productive activity represents the work, the intentional activity of man in order to obtain the necessary material goods. So we can look at the work from many points of view, such as:

- mechanical (physical),
- economic,
- social (sociological, ecological, legal)
- physiological,
- psychological.

Division of labor. A special problem for the production organization is the division of labor force. In this view it should be known:

- the required number of employees, and
- their ability to perform certain work tasks.

1.4. Investments

1.4.1 General knowledge on investments

Expenditures of financial means for the establishment, maintenance, replacement, expansion and increase of the utilization rate of facilities and other production facilities, as well as working tools in general, are called investments.

Work items in the production process are spent in full, and make working capital, which must be indivisibly compensated, work tools are gradually spent for more production cycles or for more years, and make fixed assets, which should not be are replaced and compensated from time to time, but may be technically or economically obsolete, or altogether.

1.4.2 Types of investments

With the classification and study of investments, opportunities should be created for making the most appropriate decisions regarding the engagement of new financial means. Investments should have priorities, so it should be known with certain means where to invest.

Investments can be classified according to different criteria, among which are distinguished:

- Investments according to the basic commitment,
- Investments according to the technical structure,
- Investments by economic features,
- Functional investments in reproductive processes, and
- Investments by sources of financial means.

1.4.3 Investment efficiency

With investments, the basic social and economic goal of material production must be realized: to produce necessary material goods to meet individual, common and general social needs. The production achieves the expected economic results with the positive technical and economic business and the positive economic and commercial business.

The productive organization that invests reduces the cost in the present, but with these creates the material basis for greater spending in the future.

Investment activities as well as the entire business policy of the enterprise should be based, from the point of view of investment efficiency, on the rationalization, modernization and replacement of the existing capacities of the enterprise.

1.5. Work organization

1.5.1 Workplace

The workplace is the designated space where work items are operated on. The workplace is organized to meet the technological and biological working conditions. Technological working conditions include tools and work items with which a certain work process can be successfully developed. Biological conditions include the conditions of the workplace in which man can most easily release the working energy without harmful consequences for his health and the environment to which the workplace belongs.

The necessary jobs are provided by the division of labor in the process of reproduction. We distinguish:

- horizontal division of labor, and
- vertical division of labor.

With the horizontal division of labor in the process of reproduction, certain complex tasks are subdivided into work tasks which can be performed by individuals in the workplace. In this way the number of jobs and the necessary number of executors of work tasks are found.

With the vertical division of labor in the process of reproduction becomes the global division of general working tasks of the enterprise into special tasks. With such a division are the types of functions and their sizes in the enterprise.

1.6. Organization of the defender at work

In different work processes act people with different professional training and with tools of different technical and technological levels on different items more or less harmful work. Different work processes take place at different speeds and in different working conditions. Therefore, protection at work is done in order to preserve the good health of the members of the working collective and the property of the enterprise.

According to this we distinguish:

- labor protection, and
- protection of enterprise assets.

1.7. Labor protection

In the process of work the human body is exposed to various harmful influences. These harmful impacts can come from work tools, work items, driving energy and other energies which are used in the work process. Risks from work are threatened in the form of various diseases or injuries. These risks generally represent risks in the workplace. So in order to avoid injuries, precautions must be taken which provide the worker during his work, so it is always better to prevent the occurrence of diseases and injuries at work than to cure them.

For this purpose, in our country there are a large number of general acts and regulations for protection at work and for the protection of the environment.

From what has been said we learn that the role of labor protection at work is directly related to the preservation of human health in the work process, in some cases, when he works with life-threatening items, and that may have effects lateral.

1.8. Supply

1.8.1 Organization of supply

According to the functions performed, the supply is part of the economic and financial business of the enterprise. However, because it is a phase which precedes the beginning of the production process, it represents the important conditional function of production, respectively it represents the important subsystem of the production system.

Figure 5.1 shows the organizational diagram of the supply subsystem of an industrial manufacturing organization.

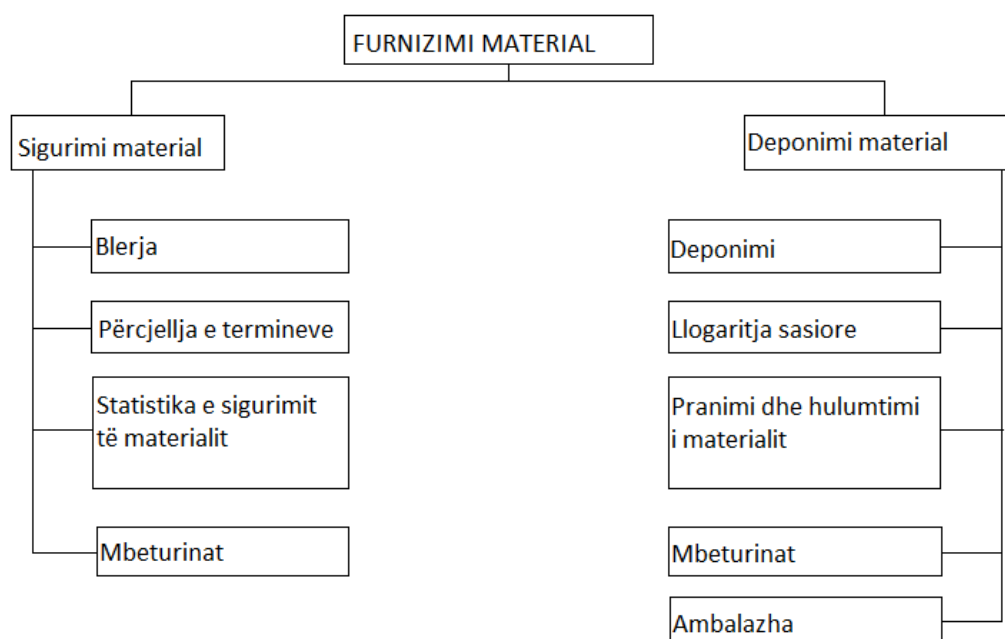


Figure 5.1. Organizational scheme of the supply subsystem of an industrial manufacturing organization

1.9. Organization of creation

From an organizational point of view, we distinguish between narrow-sense productivity and broad-sense productivity.

Broad-minded productivity represents the production process of industrial enterprises, which includes all the work which serves to turn raw material into finished production.

Production in the narrow sense, represents the basic production process, the direct processing of the raw material into finished product, respectively the technical and economic function of the general business of the industrial production organization.

Production process consists of one or more technological processes. The technological process represents the direct change of work items, in terms of appearance, shape, dimensions, properties, etc.

1.10. Planning

The rapid development and advancement of the productive forces and the existence of a great opportunity for their concentration and productivity and placement of various products in ever-larger markets, etc., increasingly pose the need to harmonize the various business elements with the development of the productive forces and with the changes of the productive relations, more and more developed.

This predictive activity of future events and the orientation of the economic activity of a social community, economic activity or branch, of the enterprise or its organizational unit to the workplace, or of the individual within a certain period of time is called meaningful planning. wide.

There are different plans. The developed economic system differs:

- The development plan of the whole social community
- The plan of the republic
- Regional plan
- Municipal plan and
- Enterprise plan.

Planning should be done on the basis of scientific and professional studies of all elements with an impact on the results achieved under the plan. For this reason the planning process is based on several principles which are:

- Economic principles of planning and
- Methodological principles of planning

These principles apply from the beginning of planning, when the goals and tasks of planning are set, to the end of the planning process.

1.11. Sales organization

Sales is the latest activity in the extensive production process, and is implemented in market-dictated conditions. Market research determines the requirements of consumers, which serve to design the production plan and program.

By organizing the sales system, the enterprise ensures the conversion of assets engaged in the production process into cash, with which it meets the requirements of suppliers, pays personal income and fulfills legal and social obligations.

The basic tasks of sale, respectively realization are:

- Sales market research,
- Sales planning,
- Sale of goods and services,
- Economic propaganda,
- Receipt and delivery of finished products,
- Evidence of sales,
- Economic analysis, audit and sales control.

According to this, the task of the sale is to turn the products into money, while with the organization of the sale, the orders and their fulfillment in time must be ensured.

1.11.1 How to build modern quality management in a company

Tip 1: Quality management should start at the top, not the bottom. If the initiative is shown from below, then the system is not taken seriously, and the effect will only be official.

Tip 2: It is necessary to train all staff and management involved. Often, managers believe they have enough knowledge to properly manage the company. However, you need to understand that employee thinking still needs to be adjusted, it is necessary to focus on well-coordinated teamwork and customer loyalty.

Tip 3: Implementation should not be organized with the help of any internal service of the enterprise. All staff should be involved in this process, without exception.

Tip 4: It is necessary to link the quality management system with the already existing concepts in the company (motivational, strategic management, etc.), as it is necessary to create a single integrated management system.

Conclusion and Recommendations

Managing an organization, in terms of quality, means that all activities are subject to defined quality objectives, and to achieve these objectives, the organization has developed a system of plans, has the necessary resources and takes action to achieve the goals.

In order for the consumer to receive quality products, a management system is needed that takes into account the interests of all actors. This approach makes the implementation of the quality system throughout the integrated supply chain less controversial. The implementation of the proposed system may allow the production manager of:

- Manage production immediately, minimizing risks;
- Avoid unreasonable losses and minimize production costs;
- Receive real-time operational information;
- Manage processes flexibly.

These principles of quality management form the basis of the philosophy philosophy of quality management system standards in the ISO 9000: 2000 family.

Evaluating the effectiveness of quality management systems, as well as any systematic changes in the activities of the organization, is a very difficult task. Although improvements resulting from the regulation of quality management system activities should actually (and not formally) be qualitatively tangible, the systemic effect is difficult to determine.

Product quality management should be performed systematically, ie. the enterprise must establish and operate a product quality management system.

As we have mentioned business is the basic cell in which income and profit are created, but this is not the main reason for doing business. The main reason for doing business is to meet the common needs of society.

In the competition in the market, functional quality is becoming more and more important. This requires the introduction of new organizational systems not only in production systems but also in quality management systems. Quality management systems are increasingly integrated with the organization's management system. High quality is becoming the factor that unites organizational units, connects them with a common goal, breaking down barriers between them.

For products to be competitive, constant, focused, attractive work of manufacturers to improve quality, systematic quality control is necessary, in other words, we can say that any enterprise that wants to strengthen its position in fierce competition and to maximize its profit, should pay close attention to the quality management process.

It is worth noting the annual increase in competition in the market. One of the key aspects of this process is precisely the compliance of the goods with the quality standards. As a result, companies need to pay more and more attention to this aspect of production. In this regard, there is a need for a certain material base, as well as modern equipment and technology. However, the most important point is the staff. It is important to implement the right motivation system as well as a management philosophy in which each employee will feel personal responsibility for the final characteristics of the product

Company management plays a key role in the success and the way a company operates and operates. Managers are those who carry on their shoulders a great responsibility in the failure or success of the company.

The objective of this paper is to elaborate as best as possible the impact that the managerial level has on engineering products, or we can say the impact on a company of a different nature. Recognizing the requirements and interests of employers and employees or employees, managers and owners of capital, as common and non-antagonistic requirements is the new basis of company management.

The real interest of these stakeholders in the general economic activity is really the same. We can justify this with the example of providing conditions for the existence of one party as a condition of existence of the other party. Prosperity of employers can not last for a long time if it is not accompanied by prosperity of workers or other stakeholders and vice versa.

So finally we can say that successful implementation is possible if:

- The main regulated activities of the company, as well as compliance with the documentation system of its real activities.
- Process management, within the framework of which the requirements for resources, inputs and procedural results are clearly defined, the criteria for evaluating customer satisfaction and performance and fixing deviations by identifying the causes and their further elimination.
- Direct involvement of senior managers in planning, analyzing and coordinating system performance.
- Improving process efficiency indicators, in the presence of increased customer satisfaction and product quality.
- Willingness of staff to work (with the right motivation and resources needed).
- Improving the overall performance of manufacturing companies.

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The importance of Information Systems and digital marketing in finding suitable clients in Microfinance Institutions

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Abstract

This paper is specific to an issue, because a lot of research has been done on digital marketing, but not on the importance it has in finding individual borrowers as well as small and medium-sized businesses, adequate to be clients of microfinance institutions in Kosovo.

The aim is to highlight the tremendous importance that different ways of using media and digital marketing have in this regard.

Technology is evolving at a rapid pace, and businesses are trying to take advantage of this development to keep up with the times and one step ahead of the competition.

Humans are social creatures, evolution is evidence of this, so social networks have made perfect use of our need to communicate with one another, and have easily deported each individual.

Given that the vast majority of the population uses at least one social network, the probability of seeing promotions and ads is significantly higher than placing an ad on a website dedicated to Marketing, or even using the traditional form of Marketing.

Digital marketing using these networks enables the finding of a greater potential buyers, and can be considered as a key factor in determining the success of the business.

Keywords: Digital Marketing, ICT, Social Media, Control, Microfinance digitalization.

1. Digital marketing in microfinance institutions of Kosovo

In a market economy, the use of digital marketing and online platforms are an important part of the business success of the company. The European Commission wants to ensure that the platforms operate online. The European Commission's policy aims to support a credible, legitimate and innovation-oriented ecosystem around online platforms in the EU. To this end, the Communication of the Commission for Online Platforms, published on 25 May 2016, identified the main areas where further attention is needed. The guiding policy principles pursued by the Commission are:

- A level playing field for comparable digital services;
- Ensuring that online platforms behave responsibly to protect core values;

- Promoting trust, transparency and ensuring justice;

Online platforms share key features including the use of information and communication technologies to facilitate interactions including trading transactions, the collection and use of data related to these interactions and the network effects that make the use of the platforms most users. valid for other users. Online platforms cover a wide range of activities, including online advertising platforms, markets, search engines, social media and content creation platforms, application delivery platforms, communication services, payment systems and platforms for the collaborative economy.

Online platforms are powerful drivers of digital marketing and innovation and play an important role in the society and economy of European countries. They increase consumer choice, improve efficiency and competitiveness. According to the research we have done in this paper, the Online Platforms with Digital Marketing that operate within the websites of Kosovar microfinance institutions are: Finca, AFK, KEP Trust, KKK and KosInvest.

2. Digital Marketing Trends

The digital marketing trend is developing with an extraordinary dynamics and every day it is becoming more and more attractive for our country. Everyone talks about the experience in buying different products online. In other words, it has become part of the lifestyle.

To prove this, we have selected some Digital Marketing statistics in the United States of America (USA), considering that new trends are usually developmental in this country, and then reflected and impacted across the globe:

- 54% of Americans prefer online shopping based on the influence of Digital Marketing;
- 69% of them are of average age 35-55 years;
- 58% of middle-aged people in the US, influenced by Digital Marketing, prefer to shop online rather than physically;

The average age (30-55 years old) spends six hours a week shopping online because they have seen something through Day marketing organized with digital tools. In the same analysis it was found that people over the age of 60 spend four hours a week shopping online, while young people spend 2.5 hours a week shopping online; Nearly half of online shoppers (49 percent) stated that they could not live without Marketing and shopping of this kind.

Providing digital Marketing by a Financial Institution has never been easier than it is now:

- It is decided what will be the object of Marketing;
- A platform for digital Marketing is selected, which will become part of the Website of the Institution;
- Order or buy the digital Marketing platform selected for the topic of microfinance, with a design suitable for customers who need financing and that fewer adaptations we will personalize to look unique;
- Starts to build the offer for the customer by introducing financial products with attractive description for the needs of the customer;

- Creates the connection for online chat with real-time answers for the client;
- We make deals by express mail for the delivery of Marketing offers ;;
- Advertise financial services products and offers - focus on online media and social networks;
- Frequent maintenance of the website;

Although it is easy to build an online Digital Marketing opportunity, maintaining and setting up an online business is hard work - even for the most reputable digital Marketing experts.

Microfinance institutions need to capitalize on communication channels with customers. The secret to digital marketing success is not just to set up financial products, but to expect how sales are going. To be successful in digital marketing, I value strategic engagement, to target customers - both online and offline.

The number of customers will increase along with their demands. Not only sound education but his alertness and dedication too are most required. Also important are the expectations about the service in relation to the customer, which we have to give all the time - before, during and after the order.

If we want to build a Digital Marketing, we must follow the global trends and consider their implementation and adaptation in Kosovo to the local market, in the best and fastest way possible.

3. Connecting client with the IMF through Digital Marketing

Digital marketing consists of two main functions: to connect buyers with sellers and to facilitate their communications in goods or services transactions. In addition, the opportunity is offered to do Marketing directly with customers or suppliers without having to open a representative office or to hire an agent abroad.

Regarding Digital Marketing in some Big Banks their experiences have shown that the flow of information in the supply chain of customers is faster by allowing them to promote and directly advertise the offer of the financial product through the website without passed through any mediator.

Customer relations are considered an important part of Marketing, as by creating a strong relationship with online customers, companies show a deep understanding of their values, which will lead to a stronger link between the MFI and the consumer. Given the central importance and growth that this channel has had, the authors of the paper thought that it is more valuable to measure the quality of services provided which have attracted the MFI client through Digital Marketing. Understanding customer behavior patterns, according to the growth and expansion rate that the online channel is going through, is essential to establishing a healthy relationship between the financial institution and the client over the long term. (Beqiri, 2002)

3.1. Creating online customer satisfaction surveys

Through online surveys can it be understood what consumers are saying about us? Want to improve customer loyalty? To attract customers' attention with our services. Similarly in a competitive market, it is important to know exactly what our customers think.

Online customer satisfaction surveys provide the feedback we need to keep our customers happy.

How to collect feedback from customers?

- Send as many polls as possible.
- Quick answers
- Easily create and submit professional surveys.
- Get reliable and fast results.
- Approach questions and descriptive models approved by our survey scientists.
- Real-time results
- Check the results on the go from any device.
- Trends of the place to enter as data
- Fresh ideas Surveys give us more than just answers
- Get new feedback and perspectives. (Group of Aut, 2020)

4. Customer satisfaction attracted by Digital Marketing with microfinance services

Data collection and analysis of the obtained results was done based on the current situation in some microfinance institutions in Kosovo. The questionnaire was made with 100 citizens of Kosovo regarding MFIs: KEP Trust, Finca, AFK, KosInvest and KRK ..

These MFIs are mentioned during the pandemic how they acted with positive financial performance thanks to Digital Marketing and their electronic platforms. The questions that were formulated were mainly addressed to the managers and consumers of MFI financial products.

The study is an important part of the research seeing that the interest is continuous for Digital Marketing in western countries but now also in Kosovo where many Digital Marketing companies operate.

For the realization of this study, a questionnaire with 10 questions was drafted and answers from 100 respondents were collected from the clients of some MFIs operating in Kosovo.

In the success of Digital Marketing so far it has been considered to be customer attraction for MFI financial products and quality of online service. From this we understand that local companies are faced with competition from giant companies either abroad or for the local market. During the literature review it has been proven that building a loyal customer base is essential to achieving success in the medium or long term, whether for local or international companies. The correlation between the quality of services, loyalty to the firm that the customer has and the access of customers to online services that day by day marks an increase in social networks especially in times of pandemic where everything has been followed in social networks and economic development has affected in online sales in this period where the economy has been declining and the trade that online creates the structural basis of this paper has caused a great commotion.

For the question related to the topic of this research in the paper, among other things, the question was asked about the satisfaction of MFI clients with the service and financial products they offer.

The table produced by the answers of our respondents provides the following data for the relevant questions:

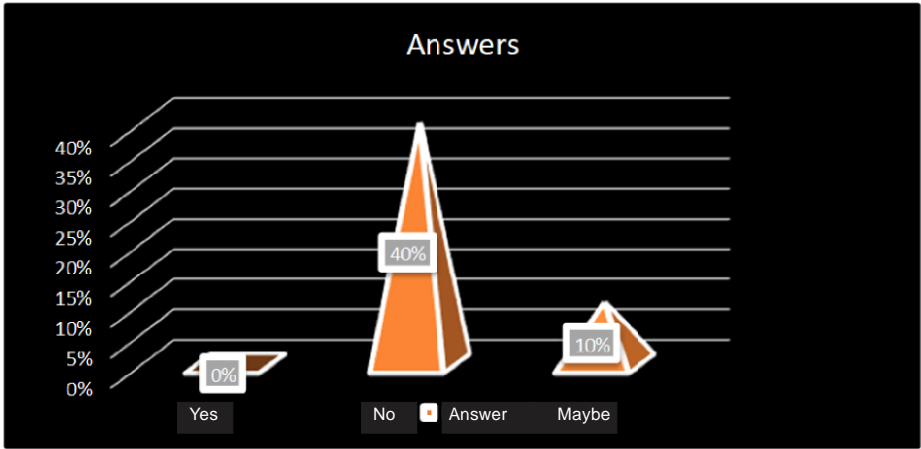
Table 1. Have you ever had a customer dissatisfied with a loan or financial product made to you and complained about them?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Jo	40	80.0	80.0	80.0
	Ndoshta	10	20.0	20.0	100.0
	Total	50	100.0	100.0	

Source: Authors' calculations - SPSS

In the given question options we see that we have 40% in the No answer, while maybe 10%. The reports are presented based on the graph which are in the structure of the respondents by the respondents.

Graph no. 1. Have you ever had a customer dissatisfied with a loan or financial product made to you and complained about them?



Authors' calculations

5. The role of Digital Marketing during Pandemic in Kosovo MFI-s

Based on the research we have done we can conclude that Digital Marketing is an inseparable phenomenon. from U.S. It is also a growing trend and helps consumers

have less waste of time and money and at the same time online shopping is as transparent as they are displayed on online sites. The competition between physical sales and online sales is a competition that is deepening day by day. Global statistics are showing how online sales are revolutionizing the market, shortening time and offering tremendous opportunities. Meanwhile the local market and sales are subject to the internet in a progressive way. The widespread use of the internet and the rise of technology have created a new market for both customers and businesses. The internet is another medium to get in touch with people who are interested in shopping. Online shopping is an important channel to find potential customers, as well as to maintain relationships with customers that are regular. The idea of online shopping can lead the consumer in a convenient way to pursue online sales. Consumers will be able to save time choosing the product, and pull all the information in less clicks in minutes. Buying can be done anywhere, anytime according to their preferences. Companies that operate online are mostly private. According to research in the Peja region, these companies have slowed development, but during the pandemic there was an increase in online sales. Based on the results of the study we conclude that in addition to their development an important component is advertising, and the consumer. We can say that the key to success for any company is good advertising of products to attract the attention of every customer. Through the answers to the questionnaires from the consumers, our country needs the establishment of new entrepreneurs for this business to have growth and this study to be an example for future generations. The purpose of this study was to assess the credibility of citizens during online shopping: Who provides the most appropriate health care and how much have been supplied with equipment that was needed during this pandemic time. The new corona virus, Covid-19, is a global challenge which requires individual responsibility for action. Every citizen, individually, as well as businesses, institutions and organizations, can take action to better protect themselves from the virus and be prepared for unpredictable situations. Predictions and estimates are already available that Covid-19 was causing a major shock in the economies of many countries, but also for the global economy. The coronavirus pandemic has rocked financial markets, especially emerging markets and emerging economies which are suffering from outflows to safer countries. The rapid spread of the coronavirus pandemic in the world has caused global capital markets to sink, while a large group of companies to lower earnings estimates due to falling demand as well as supply chain disruptions. The impact would be more severe for small and medium-sized enterprises, which currently have minimal access to credit. Finally, as a result of growing financial ties in the region, financial or banking stress in one economy can have serious consequences in other countries in the region as well. However, doing so has disrupted the flow of goods and people, stalled economies and is in the process of delivering a global recession. Economic infection is now spreading as fast as the disease itself. (E drejta bankare, bankat dhe e-banking, 2017)

6. Conclusion

Effective targeting of customers, who are willing to borrow through any offer of microfinance institution products - however - requires data and statistics from current customers. Small and medium-sized businesses have little space and fewer resources.

To conduct high-level research and obtain information from the entire industry on who borrows, how much to borrow, where to borrow, then age, gender, interests, when it needs to borrow money, etc. These are costly researches that we get in time. Data analysis should be done, of why they are converted into lending and which plan channels should be used to optimize the return on investment.

Mobile users have far surpassed PC users, so we need to pay special attention to the development of a dedicated platform for consumers coming from smartphone users. Earlier, the Desktop version was adapted for the mobile version, and now we have to dedicate a special mobile version so that the effect of Digital Marketing is bigger, simpler, more attractive, and to maintain customer engagement, because, 90% of time - according to statistics - people spend on mobile devices with the average browsing up to 150 times a day of various Internet sites. With this commitment to smart devices one can imagine what can be done in Digital Marketing targeting mobile device users.

When it comes to marketing, we need to focus on online channels, online portals and social networks - because of the ability to target customers by gender, age, interests, habits, etc. Sooner or later it is inevitable that most of Kosovo's microfinance institutions will be present with their financial products and services online, doing their Marketing or joining a large platform with their inclusions within them..

6.1. Recommendation

From the research we see that Digital Marketing is a growing trend and very efficient and effective. The recommendations that emerge are:

- The financial services and goods that are ordered online must be of good quality so that the consumer is not disappointed and does not lose the clientele as a company.
- It is recommended that during the pandemic there be no price fluctuations so as not to create harm to the consumer and panic.
- It is recommended not to increase unemployment during the pandemic in such a way as to reduce the number of employees.
- To show interest for the younger generations so that this branch has the greatest development in our country.
- Attract a lot of people to join social networks.
- Each customer to be informed about the products by the company.
- To use more internet and visit more online sites, to inform consumers about any uncertainty about online services.
- Make offers to consumers at affordable prices, usually prices play an important role in selecting the most discounted items.

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INFORMATION TECHNOLOGY EQUIPMENT AND ITS APPLICATION IN HEALTHCARE

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Abstract

Information technological developments are increasingly being applied in the Health Sciences. As a direction, health technological development is the interdisciplinary field that studies and pursues the effective use of biomedical data, information and knowledge for scientific research, education, problem solving and decision making to improve human health. Medical Technological Developments supports many applications in the field of medicine, aids modeling, simulation, experimentation and translation across the spectrum from molecules to individuals and populations, from biological systems to social ones, intervening in research and basic and clinical healthcare practices. This relatively new science in medicine develops, studies and applies the theory, methods and processes for the generation, storage, retrieval, use, management and exchange of biomedical data, information and knowledge. Technology in the last decade in medical sciences as well as applying them in specific sectors have made a modern and successful journey for the fact that medicine is one of the sciences, where technology has shown its priority, and this can be analyzed with an analysis concrete of the remote operation which was realized through the robot and has been quite successful.

The purpose of this paper is to provide sufficient knowledge about the development and application of health information technology in Kosovo, disease management system and to improve health care and provide accurate information on patient records. Technological developments in the region will be analyzed and a comparability will be made between the public and private sector in Kosovo.

Keywords: *equipment, technology, applications, health*

Introduction

Comparability and analysis of technological developments will be done on how much they use Information technology and other technologies in the public and private sectors in Kosovo institutions, where it is known that in Kosovo there is a very good investment of information technology which these technological devices use software with different algorithms to analyze as accurately and quickly as possible the data of diagnosis and identification of the disease as accurately as possible. The application of information technology aims to promise and provide doctors with clearer medical results, as well as reduce the time required to analyze health care data from systems that hold medical records in a logical structure, along with patient historical records quickly and smoothly.

1.0 History of medical technology in health

Information technology devices are healthcare providers who are expected to evaluate all relevant study test data plus information from other sources before making a diagnosis and designing a treatment plan. Careful evaluation and review of the test with information technology increases the reliability of a diagnosis and reduces the possibility of medical errors. Data from medical device tests are part of the set of information that should be considered when a physician makes a diagnosis. A retest or other test to confirm the findings may be appropriate for the patient who underwent the examination.

With information technology technology equipment in health can be applied by:

- Managers of hospitals / clinics
- Doctors specializing in various medical fields
- Nurses trained in the use of information technology
- Technicians who are trained in the field of IT

- Experts in other relevant medical fields.

The paper is developed with three main elements:

Element one: Provides detailed data and shows the inclusion of health information technology equipment. At this point should not be mentioned the immediate need for the application of health information technology.

The second element: The problems of using health information technology, have many benefits, but it should be noted that during the analysis of technological equipment in health, various problems may arise.

Third element: TISH in the adaptive system in medicine has the ability to adjust the speed of the result for diagnosis, but this system can present complex consequences and present new challenges for measurement and wider research. Health and equipment used in healthcare as well as in other healthcare settings is a major challenge facing many countries.

1.1 Use of medical devices using information technology

Currently, healthcare workers face vast amounts of information. The quality of medical care, the general standard of living of the population, the level of development of the country as a whole and each of its territorial subjects in health care depend on how effectively this information is used by medical staff. The age of paper information carriers is being replaced by modern information technologies that will take the work of health institutions to a qualitative level. new level, increase the work efficiency of specialist doctors and non-medical services, ensure the loyalty of medical staff and increase patient satisfaction. Informatics and information technology are most important in the professional activity of medical workers.

Information Technology applied in medical education, medical research, medical practice. Information technology includes the ability to work competently with information technology and computer.

1.2 Technological system analysis

The concept for the development of the health care system by 2020 have shown a very satisfactory result both from a practical and experimental point of view based on the data of the NIPH in Kosovo regarding the analysis and results of COVID-19 tests. According to some data from medical reports in Kosovo, the personalization of medical services such as: Electronic Health Passport (EMP), Development of ICT infrastructure of the health care system, has included some successful actions: Establishment of regional processing centers of data, Organization of electronic exchange of medical data, Establishment of national registers, reference books and classifiers, national electronic medical library Integration of all state information systems in the field of health.

1.2 Challenges related to software and hardware limitations

Physicians and other healthcare providers with information technology will be able to review a patient's complete medical history, regardless of the patient's location or provider. An individual on holiday in Brezovic who lives in Prishtina can go to any doctor and have their information available immediately. At each visit, health care providers add to the register, so no matter where and when the registration is reviewed, it will be updated in each country. Access to medical history with information technology will be available in any treatment setting: in an emergency room, in an examination room, in places around a hospital, in a doctor's home or office, in public and private clinics - wherever internet connection is available.

2.1 The necessity for a health information technology

Health Information Technology equipment is needed to record, memorize, present and send patients to different locations and may receive different opinions from physicians as well as health professionals. The technology used in healthcare can be used for the health registration system, such as patients, staff and all possible data of different

clinics or hospitals. Health information technology includes personal health tools in clinics, various application devices as well as other intelligent applications.^{1,2}

2.2 Use of information technology in health

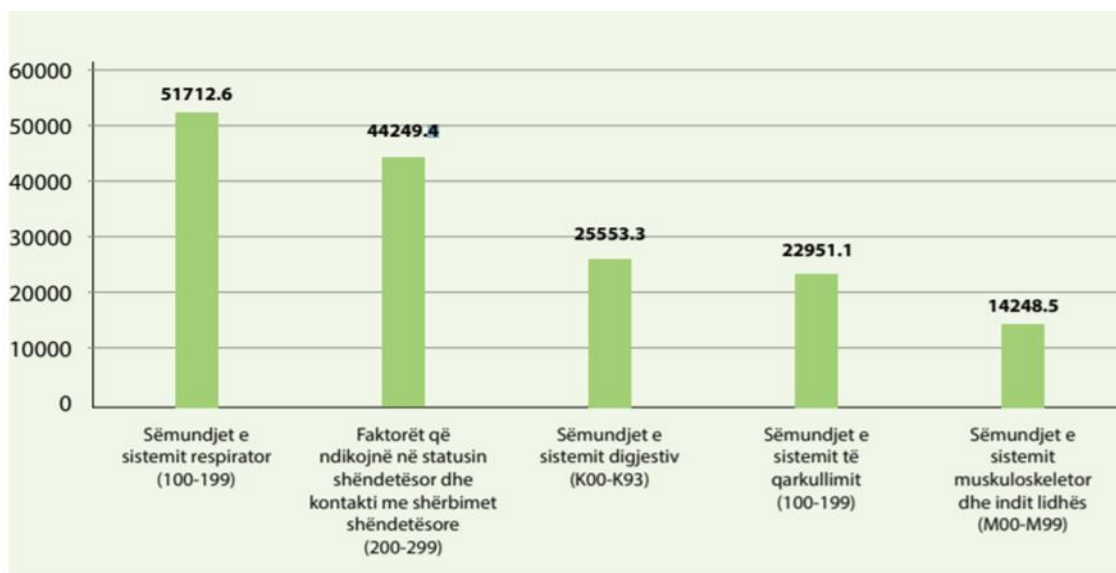
Health information technology improves various aspects of health care including quality, cost, effectiveness, accessibility etc.

- enables more information for decision making
- enables transparency and accountability for health care processes
- facilitates the provision of health care across borders
- various tests can be done and reduces errors
- improves diagnostic accuracy.
- improves access to effective care
- reduces the barriers created for the physical location
- facilitates patient empowerment for self-care and health decision-making
- facilitates the diagnosis of various diseases
- facilitates views of changes through computer imaging.
- Measurements, analyzes, examinations, correlation, change as well as the choice of various other medical problems.
- improves cost and reduces downtime and wasted time.

It is known that a computer device using information technology can not replace the human factor³.

2.3 Health services in Kosovo

In a population analysis in Kosovo shows that the disease rate is lower and amounts to a ratio of 439 cases per 100,000 b / v, Year 2019 compared to the European Union 677 cases per 100,000 inhabitants. The most common diseases in Kosovo are various diseases such as: Digestive system, respiratory tract and others.



Graphics. 3 Number of types of diseases in Kosovo

¹ Dr. Vijaya Pithadia, and Dr Vandana Parmar, "Renovation in Healthcare and Information technology", Faculty column, indianmba.com, 2009.

² <https://tek22.weebly.com/ndikimi-i-teknologjise.html>

³ Arthur, W. B. (2011) *Natyrë e Teknologjisë: Çfarë është dhe si evoluon*. New York: Shtypi i Lirë.

During the presented analysis of the system in Kosovo is e-health which will be sufficient information for decision making. Data analyzed and diagnosed by the application of information technology in Kosovo are around 1,800.00 and annual 20,000,000 records.⁴

2.4 Introduced systems to be applied in Kosovo

These systems are being applied in the region, in Kosovo, since the data has been collected and a basic database has been formed for their implementation: e-medicines application, E-health, Health card, Computer sheets, rengenit, CT, other MRI. System for laboratories with advanced technologies.

- "Electronic Prescription" system;
- "e-Rx" system. etjera

e-barna: Regarding the e-Barna application, this application is still used by the citizens of Kosovo and is the one applied in the market. A simple, cost-free technological solution from the state data on Health care is also enabled by the e-Barna application that has access from the internet or smartphone phones, and information can be obtained for any type of drug. The purpose of this application is to improve the health status through the digitalization of the service. The newest system in the field of health is also electronic prescriptions. Teleconsultation:

The Integrated Telemedicine and e-health Program in Kosovo should equip hospitals. All sites should be equipped with technology, HD video and HD content towards quality in communication, using technology based on standards. HD monitors or video projectors are used to display the image. The main data center should be located in the Telemedicine Center in Prishtina. The Telemedicine Center in Kosovo manages the infrastructure servers and the database. The Desktop and Mobile app enables other customers to connect from their homes or offices. Infrastructure: The main telemedicine center should have a joint program: Prishtina Telemedicine Center, which is located in UCCK⁵.

3.0 The main application of technology in health sciences

We all know very well that nowadays technology is everywhere, in every field or in every possible place. this advancement of technology has made our lives many times simpler and more comfortable. Finally, we can say that technology has in hand the lives of thousands of people as it occupies an important place even in medicine.

3.1 Use of technology for diagnosis

Equipping with information technology is used to diagnose various diseases whose main purpose is to identify or diagnose them as early as possible. The devices that apply information technology enable us to have current knowledge about the type of cancer, what is the course (stasis) of this disease and what it has included from the human body.

3.2 Advanced diagnostic technologies

Introducing some advanced technologies for treatment are: MRI 3 intraoperative tesla, Cyberknife, Gamma knife, Rapidarc, Trilogy, Truebeam and others.

4.0 Number of patients diagnosed with information technology equipment in Kosovo

Table: 1. Number of patients according to IT services using the radiological device

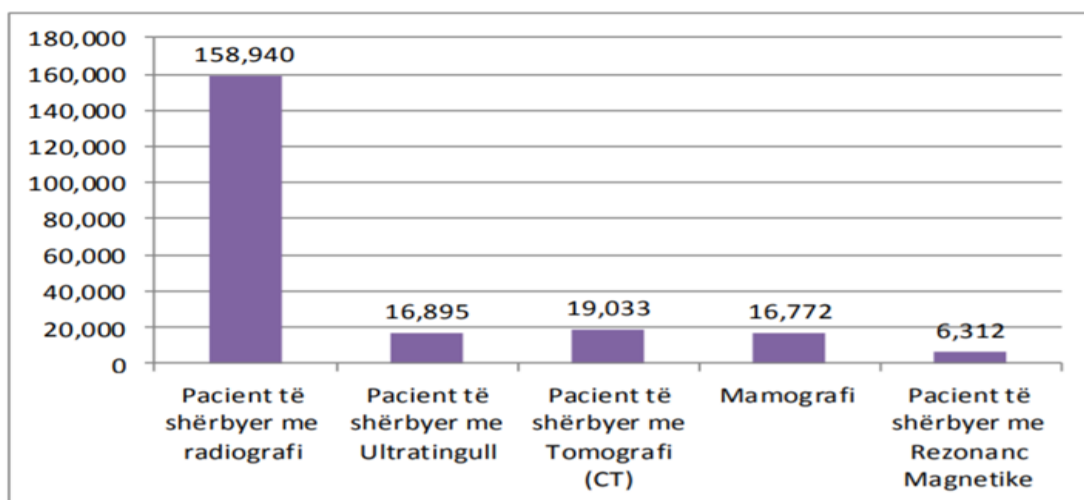
<i>Radiology</i>	
Diagnostic service	Number of patients diagnosed
Patients diagnosed with radiography	158,940
Ultrasound-diagnosed patients	16,895
Patients diagnosed with tomography (CT)	19,033

⁴ Future Hospital Commission. *Future hospital: caring for medical patients. September 2013. Available from:* http://www.rcplondon.ac.uk/sites/default/files/future-hospital-commission-report_0.pdf [Google Scholar]

MMG-Mamografi in breast	16,772
Patients who have had magnetic resonance imaging RM	6,312
Total	217,952

Tabela: 2. Radiological services provided in Kosovo public hospitals

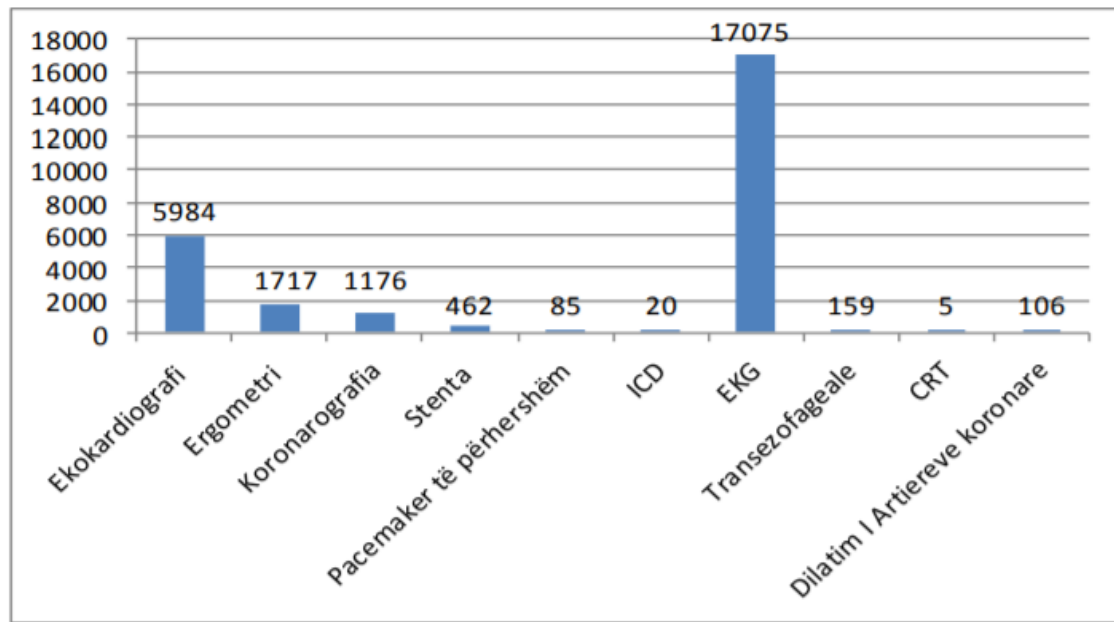
Institucione	CT-ja	MRI	Ultrasound	Radiografy	Angiografy	Mamografy	Mamografy in mobile
QKUK	19033	6312	16895	158914	96	6492	10280
Hospital Peja	3833	-	11029	23644	-	979	-
Hospital Prizren	3344	-	7164	24157	-	201	-
Hospital Gjilan	1864	-	2001	10968	-	-	-
Hospital Ferizaj	-	-	4136	4168	-	-	-
Hospital Mitrovica	834	-	1944	8186	-	117	-
Hospital Gjakovo	538	-	10776	10565	-	-	-
Hospital Vushtrri	-	-	1258	843	-	208	-
QKMP	-	-	40	1694	-	-	-
Total	29446	6312	55243	243165	69	7997	10280



Graph 3. Number of patients who have used radiology with information technology for 2021

Table: 3. Number of visits to public hospital centers in Kosovo by type of equipment during 2020

Naming the device with Information Technology	Number of patinet
Echocardiography device	5984
Ergometer device	1717
Coronografi device	1176
Stent in the heart	472
Permanent pacemaker	87
ICD	19
EKG	17075
Transesophageal services	162
CRT-ja	7
Coronographic placement and dilation	109



Graph: 4. Number of patients in the Department of Nephrology and Cardiology for 2021

Table: 4. Comparability by years for the use of innovative technological equipment

Krahësimi sipas viteve	Ergometri	Ekokardiografi	Koronarografi	Stenta	Pacemaker të përhershëm	ICD	EKG	Transezofageale	CRT	Dilatim i artireve koronare
11/2021	1719	5979	1279	483	99	22	16165	159	6	102
2020	1563	5423	1000	361	75	29	14523	145	2	45
2019	1536	4897	745	347	71	19	13250	120	1	36
2018	1213	5348	740	320	56	15	12568	119	-	18
Gjithësejt	6029	21652	3661	1490	287	83	57416	543	8	205

This Cardiology Clinic for 2021, has completed 1719 ergometry, 5979 echocardiography, transesophageal 167, coronarography 1279, 482 stents, 99 pacemakers, 22 ICD, 16165 ECG, 6 CRT and 102 coronary dilatations. Looking at the data as well as the records of the Cardiology Clinic at UCCCK, it is seen that by using and thanking the equipment with information technology we have a very high increase in patient diagnosis. If we take compared to other years it is seen that 43.64% have more ergometry than in 2020, or expressed by the number of patients 156 more. Calculating the patients who were served with echocardiography, measurements were made about 5979 patients, or 556 more patients by 2020. Using the application of technological equipment, it is seen that we have an increase of about 18.5% or 279 more patients. Completely calculating the year 2021 we have a 54.52% increase in stents.

Tab.5. Medical services using Information Technology in HUCSK during 2021

Total service in HUCSK applying Information Technology-IT

	Number of days	Number of hospital admissions	Number of operations	Visits to QKMF	Number of laboratory patients	Patient-specific diagnostics	Number of patients with ultrasound
QKUK	492853	84896	34896	371101	1054397	851321	9641
General hospitals in Kosovo	371256	84966	21245	702626	1322543	598924	13163
Mental health	-	-	-	97410	-	87415	-
Occupational medicine	-	-	-	28120	114568	40120	-
QSKUK	-	-	-	64721	-	3146420	-
QKMS	-	-	-	16171	-	-	-
Telemedicine	-	-	-	-	-	6002	-
Total	864109	160793	56141	1280149	2485315	1859247	22804

UCCK in 2021, were 864109 days of patients cured in Kosovo with 169 862 patients who were hospitalized. In the reports of the computer sheets where we have presented them in table no. 5, shows that 56141 operations were performed in UCCK-SHSKUK. While patients in sophisticated laboratories have received services 2 491 508. In 2021 were operated patients who have used equipment with information technology 49 025 patients, 23% are as services from QKF, 48% with laboratory values as well as 34% of the total services are with special diagnostics.

Tabela: 6. Laboratory services by applying information technology equipment

Laboratory	Number of patients	Realization of values
Biohemia	70633	490458
I Emergency	4936	287516
Surgery laboratory	35812	33245
Laboratory KOGJ-it	42786	45879
Laboatory in Peditry	25999	28613
Laboratory in hematology	9128	11423
Laboratory in interno	23458	21989
Laboratory in interno -H	9587	9879
Infektiv	19875	19129
Laboratory in ORL-i	2219	3769
Laboratory in oftalmology	2986	4989
Laboratory in pulmology	5155	5454
Laboratory in onkologjisë	13980	13970
Laboratori i neurology	5789	5687
Laboratory in Dermatology	4989	6123
Total	277332	988123

4.1 Number of polyclinics and private dispensaries in Kosovo

Polyclinics, Clinics and private clinics have different services from different areas for the needs of patients in Kosovo, the areas in which technological equipment is used and the use of these equipment are: urology, neurology and others. All these polyclinics have a high specialist level of the above mentioned fields. One of the main problems of polyclinics in Kosovo is the purchase of equipment, as the cost of medical equipment is always very high. For example, An ultrasound diagnostic device costs \$ 160,000, and a test examination device costs \$ 10,000-70,000. All polyclinics can make different recordings e.g. CT, MRI, X-ray, EEG as well as with other service devices which present a sophisticated method of equipment and examinations for patients. The following is an indicative list of equipment for a private medical center: analyzer, scales, magnetic pendant, thermostat, centrifuge, water-based bath,

drying cabinet, plates with a heating surface, shakers, microscopes, equipment for measuring physical parameters, equipment for mixing, choking ovens etc.

Tabela: 7. Naming of private polyclinics and ambulances in Kosovo

<i>Number of</i>	<i>Type of institution</i>
1	Spitali AMERICAN HOSPITAL KOSOVA
2	Spitali BAHÇECI
3	Spitali i shërbimeve maksilofaciale ARS MEDOC
4	Spitali i oftalmologjisë KLINIKA GJERMANE E SYRIT
5	Spitali DEUTSCH FRAUENKLINIK
6	Spitali kirurgjik KAVAJA HOSPITAL
7	Spitali MENDJA INTEGRUAR MJEKËSORE
8	Spitali MEDICAL CENTER
9	Spital ONIX SPA L.L.C
10	Spital ALOKA
11	Spitali NËNA NAILE
12	Spital QENDRA LASERIKE E SYRIT KUBATI
13	Spital VITA HOSPITAL
14	Spital KLINIKA AMERICANE SH.P.K
15	Spitali KLINIKA EUROMED
16	Spital ROYAL MEDICAL
17	Spital INTERMED
18	Spital INERNATIONAL HOSPITAL
19	Spital EYE HOSPITAL Sh.P.K
20	Spitali FATI IM
21	Spitali INTERNATIONAL MEDICINE HOSPITAL
22	Spitali AKAT SH.P.K
23	Spitali LINDJA
24	Spitali SIRONA
25	Spitali INTERNATIONAL HOSPITAL

In the following we present the activities of private hospitals using Information-IT technology

Table: 8. Activity of polyclinics and clinics in Kosovo with Information Technology equipment

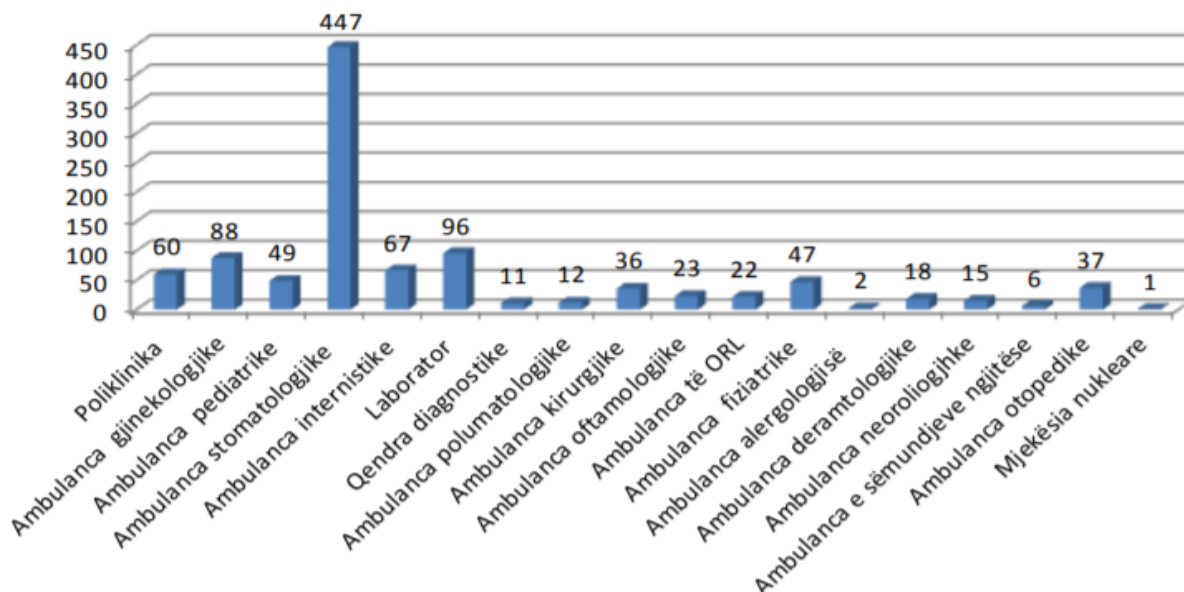
<i>Spitalet dhe aktivitetet e tyre</i>	<i>Numri i spitaleve</i>	<i>Numri i specialistëve</i>	<i>Numri i infermiereve</i>	<i>Numri per pacient</i>
General Hospital	2	83	138	72
Daily hospital	5	21	42	28
Special ophthalmology hospital	2	12	24	20
Special Hospital for Cardiovascular Diseases	2	10	18	20
Special Hospital for Gynecology, Infertility and Endocrinology	6	50	104	66
Special hospital for general rehabilitation	2	20	27	49
Urology Hospital	2	3	7	11
Ortopedi Hospital	3	18	34	25
Surgery Hospita	2	29	55	40
Total	26	246	449	331

Public institutions that serve in Kosovo are better equipped with more sophisticated technological equipment than private ones, when it is known that the number of private polyclinics in Kosovo are about 1,071 which serve in private health institutions and only 30 of them provide outpatient services. The number of polyclinics and ambulances which apply information technology for control and diagnosis of various diseases are presented in table no.9.^{6,7}

Tabela: 9. Number of polyclinics and ambulances that apply IT

Health institution that applies IT	Total
Polyclinic service	62
Specialized gynecological ambulances	90
Pediatric specialist ambulances	50
Stomatological ambulances	450
Specialist internal medical ambulance	68
Laboratore të ndryshme	98
Other diagnostic centers	12
Other pulmatological ambulances	11
Specialist surgical ambulances	35
Ophthalmic eye ambulances	24
Ambulances ORL-s	23
Physiotherapy ambulances with physiatrists	48
Allergy specialist clinics	3
Ambulances dermatology	19
Ambulances neurology	16
Infectious disease specialist clinics	7
Ambulances ortopedik	37
Total	1053

There are 1053 specialist clinics, it can be seen that 28.5% of them apply sophisticated technological equipment such as dental clinics



⁶ Ligji i Shëndetësisë, Nr.04/L-125 32 Master plan, BB, 2008

⁷ Analiza e performances së sektorit shëndetësor 2012

Graph 5. Licensed private health institutions that apply Information technology

4.2 High level technology in medicine in the Private Sector in Kosovo

Today, people are accustomed to using old equipment and tools without noticing scientific and technological advances. Kosovo has not invested in the renovation and purchase of medical equipment during 2021, especially equipment that uses sophisticated information technology.

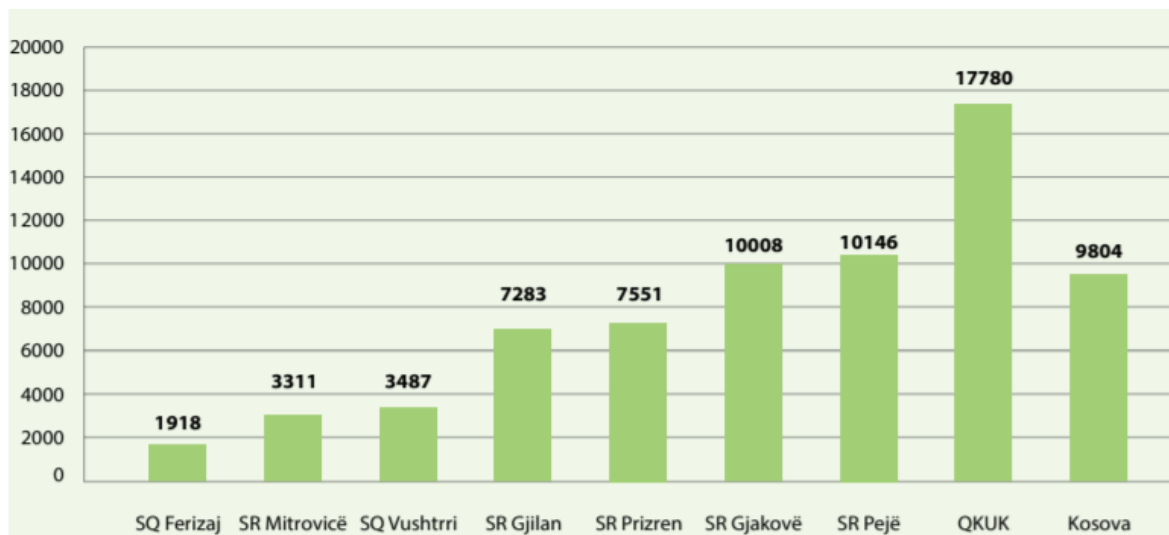
Whereas the number of devices that apply information technology are: 5 information technology devices of the Republic of Macedonia (3 in the private sector); 20 CT tomography equipment (8 in the private sector), 8 mammography IT equipment (3 in the private sector).

The Clinical Center during 2019, has performed 350 magnetic resonance imaging-RM diagnoses, increasing to 3,015 in 2020 and 3,990 in 2021. The number of CTs is presented in Table 10.

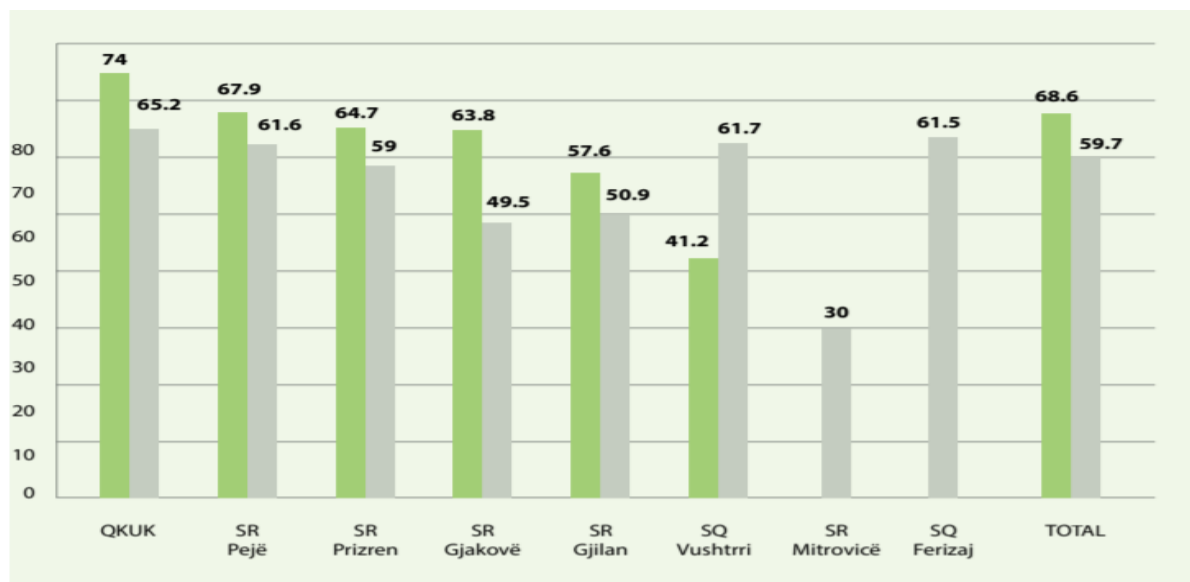
Tabela 10. Number of CTs in the period 2015-2021 in the public sector

Device naming	2015	2016	2017	2018	2019	2020	2021
IT CT-innovation device	5	5	8	9	10	12	14
Total patient-procedures	13125	13125	18290	19432	20432	22019	24206
CT procedures for each device	4375	4375	2286	2159	2213	2315	2450

Comparing EU countries, Kosovo has not purchased RM and CT equipment. Today in Kosovo and in the EU country more than 58% of all patients consult their family doctor. In Kosovo, the WHO standard has not reached that 70-80% apply diagnostic notifications through their personal doctor and using Information technology.



Graph 6. The rate and number of patients from the hospital per 100,000 inhabitants, who have applied the Information technology device for diagnosis.



Graph 7. Average days of usability of beds and equipment with information technology in public hospitals in Kosovo for diagnosis from 2015 to 2021.

During 2021, more than 50,551 people were checked and diagnosed with various diseases with operations in which they used information technology, ie 35.1% in private hospitals and 65.1% in public hospitals. Whereas in 2020, 25,601 operations were completed in Kosovo, where 43.2% in private hospitals and 66.8% in public hospitals. The total amount performed for patients admitted to private hospitals and who have applied information technology is 18.9 in UCKK, while 11.9 and 14.8 in all hospitals. And in 2019 there was an increase in UCKK clinics.

Conclusion

Nowadays it is intended to apply in Kosovo various application devices with information technology which are useful for Kosovar patients, as a concept by Kosovar programmers and with the initiative of the Government of the Republic of Kosovo respectively the Ministry of Health it is necessary that to form several different types of registers such as: EHR / EHCR (Electronic Health Records), PCR (Patient Registration System), CMR (Computerized Treatment), CPR (Computer-Based Patient Registers), EPR (Registers Electronic Patient Records), EMR (Electronic Medical Records), PHR (Personal Health Records)

Based on an analysis, it is seen that the use of information technology in Kosovo for a year is 1434 patients and is always increasing, where all patients are diagnosed and examined with information technology in public hospitals.

In all public and private hospitals are widely presented programmed information technologies, modular, based on patient problems, based on state projects, which creates the necessary scientific basis for solving patients' problems and the design of technologies for professional activity. medical. The introduction of new information technologies in Kosovo such as paracentric learning technology, technology of full assimilation of basic knowledge for doctors, technology of individual learning, technology of collaborative learning, significantly changed the level of health and development of a country. Based on a tireless work in which the master thesis has been worked I can emphasize that patients are very satisfied with the information technology services more than 70% are satisfied and many are satisfied with the medical staff and the support they received in public institutions, while the private sector was very satisfied with the service but the remark was that the prices offered were high.

Therefore, I can emphasize and recommend the Minister of Health of the Republic of Kosovo that a long-term strategy is needed for the health of patients in Kosovo and to take care of health insurance because a healthy population means a genuine and stable state.

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THE ROLE OF IT IN ASSESSING ECONOMIC OUTLOOK DURING THE COVID 19 PANDEMIC

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ABSTRACT

In this pandemic age, digital technology has the revolutionary capacity required to maintain the economy, helping it function and also provide people the means to access essential services such as health, education, job search, and culture. Digitization is a growing and lasting trend. The transformations it involves will bring us closer or we will separate more. Responses to the COVID-19 crisis underscore the important role that digital technology plays in promoting inclusive, fair and equitable societies, especially from an economic standpoint. We should also highlight that the digital divide is no longer a subject, but something that affects people's access to opportunities and inclusion in their communities. The COVID-19 pandemic was a violent shock, on a global scale. It forced individuals to stay at home, and stay away from each other outside, thus making a huge economical impact on a global scale. In many countries, businesses, factories, schools and governments were closed, and many have therefore found it difficult to earn a living, to continue their education and access important government services. In many cases, The Internet may have been the link that allowed families and friends to communicate and have fun, who made work possible from home, which allowed students to learn online and which provided tools for online services, including health advice and economic cooperation. This paper will provide an analysis of how IT can help assess the future economic outlook in a global scale.

Keywords: COVID 19, economy, Information Technologies, Digitalization, Communication, natural and mathematical sciences

INTRODUCTION

According to the OECD (Organization for Economic Co-operation and Development), with the COVID-19 epidemic, the world has turned massively to cyberspace, accelerating a digital transformation that began several decades ago. Schoolchildren equipped with their home internet connection inaugurated the school remotely, many employees embarked on telework, and a multitude of companies adopted digital-based economic models to continue their activities and save part of their profits.

In many countries, governments and businesses adapted a working ground usually based on three main pillars: digital government, digital economy and digital society. These objectives are ambitious: the digital economy will have to represent a crucial part of the national GDP, nevertheless, digital transformation is an inevitable trend in business, and the health crisis has accelerated this process. The COVID-19 pandemic is still ongoing, causing strong socio-economic impacts. In this context, new emerging technological trends will play an important role in helping companies to develop in the post-COVID-19 era.

In many countries of the world, while most areas of life are affected by the epidemic, cash-free payment has become a "rescue buoy" for many socio-economic activities where direct contact must be limited. Many countries have quickly put in place policies to promote non-cash payments. Using electronic wallets or paying via mobile phones is also a preferred solution for many consumers. The pandemic is accelerating changes in the habit of consumer payment. For the economy, using less liquidity means saving on social costs. According to The Economist's analysis, the annual cost of cash management is generally around 0.5 to 1% of GDP. The development of online payment brings buyers and sellers together, and contributes to developing the economy, to improve the standard of living of families, create jobs and contribute to the increase in budget revenue. For the company, payment via banks clearly guarantees the safety and security of the parties, and the interests of people are protected in the event of litigation. More payments through banks also help increase the transparency of the economy, to

limit underground economic activities, acts of corruption, tax fraud, etc. Economic experts have said that in the future, digital payment will gradually replace cash. One of the trends of the post-Covid era will clearly be the emergence of a more digital financial system.

THE BOOM OF CLOUD COMPUTING

Before the pandemic, homework was little practiced, with employers wishing their employees to come on site to perform tasks under the supervision of their superiors. COVID-19 has completely changed the game. Companies are now encouraging their employees to work at home and send their documents or projects via the cloud.

Recently, the demand for online meeting tools such as Zoom, Microsoft Teams, Google Meet and Slack has increased at an unprecedented rate. More traditional office work tools such as Microsoft 365 have also increased demand. The common point is that these tools are all based on the cloud. Since people are forced to stay at home, the demand for retail and online entertainment services has also exploded. Entertainment services using cloud computing technology such as the Netflix film streaming platform, Spotify music service and some game platforms like Steam have all jumped in enrollment. The tendency to switch to cloud platforms is also manifested in government activities. In order to limit the spread of the disease, many countries have accelerated the process of digitizing its administrative activities, creating portals and supporting the development of national digital platforms.

Before the epidemic, a report by the investment consultancy McKinsey showed that 92% of companies said that their business models should evolve towards digitization. However, while most companies are aware of this, the investments and efforts required for this transition are still below other commercial needs. When the pandemic has struck, a June 2020 McKinsey report found that the adoption of digital technology by consumers and businesses had been as important in eight weeks as in the previous five years. The emergency has resulted in much progress in the digitization of chains of supply, because demand for electronic commerce exploded. Manufacturers' efforts to produce the equipment necessary for anti-epidemic operations have also accelerated this process. In addition, companies also face internal pressures to make operations more efficient, integrated and reactive in order to meet consumers' expectations. This has led to a change in the way companies assess suppliers and sources. In general, companies prioritize imports from multiple suppliers. As more and more data on suppliers and their products are accessible, their digitization gives companies more information for a better and more dynamic selection of suppliers. This allows companies to source easily on demand and facilitates the entry of new suppliers into the market.

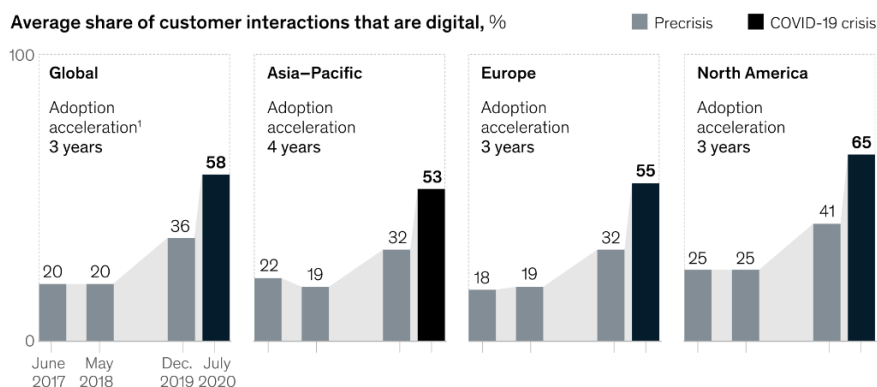


Fig. 1 Average Share of Customers that Are Digital¹

¹ <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever>, Accessed on March 3, 2022.

Average share of products and/or services that are partially or fully digitized, %

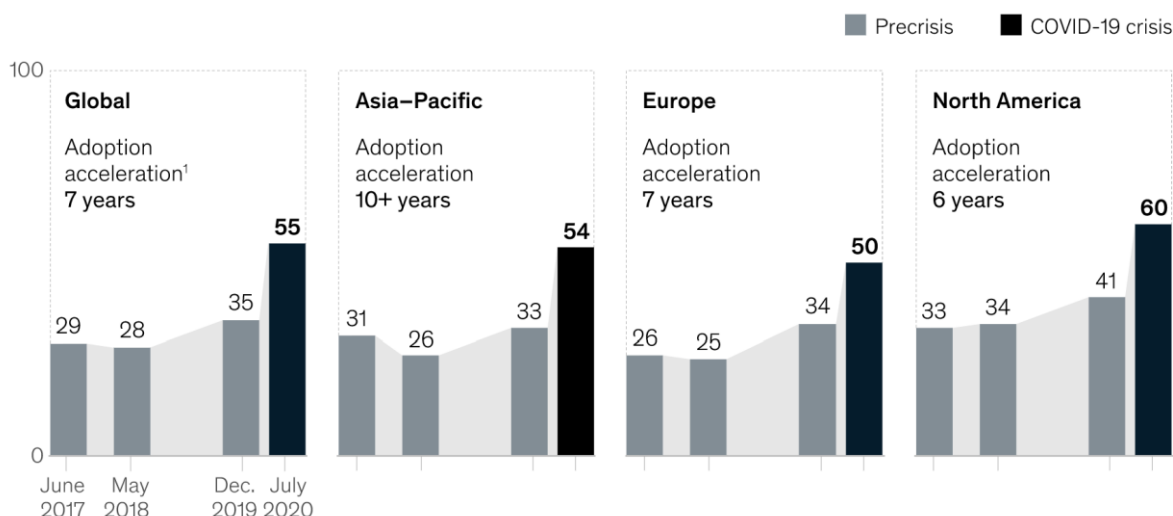


Fig. 1 Average Share of Products and Services that Are Partially Digitized²

THE RISE OF DIGITAL ECONOMY

The Covid 19 crisis has had many effects, both in its health dimension and in economic and monetary responses. But these effects are different depending on the country, the economic sectors and the individuals.

First, the health crisis accelerates the role of Asia as the main world economic center and confirms the major role of the United States as the only global "hyperpower", to use the expression of Hubert Védrine.

The Covid-19 epidemic opens a new economic cycle. Liberal policies since the 1980s are replaced by accommodative monetary policies and fiscal stimulus, in economies where inflation seems to be close to zero due to downward pressure on prices by global competition. Joseph Biden, the American president, has become the figurehead of this new economic policy. It aimed to bring growth to 6.5% of GDP and to restore full employment by the end of 2021 by a fiscal stimulus plan of 14% of GDP, coupled with an investment program of 2.250 billion dollars in infrastructure and energy transition. In France, 424 billion euros were mobilized, between 2020 and 2022, to face the health crisis and revive the economy.

Finally, the Covid-19 plays an accelerating role in the rise of the digital economy, in the ecological transition and in the investments of the key sectors which responded to the crisis (pharmaceutical industry, essential services, etc.), to the detriment of the most affected sectors such as air transport or tourism.

FACING THE DIFFERENCES

However, this economic differentiation will continue in the coming months due to several factors. On the one hand, the countries which have vaccinated their populations the fastest, like Israel, the United States and Europe, will experience a rapid economic recovery. On the other hand, the amounts of the American and European recovery plans will support demand and investments, especially in digital technology and ecology. Finally, the pursuit of accommodative monetary policies will make it possible to continue to bring the rise in stock prices, while keeping interest rates close to zero. The main macroeconomic threat remains the resumption of inflation in the United States.

The pandemic is accelerating the transition to an increasingly digital economy. Large corporations have benefited from these transformations, like Amazon, which has enabled many businesses to continue operating. For Google,

² <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever>, Accessed on March 3, 2022.

the situation is more mixed. Admittedly, the revenues of its Cloud increased but the advertising revenues, linked to the pre-crisis economy, decreased.

The ecological transition will experience an unprecedented acceleration, whether in terms of development of the electric vehicle (Europe invested nearly 60 billion euros in electric mobility in 2019), energy renovation of buildings or development of renewable energies. Despite the pandemic and the economic recession, renewable energies increased by 6% in 2020.

Other economic sectors are also affected by the health crisis. The pharmaceutical industry will experience a powerful development in the coming years thanks to the RNA technology, used in anti-Covid vaccines, which could be used against many serious diseases, including cancer. The luxury industry is experiencing a higher market valuation and its prospects are mainly borne by the Chinese market, which had grown by + 45% in 2021, due to the desire for consumption of the middle class.

The Covid-19 epidemic, from which the world should gradually emerge in the coming months thanks to vaccination, will probably mark a profound transformation of our economic and social systems, accentuating the transition to a more digital and less carbon-based economy, thus making IT the crucial driving force behind these changes.

PREPARING FOR THE FUTURE

The COVID-19 crisis has highlighted the role that the digital economy can play in a country. First, it is useful during the crisis, as it provides information and access to services to isolated people at home, and helps people who have to leave their homes to practice social distancing. It can also help businesses sell goods and services on the Internet and help develop essential government services. Countries with a robust digital economy can respond relatively quickly to the needs created by the crisis and those with a digital economy that is still developing should take advantage of the crisis to encourage development.

Digital payments which are the key element of the digital economy can play several important roles during and after the crisis. To begin with, they allow remote transactions for e-commerce, which allows individuals to shop without leaving their homes. Second, electronic payments can contribute to social distancing when individuals have to pay something in person, by avoiding giving cash. Finally, they can allow direct transfer of money from government to individuals, especially those who have lost their jobs, to ensure that they have the resources to survive.

In countries with mobile financial services, it can be relatively easy to do what is necessary, even if it is possible to offer incentives for their use. In Egypt, for example, to promote electronic payments, mobile operators offer users 30 times the number of minutes or data units billed by online payment. In Jordan, the government is taking steps to develop the acceptance and use of mobile digital portfolios to reduce the use of cash.

Governments can also reduce taxes on mobile financial transactions when it is useful to support their use, and accept mobile payments for government services to build consumer confidence and promote their adoption.

The development of digital payments in countries that do not have access to them can take longer, as regulatory barriers can play a role in the cost of developing these services. However, the crisis can provide the impetus necessary to launch this process, which is in any case essential for the development of a digital economy.

As for the maintenance of commercial activities, many companies have had to close to comply with the requirements of social distancing, while others have seen their room for maneuver severely restricted. Internet efforts to help businesses are welcome and, in a way, essential.

Employees of companies that have gone online must have access to it, which is why we emphasized its importance in this paper. But it is also crucial that companies themselves have access to the Internet and the ability to access the tools necessary for virtual business management. Qatar, for example, gives free access to professional collaboration tools to small and medium-sized enterprises (SMEs), via the Microsoft cloud platform.

At the same time, companies in financial difficulty may find it difficult to continue making payments, even for crucial online services. To address this problem, some governments prohibit operators from suspending or interrupting service to small businesses in default. For example, The Bahrain Telecommunications Regulatory Authority has removed the redline for fixed Internet data offers to contribute to business continuity.

These measures are appropriate short-term reactions. In the longer term, companies need to develop business continuity plans to adapt to any future containment, and perhaps also new business management plans for after the pandemic. The existence of a national digital economy can contribute to the creation of online tools.

CONCLUSION

Internet usage evolved in several significant ways during the crisis from COVID-19. First, total traffic was increasing due to the increase in demand on the network for personal and professional uses. This increase is the fruit of another development, which concerns the content and services used: the increase in the use of videoconferencing in the professional and educational world, as well as in content broadcasting service, online games and other entertainment applications requiring high bandwidth. Usage patterns have also evolved, and peak moments are now spread over the days of the week, with less difference between weekdays and weekends.

According to GSMA (Global System for Mobile Communications Association), the organization which aims to represent various interests of mobile network operators around the world, global data traffic has increased by 30%. In some countries, for example, domestic Internet consumption increased by more than 80 % and 20% for mobile Internet. This of course led to a reduction in the speed of fixed and mobile broadband in many countries, while the networks sought to respond to this sharp increase in demand. However, operators in some countries have managed to meet this new demand by increasing the speed of flow.

Interconnection and data infrastructure can help reduce the capacity needs of national and international riders. This leads to a marked difference between countries that have data centers and countries that do not have it, as it takes time to build. After acquiring these essential infrastructures, countries can attract investment in data centers and consolidate the activities necessary for the development of a long-term IXP. This will be crucial for the digital economy to develop accordingly.

For a country with one or more commercial data centers, it is not certain that short-term changes are necessary, except, where appropriate, the continuation of projects in progress if the current imperatives of social distancing allow it. Data centers are generally designed to be resilient and to meet increased demand, and there is no evidence that they will be a source of problem during the crisis.

Much of the Internet infrastructure, both for access and for data, cannot be changed currently. This is partly due to the scale of resources and time required to build infrastructure, and partly due to the challenge of security of infrastructure deployment during a pandemic and the financial pressure faced by operators.

However the case may be IT tools and services are the basis upon which countries around the world should develop their economies and have a more qualitative outlook for the future ahead.

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Tourism Development and Safe Travel Stamp Protocols Application in WB6 on Post Pandemic Period

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ABSTRACT

Our aim in conducting this study was to show the performance of the tourism sector in the Western Balkans during and after the pandemic period, in order to provide some ideas for strengthening this sector as an important part of the economy of each country of the Western Balkans and for the economy of the region as a whole.

The methodology and methods used and followed for the realization of this study was the creation of the idea for the field of study for which the research would be performed, the collection based on the desk research level of data, figures, facts and information as well as the literature that would be used for the realization of the study. The literature, data, figures, facts and information were then read, selected and selected in order to determine the materials to be used in this study. Subsequently, the study methodology has been the processing of data through comparative analysis, to create other reliable data, combining by means of descriptive statistics method data, figures, information from various sources and research previously, and a SWOT analysis was built to identify key tourism development trends in WB6 countries and to support its long-term evolution in relation to the application of the Safe Travel Seal as an important standards' package for this sector. Further, the first draft of the research was written, which was then reviewed several times until the final version we present in this scientific activity was reached. After writing the final text, we constructed the abstract and the introduction of the paper and then drew the relevant conclusions and recommendations.

The main recommendation is that the countries of the Western Balkans should cooperate together in the development of the hotel and tourism sector to offer joint tourism packages to the international market and to apply as a region the seal of safe travel of the World Tourism Organization, as a package of significant standards for the post-pandemic period Covid - 19.

Keywords: Tourism, hospitality, WB6, safe travel stamp, etc.,

Introduction

As the coronavirus during 2019 – 2022 spread globally, authorities all around the world have acted firmly to limit its spread through social isolation policies, such as shutting educational institutions, limiting work and restricting the mobility of people, causing an immediate and significant impact on local, regional and world economy, tourism sector included.

Only after six – seven months after it's detection, COVID-19 affected almost all countries of the world, with more than half of the world's population experiencing lockdown measures. The world economy started to operate in a context of uncertainty, rising challenges on trade-offs on health, economic and social life. The global economic activity felt down as the waves of infections hits population. As of 30th November 2020, more than 170 million jobs and livelihoods in the Travel and Tourism sector have been impacted globally creating the worst economic and social crisis.

Besides prior pandemic crisis, tourism sector growth in the WB6 economies was above the global average, regional economies have been hit hardly, tourism sector included, with around 72 - 74% decrease of international visitors during the first half of 2020 compared to the same period of 2019.

An unprecedented crisis requires unprecedented action and collaboration, and most of countries and international organizations coordinated actions and steps towards achieving recovery. Within the current situation of a promising future, economies are committed to recover and working together on guiding the travel and tourism sectors to reopen under the new normality. The tourism sector in the world and especially in Western Balkans is fully committed to putting people and their well-being first and cooperation between Western Balkan economies is vital for the sector. For this, WTTC (World Travel and Tourism Council) Safe Travel Stamp protocols, guidelines and general advice has been prepared and published, to allow travel to be safely resumed.

Literature Review

The tourism and hospitality industry is the largest and fastest growing industry in the world. According to statistics, about 70% of GDP in developed countries consists of the services sector and this trend is also for developing countries. Within the service sector, the share held by tourism is always growing. Tourism in recent years has contributed to about 10 - 20% of GDP. This requires that the service provided be of the highest quality and most complete, in accordance with the payment made by customers, aiming to achieve loyalty to the service, as the key to success. The hotel and tourism industry is the largest and fastest growing industry in the world (Ceko. 2021).

The hotel and tourism sector is constantly changing and constantly improving, and this is because the customers in this sector are also looking for excellence for the price they pay for services and products, and because the managers, managers and employees of this sector themselves seek to continually improve and innovate. This mutual tendency for innovation seems to be faster in this sector than in other sectors, and this is because in this sector it is often enough to change the menu, the way of setting the table or the provision of a tourist guide, so that customers can perceive change, when in other industries change may require more time and investment in technology and equipment (Walker. 2017).

This approach has made the organizations operating in this sector have an even more positive and even more acceptable approach to Total Quality Management, through which a greater inclusion among staff and a communication and cooperation is possible. more facilitated, which affects the improvement of productivity of entities that are involved in this sector. TQM works well when managers are quality too. Now in the hotel and tourism sector, the aim is not simply quality control (Quality Control), which focuses only on error detection, but Total Quality Management (Total Quality Management) that focuses on error prevention (Ceko. 2021).

Main tendencies on tourism sector word wide

Main tendencies on the tourism and hospitality sector on post modern times are:

- Growth of globalization.
- Improvement of health and safety standards
- Acceptance of diversity and demography changes
- Growth and extension of services sector
- Quick technological changes
- Increase the importance of sustainability and green travel
- Sophistication of legal aspects.
- Increase of demand for travel with only one aim
- Social and mobile media inclusion (Ceko. 2021).

The period 2016 - 2018 is the period that has had the largest number of tourists worldwide, with over 1.2 billion international tourists, making this sector considered as an export, as foreigners consume in the country that visits those services and products as to consume them in their country of origin, but to have been exported from the country to which they go to visit. The United Nations World Tourism Organization (UNWTO) defines hotel tourism as a social, cultural and economic phenomenon, involving the movement of people to places outside their usual environment, for personal or business / professional purposes. These people are called visitors (who can be either tourists or excursionists, residents or non-residents) and tourism is about some specific activities, including hotel tourism costs. This activity includes many different types of activities and public and private entities, which provide services and products for tourists, which can be local residents, local and private public administration employees and foreigners and foreigners who come as visitors, who become part of tourist destinations, built environment and natural environment. All of these actors and environments come together to create processes, activities, and outcomes (Ceko. 2021).

Tourism sector globally during pandemics

Globally, International tourist arrivals (overnight visitors) in the first seven months of 2021 were 40% below the levels of 2020, and still 80% down when compared to the same period of pre-pandemic year 2019, while after a weak start of the year, international tourism saw a modest improvement during the months of June and July 2021 and the same trend looks to happen during the beginning of 2022, while looking ahead, most experts continue to expect a rebound in 2022, driven by unleashed pent-up demand, mostly during the second and third quarter of that year. Nearly one-third of respondents expect a potential rebound in 2023. Almost half of all experts continue to see a return of international arrivals to 2019 levels in 2024 or later.

European tourism sector during pandemics

European tourism recovery seems to be underway, however there is still a long road ahead. Overall, improving vaccination rates across Europe and the EU Digital COVID certificate have facilitated cross-border travel over the peak summer months. More relaxed entry measures seemed to be in place in destinations where tourism comprises a significant share of the economy. Due to the gradual easing of restrictions within the European Union, the fast vaccination rate, and the reopening of borders for more third countries and fully vaccinated travelers from abroad, it is expected that European tourism will rebound for the summer months.

WB6 tourism sector during pandemics

Assessing recent tourism data and industry performance is a useful way of directly monitoring the key trends for travel demand across Western Balkans. This can be complemented by looking at key trends and relationships in macroeconomic performance which can provide further insight into likely tourism developments in WB6 throughout the short term, medium term and long term.

In 2021, the Western Balkans region is seeing a faster-than-expected recovery from the COVID-19-induced recession that all six economies experienced in 2020. GDP growth for the region for 2021 was accounted around 6%, after a 3.1% contraction in 2020. Growth in the region is projected at 4.1% in 2022 and 3.8% in 2023, and expected to resume its pre-crisis path. This rebound is due to a combination of domestic reopening and favorable external conditions for the region's exports. Falling infection rates and loosened mobility restrictions allowed for a sharp rebound in domestic consumption and tourism arrivals. A strong recovery in advanced economies also provided a boost to demand for the region's exports (World Bank. 2021).

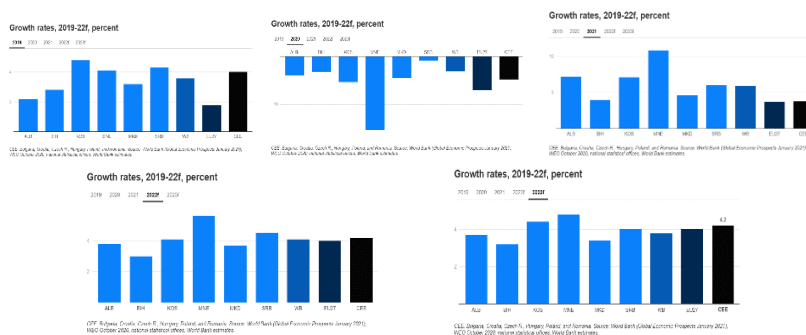
Table 1: Economic policy comparator for Western Balkan

Western Balkan countries		AL B	Bi H	KSV	MNG	NRM	SRB
Financial Sector	Policy rate reduced	X				X	X
	Liquidity increased	X					X
	Prudential req. loosened				X	X	
Direct support to firms	Wage subsidies	X	X	X	X	X	X
	Tax/social contr. deferred/reduced	X	X	X	X	X	X
	Loan subsidies				X	X	X
	Guarantees	X	X	X			X
	Inspections/ audits suspended						
Payment holidays	Loans	X	X	X	X	X	X
	Rent	X	X	X	X	X	X
	Utilities	X		X		X	X
Temporary controls	Prices		X	X		X	X
	Exports						X

Support to individuals	Universal transfers						
	Self-employed	X		X		X	X
	Pensioners		X	X	X		X
	Low income households	X	X	X	X	X	X
Increased social benefits	Enhanced sick leave		X		X		
	Enhanced unemp. benefits	X	X	X	X	X	
	Public works						
Health	Additional spending	X	X	X	X		X
External Assistance	(available or negotiated)	X	X	X	X	X	X

Source: EBRD – Policy comparator (EBRD. 2019).

Graph 1. Growth rate of WB6 economies 2019 – 2022*



Source: Tourism around the world (Knoema. 2022)

Besides the prior pandemic crisis, tourism growth in the WB6 economies was above the global average, regional economies have been hit hardly, tourism sector included, with around 72 - 74% decrease of international visitors during the first half of 2020 compared to the same period of 2019 with an improvement during Summer 2021, expecting a better situation during Summer 2022 and a full recovery beyond. WB6 economies are specific and distinguished for the seasonal tourism. Layoff level generally is about 30%, while in normal situations the layoff level for tourism sector is about 15-20% for full time employees, while for seasonal employees is about 30-40%. To maintain the level of tourism sector in full time operation as well as the seasonal employees, WB6 economies have introduced several measures to support tourism and hospitality, combined with managerial decisions of private entities on cutting costs, for the same purpose too. Enhanced international and regional coordination to remove barriers and gain traveler's confidence are critical to the sector's survival and recovery. To achieve recovery, it is essential to provide certainty for the travelers in regard to travel restrictions and policies to facilitate domestic and international travel (WTTC. G20. 2020). Cooperation between Western Balkan economies is vital for the sector and can effectively contribute to the control of COVID-19, working in close consultation and with other partners to assist the sector in ensuring that health measures are implemented in ways that minimize unnecessary interference with international traffic, trade and life quality of tourists.

WTTC Safe Travel Stamp protocols

During the course of pandemic situation WTTC (World Tourism and Travel Council) introduced Safe Travel Stamp protocols, as the world's first ever global safety and hygiene stamp for Travel & Tourism, designed specifically to

address COVID-19 and similar outbreaks. The stamp allows travelers and other Travel & Tourism stakeholders to recognize destination authorities and companies around the world that have implemented health and hygiene protocols that are aligned with WTTC's Safe Travels Protocols. All economies, destination authorities and companies operating in Travel & Tourism will be able to use the stamp, provided they comply with the Safe Travels protocols. The stamp is free to use. The Safe Travels stamp is based on self-assessment and it is not a certification. Recovery protocols to optimize sector-wide recovery efforts are in place. These protocols include providing the public & private sectors with the insights & toolkits for interaction & implementation to ensure that people are and feel safe however they can't guarantee 100% safety. It is paramount to have common rules. Ultimately, we envision a future of travel which is safe, secure, seamless and provides an authentic and meaningful experience to the traveler along the journey; one which supports the livelihoods of millions and contributes to sustainable economic growth. Protocols for twelve industries, include:

1. Hospitality;
2. Attractions;
3. Outdoor Retail;
4. Aviation;
5. Airports;
6. Short Term Rentals;
7. Cruise;
8. Tour Operators;
9. Convention Centers and MICE;
10. Car Rental;
11. Insurance;
12. Adventure tourism;

The protocols align the private sector behind common standards to ensure the safety of its workforce and travelers as the sector shifts to a new normality. They are living documents which will be updated as new information becomes available about COVID-19. The global protocols are designed to help to rebuild confidence among travelers, and within the sector, so safe travel can resume once restrictions are eased. They provide consistency to destination authorities as well as guidance to travel providers, operators, & travelers, about the new approach to health & hygiene in the post COVID-19 world. The global protocols were developed in collaboration with WTTC Members, leading industry associations & international organizations. They take into account the current guidelines of the WHO and CDC. The protocols are living documents which will be updated as new information becomes available about COVID-19. WTTC recommends the private sector and destination authorities alike, to adopt a risk-based approach based on high & low risk contexts and adapt their measures accordingly, as subjects in charge for these issues (WTTC. 2019).

Methodology

The methodology followed for the realization of this study was the creation of the idea for the field of study for which the research would be performed, the collection of data, figures, facts and information as well as the literature that would be used for the realization of the study, based on a desk research.

The desk research was done through:

1. Gathering information on WB6 economies.
2. Gathering information about tourism industry worldwide, European and WB6.
3. Gathering information about WB6 Covid – 19 situation.
4. Gathering information about Safe Travel Stamp application in WB6.

The literature, data, figures, facts and information were then read, selected and selected in order to determine the materials to be used in this study. Subsequently, the study methodology has been the processing of data through comparative analysis of tourism activities services and products in WB6 in order to provide reliable data, and by using

a combination of sources like surveys, relevant reporting units from the WB6 countries with accurate and complete data, and other appropriate sources, including key stakeholders in each of the Western Balkan economies, to create other reliable data, combining by means of descriptive statistics method data, figures, information from various sources and research previously, and a SWOT analysis was built to identify key tourism development trends in WB6 countries, defining the current situation in region's tourism industry and to support its long-term evolution in relation to the application of the Safe Travel Seal as an important standards package for this sector. All information, data and facts gathered and processed helped to identify, quantify, and visually display the main research results and to propose solutions that will facilitate the sector's short-term recovery and support its long-term evolution.

Through this process we have investigated and analysed the tourism industry's state of play, through research, data collection and analysis of findings. Analyzing primary and secondary data & information collected during the course of the paper research on the state of WB6 tourism industry, identify, quantify, and visually display the main research results, analysing the status of digital communication's role in the WB6 related to tourism sector, proposing improvements, the current status of communication between tourism public and private sector subjects in WB6 countries, between WB6 countries and between them and the rest of tourism world community and a wider audience, investigate the current state of the joint tourism product's narrative in the region and worldwide and propose communication solutions that will facilitate the sector's short-term recovery and support its long-term evolution, etc. Further, the first draft of the research was written, which was then reviewed several times until the final version we present in this article was reached. Writing the paper, the focus was to (1) asses the post COVID 19 situation in the tourism industry in the WB6 economies, (2) define how to improve communication on tourism sector between WB6 economies and (3) propose scenarios about the sustainable future of the industry in WB6:

After writing the final text, we constructed the abstract and the introduction of the paper and then drew the relevant conclusions and recommendations and later we have prepared all information and data in a user friendly, visual manner understandable for wider audience in case of publication of this paper research and in case of presenting findings on scientific occasions related to the issue.

Data Analysis

As previously mentioned, data, facts, information gathered from different trusted sources, are processed and presented in a visual manner understandable, in tables and graphs below.

Table 2: 2020 Outlook for Western Balkan countries

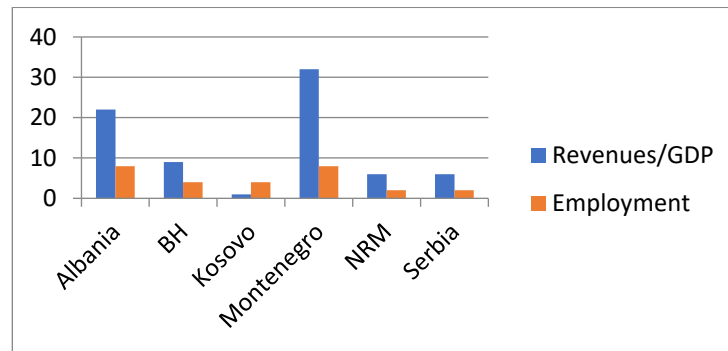
	MONTENEGRO			SERBIA			KOSOVO			BOSNIA & HERZEGOVINA			ALBANIA			NORTH MACEDONIA		
	Pre Covid-19	Baseline scenario	Downsize scenario	Original Deviations	New Base Case	Low Case	Pre Covid-19	Baseline scenario	Downsize scenario	Pre Covid-19	Baseline scenario	Downsize scenario	Pre Covid-19	Baseline scenario	Downsize scenario	Pre Covid-19	Baseline scenario	Downsize scenario
Real GDP growth	3,2	-5,6	-8,9	3,9	-2,5	-5,3	4,1	-4,5	-11,3	4,2	-3,2	-4,2	3,3	-5,0	-6,9	3,6	-1,4	-3,2
Consumption	2,9	-3,6	-4,8	5,7	-2,3	-3,5	3,2	1,1	-0,6	5,0	-2,7	-3,8	3,1	-1,6	-2,2	4,3	0,6	-0,3
Investment	0,0	-8,8	-13,7	5,3	-5,2	-7,7	3,8	-21,5	-28,5	2,1	-6,2	-7,1	7,7	1,0	0,8	8,0	-0,1	-2,6
Exports	4,1	-18,5	-27,8	4,9	-10,2	-18,5	4,0	-12,2	-25,5	1,1	-8,8	-10,0	2,7	-25,0	-30,0	7,4	-0,1	-2,9

Imports	1,9	-	-	7,6	-9,7	-	2,2	-	-8,0	2,5	-6,5	-7,5	4,6	-9,5	-	9,4	1,7	0,1
	12,4	17,7			15,1		6,8							10,6				

Source: Table based on Western Balkans regular economic report no. 17 -The Economic and Social Impact of COVID-19 – The country notes (Studies on obstacles and opportunities for doing business in the region. Study no.1. Prospects for Travelling and Tourism Sector in the Western Balkans in 2020-impact of the coronavirus pandemic) (World Bank. 2021)

In table 2 there is a prediction about trends of real GDP, consumption, investments, exports and imports for WB6 economies.




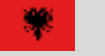

Graphic 1. Tourism revenues (as part of GDP) & tourism employment / total between WB6



Source: World Bank (2021)

In graph 1, there is a comparative analysis of tourism revenues as per the total of GDP and contribution of tourism sector on employment, where we see that Albania and Montenegro have the highest level of revenues and employment related to tourism sector.

Table 3: Common table for key tourism indicators for WB6 for 2019




Countries / Key indicators for 2019	 MNG	 SRB	 BiH	 ALB	 RNM
International tourist arrivals	2,5 million	1,8 million	1,2 million	5,9 million	0,8 million
International tourism receipts	\$ 1.200 million	\$ 1.600 million	\$ 1.100 million	\$ 2.300 million	\$ 400 million
Average receipts per arrival	\$ 490	\$ 870	\$ 950	\$ 390	\$ 520
International tourism exports	\$ 1.300 million	\$ 2.000 million	\$ 1.200 million	\$ 2.500 million	\$ 400 million
Share of tourism of total export	Tourism as 54 % of Exports	Tourism as 7 % of Exports	Tourism as 13 % of Exports	Tourism as 38 % of Exports	Tourism as 4 % of Exports
Average annual growth for last 10 years (for tourist arrivals)	9 %	11 %	14 %	13 %	11 %
Total contribution of T&T to GDP (% of total economy)	\$ 1.762,8 million (32,1 %)	\$ 2.994,9 million (5,85 %)	\$ 1.820,0 million (9,3 %)	\$ 3.264,5 million (21,2 %)	\$965,3 million (7,4 %)

Total contribution of T&T to GDP growth	6,5 %	4,2 %	6,85 %	8,3 %	5,9 %
Total contribution of T&T to employment (% total employment)	66,9 jobs (000's) (32,8 %)	134,8 jobs (000's) (6,2 %)	79,1 jobs (000's) (9,6 %)	254,3 jobs (000's) (22,2 %)	51,4 jobs (000's) (6,8 %)
Total contribution of T&T to employment - % growth	6,7 %	2,9 %	6,65 %	5,9 %	3,5 %

Source: The table is based on the individual data for each country, taken from the World Tourism Organization (UNWTO) and World Travel and Tourism Council (WTTC).

As per the information provided at table 3, there is a significative contribution of tourism sector in WB6 economies individually and as a region.

Table 4: Common table for performance overviews by WB6

Countries	MNG	SRB	BiH	ALB	NRM	KSV
Business environment	4,6	4,4	3,4	4,0	4,3	-
Safety & security	5,6	5,5	5,4	5,8	5,2	-
Health & hygiene	5,8	6,3	5,6	5,3	6,0	-
Human resources & labour market	4,8	4,7	4,1	5,1	4,1	-
ICT readiness	5,2	5,1	4,5	4,7	4,7	-
Prioritization of Travel & Tourism	5,0	3,9	4,1	5,0	3,7	-
International Openness	2,4	3,2	2,4	2,4	2,3	-
Price competitiveness	5,6	5,5	5,5	5,3	5,8	-
Environmental sustainability	4,7	4,5	4,3	4,3	3,6	-
Air transport infrastructure	3,2	2,6	2,0	2,1	2,4	-
Ground & port infrastructure	3,3	3,0	2,4	3,1	2,6	-
Tourist service infrastructure	5,5	3,9	3,9	4,0	3,9	-
Natural resources	2,7	2,1	1,9	2,9	2,2	-
Cultural resources & business travel	1,1	1,7	1,5	1,2	1,4	-
Overall Score (Rank)	3,9 / 67th	3,6 / 83rd	3,3 / 105th	3,6 / 86th	3,4 / 101st	-
Past overall score (Rank) - for 2017	3,7 / 72nd	3,4 / 95th	3,1 / 113rd	3,4 / 98th	3,5 / 89th	-
Overall Change (Rank change)	+0,2 (+5) 	+0,2 (+12)	+0,2 (+8) 	+0,2 (+12)	-0,1 (-12) 	-

Source: World Economic Forum. 2019

In table 4, there is a comparative analysis on doing business climate on WB6 economies, where Montenegro is on top of the region.

**Table 5. Western Balkans COVID – 19 cases, recoveries and fatalities
(29th November 2020 – 26th December 2021).**

No	Country	Population	Cases		Recoveries		Fatalities	
			2020	2021	2020	2021	2020	2021
1	Albania	2.800.000	38.182	207.542	18.849	199.133	810	3.189
2	Bosnia & Herzegovina	3.500.000	87.901	287.276	52.769	192.298	2.681	13.269
3	Kosovo*	1.800.000	38.902	161.327	23.405	158.125	988	3.073
4	Montenegro	630.000	34.881	163.373	23.484	157.979	487	2.394
5	N. R. Macedonia	2.100.000	61.543	223.211	38.400	210.475	1.731	7.904
6	Serbia	7.000.000	175.438	1.290.469	31.534	1.256.219	1.604	12.594
8	TOTAL	17.830.000	436.847	2.333.198	188.441	2.174.229	8.301	42.423

Source: Worldometer. 2022 (Calculations from authors of the paper research).

In table 5 there is an information about the Covid – 19 cases, recoveries and fatalities, during November 2020 – December 2021.

Table 6. Comparison of WTTC Safe Travel Stamp protocols and measures taken by WB6 economies

No	WTTC Safe Travel Stamp Protocols	ALB	BiH	XKX	MNG	NRM	SRB
1	Hospitality	Protocol	STS	Protocol	STS	STS	Protocol
2	Attractions	Guideline	STS	Guideline	STS	STS	Guideline
3	Outdoor Retail	General rules	STS	General rules	STS	STS	General rules
4	Aviation	Guideline	STS	Guideline	STS	STS	Guideline
5	Airports	Guideline	STS	Guideline	STS	STS	Guideline
6	Short Term Rentals	General rules	STS	General rules	STS	STS	General rules
7	Cruise	Guideline	STS	Guideline	STS	STS	Guideline
8	Tour Operators	Protocol	STS	Protocol	STS	STS	Protocol
9	Con. Centers, MICE	Guideline	STS	Guideline	STS	STS	Guideline
10	Car Rental	Guideline	STS	Guideline	STS	STS	Guideline
11	Insurance	General rules	STS	General rules	STS	STS	General rules
12	Adventure tourism	Guideline	STS	-	STS	STS	-

Source: WTTC. 2022

In table 6 there is an updated information about application of Safe Travel Stamp protocols in WB6, where only Bosnia & Herzegovina, Montenegro and Northern Republic of Macedonia have applied and use STS protocols.

Results

Based on a Comparative analysis of tables and graphs contributing to this paper research, it is possible to draw some important results:

Albania is the leading country in terms of the number of tourists arriving during 2019–2021, and Montenegro the second. The largest percentage increase in the number of tourists arrivals compared to 2020 is hold by Montenegro, followed by Albania, while North Republic of Macedonia ranks last by this criterion.

Albania is also a leader in value of international tourist receipts, while Serbia is second. The largest percentage increase in this area is in Bosnia and Herzegovina, while North Macedonia is ranked at last place by this criterion also.

Bosnia and Herzegovina and Serbia are leaders in terms of average receipt per arrival, while Albania has the lowest average receipt per arrival;

Like expected, share of tourism of total export is highest in Montenegro (54%) and Albania (38%), while share in other countries is quite lower (In Bosnia and Herzegovina 13%, in Serbia 7%, and the lowest in North Macedonia – 4%);

Montenegro has the largest total contribution of T&T to GDP with 32,1%, Albania is second with 21,2% , while other countries have a much lower contribution rate of T&T to GDP. The highest % growth of total contribution of T&T to GDP is hold by Albania –8,3 % and the same situation is with total contribution of T&T to employment.

The fields in which all states together have poor grades are: International Openness, Price competitiveness, Environmental sustainability, Air transport infrastructure, Ground & port infrastructure, Tourist service infrastructure, Natural resources and Cultural resources & business travel. This fields should be worked on, improved, in order to take better places in the next ranking.

There is a lack of communication between WB6 governments and WB6 National Tourism Authorities about tourism issues, and there is no any communication between public and private sector in WB6 in a organized form, since there is no any common authority in charge for tourism and hospitality in WB6, while WB6 is in an important position of the list of the tourism industry. Improving business climate and investment climate on tourism sector, promoting specific tourism segments like culture and adventure routes, virtual tourism, virtual tours, virtual museums, scientific tourism, flora and fauna tourism, historical tourism, etc., helps on developing the sector, in parallel with a promising economic growth and progress generally in WB6

Discussions

Besides the prior pandemic crisis, tourism growth in the WB6 economies was above the global average, regional economies have been hit hardly, tourism sector included, with around 72 - 74% decrease of international visitors during the first half of 2020 compared to the same period of 2019. Especially during the 2nd quarter economies of Bosnia and Herzegovina, Montenegro and North Macedonia have experienced more than 95% recession, especially because of negative influence on the international arrivals, reducing foreign expenditures too.

WB6 economies are specific and are distinguished for the seasonal tourism, generally in their economies, including tourism sector. Layoff level generally is about 30%, while in normal situations the layoff level for tourism sector is about 15-20% for full time employees, while for seasonal employees is about 30-40%. To maintain the level of tourism sector in full time operation as well as the seasonal employees, WB6 economies have introduced several measures to support tourism and hospitality, combined with managerial decisions of private entities on cutting costs, for the same purpose too.

Enhanced international and regional coordination to remove barriers and gain traveler's confidence are critical to the sector's survival and recovery. To achieve recovery, it is essential to provide certainty for the travelers in regard to travel restrictions and policies to facilitate domestic and international travel (WTTC. G20. 2020).

Besides there is a lack of cooperation between WB6 economies generally and on tourism sector specifically, this cooperation is considered to be vital for the sector and can effectively contribute to the control of COVID-19, working in close consultation and with other partners to assist the sector in ensuring that health measures are implemented in ways that minimize unnecessary interference with international traffic, trade and life quality of tourists.

Currently, WTTC introduction of Safe Travel Stamp protocols took place only in three WB6 countries, while it is a promising tool for increasing number of tourists, arrivals and flights towards WB6, which should focus their effort on six main areas:

1. Adapt operations, modify employee practices and/or redesign public spaces to help protect employees and customers.
2. Consider implementing touch-less solutions, practical, to limit the opportunity for virus transmission while also enabling a positive travel experience.
3. Adopt and implement enhanced sanitation procedures specifically designed to combat the transmission of COVID-19.
4. Promote health screening measures for employees and isolate workers with possible symptoms and provide health resources to customers.
5. Establish a set of procedures aligned with official guidance should an employee results positive.
6. Follow best practices in food and beverage service to promote employee and customer health.
7. Establish a common tourism strategy, a tourism communication strategy, a communication system and communication tools.
8. Applying as a region for WTTC Safe Travel Stamp and protocols, guidelines related to them
9. Support financially the sector in parallel with reviewing of regulatory and tax system
10. Promote tourism internally, especially the rural/natural areas, spa, mountain, river areas;
11. Involving new technologies and applications to address health and safety issues related to tourists, visitors, travelers
12. Etc.;

Year after year, tourism is increasingly crystallizing as one of the main engines of the WB6 economic development. According to the Economic Impact Report of 2018 of the World Travel and Tourism Council¹ (WTTC), along 2017, the tourism sector recorded an important direct contribution to WB6 GDP, including indirect multiplier effects too (WTTC. 2018).

Meanwhile, the sector's contribution to the economy is projected to grow significantly over the next 10 years with about 10% of the WB6 GDP, while taking into account this upward trend, with direct and indirect effect of the tourism sector will reach approximately 1/3 of Albania's and Montenegrin total GDP (Tourism Report Alb. Gov. 2019).

Also, in terms of employment, currently the tourism sector employs about 3% of the total labor force in WB6, while by 2031 this number is projected to grow to 4 - 6%. Referring to the same report of the World Council on Travel and Tourism (WTTC), investments in this sector in 2031 are accounted for about 5% of all investments in the WB6.

However, compared to other Mediterranean countries, the development of tourism in WB6 is still far from the potential represented by the region's natural, historical and cultural assets. Infrastructure, accommodation capacities, quality of services, the tourism offer and product are all factors that have somewhat inhibited the sustainable and consistent development of tourism in Albania, leaving room for uncontrolled and chaotic development that has actually kept this industry in operation, but endangering its sustainability in the long run.

According to The World Tourism Organization (WTO), sustainable tourism should:

- 1) Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.
- 2) Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.
- 3) Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

The tourism industry's state of play on the state of WB6 is going to expand during next 10 years more than in the last century (World Bank. 2021), which requires a common tourism strategy, a common tourism communication strategy, infrastructure and tools too.

SWOT analysis for tourism sector of WB6

Strength	Weakness
<ul style="list-style-type: none"> • The beauty of diverse cultures • General convenient transportation • Economic progress • Produce quality products • Comfortable accommodation • Safe & secure environment • Festival & fairs • Cultural heritage 	<ul style="list-style-type: none"> • Outdated marketing strategies • Seasonal workforce • Turnover rate and low salaries at the sector • Not quality service • No innovation & creativity • No proper management skill • Lack of communication between stakeholders.
Opportunities	Threats
<ul style="list-style-type: none"> • Online & social media marketing • Economical prices • Eco-friendly approach • New items in menu • Unusual places • Personalized service approach • Development of communication between stakeholders 	<ul style="list-style-type: none"> • Visa restriction • Competitive market • No institute for tourism • Financial limitations • Environmental concerns • Pandemic of covid-19

Based on this SWOT analysis, a strong support to Western Balkan region in sustainable tourism development is needed, followed by (1) developing a common communication strategy for the WB6 joint tourism products, namely the culture and adventure routes of the region and spa, rural and mountain destination too, (2) supporting the development of a comprehensive and consistent data collection and statistics strategy for the WB6 tourism industry with a holistic approach to tourism development, management and monitoring, (3) measuring the economic contribution and impact of tourism requires reliable approaches to the collection and analysis of data collection and it is supported by the WB6's resolve for an efficient use of analysis, publication and dissemination of statistical information.

Quality in tourism hotel and Safe travel stamp

Peter Drucker, Deming's successor and one of the people who has contributed the most to the marketing discipline, said: "Quality is not what manufacturers put into a product or service, but what customers get and are willing to pay" (Ceko. Meçalla. 2017).

Quality is the foundation of success in the 21st Century. No entity, public, private or non-governmental organization can do without quality, because that's what the client really wants and no entity has a reason to exist if it does not have clients (Ceko). 2021).

Quality management - a set of tools, techniques, ways, certain methods applied by people in an organization, that, using certain resources, manage to produce quality certain products and services, which have embodied in themselves characteristics certain which in fact constitute the very quality of the product or service. According to the ISO definition, Quality Management are "all activities of the overall management function that define quality policy, objectives and responsibilities and implement them through quality planning, quality control, quality assurance and quality improvement with the management system of quality." (Ceko. Meçalla. 2017).

Quality management system - "organizational structure, procedures, processes and resources needed to implement quality management. In an organization, the quality management system affects all aspects of the business, because every system, process, activity and / or task has the potential to create mistakes and flaws," said Harrington, one of the masters of modern quality times (Harrington. 1997). The quality management system includes the system of personnel,

safety at work, environment, human safety, production, financial, information, development, procurement, etc. For the quality management system to move towards Total Quality Management, the organization must have:

- Customer focus
- Leadership involved by setting an example
- Involvement of people
- Qualitative decision making
- Benefits and partnership with suppliers
- Application of best practices
- Electronic documentation
- Total productive maintenance
- Etj

Standards advance change, facilitate quality achievement, provide assurance, unify test methods and procedures, and generally facilitate communication, defining what is a "standard" for products and services. Standards are prepared by those who apply them in practice and who know exactly what they are for. Standards contribute significantly to the country's economic growth. They encourage economic growth, are a tool in the hands of producers to enforce legislation, encourage increased competition, facilitate trade, eliminate technical barriers to trade and ensure the right ecological level, sustainability and preservation of the environment (Ceko. Meçalla. 2017).

Currently, related to Covid – 19, several protocols, guidelines and general advice has been issued in all Western Balkan economies, following the initial actions of Albania and Montenegro, while Montenegro, Northern Republic of Macedonia and Bosnia & Herzegovina enjoy safe travel stamp attribute too. The government of Northern Republic of Macedonia in the early September 2020 has taken the initiative to communicate with other governments of the region on how to act regionally on opening-up the borders, undertaken in regards to the EU integration process too, which need further promotion.

Conclusions & Recommendations

1. As the current outbreak of the COVID-19 is diminishing, economies and international organizations all around the world are committed to cooperating together in guiding the travel and tourism sectors' respond to pandemic.
2. Besides tourism sector must keep doing the basics: physical distancing, hand washing, mask wearing, coughing and sneezing safely away from others, avoiding crowds and keeping windows and doors opened, removing barriers and build traveler confidence are critical to the sector's survival and recovery, providing certainty for the travelers in regard to travel restrictions and policies to facilitate domestic and international travel.
3. Employing national plans to recover WB6 economies and especially the tourism sector, spreading of good practices, ensuring tourism system and workers are protected, lives are saved and the business will go on, are key messages to deliver to the public and business operators.
4. Cooperation between WB6 governments, WB6 National Tourism Authorities, business operators and other stakeholders is vital to protect and develop the tourism sector, ensuring health measures are implemented in ways that could minimize the unnecessary interference with international traffic, trade and life quality of tourists.
5. The local national and regional authorities in WB6 must apply for and adopt the WTTC Safe Travels protocols so that they can be implemented regionally, to restore the much-needed confidence in the travelers, since a common protocols framework is useful rather than using individual protocols.
6. Unifying protocols in accordance with Safe Travel Stamp WTO and recommendations of UNWTO is the most important step forward, Western Balkan economies should undertake quickly, as the new tourism season is taking place.

7. The tourism industry's state of play on the state of WB6 is going to expand during next 10 years more than in the last century, which requires a common tourism strategy, a common tourism communication strategy, infrastructure and tools too.
8. Joint tourism product specifically: culture and adventure routes, virtual tourism, virtual tours, virtual museums, scientific tourism, flora and fauna tourism, historical tourism, etc.), will be the main tourism demand services in the new normal, which requires reshaping tourism strategy for WB6.

Limitations and Future Studies

This study was conducted in the conditions of a reliable information collected from secondary sources. The processing of information is done by the authors of this study and this is a delicate issue as it is necessary that the data obtained from the processing of information to be compared with studies conducted by other authors for the same purpose, to draw fair and focused conclusions to be used for the long-term development of WB6 tourism sector.

The methodology and methods used for this study, especially comparative analysis used to gather, process and compare data, open a path for other researchers conducting studies on tourism sector generally and for WB6 specifically.

There is a lack of data, facts and information about tourism sector in Kosovo.

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An Examination of the Causality Between Export, Import and Economic Growth of Kosovo Using Quarterly Data From 2010 To 2021

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ABSTRACT

The aim of this paper is to examine the nexus between exports, imports, and economic growth for the Kosovo's economy in the period 2010-2021. Unit root tests were used to test the stationarity condition. The ADF, P-P and KPSS tests showed that the three variables are stationary in the first difference. The Johansen cointegration test showed that these variables are cointegrated in the short run. The lag length was set to five based on three criteria. The proposed model was free of serial autocorrelation and heteroskedasticity. Granger causality results based on Vector Autoregression showed that there is a bidirectional causality relationship between exports and economic growth. There is no causality between imports and economic growth. However, there is unidirectional causality from economic growth to imports and unidirectional causality from exports to imports. This study supports the ELG theory, i.e., exports are an important driver of economic growth.

Keywords: exports, imports, economic growth

Introduction

The relationship between exports and imports and their impact on a country's economic success is a hot topic for economists, policymakers, and to some extent, academics as economic growth is considered the best indicator of a country's well-being or economic prosperity (Khan & Khan, 2021). The past two decades have seen tremendous trade integration and expansion, as well as a changing global trade environment (Sokolov-Mladenović et al., 2016). One of the concerns of how a country can achieve economic development is the export-led hypothesis which states that exports are critical to promoting economic growth (Jordaan & Eita, 2007). For decades, researchers have been interested only in the role of exports in spurring economic growth. According to proponents of the export-led growth (ELG) hypothesis, exports contribute positively to economic growth by facilitating the exploitation of economies of scale, especially in small economies; removing the binding constraint to increase import of capital and intermediate goods; increasing efficiency through increased competition; and promoting the diffusion of technical know-how through learning by doing (Mahadevan & Suardi, 2008).

Nevertheless, in addition to exports, the significance of import movements in the development of wealth and national prosperity is also recognized (Bakari et al., 2019). The relationship between exports, imports, and economic growth (as measured by GDP-Gross Domestic Product) occupies a prominent position in the economic development literature and it is a major policy concern for government planners and policymakers. To this end, it is particularly interesting to know the direction of causality between these variables (El Alaoui, 2015).

This paper provides new insights into the economic situation in Kosovo by analyzing the causal relationship between exports, imports, and economic growth using quarterly data from 2010:Q1 to 2021:Q3. It is one of the first studies to examine the relationship between these variables for Kosovo using actual data and a significant number of observations. With the exception of the study of Vardari (2016), who analyzed this relationship using annual data from 2004 to 2014, a total of 10 observations, no other study has been conducted. Moreover, this paper uses data from the Covid-19 pandemic period, which had a fundamental impact on the economies of each country. This paper is organized as follows: First, we review the literature on key variables and then discuss the economic and trade situation in Kosovo. Then, using the time series data, we empirically examine the causality between the variables.

Literature Review

For many countries, the relationship between these three variables has been extensively studied. Researchers' findings are divergent. Awokuse (2007) examined the effects of exports and imports on economic growth in Bulgaria, the Czech Republic, and Poland. In the case of Bulgaria, the results showed empirical evidence for both export-led growth and growth-led exports. In the Czech Republic, there was Granger causality between exports and imports and economic growth, providing empirical evidence for both export- and import-led growth. Polish data, on the other hand, supported only import-led growth. Taghavi et al. (2012) studied the relationship between imports, exports and economic growth in Iran using the VAR method. According to their results, exports had a positive relationship with economic growth, while imports had a negative relationship with economic growth. El Alaoui (2015) examined the relationship between exports, imports, and economic growth using annual time series data for the Moroccan economy for the period 1980-2013 using the VECM. Granger causality results suggested bidirectional causality between economic growth and imports, unidirectional causality running from exports to imports, and no-directional causality between economic growth and export. Kogid et al. (2011) examined only the effect of imports on economic growth in Malaysia using data from 1970 to 2007, and they found bilateral causality between economic growth and imports.

Bakari (2017) investigated the relationship between exports, imports and economic growth in Tunisia exploiting annual time series data for the period 1965-2016 using a cointegration test and VECM. He argued that there is a bidirectional causal relationship between exports and economic growth in the short run. There is also a unidirectional causal relationship from imports to economic growth and a unidirectional causal relationship from exports to imports. However, in the long run, exports have a negative effect on economic growth, while imports have a positive effect on economic growth. There is a unidirectional causal relationship running from economic growth and a unidirectional causal relationship from imports to exports. In another paper, Bakari et al. (2019) studied the relationship between domestic investment, exports, imports, and economic growth for the Brazilian economy for the period 1970-2017 using the VECM method. They found that in the short run, imports, exports, and domestic investment condition economic growth, and economic growth conditions exports. Nevertheless, in the long run, imports have a negative effect on economic growth. Economic growth, exports, and domestic investment have no effect on imports, and economic growth, domestic investment and imports have no effect on exports. In a Hsiao version of the Granger causality and Toda-Yamamoto approach, Kogid et al. (2011) reported a bidirectional causal relationship between imports and economic growth in the short run where imports affect economic growth.

Using quarterly time series data from 2005 to 2014, Hashim and Masih (2014) found a bidirectional causal relationship between exports and economic growth in Malaysia, where exports lead to economic growth and economic growth lead to exports. At the same time, they confirmed a bidirectional relationship between imports and economic growth. Finally, they found a bidirectional causal relationship between exports and imports.

Okyere and Jilu (2020) found for Ghana that exports cause GDP, but GDP does not cause exports. Moreover, imports do not cause GDP and GDP does not cause imports. Devkota (2019) found long-run equilibrium relationships between exports, imports, and economic growth for India. They reported unidirectional causality leading from GDP to imports and unidirectional causality leading from exports to imports. Khan and Khan (2021) found a unidirectional causal effect from imports to GDP and a unidirectional causality from exports to GDP for Oman, while GDP had no causal influence on exports or imports. Millia et al. (2021) used the ARDL model to show that exports and imports have a positive effect on economic growth. Finally, fewer studies, such as that of Ali et al. (2021), found no causal relationship between exports, imports, capital, and economic growth in Bahrain using data from 1986 to 2018.

An Overview on the Economic Situation in Kosovo

According to the Kosovo Agency of Statistics, the population of Kosovo in 2020 is estimated at 1,798,188 people. In 2011 (the last time the population was recorded), the average age was estimated at 30.2 years. The average net salary for 2020 was €416. Exports of goods amounted to €474.8 million in 2020. Imports of goods amounted €3.2 billion in 2020. Inflation (Consumer Price Index) was 0.2% in 2020. GDP for 2019 was €7,056,172. GDP per capita for 2019 was €3,959. Real GDP growth in 2019 was 4.8% (ASK, 2021).

The main economic indicator in the system of national accounts is Gross Domestic Product (GDP), which represents the performance of a country's economy over a given period. The Gross Domestic Product (GDP) in Kosovo is compiled on an annual basis, based on the approach of expenditure and production (economic activities) at prices of the current year and the previous year, and on a quarterly basis, based on the approach of expenditure and production (economic activities) at prices of the current year and the previous year (ASK, 2021). Economic activity has been

defined as recovering in 2021 due to the ease of containment measures to maintain public health. According to KAS calculations, real GDP increased by 12.1 percent from September 2021 to September 2022, with only a 14.5 percent increase in the third quarter of 2021. Net exports contributed 12.8 percentage points to real GDP growth in the third quarter of 2021, while consumption and investments contributed 1.7 and 0.1 percentage points, respectively (BQK, 2021A).

According to Kosovo Agency of Statistics, the sector with the highest GDP growth in the third quarter of 2021 was hotels and restaurants (95.5 percent), transport and storage (33.3 percent), trade (29.1 percent), and so on. In contrast, there was a 24.7 percent decline in energy supply and a 4.1 percent decline in construction (BQK, 2021A).

According to estimates by the Central Bank of the Republic of Kosovo, the accelerated upward trend in economic activity has continued in the fourth quarter of 2021. These estimates are based on direct or indirect measurements, which indicate an increase in exports of goods and services during the period, as well as an increase in remittances, foreign direct investment, etc. On the other hand, the significant increase in imports of goods and services contributed negatively to the growth rate of real GDP during the period under review (BQK, 2021A).

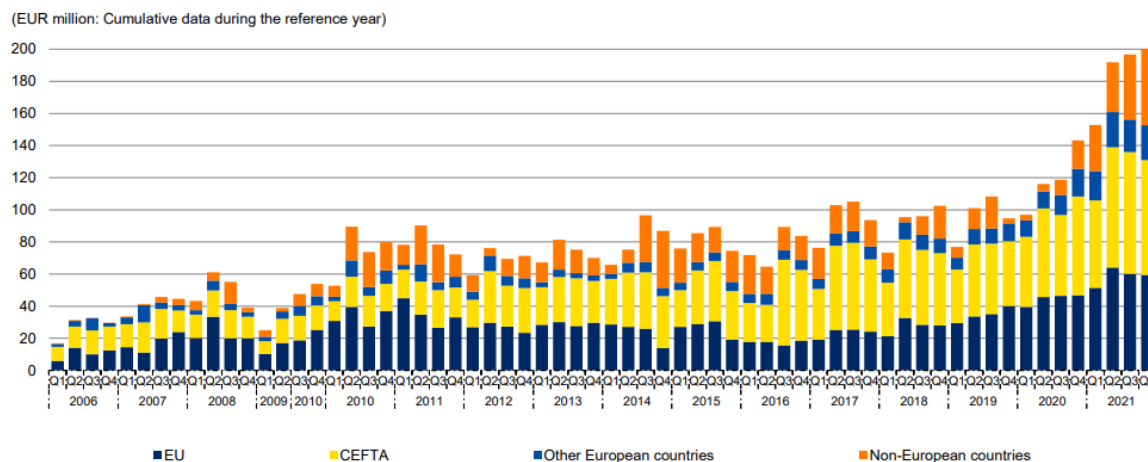


Figure 1. Exports of goods in Kosovo

Source: BQK (2021B)

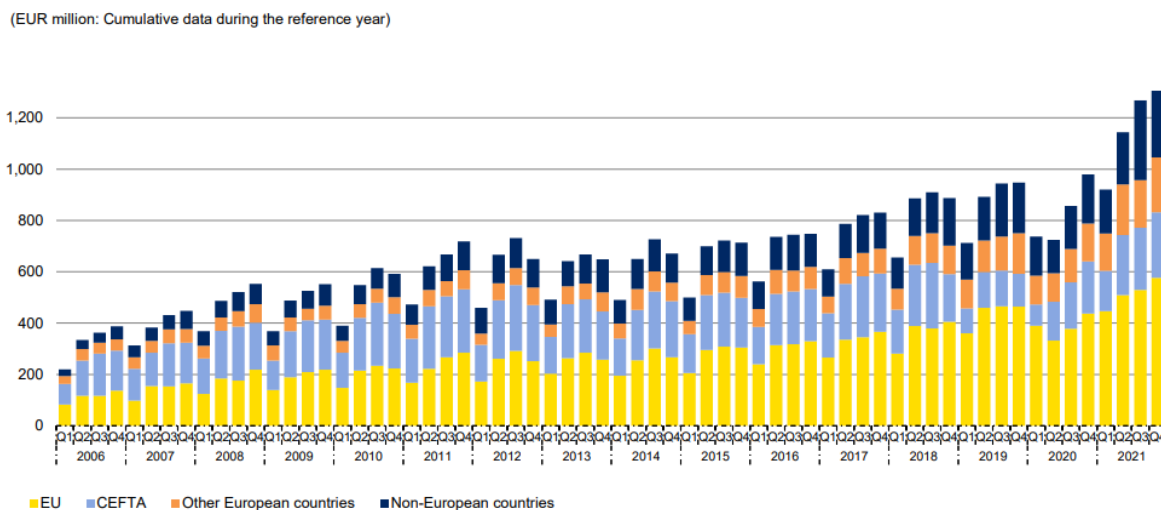


Figure 2. Imports of goods in Kosovo

Source: BQK (2021B)

Figure 1 summarizes Kosovo's exports from 2006 to the last quarter of 2021. Kosovo exports more goods to EU and CEFTA countries and less to other European and non-EU countries. Figure 2 summarizes Kosovo's imports from 2006 to the last quarter of 2021. Compared to exports, Kosovo shows a large imbalance and, as with exports, imports more goods from EU and CEFTA countries and less from other European and non-European countries.

Data and Methodology

Our study uses quarterly time series data on real GDP, real exports, and real imports collected by the Kosovo Agency of Statistics (<https://ask.rks-gov.net/>). The methodology used in this study spans the quarterly time series from Q1-2010 to Q3:2021, or 47 observations, which should be sufficient to capture the short-term and long-term relationships between variables in the model (Jiying et al., 2020). The data are analyzed using EViews 10.

Before testing the relationship between these variables, we first examined the stationarity properties of each variable using the ADF, P-P, and KPSS tests. The ADF test is expressed as follows:

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum_{i=1}^m \alpha_i \Delta Y_{t-i} + \varepsilon_t \quad (1)$$

where ε_t is a pure white noise error term and where $\Delta Y_{t-i} = (Y_{t-i} - Y_{t-i-1})$, $\Delta Y_{t-2} = (Y_{t-2} - Y_{t-3})$, etc.

Phillips and Perron employ nonparametric statistical approaches to account for serial correlation in error terms without adding lagged difference terms (Gujarati & Porter, 2009). When the level of a variable turns out to be non-stationary, the ADF test is applied to the first difference of the variables. If the first difference of the variable is found to be stationary, we can conclude that the variable is integrated with order one I(1) and has a unit root (Zang & Baimbridge, 2012).

The short-term relationship between these variables according to the VAR model is formulated as follows:

$$Export_t = \alpha_1 + \sum_{j=1}^K \beta_j Export_{t-j} + \sum_{j=1}^K \gamma_j Import_{t-j} + \sum_{j=1}^K \delta_j GDP_{t-j} + u_{1t} \quad (2)$$

$$Import_t = \alpha_2 + \sum_{j=1}^K \beta_j Export_{t-j} + \sum_{j=1}^K \gamma_j Import_{t-j} + \sum_{j=1}^K \delta_j GDP_{t-j} + u_{2t} \quad (3)$$

$$GDP_t = \alpha_3 + \sum_{j=1}^K \beta_j Export_{t-j} + \sum_{j=1}^K \gamma_j Import_{t-j} + \sum_{j=1}^K \delta_j GDP_{t-j} + u_{3t} \quad (4)$$

Export is a function of its own lagged values and the lagged values of import and GDP. Import is a function of its own lagged values and the lagged values of export and GDP. GDP is a function of its own lagged values and the lagged values of export and import.

Results

The results of the unit root tests are shown in Table 1. All three tests, ADF, P-P, and KPSS, show that all three variables are nonstationary at the level and stationary at the first difference. This means that all variables are integrated with order 1, i.e. I(1).

Table 1. Results of the unit root tests

Variables	ADF	P-P	KPSS
<i>Level</i>			
GDP	-1.401	-2.540	0.906
EXPORT	3.565	0.607	0.659
IMPORT	1.646	-2.310	0.873
<i>First difference</i>			
GDP	-5.840***	-12.706***	0.235***
EXPORT	-8.508***	-8.505***	0.280***
IMPORT	-4.177***	-11.939***	0.199***

*** denotes rejection of the null hypothesis of unit root at 1 percent level of significance

Table 2. Johansen cointegration test results

No. Of CE(s)	Trace Statistic	Prob.	Max-Eigen Values	Prob.
None	21.737	0.313	17.176	0.163
At most 1	4.561	0.853	4.490	0.804
At most 2	0.070	0.789	0.070	0.789

We used the Johansen cointegration test to check whether the variables are cointegrated. The results of the Johansen cointegration test are shown in Table 2. Both the Trace and Maximum-Eigenvalue test statistics show that there is no cointegration. This means that there is no long-term relationship between GDP, exports, and imports in Kosovo. Therefore, we need to perform VAR analysis.

Table 3. VAR lag order selection criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	−1101.195	NA	1.90e+20	55.20977	55.33644	55.25557
1	−1091.760	16.98364	1.87e+20	55.18801	55.69467	55.37120
2	−1044.625	77.77265	2.80e+19	53.28126	54.16792	53.60185
3	−1023.529	31.64411	1.56e+19	52.67645	53.94311*	53.13444
4	−1008.670	20.05967	1.21e+19	52.38350	54.03016	52.97888
5	−992.9383	18.87813*	9.29e+18*	52.04691	54.07357	52.77969*
6	−982.9603	10.47690	9.84e+18	51.99801*	54.40467	52.86818

First, the VAR analysis was applied with the given lags, and then we used some criteria to determine the order of the lags. Table 3 shows the selection criteria for the order of lags at VAR. Multiple criteria can be used to determine the optimal lag length. However, after the lag's selection tests, different lag lengths were proposed. The lag length was set to 5 (five) based on three criteria: LR, FPE, and HQ. Then, the analysis VAR is performed with five lags.

Before testing the VAR causality between exports, imports, and GDP, we ran a diagnostic to check whether the model is stable. Table 4 shows the results of the LM test, the normality test, and the heteroskedasticity test. As for the serial correlation between variables, all lags have probability values greater than 0.05 except lag 4, whose probability value is less than 0.05. These values show that our VAR model does not suffer from autocorrelation. The Jarque-Bera test determines the two values of skewness and kurtosis for the normality test. With the exception of GDP, which is not normally distributed, the other two variables, exports and imports, follow the normal distribution. The last part of the table summarizes the results of the heteroskedasticity test. Since the probability value $p=0.350$ is greater than 0.05, we can conclude that there is no heteroscedasticity in our model.

Table 4. Independence of error terms – LM test

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	15.32544	9	0.0824	1.846098	(9, 48.8)	0.0835
2	14.92238	9	0.0931	1.790303	(9, 48.8)	0.0943
3	7.683710	9	0.5663	0.858102	(9, 48.8)	0.5679
4	18.59626	9	0.0289	2.315118	(9, 48.8)	0.0294
5	4.434920	9	0.8805	0.479856	(9, 48.8)	0.8811
Component		Jarque-Bera		df		Prob.
1		19.98255		2		0.0000
2		1.383845		2		0.5006
3		0.303588		2		0.8592
Chi-sq		df		Prob.		
186.7144		180		0.3503		

Table 5. Causality results based on Vector of Autoregression

Dependent Variables	χ^2 statistic		
	Δ Export	Δ Import	Δ GDP
Δ Export	—	15.586***	17.354***
Δ Import	6.718	—	1.211
Δ GDP	23.417***	25.265***	—

Note: Δ Export, Δ Import and Δ GDP denote the first differences of the values of export, import, and GDP, respectively. (***) denotes the rejection of the null hypothesis at the 1% level of significance.

Table 5 shows the results of causality between exports, imports, and GDP. These results show that there is a bidirectional causality between exports and GDP ($\chi^2=17.354$ & $\chi^2=23.417$ at $p=0.000<0.01$). This is consistent with the findings of several studies such as the study by Rani and Kumar (2018) for BRICS countries (Brazil, Russia, India, China, and South Africa) and Jordaan and Eita (2007) for Namibia. Kristjanpoller and Olson (2014) found that data for nine countries (Bolivia, Brazil, Colombia, Dominican Republic, Ecuador, El Salvador, Mexico, Paraguay, and Peru) support the ELG theory. Agbo et al. (2018) found that exports have a significant impact on Nigerian economic growth. The validity of the export-led growth hypothesis (ELGH) was also confirmed by Agrawal (2015) in India.

There is unidirectional causality from exports to imports ($\chi^2=15$, $p<0.01$) and unidirectional causality from GDP to imports ($\chi^2=25.265$, $p<0.01$). El Alaoui (2015) found unidirectional causality from exports to imports and bidirectional causality between imports and growth in Morocco. Similarly, Kogid et al. (2011) confirmed that economic growth in Malaysia has Granger causality with imports and concurrent imports have Granger causality with economic growth, while in our study, as explained below, import is not a cause of economic growth.

There is no causality from imports to exports ($\chi^2=6.718$, $p>0.05$) and from imports to GDP ($\chi^2=1.211$, $p>0.05$). Jordaan and Eita (2007) and Agbo et al. (2018) also found that imports do not cause economic growth. The same results are found in Uddin et al.'s (2010) in Bhutan, where exports cause both GDP and imports, but imports cause neither GDP nor exports. These results suggest that exports are an important factor in economic growth in Kosovo, while imports are not. Moreover, economic growth stimulates both exports and imports. Kristjanpoller and Olson (2014) argued that export-led growth and import-led growth cannot theoretically exist simultaneously in one country.

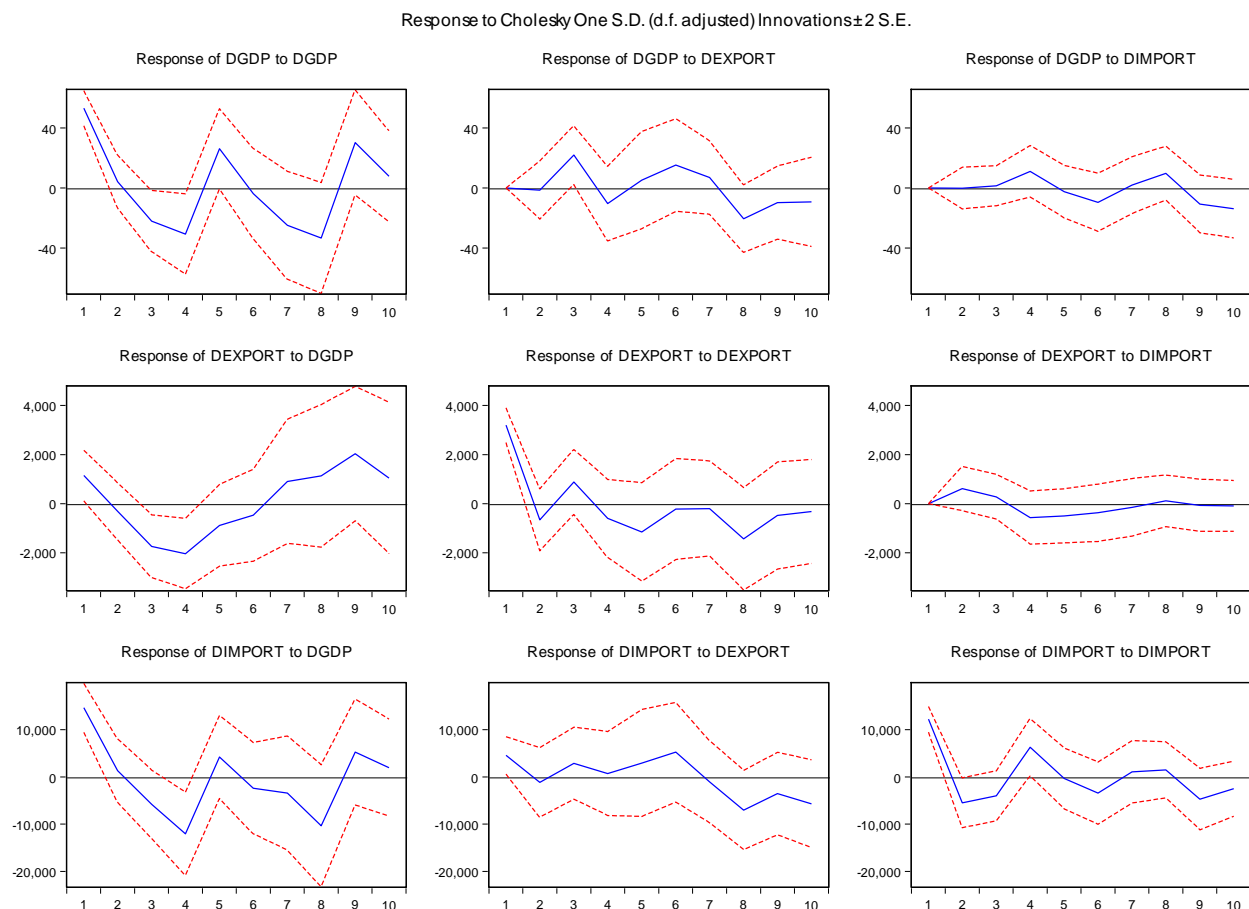


Figure 3. Impulse Response Functions (IRF) results

Impulse response functions (IRF) allow us to study the dynamic effects of the shock of a given variable on the other variables included in the same model (Mohsen, 2015). The first part of the figure shows the responses of GDP to exports and imports. GDP responded positively to exports from period 2 to 3, with a small and negative decrease in period 4. From period 5 to period 7, GDP responded positively to exports. After period 7, GDP remained in negative territory. In period 2, an import shock began, to which GDP responded positively until period 3. After period 3 until period 7, GDP reacted negatively to imports. After period 8, the shock continued in the negative territory.

As for the response of exports to GDP, we can see that exports responded positively to GDP from period 1 and negatively until period 6. After period 6, exports responded positively, and the remaining periods remained in the upper range. Exports reacted slightly positively from period 1 to period 3. From period 3 to period 4, there is a decline. From period 4 to period 7, imports respond increasingly, but remain on the negative side of the axis. After period 8, the shock is already zero.

As for the response of imports to GDP, we can see that imports have declined significantly from the positive territory in period 1 to the negative territory in period 4. From period 4 to 5, the shock becomes positive. The response of imports to GDP is volatile in all periods. Imports responded similarly to exports, but with equal decreases and increases.

Conclusion and Implications

This study sought to examine the impact of exports and imports on Kosovo's economic growth using quarterly time series data from 2010 to 2021. The unit root tests, Johansen cointegration test, VAR analysis, Granger causality test, and impulse response functions (IRF) were used to test the relationship between these variables. The unit root tests showed that the three variables were stationary at first difference $I(1)$. Johansen cointegration showed that the variables were cointegrated in the short run, which led us to apply Granger causality based on the VAR analysis. The Granger causality results showed a bidirectional causal relationship between exports and economic growth. However, imports did not have a significant impact on economic growth in Kosovo. Finally, there was a unidirectional causal relationship running from exports to imports. The impulse response functions (IRF) showed that GDP responds abruptly to a shock in exports by increasing initially and decreasing in later periods. GDP responds only weakly to import shocks. These results clearly support the ELG hypothesis.

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The effects of the Covid-19 Pandemic on Kosovo's Economy

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ABSTRACT

This paper includes an analysis of the state of Kosovo's economy during 2020, with an emphasis on the microeconomic and macroeconomic effects of the Covid-19 pandemic. After consulting numerous sources, we have presented the impact of this crisis on the economy with a focus on some of the concrete indicators that identify the Kosovar economy. In reality, Kosovar companies have first felt the effects of the Covid-19 pandemic, since January 2020 due to the beginning of the decline in imports from China. Then the crisis in Italy has increased the effects even more because Italy, excluding Germany, is the most important foreign trade partner of Kosovo. But the real problem in Kosovo occurred in mid-March 2020 when it came to the detention of economic activities, rising unemployment and declining public revenues. The paper addresses the Kosovo Economy 2020, presenting expectations for economic raise / decline, economic developments during the year, Remittances, Foreign Direct Investment (FDI) in Kosovo and impacts on the banking system. In the last part are the conclusions which include concrete findings from the broad economic structure scoring almost all economic indicators. The paper also includes specific macroeconomic simulations which are related to estimates of Kosovo's GDP trends in 2020 and estimates of the increase in the number of unemployed people as a direct consequence of the pandemic.

Keywords: *Economy, Kosovo, Pandemic Covid-19, crisis*

Introduction

Expectations were that Kosovo's economy would shrink by about 5% by 2020 as a result of the Covid-19 Pandemic, according to a report by the European Bank for Reconstruction and Development (EBRD)¹. According to the EBRD, the reason for this decline is the reduction of investments by 9 percent, the construction sector by 12 percent and the impact of the pandemic in almost every sector. In the first half of 2022, visits from the Kosovar diaspora fell by about 35 percent. However, according to the EBRD, despite the reduced visits, the Kosovar diaspora sent 10 percent more money than in the first seven months of 2019.

The global economy also decreased in the second quarter of 2020, global production was 10% lower than at the end of 2019, before the Covid-19 Pandemic broke out. The Organization for Economic Co-operation and Development (OECD) has called the decline "an unparalleled shock of modern times". Expectations were that China would be the only major economy to expand in 2020, by about 1.8 percent. The United States, which have the largest economy in the world, will face an economic contraction of 3.8 percent, or smaller than other developed countries. The German economy was expected to shrink by 5.4 percent, compared to 7.9 percent at the Eurozone level.

Kosovo economy during 2020

During 2020, as expected there was a decline in GDP. Gross Domestic Product, GDP in Q3 of 2020 marked a real decrease of (-7.25%), compared to the same quarter of the previous year (Q3 2019). Economic activities that have marked a decline in this quarter were: construction (-16.77%); trade, transport, accommodation and food services (-16.89%); financial and insurance activities (-3.67%)². Meanwhile, the economic activities that had growth in this quarter were: extractive and processing industry, electricity, and water supply (6.7%)²; information and communication (3.65%); real estate activities (2.81%); arts, entertainment and recreation, and other service activities (3.67%); public administration, education and health (3.59%); professional and administrative activities (3.3%); and agriculture, forestry and piscatorial (0.58%).

¹ <https://www.evropaelire.org/a/berzh-rritja-ekonomike-e-kosoves-/30868149.html>

² Bruto Produkti Vendor (BPV) me Qasjen e Shpenzimeve dhe të Prodhimit, TM3 2020 | (rks-gov.net);

The components of GDP according to the method of expenditures, which had a decrease are:

- Gross capital formation (-10.18%);
- Export of services (-59.62%); and
- Import of goods and services (-13.51%).

In the meantime, the increase in three months were:

- Exports of goods (3.55%);
- Final consumption expenditures of households and Non-profit institutions in the service of households (16.92%);
- Government final consumption expenditures (5.99%).

Meanwhile, household final consumption expenditures had a nominal increase of 2.53% in Q3 2020, compared to Q2 2020.

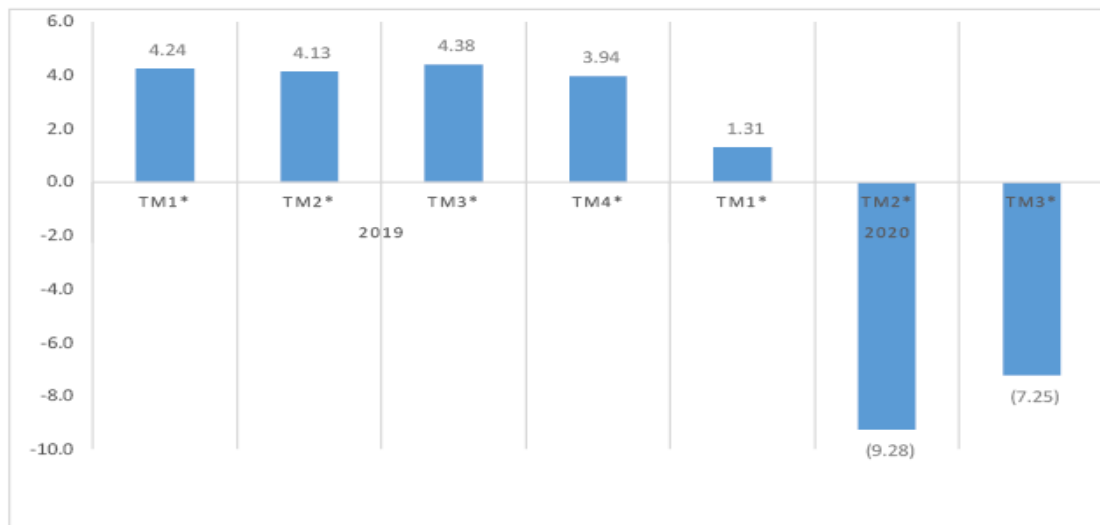


Figure 1. Real quarterly GDP growth compared to the corresponding period of the previous year. Source: Kosovo Agency of Statistics (KAS)

In the third quarter of 2020, compared to the third quarter of 2019, there was an increase in the Retail trade of information and communication equipment, in specialized stores 20.4%. While decline were in : Retail trade of vehicle fuel, in specialized stores marked (48.1%), Retail sale of food, beverages and tobacco in specialized stores (43.1%), Retail not in stores, stalls or markets (41.0%), Retail sale of cultural and entertainment goods in specialized stores (37.4%), Retail sale of other goods in specialized stores (34.7%), Retail sale in non-specialized stores (21.2%) and Retail sale of other household appliances in specialized stores (16.1%)³.

Also, in the third quarter of 2020 compared to the same quarter of 2019 increase in the number of employees have: Retail sale of cultural and entertainment goods, in specialized stores 9.6%. While declines have been recorded: retail trade of vehicle fuel, in specialized stores (39.9%), retail trade of information and communication equipment, in specialized stores (38.4%), retail trade of other goods in specialized stores (27.6%) retail trade of products food, beverages and tobacco, in specialized stores (26.7%), retail trade in non-specialized stores (13.1%), retail trade not in stores, stalls or markets (12.6%) and retail trade of other equipment household goods in specialized stores (9.4%).⁴

Table 1. Index of number of employees in the retail trade sector by periods.

³ Seria 3: Statistikat Ekonomike Statistikat Afatshkurtra të Tregtisë me Pakicë TM3 2020, Agjencia e Statistikave të Kosovës (ASK), Dhjetor, 2020;

⁴ Statistikat-afatshkurtra-të-tregtisë-me-pakicë-tm3-2020.pdf

Nëngrupi (NACE Rev.2)	Aktiviteti ekonomik	2019 TM1	2019 TM2	2019 TM3	2019 TM4	2020 TM1	2020 TM2	2020 TM3
471	Tregtia me pakicë në dyqane jo të specializuara	132.0	131.1	131.7	130.6	128.8	127.5	114.4
472	Tregtia me pakicë e produkteve ushqimore, pijeve dhe duhanit, në dyqane të specializuara	126.5	127.0	117.0	114.5	117.1	106.1	85.7
473	Tregtia me pakicë e karburantit për automjete, në dyqane të specializuara	143.6	148.5	151.5	154.2	152.2	137.0	91.0
474	Tregtia me pakicë e pajisjeve informatike dhe të komunikimit, në dyqane të specializuara	111.2	129.0	124.5	127.0	120.9	80.4	76.8
475	Tregtia me pakicë e pajisjeve të tjera shtëpiake në dyqane të specializuara	128.4	131.8	130.0	127.3	127.2	128.1	117.7
476	Tregtia me pakicë e mallrave kulturore dhe të argëtimit, në dyqane të specializuara	110.8	100.3	95.5	105.9	106.8	101.6	104.6
477	Tregtia me pakicë e mallrave të tjerë në dyqane të specializuara	133.6	116.8	128.6	126.2	119.1	101.2	93.1
479	Tregtia me pakicë jo në dyqane, tregje ose tregje	108.9	106.1	106.8	105.4	103.8	104.3	93.4

Table 1. Source: Kosovo Agency of Statistics (KAS)

On a sectorial basis, in the first half of 2020, the highest decline was recorded by the hotels and restaurants sector with -39.0 percent, the construction sector with a decrease of -35.5 percent, the transport and storage sector with -33.1 percent, administrative and support activities by -22.8 percent, trade by -5.0 percent, etc. The highest growth was recorded in the manufacturing sector with 15.7 percent, information and communication with an increase of 15.7 percent, electricity and gas supply with 12.8 percent, health and social work with 11.1 percent, extractive industry with 5.8 percent, etc.

According to KAS, in Q3 2020, the unemployment rate is 24.6%⁵. Unemployment is most pronounced among women with 33.1%, compared to men, 21.5%. The most pronounced unemployment rate is in the 15-24 age group with 46.9%. According to KAS, in Q3 2020, inactive power is quite high at 60.0%, with a particular focus on women at 78.5%, compared to men, 41.1%⁶. Compared to last year 2019 in Kosovo, we have a decrease in the employment rate by 1.7%, where this decrease in men was 3.4% while in women we have an increase of 0.2%⁷.

Kosovo's public debt has continued to grow month after month as a result of the negative impact of the Covid-19 Pandemic on Kosovo's economy and was expected to grow in the coming months⁸. Only in the last third quarter of 2020, the country's public debt has managed to reach the figure of 1.3 billion euros, which compared to the same period of 2019 was 1.12 percent higher. Meanwhile, as a percentage of all Gross Domestic Product (GDP), public debt at the end of 2020 has reached 19.9% from only 17.4% in 2019, according to the Economic Bulletin. This increase in public debt, according to the latest report from the CBK, entitled: "Quarterly Macroeconomic Development Assessment no. 32, Quarter III / 2020", is attributed to the increase of domestic debt of 18.7% (which reached 934.5 million euros), while public external debt decreased by 0.3% and was 407.3 million euros. On the other hand, according to the CBK, the share of public external debt in total public debt has decreased to 30.4%, from 34.2% as it was in Q3 2019.

The public debt threshold provided by law in Kosovo is 40% of GDP, and consequently the level of public debt of 19.9% keeps Kosovo in the position of the country with the lowest rate of public debt compared to countries in the region. However, this low level of public debt may increase rapidly in the future as a result of the negative impact of the Covid-19 pandemic on Kosovo's economy and government plans to finance the budget deficit through public debt.

Although in December there was an increase in turnover as a result of the withdrawal of funds from the Trust and the arrival of the diaspora⁹, the latest data on turnover in the country's economy during 2020 had an economic decline of over 1.2 billion euros. This decline is not a business loss but a turnover decline. "The light at the end of the tunnel was the turnover in December 2020 where we saw an increase in turnover and this as an effect of the arrival of

⁵ Gazeta Metro – ASK: Në tre mujorin e tretë të këtij viti, shkalla e papunësisë është 24.6%

⁶ Seria 5: Statistikat Sociale Anketa e Fuqisë Punëtore TM3 – 2020, Agjencia e Statistikave të Kosovës (ASK), 30.12.2020, Prishtinë;

⁷ Seria 5: Statistikat Sociale Anketa e Fuqisë Punëtore (AFP) 2020, Agjencia e Statistikave të Kosovës (ASK), Korrik 2021;

⁸ Borxhi publik i Kosovës arrin në 1.3 miliard euro në tremujorin e fundit - Gazeta Express

⁹ Kryetari i Odës Ekonomike të Kosovës, Berat Rukqiqi, Nga, Buletini Ekonomik, 26/12/202;

the diaspora and as an effect of money coming out of trust funds. “This has created a measured optimism for a good completion of businesses for this year.

An interesting and encouraging indicator for Businesses was the information that the Pandemic has influenced citizens to use more technology to conduct their financial transactions. In June 2020, online payments marked a record increase of 160%, which is seven times more than last year. Electronic credit transfers via personal computers or telephones also increased by 34%.

The pandemic did not affect exports to Kosovo. Despite the negative impact that the pandemic brought to Kosovo, it did not affect Kosovo's exports. According to Kosovo Custom's data, Kosovar businesses during 2020 have exported goods in a worth of 450 million euros¹⁰. The value of exported goods during 2019 was 349.4 Million Euros. Export destinations were mainly Albania and EU countries. Also this year there has been a positive trend in terms of Imports of goods from there was a decline in Imports that improves the General Trade Balance. Imports of goods this year were in a worth of 3.2 Billion Euros (250 Million Euros less than in 2019)¹¹. From these data it can be concluded that Kosovo this year has made a small but important step towards covering imports and exports, although there is much to do.

According to information received from the Department for Agricultural Policy in the Ministry of Agriculture, Forestry and Rural Development, during 2020 Kosovo has reached records in the amount of wheat production, as up to 4,700 kilograms of wheat were collected per hectare¹². So compared to other years, 2020 was a record year of yield, from 4,600 to 4,700 kilograms per hectare. The highest wheat yield was presented in 2008 and 2016, with an average national yield of 4.1 t / ha¹³. Based on the area cultivated with wheat and average yields, Kosovo in 2020 has met over 70 percent of the needs of the population with food. Kosovo is highly dependent on food imports and inputs for agricultural production. Stocks of strategic food commodities and raw materials for agriculture practically do not exist in Kosovo. At the time of the pandemic, the market was well supplied with agricultural and food products only because of the import of these goods. There were no restrictions on their export from other countries and the fact that there were good conditions for international transport¹⁴.

Remittances

The Kosovar Diaspora is one of the largest contributors to the country's economy, with the money they bring to their families and the investments they make mainly in the real estate sector, therefore according to all parameters the economic damage from the coronavirus "was not so big" as predicted¹⁵. Our compatriots from 1999 until now are estimated to have sent over 40 billion euros to Kosovo in various ways¹⁶. This contribution of the diaspora was very important for maintaining economic and social stability in Kosovo. In reality, the diaspora has been and continues to be an important pillar of the state stability of the Republic. In 2020, when we have a contraction of customs revenues and in TAK, we had an enormous support of the diaspora where almost 800 million euros came as direct remittances, but it should be understood that the largest contribution of the diaspora to Kosovo has been their stay in Kosovo during summer and winter holidays. It is estimated that the stay of close to 100 thousand of companions in Kosovo in recent holidays has tripled the turnover or has affected the Aggregate Demand at least to triple and if we add to this the approved emergency package, we think that a strong impulse has been given to financial sustainability.

¹⁰ Pandemia nuk preku eksportet/ Kosovë, destinacion ka qenë Shqipëria dhe vendet e BE - Top Channel (top-channel.tv)

¹¹ Raporti_vjetor_per_vitin-2019.pdf (rks-gov.net), Dogana e Kosovës (rks-gov.net)

¹² Vit rekord i rendimenteve të grurit - Arbresh.info

¹³ MBPZHR, “KULTIVIMI I GRURIT DHE MISRIT NË KOSOVË 1939-2019”, Gusht, 2020 ,f6;

¹⁴ Basri Hyseni, “Ndikimi I Pandemisë COVID-19 në Bujqësinë dhe zhvillimin Rural në Kosovë”, SWD RRD, Prishtinë, 2020, f26;

¹⁵ Halil Halili, “Pandemia Covid 19 dhe ndikimi në Ekonominë e Kosovës, Mars – Dhjetor 2020”, 2021, Ferizaj, f151;

¹⁶ Gazeta Metro – Dhjetëra miliardë euro kontributi i bashkatdhetarëve që nga lufta e fundit

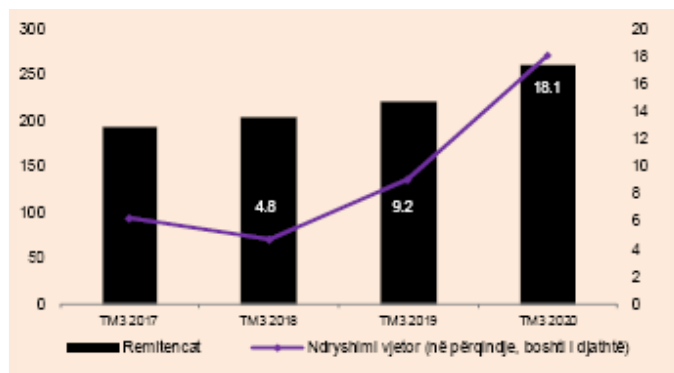


Figure 2. Remittances, in millions of euros. Source: CBK (2020)

So, the factor that has influenced the mitigation of the effects of the crisis have been remittances from the diaspora, which in this very difficult time for the world economy continued the continuous flow towards our economy. The value of remittances that have been received until October 2020 was 796.5 million euros, which represents an annual increase of 12.9 percent. According to a recent report by the GAP Institute "The impact of the diaspora on the economy of Kosovo during the COVID-19 pandemic", it is said that at a time when the Kosovo economy is declining due to the pandemic caused by COVID-19, the role of the diaspora in Kosovo's economy continues to be extremely large¹⁷.

Diaspora has an impact on Kosovo's economy either through remittances, foreign direct investment (FDI), and sending things to their families or even through the expenses they make during the visits to Kosovo. A large part of real estate investments in Kosovo are made by the diaspora. According to a survey conducted by UNDP, over 35% of the diaspora responded that they invest in Kosovo, mainly in the purchase of real estate for personal use (60%) and investment in family businesses (23%)¹⁸.

Foreign Direct Investment (FDI) in Kosovo

Over the last 10 years, Foreign Direct Investment in Kosovo have experienced fluctuations and have not been stable. Foreign investments in the country are declining over the years. Millions that once flowed into Kosovo are now being invested in other countries in the region. According to economists, the reason why investors are leaving the country is non-commercial policy. But, despite the political situation and frequent elections in the country, some countries have not given up investing in Kosovo. According to data from the Central Bank of Kosovo, the countries that invest the most in Kosovo are Germany and Switzerland. In addition, millions of euros in the country have been invested by the US, Albania and Slovenia. While the main sector in which these countries invest is that of real estate, followed by financial services and construction. So during 2019, Germany and Switzerland have been two main countries that have invested in Kosovo. Both together constitute 50 percent of the total investments for the period of January-October 2019. After them are the USA, Albania and Slovenia (with 12%, 6% and 4% respectively of the total direct investments) ", they declare in the CBK. Only by October 2019, the value of foreign investment goes to 257 million euros. Based on the data, the list of countries where foreign direct investment comes from is unchanged, but the ranking is different. During 2019 there were more investments from Switzerland, while in 2020 Germany dominates. But, based on Kosovo Central Bank statistics, the country is no longer attracting foreign investors as it once did. While in 2007 the value of foreign investments reached a figure of 440 million euros, now it barely exceeds 200 million. The pandemic "swallowed" foreign investment. Based on official data from the Central Bank of Kosovo, foreign investment has declined over the years. In 2019 the value of investments was 265 million euros. The lowest amount of foreign direct investment was in 2014, with only 151 million euros¹⁹.

FDI rise in Q3 2020 was recorded in the financial services sector, construction sector and trade sector, while other sectors declined. Only in the real estate sector, the level of FDI was € 52.4 million, or 32.9 percent less compared to Q3 2020. In terms of the origin of FDI, Germany represents the country where the most FDI came from in Q3 2020

¹⁷ Ndikimi i diasporës në ekonominë e Kosovës gjatë pandemisë COVID-19, Nëntor 2020, Institutit GAP, Prishtine

¹⁸ Diaspora nga paslufta ka dërguar mbi 40 miliardë euro në Kosovë - Telegrafi

¹⁹ Pandemia "gëlltit" investimet e huaja - Telegrafi

(24.9 million euros), followed by Switzerland (16.6 million euros), USA (9.4 million euros), Turkey (8.6 million euros) etc.

An interesting indicator is the increase in FDI in 2020, despite the shocking economic effects of the Covid-19 pandemic. The Central Bank of Kosovo notes that FDI in Kosovo in 2020 increased by 34.2% compared to last year, reaching the value of 341.7 million euros²⁰.

It is worth mentioning that the European Union, as it has played a key role in the state-building of Kosovo, has also helped Kosovo in the fight against Covid-19. Since 1999, political, social, economic and other assistance from the EU to Kosovo has been very important for the future of the country. From the post-war period until today, billions of euros are counted, as financial aid, donations and loans given to Kosovo from European Union funds.

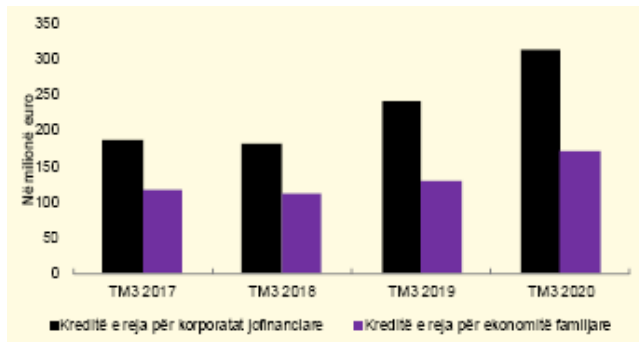
Only from 2007 to 2013 Kosovo received a total of Financial Assistance 657, 2 million Euros²¹. In addition to the processes and programs that already operate between Kosovo and the EU and financial assistance, in 2020 coping with the global pandemic Covid - 19 the European Union allocated 5 million euros in emergency aid for the country, money which was given to the Ministry of Health, Kosovo. The role of international partners is of paramount importance in the global fight against disease in order to achieve the strength and synergy needed to meet the challenges²².

Impact of the Covid-19 crisis on the Kosovo banking system

The Covid-19 pandemic has put Kosovars in debt²³. Only during the month of March and April 2020, over 206 million euros were borrowed through the country's banks, not including overdrafts and credit lines. According to the Central Bank of Kosovo, the sectors where households and businesses have received the most loans are services, industry, energy and construction.

New loans in Q3 2020 reached the value of 484.6 million euros, which represents an annual increase of 30.3% compared to Q3 2019. New loans to non-financial corporations increased by 29.6 percent and reached the value of 313.4 million euros.

Figure 3. New loans to non-financial corporations and households in Q3



Source: CBK (2020)

New loans to households were characterized by significant growth. The value of total new loans was by 41.3 million euros higher compared to Q3 2019, reaching the value of 171.1 million euros in Q3 2020. From these, new consumer loans marked the most significant increase of 37.5 percent, and reached the value of 126.2 million in Q3 2020. An increase of 23.7 percent was also characterized by new mortgage loans, which reached the value of 34.4 million euros at the end of 2020.

Banks during 2020 have also approved a significant number of applications for deferral of loan payments in the amount of 1.5 billion euros, thus creating the necessary flexibility in the economy during this period. During the first seven months of the year, all commercial banks in the country have generated a net profit of about 45 million euros. Compared to the same period of 2019, their profit is smaller by 4.1 million euros²⁴.

²⁰ Diellë Duga, Oda Ekonimike Amerikane në Kosovë, "Investimet e Huaja Direkte në Kosovë", Prishtinë, korrik 2021, f8;

²¹ Njazi Halili, "Ekonomi Politike Ndërkombëtare", Kolegji Iliria, Prishtinë, 2020, f88.

²² Naser Ramadani, "Epidemiologjia Moderne", Shkolla Kosovare e Shëndetësisë Publike, Prishtinë, maj 2005, f204.

²³ Kriza me Covid-19, rritet numri i kredive bankare në Kosovë – FrontOnline

²⁴ Bankat komerciale në Kosovë, rreth 45 milionë euro fitime për shtatë muaj - Telegrafi

The average effective interest rate on loans has decreased significantly in recent years, reaching 6.2%, a rate that is on average in the region²⁵.

The pension sector, as the second most important sector in the financial system, makes up 27.1 percent of the total financial system assets. Total assets of the pension sector marked an annual increase of 8.5 percent, reaching a value of 2.08 billion euros at the end of September 2020. On a quarterly basis, only during Q3 2020, the assets of the pension sector increased by euro 64.1 million (increase 43.9 million euros in Q3 2019), as a result of the positive return on investment and collections from contributors.²⁶

Pension sector assets consist 99.6 percent of the assets of the Kosovo Pension Savings Fund (KPST) and 0.4 percent of the assets of the Slovenian-Kosovo Pension Fund (KSFP). The asset structure of KPST consists mainly of assets invested abroad, but their weight compared to the previous period marked a significant decrease. About 68.0 percent of KPST assets are held abroad, or about 1.41 billion euros allocated to mutual investment funds. The rest of the assets that are invested domestically (32.0 percent) increased by 6.8 percentage points compared to the same quarter of the previous year. By the end of September 2020, the value of domestic investments reached 661.5 million euros. Most of these funds are invested in bonds and treasury bills of the Government of Kosovo, which only during Q3 2020, have increased by 40.5 million euros.

During the third quarter of 2020, the Government of Kosovo issued debt at a significantly lower value than in the previous quarter (Q2 2020) and the same quarter of the previous year. The decline in the level of sovereign debt issued reflects the needs of the Government of Kosovo to finance its activity through this instrument. Also, the decline in demand for domestic debt is a result of the increase in the level of foreign borrowing, the value of which by October 2020 reached 130.7 million euros, while the total value last year had reached at only 42.9 million euros.

By the first week of January 2021, over 400 thousand contributors have successfully applied for the withdrawal of 10%, while in terms of value of funds that withdraw values is about 186 million euros.²⁷

Conclusion

- The Covid-19 pandemic has affected the increase of debts of Kosovar citizens because during 2020 there was an increase of close to 30% of new loans, not including overdrafts and credit lines;
- At the same time, all commercial banks in the country during 2020 have created a net profit of about 45 million euros;
- The unemployment rate according to the Kosovo Agency of Statistics (KAS) was 24.6%, while the most pronounced unemployment was among women with 33.1%, compared to men, 21.5%. Compared to last year 2019 in Kosovo, during 2020 we have a decrease in the employment rate by 1.7%, where this decrease in men was 3.4% while in women we have an increase of 0.2%;
- The Covid-19 pandemic has affected citizens to use more technology to conduct their financial transactions. In June 2020, online payments in Kosovo marked a record increase of 160%, which is seven times more than last year. Electronic credit transfers via personal computers or telephones also increased by 34%;
- Diaspora has an impact on Kosovo's economy either through remittances, foreign direct investment (FDI), and sending things to their families or even through the expenses they make during visits to Kosovo. It is estimated that our compatriots from 1999 until now are estimated to have sent to Kosovo over 40 billion euros in various ways. Therefore, the factor that has influenced the mitigation of the effects of the crisis have been remittances from the diaspora, which in this very difficult time for the world economy continued the continuous flow towards our economy. The value of remittances received until October 2020 was 796.5 million euros which represents an annual increase of 12.9%;
- Foreign Direct Investments (FDI) in Kosovo in 2020 increased by 34.2% compared to last year, reaching the value of 341.7 million euros;
- According to information that we received from the Department for Agricultural Policy in the Ministry of Agriculture, Forestry and Rural Development, during 2020 Kosovo reached records in the amount of wheat production, as up to 4,700 kilograms of wheat were collected per hectare. So comparing to other years, 2020 was a record year of yield, from 4,600 to 4,700 kilograms per hectare. The highest wheat yield was presented in 2008 and 2016, with an average national yield of 4.1 t / ha. Based on the area cultivated with wheat and average yields, Kosovo in 2020 has met over 70 percent of the needs of the population with food.

²⁵ Balijs: Aproximi i kredive nga Bankat e Kosovës arrin nivelet rekorde që nga paslufta – FrontOnline

²⁶ Vlerësimi Tremujor i Sistemit Financiar Nr. 32, Tremujori III/2020, BQK f.16

²⁷ <https://www.monitor.al/qytetaret-e-kosoves-terhoqen-mbi-180-milione-nga-trusti/>

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Bank Specific and Macroeconomic Determinants: Empirical Evidence from Republic of North Macedonia

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ABSTRACT

This study examined the impact of bad loans on banks profitability, because banks are the most important participants in the financial system, but also the most significant and largest financial institutions around the world, measured through their share in the total financial sector assets and for this, the purpose of this paper is to study impact of bank-specific and macroeconomic determinants on bank profitability in Republic of North Macedonia.

A strong financial system is very important for a country to flourish. The economic progress of a nation and development of banking is invariably interrelated. The banking sector is important financial service sector because channelizing funds for productive purpose.

The objective of this study is to examine the impact of bank-specific and major macroeconomic factors on the profitability of banking sector in Republic of North Macedonia by using the data over the time period 1994-2016. This study used unbalanced time series data with OLS methods, which were collected from World Bank and National bank in Republic of North Macedonia. This paper employs the Ordinary Least Square method to investigate also the effect of loans, economic growth and other determinants showed with the level of the profitability in Republic of North Macedonia, because the purpose of this study is to find out the causes of loans in Republic of North Macedonia. However, some of these loans usually fall into non-performing loans and adversely affect the performance of bank profitability.

The main goal of this paper is the impact of internal and external factors which can be classified also into bank-specific and macroeconomic factors on bank profitability in Republic of North Macedonia as one of the countries that is in transition.

The paper sets out to determine the main factors and their level of impact on profitability of banks in the Republic of North Macedonia and showed that the loans have negative impact on the bank profitability in the Republic of North Macedonia, but also results showed the individual effects on profitability where in some variables coefficients are statistically significant. Moreover, results showed a positive but insignificant impact of the macroeconomic determinants such as growth.

Keywords: Financial system; Banking profitability; Non-performing loans; OLS; Republic of North Macedonia,

SOCIAL SCIENCES

Introduction

A bank is a financial institution that accepts deposits from the public and creates credit. Lending activities can be performed either directly or indirectly through capital markets. Banks may also provide financial services, such as wealth management, currency exchange, and safe deposit boxes.

Banks play a vital role in economic growth, namely by diversifying the risk to their activity. Interest rate risk is one of the most important financial risks of each bank which the banks face. Each risk is in itself a direct or indirect negative impact on the profit, activity, or realization of the ultimate goal of the banks. The risk of a change in interest rates in the portfolios of banking activities is a risk of loss arising from unfavorable changes in interest rates, as seen by the bank.

The main goal of this paper is the impact of internal and external factors which can be classified also into bank-specific and macroeconomic factors on bank profitability in Republic of North Macedonia as one of the countries that is in transition. The main research question is: Is there a significant link between banking and macroeconomic factors, such as Non-performing loans and GDP growth on bank profitability in Republic of North Macedonia. What effect do macroeconomic factors have in the bank profitability in the banking sector in Republic of North Macedonia? The methodology of this research is based on the unbalanced time series data and OLS - Ordinary Least Square method. The data used are annual from 1994 to 2016 and the research is structured in this way. The section 2 is talking about the literature review and the used methodology, also in this section will describes the performance indicators being studied in the banking system in Republic of North Macedonia. Section 3 corresponds to the description of the data obtained in the study and will show the main results identified through the linear regression model. In section 4 will

be the conclusions and recommendations and in the end of this research are references.

Theoretical Literature Review and Methodology

The performance of banking sector is also activity applied to a part of performance of an action in a time period, often with connection to previous expenditure efficiency or management responsibility (Abugamea, 2018). But, banking sectors play a key role in the development of an economy. The development role undertaken by banking sector determines the step for development of economy. Hence the stability of banking sector is a key for the development of an economy.

Therefore, commercial banks are one of the banking sectors which are the main source of funding to business activities as well as other projects throughout the country. They play a key role in the economy by mobilizing deposits from surplus units to deficit units in the form of loan and advances (Bhattarai, 2015).

As literatures shows, there have been an increased number of significant bank problems both at matured and emerging economies (Joseph et. al 2012). Banking sectors can perform worst as a result of inefficient management, low capital adequacy and poor assets quality. Non-performing assets is also the single largest cause of irritation of the banking sectors (Sontakke and Tiwari, 2013).

This research is an explanatory research design that identifies the cause and relationships effect between the NPLs and other banking and macroeconomic determinants. A lot of studies were conducted on the difficulty of non- performing loans for banking sectors.

Similar studies are made for loans and bank profitability, because the main effect of bad loans is the ability to deter the bank to grow financially. This is because bad loans drag banks into liquidity problems and make them unable to extend funds to other potentially viable businesses. (Karim et. al 2010) also maintained that the banks cannot take up some proactive investment opportunities because of locked up capital due to bad loans and makes banks experience shortfalls in revenue generation. (Karim et. al 2010).

To this end, the main objective of this study was to examine the bank specific and macroeconomic determinants of NPLs of banks in Republic of North Macedonia. This initiates the bank management and executives with applied knowledge on the management of identified variables and provides them with understanding of activities that will enhance their loan quality and play a vital role in filling gap in understanding the determinants of banking sector in Republic of North Macedonia.

Overview of Banking System in Republic of North Macedonia in 2017-2019

According on the report of National Bank of the Republic of North Macedonia (2017-2019), the activities of the banks in 2017 had different tendencies in the first and in the second half of the year. In the first half of 2017 the activities of the banks were under the influence of the reduced economic activity and still were present risks from the domestic political events and the global environment. The total assets of the banks in this period featured modest growth which was primarily due to the decline in the deposit potential of the banks in the first quarter of 2017 and due to the minimal growth in the second quarter of the year. The gradual stabilizing of the situation and the ascertainment's of the economic entities in the second half of 2017 has relevant impact on the positive tendencies on the foreign currency market and on the upward tendency of the deposit base of the banks, mainly from the households.

In conditions of stable expectations of domestic economic agents, with healthy economic fundamentals and absence of imbalances in the economy, the overall activities of the banking system in 2018 grew rapidly. The growth of the bank's assets mostly stems from the rapid growth of deposits and reflects the rapid growth of credit activity by non-financial entities and liquid funds. The increase in lending is largely due to the household denar loans.

Credit risk realization, measured through the trend of non-performing loans, declined in 2018, as non-performing loans declined by 12% (unlike 2017, when these loans increased by 2%). Participation of non-performing loans in total for nonfinancial entities also improved and decreased to the level of 5.2% (6.3% in 31.12.2017) and this according to report of NBRNM, 2018.

On the other hand, credit risk realization, reflected by the growth of non-performing loans (1.3%), slowed down in the first quarter of 2019, compared to the last quarter of 2018 (6.8%). The bulk (almost 80%) of the quarterly growth of non-performing loans is attributable to the increase in these loans to nonfinancial companies, which was spread over several sectors (construction, trade, vocational, scientific and technical activities and certain industries). However, non-performing loans of the households also increased in the first four quarters of 2019 (by 1.4%), which is a

consequence of the growth of non-performing consumer and non-performing loans for purchase and renovation of business and residential premises. Participation of non-performing loans in total to the non-financial entities remained at the same level (of 5.2%) as in 31.12.2018, between this unchanged ratio of households (2.3%) and minimum growth of 0.1 percentage points, to non-financial companies (8.1% in March 31, 2009). High coverage of non-performing loans with impairment was also maintained in the first quarter of 2019 (76.5%), which at satisfactory volume and quality of its own funds limits the negative effects on the solvency of the banks, due to the possible non-payment of these loans.

Data Specification

The research subject of this paper are NPLs and bank profitability in the banking systems of the Republic of North Macedonia, their dynamics, sector structure, and the basic determinants of growth, due to the fact that the bad loan portfolio is one of the most important factors of instability of banks and the banking system as a whole and as such, it produces negative effects on the overall economic activity of the country.

Most of the literatures explore the factors that determine non-performing loans, make use of the linear regression model, while implementing in parallel macroeconomic and bank-specific determinants. Accordingly, this chapter discussed the research procedure that is used to carry out this study. In case, it starts by discussing research design followed by the nature and instruments of data collection and sampling design. The subsequent section presents and discusses method of data process and analysis.

Primary data in this study are derived from secondary sources, mainly identified from annual reports and statistics published by the National Bank of the Republic of North Macedonia (2017), World Bank (2019), FRED Economic data ST. Louis FRED (2019), different data and information reports. The methodology of research is based on the time series method by the Ordinary Least Square. Identified data are processed by the statistical program Eviews.

Initially, the relevant tests have been developed for evaluation of variables and construction of the final model of linear equation. The study used secondary sources that span from 1994 to 2016. Annual time series data for each of the variables; return on equity (ROE), Non-Performing Loan (NPL), GDP growth (GDP g) and Liquid liabilities to GDP (LIQ).

This research used descriptive analysis and multiple regression analysis methods to analyze data. To ensure that the sample matched with multiple methods of regression analysis, data was tested for normality, multi co-linearity and heteroskedasticity. No significant violations were found. A regression model is estimated to examine the relationship between NPL and ROE. The model is expressed as:

$$ROEt = \beta_0 + \beta_1 NPL + \beta_2 LIQ + \beta_3 GDPg + u_t \dots \dots \dots (1)$$

Whereas: β_0 = Constant parameter; β_{1-3} = Coefficients of independent variables; u_t = Represents the unexplained residual and t = time. Where, ROE: return on equity (*dependent variable*), NPL: Non-Performing Loans, LIQ: Liquid liabilities to GDP and GDP growth: GDP growth. According to these data, hypotheses are:

I. Hypothesis The macroeconomic variables will affect the performance of banks in Republic of North Macedonia.

II. Hypothesis The macroeconomic variables will not affect the performance of banks in Republic of North Macedonia, respectively in the normal period.

Results

Times series data is used in this study from 1994-2016, all data are obtained from NBRNM (2018), World Bank, IMF (2018) and FRED Economic data ST. Louis FED. Identified data were processed by the statistical program Eviews 9.0. Table 1 below also shows the descriptive statistics of all data used in the study.

Table 1. Descriptive statistics of variables impacting ROE

	ROE	NPL	LIQ. LIABIL. TO GDP	GDP GROWTH
Mean	7.424286	17.66263	34.43706	2.390509
Median	7.860000	10.93000	33.20130	2.924381
Maximum	16.52000	41.30000	54.42080	6.473487
Minimum	-5.750000	6.280000	11.11710	-3.067246
Std. Dev.	4.704701	12.43570	16.11064	2.490889
Observations	23	23	23	23

Source: Author's calculations

This study was used to find the impact of independent variable on bank profitability, by using following variables NPL, Liquid liabilities to GDP and GDP growth, with 23 observations. As it can be seen from Table 1, the results show that NPL had an average of 17% and Std. Dev. 12.43570, the maximum and minimum values are 41.30000 and 6.280000, respectively. Liquid liabilities to GDP had an average of 34% and Std. Dev. 16.11064, the maximum and minimum values are 54.42080 and 11.11710 respectively, GDP growth had an average of 2% and Std. Dev. 2.490889, the maximum and minimum values were 6.473487 and -3.067246.

Correlation of Variables Impacting ROE

Relevant tests identified: the test of autocorrelation and multi co-linearity test. Multi co-linearity test serves to evaluate the linear relationship between the variables. The results are shown in Table 2, which suggests that multi co-linearity does not exist.

Table 2. Correlation

	Δ ROE	Δ NPL	Δ LIQ	GDP growth
Δ ROE	1.000000	-0.580376	-0.357827	0.338675
Δ NPL	-0.580376	1.000000	-0.265152	-0.028049
Δ LIQ	-0.357827	-0.265152	1.000000	-0.130076
GDP G	0.338675	-0.028049	-0.130076	1.000000

Source: Author's calculations

This model was tested also for autocorrelations with DW = 2.62. The results suggest that positive autocorrelation is not significant and to continue with data analysis.

Results of Regression Analysis and Descriptive Statistics

On the basis of the results from the testing it is possible to make transformations of series and their modeling, with Unit Root test (Bucevska, 2016). The series of ROE, non-performing loans and liquid liabilities to GDP are non-stationary series for our model, so the final econometric model for bank profitability and non-performing loans is presented in this form:

$$\Delta \text{ROE} = 0.020487C - 0.602384 \Delta \text{NPL} - 0.934559 \Delta \text{LIQ} + 0.458974 \text{GDP growth} \dots (2)$$

The estimation coefficient of the non-performing loan ratio was negative and statistically significant, which indicates that the higher the level of non-performing loans is the lower is the level of bank profitability (ROE). The estimated coefficient of Liquid liabilities to GDP was negative and statistically significant and the coefficient of GDP growth was positive and statistically insignificant.

The following will appear statistical tables of results of all variables (dependent and independent).

Table 3. The results of the model

Method: OLS Independent Variables	Coefficient	Prob.	R-squared	68%
C	0.020487	0.9873	Adjusted R-squared	61%
Δ NPL	-0.602384	0.0005	Prob (F-statistic)	0.0009003
Δ LIQ	-0.934559	0.0059	DW	2.62
GDP growth	0.458974	0.1210		

Source: Author's calculations

Normality Test for the Model and Heteroskedasticity Test

The model was tested for normality, when the residuals are normally distributed and the probability of Jarque Bera is 62%, which mean that the variables are normally distributed.

The model was also tested for Heteroskedasticity with Breusch-Pagan-Godfrey test and this is showed in Table 4.

Table 4. Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.289935	Prob. F(3,14)	0.8319
Obs* R-squared	1.052905	Prob. Chi-Square(3)	0.7885
Scaled explained SS	0.345035	Prob. Chi-Square(3)	0.9513

Source: Author's calculations

Table 4, shows that we do not reject the zero hypothesis which implies that the remains are homoskedastic.

Conclusions and Recommendations

In this study we used unbalanced time series data from 1994 to 2016 and OLS method with macroeconomic and banking sector variables, because for analysis is taken banking sector in Republic of North Macedonia.

The results are compatible with the prepositions for all variables and with the literature we have read. The p- value for two independent variables is less than 0.05 which indicates a significant relationship between the dependent and independent variables. The macroeconomic variable is insignificant because the p- value is greater than 0.05. Also, in this study, we found that an increase in non-performing loans affects a decrease in bank profitability (ROE). These results support the theory, which argues that increased credit risk exposure, measured by non-performing loans, usually is associated with an increase in operating costs and leads to reduced profitability.

In many studies, in other countries we read that a lot of factors influencing different types of non-performing loans, but in this model the independent variable explains about 68% of the model in the period 1994-2016, which would say that the model provides 68% base for the forecast.

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COVID 19 PANDEMIC AND DIGITAL ECONOMY - CHALLENGES AND OPPORTUNITIES

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ABSTRACT

Technologies are useful and necessary tools to help ensure that authorities continue to provide appropriate required services throughout the COVID-19 pandemic. As the virus continued to spread around the globe, almost all governments had brought forward restrictions in accordance with how the pandemic evolved. These restrictions affected the mobility of people, the way services were provided and the specific rules regarding social distancing. In this context, technology had a profound effect on the daily life of citizens and guaranteed them, among other things, access to services related to health, access to needed information in relation with the authorities, and what is very crucial, it provided, and continues to do so, the main tools for economic growth. However, the rapid expansion of the COVID-19 virus can force the competent authorities to take on-time decisions, involving, but not just, digital technologies. This, although effective in the short term, can lead to negative long-term impacts, particularly with regard to digital rights and local governance. In addition, throughout the post COVID-19 phase, digital technologies will be crucial and at the heart of ensuring a return to the daily life of citizens and communities in safe conditions, and a return to the provision of services. This paper will give an overview about the challenges that the world has faced and is still facing during this time.

Keywords: digital economy, COVID 19, computer devices, connections, communications.

- Natural and mathematical sciences

INTRODUCTION

The data-based digital economy is booming, global traffic in Internet Protocol (IP) has tripled between 2017 and 2022. However, the digital divide is widening, according to the UNCTAD Digital Economy Report of 2021.

According to the United Nations Conference on Trade and Development (UNCTAD), the Covid-19 pandemic has greatly increased Internet traffic, as many activities have had to be adapted to this new reality and established online.

According to the mentioned report Global Internet usage increased by 35% in 2020, which is an important increase compared to the 26% from the previous year.

On the other hand, the increased share of data flows is closely related to mobile networks. With the increase in the number of mobile devices and devices connected to the Internet, data traffic by mobile broadband should represent almost a third of the total volume of data in 2026, indicates the report.

UNCTAD reports, however, that the data-based digital economy is unfortunately characterized by major imbalances and major fractures.

As the digital economy grows, an additional data divide worsens the digital divide, according to the Director of the Technology and Logistics Division of UNCTAD, Shamika N. Sirimanne. It urges the establishment of a new international system for regulating data flows in order to redistribute the gains more equitably.

The UNCTAD report warns that, in this new configuration, developing countries risk becoming simple providers of raw data to various established global digital platforms, while they will still have to pay at the same time to gain access to digital intelligence obtained from their own data.

Only 20% of people in the least developed countries (LDCs) use the Internet, and when they do, it is generally at relatively low download speeds and at a proportionately high price, the report indicates.

Additionally, data shows that the average speed regarding mobile broadband is around three times greater in the majority of the developed countries compared to LDCs.

Also, if up to eight out of ten internet users shop online in many developed countries, less than one in ten does so in a large number of LDCs.

The use of international bandwidths is concentrated geographically along two main axes: North America - Europe and North America - China.

The largest digital platforms - Apple, Microsoft, Amazon, Alphabet (Google), Facebook (Meta), Tencent and Alibaba - are investing more and more throughout the global data value chain. They invest in data collection through user service platforms, in data transmission via submarine cables and satellites, in data storage (data centers) and in analysis, data processing and use, for example thanks to artificial intelligence (IA).

With the acceleration of digitization, the size, magnitude of the profits, market value and dominance of these platforms further strengthened during the pandemic.

Thanks to privileged access to data, network effects and economies of different scale and range, these platforms have become global digital companies with global reach ; financial power, colossal commercial and technological gains, who control a huge range of data about their users.

According to the report, the Amazon corporation has invested around \$ 10 billion in satellite based broadband connectivity.

Amazon, Apple, Facebook (Meta), Google and Microsoft were the main buyers of artificial intelligence startups between 2016 and 2020. In the 4th quarter of 2020, large corporations such as Alibaba, Amazon, Google and Microsoft held around 67% of global revenues from various cloud services.

By 2022, the share of online advertising worldwide of five of the largest digital platforms (Alibaba, Amazon, Facebook (Meta), Google and Tencent) is expected to exceed 73%, compared to only 50% in 2015.

An innovative approach to global data governance is essential. As cross-border data flows become increasingly important in the digital economy, UNCTAD calls for an innovative approach to regulate them fairly internationally.

It seems that a new international system directed towards data flows regulations is of utmost importance if the gains are to be distributed in a more equitable way. For now, countries that are more able to extract and collect data are more privileged to appropriate the majority of their value.

According to Sirimanne (2021) a new international system for regulating data flows is essential if the resulting gains are to be redistributed more equitably.

According to her, the international community should pay more attention to the current bills that characterize the global digital economy, and which are found not only between countries, but also between states and businesses.

Torbjörn Fredriksson (2021), who heads the electronic commerce and digital economy branch of UNCTAD, reports that the shortage of adequate skills within governments may result in a lack of technical and analytical expertise in the process of developing legislative frameworks and regulations.

He added that this in turn could hamper the ability of governments to identify both the opportunities offered by digital technologies and the risks and dangers that might arise from them, as well as the means to deal with them.

The report also highlights the fact that less developed countries suffer from a brain drain to developed countries and are therefore less well represented in discussions to develop public policies at the global level, which contributes even more to the increase of inequalities in the world.

While all countries will need to allocate more resources to develop their capacities to create and understand the value of data at the national level, it is very likely that many developing countries will need international support to do so, due in particular to the limited level of their financial and technical resources.

FACING THE CRISIS

Against a backdrop of economic slowdown, the COVID-19 crisis has resulted in an explosion in electronic commerce and an acceleration of digital transformation.

Businesses and consumers increasingly are turning to digital, which suggests that more goods and services are sold and bought online. The share of electronic commerce in the global retail trade thus increased from 14% in 2019 to around 17% in 2020.

These results, among others, are presented in a new report entitled COVID-19 and E-commerce: A Global Review, published by UNCTAD and its partners in the eTrade for all initiative. It presents the deep regional and global industrial transformations that appeared throughout 2020.

During an event organized on the occasion of the publication of the report, the President of the United Nations General Assembly, Volkan Bozkir, stated that these trends regarding electronic commerce should continue during the recovery phase from COVID-19. He said that "We must identify the challenges and take action to support governments and citizens who continue to adopt new working methods".

According to Isabelle Durant, Acting Secretary-General of UNCTAD, companies and consumers who have been able to "go digital" have helped to alleviate the economic slowdown caused by the pandemic but they have also accelerated a digital transition that will have lasting repercussions on our societies and our daily lives - repercussions for which not everyone is prepared.

WE ARE NOT EQUAL

The results show that electronic commerce has made significant progress in all regions, with consumers in emerging economies being the most likely to shop online.

The Latin American Mercado Libre online market it is reported to have sold twice as many products each day during the second quarter of 2020 compared to 2019 for the same period. Whereas, the African e-commerce platform which goes by the name Jumia has recorded a 50% increase in transactions based on data from the first half of 2020.

In China, on the other hand, online retail sales grew from 19.4% to 24.6% in the period throughout August of 2019 and August of 2020. Whereas, in Kazakhstan, online sales are reported to have increased between 5% in 2019 all the way to 9.4% in 2020. Whereas, Thailand is the country where the number of shopping applications usage has increased around 60% in the span of just one week of March 2020.

These trends for e-commerce in 2020 should continue during the recovery period, according to various reports.

It is worth mentioning that in several of the least developed countries, a lot of consumers and businesses continue to lack in opportunities offered by the ever increasing electronic commerce due to many persistent social and other kind of barriers.

These include the high cost of broadband services, excessive dependence on cash, lack of consumer confidence, poor digital skills of the population and limited attention paid by governments in electronic commerce.

"The countries that exploit the potential of electronic commerce will be in the best position for the goods and services they produce to reach world markets in a digital economy. On the other hand, those who do not are at risk of falling further behind," said Shamika N. Sirimanne, Director of Technology and Logistics at UNCTAD.

According to the report, the pandemic has mainly benefited the major digital platforms of the world, which in itself constitutes a challenge.

Most of the solutions that people are using for electronic commerce, including tools such as teleworking and the so called dematerialized computing continue to be offered by a small number of companies, many of which are based in China or the United States.

The most modest players may be better established, but the digital giants are still overshadowing them in this market, which could strengthen their dominant role throughout the pandemic.

According to Torbjörn Fredriksson, head of the digital economy at UNCTAD, there is a real risk that the large digital divide that existed between many countries and within a single country will worsen following the pandemic," said,. This will result in even deeper inequalities that may jeopardize progress towards the achievement of the United Nations' proposed development goals.

HOW GOVERNMENTS RESPONDED

We should mention that most governments have focused their strategies on short-term actions regarding the pandemic, but some of them have also begun, to a greater or lesser degree, to address longer-term strategic demands too, especially with the economic recovery which is in sight. A number of governments coming from developing countries have proposed strategies to protect their businesses and the incomes of individuals.

For example, in Latin America, the government of Costa Rica has provided a platform for those businesses which are not connected, as well as developing a smartphone application coupled with an SMS service to all of which help facilitate the trade between producers in agricultural, meat and fish industry.

In Africa, on the other hand, Senegal carried out a campaign to inform, educate and make awareness through highlighting all the benefits that an electronic commerce can provide to all segments of its population.

In Asia, we should mention Indonesia which has launched a capacity development program to improve digitization and accelerate the digital switchover of micro, small and medium-sized enterprises.

According to the UNCTAD 2020 report the measures that should be taken by three types of partners to make e-commerce work for everyone. Governments must prioritize digital preparation at the national level in such a way that it will pave the way for more local based businesses to be able to become producers of the digital economy, not just consumers.

Based on the report, establishing an appropriate e-commerce ecosystem will require additional changes regarding public policies and previous established business practices with the aim to improve the digital business infrastructure through facilitating digital payments and by establishing legal and regulatory frameworks for better online transactions with better security. Policies should not be developed in a vacuum, at least according to Sirimanne.

To capture the value of digital commerce, digital entrepreneurship must become a central axis.

This requires accelerating the digitization of small businesses and paying more attention to digital entrepreneurship.

Countries also need increased capacity to capture and exploit data, and stronger regulatory frameworks to create and take advantage of the digital economy.

At long last, the worldwide community should track down new, intense and insightful ways of working with country leaders and the private area to use these opportunities for its benefit.

The digital difference between countries, which was obvious even before COVID-19, is a true challenge that should be met through the means of collective efforts and especially through international support. E-commerce provides a huge potential for all.

To support work within the United Nations on the subject, Mr. Bozkir announced one high-level thematic debate on digital cooperation and connectivity on April 27, 2021.

This debate served as a platform for high-level declarations of political intention and support, and for open exchanges between United Nations entities, technological leaders and other stakeholders. It's objective was to mobilize the international community to provide specific strategies to strengthen existing initiatives and partnerships, to support new ones to accelerate implementation.

Better discourse and better coordinated effort are expected to distinguish new ways for the advanced economy. One method for doing this is the eTrade for all issues, driven by UNCTAD and presently subsidized by the Netherlands, Germany and Estonia.

Over the past years, this initiative was ment to serve as a global assistance service for developing countries to fill the information and resources gap on electronic commerce and to catalyze partners.

Since the start of the pandemic, more than 30 partners of the eTrade for all initiative have worked together to raise awareness of the opportunities and risks of electronic commerce that emerged during the crisis.

They likewise recognized the means by which organizations from developing and least developed nations could move beyond these challenges.

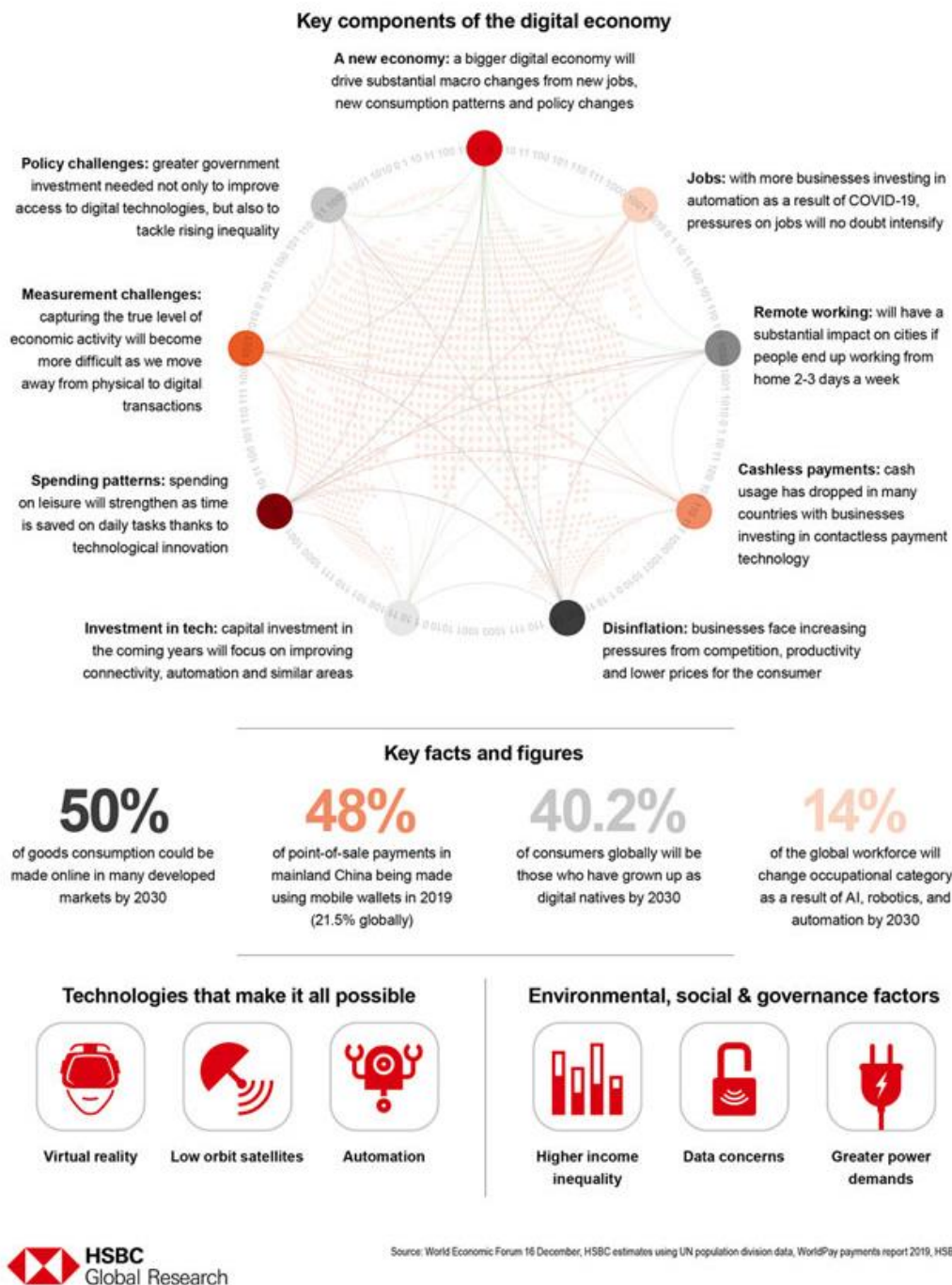


Fig. 1 Digital Economy Overview¹

CONCLUSION

¹<https://www.gbm.hsbc.com/insights/global-research/the-booming-digital-economy>, accessed on February 27, 2022

Improving internet access and digital skills has helped many countries cope with the health and economic crisis caused by the COVID-19 pandemic. At the same time, the crisis has highlighted the need to go further in the digital transition and to fill digital fractures, otherwise a number of individuals and businesses may find it more difficult than others in the post-COVID world.

While some internet service providers have reported a 60% increase in traffic since the start of the pandemic - whole fields of private and professional life have switched to the cyber environment - the new edition of Digital economy outlook of the OECD (Organisation for Economic Co-operation and Development) highlights the disparities in access to a fast and reliable internet between and within countries. For example, the share of fiber in fixed broadband subscriptions reaches 82% in Korea and 79% in Japan, but is less than 5% in Germany, Austria, Belgium, Greece, Israel and the United Kingdom, and very high speed is often rare in rural areas. Some countries have about twice as many mobile broadband internet subscriptions per capita and three times as many fixed broadband subscriptions compared to others.

Digital technologies have helped our economies and societies to avoid a complete halt during the COVID-19 crisis, and allowed us to know more about the virus, accelerate the search for a vaccine and follow the evolution of the pandemic. But the crisis has also increased our dependence on digital technologies and exposed the digital disparities between and within countries. We are reaching a turning point in digital transformation, and the face of our economies and our post-COVID societies will depend on the progress we achieve and our ability to reduce the divides.

It is worth mentioning that digital transformation was already in a fast pace even before the COVID-19 crisis, where an increasing number of countries developed digital appropriate strategies that were at the core of their national action programs. The surge in demand for bandwidth-intensive communication services for electronic commerce, telework, online social activities and the strengthening of cross-border collaboration between governments and academics should give it additional impetus. Not to mention that the current dependence on digital solutions has added urgency to privacy and security concerns, creating an environment conducive to cybercriminals.

The average use of mobile subscription data in many countries had already quadrupled over four years until June 2019, and the prices of high-use mobile broadband subscriptions fell 59% over the 2013-19 period, according to the study, which is based on data from OECD Broadband Portal.

The OECD economies had 113 mobile broadband internet subscriptions per 100 population in June 2019, compared to 32 ten years earlier, while non-member countries had 60 such subscriptions per 100 population. There are also 32 fixed broadband subscriptions per 100 inhabitants in OECD countries (more than triple the levels observed in non-member countries, whose average is 9 per 100 inhabitants); fiber represents 27% of subscriptions. Differences remain between rural and urban households in terms of quality of connection to fixed broadband.

In 2019, before the pandemic, only a quarter of OECD companies employing more than 10 employees engaged in electronic commerce; a third of the companies used infonuagic services and more than half were present on social media. In 2019, 58% of individuals used e-government services, compared to 43% in 2010.

The share of adults using the Internet exceeds 95% in some OECD countries, while it is less than 70% in others. Examining the differences in internet access and use by age or level of income reveals inequalities in terms of access to information and public services, which are essential in the event of a pandemic. If in the future the jobs, education, health, even social interactions, and economic growth for that matter, come to depend on digital technologies, failure to guarantee widespread access to digital services will greatly impact those countries which will not be able to establish such technologies.

State run administrations can speed up the arrangement of broadband by advancing private venture and contest, empowering the sharing of foundation and setting the minimum levels of inclusion of rural regions. To meet the current growth in demand for connectivity, experts recommend a number of measures, in particular: temporarily release additional frequencies or approve commercial transactions allowing the operation of unused frequency bands, strengthen interconnection capacities between networks, or find solutions to encourage broadband service providers to deploy fiber further in networks.

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DAMAGE AND ITS RESPONSIBILITY: EMPIRICAL ANALYSIS OF MONETARY DAMAGE TO THE LAW IN ALBANIAN INSTITUTIONS

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Abstract

The Concept of Impair and whom is Liable for its occurrence, putting the causer of the impair through legal process and reestablishing the infringed Right through institutional means or through fair and full compensation for impaired damage, encompasses a wide variety of problems in theory and practice for Civil Right, which goes on into more convoluted and wide range of other disciplines; so the only means by which in this work we can successfully tackle this problem is by taking a deep and comprehensive side by side analysis of revised law and coherent practice.

Foremost, careful scrutiny, should be paid to treatment of Non Material Impair, this mostly due to the fact that this institution is less known and studied from current legislation, doctrine and Albanian jurisprudence, differently from other Western European Countries or even U.S.A where personality infringement, mental and physical integrity and everything else that might infringe on “non-material” have been the center of studying from lawyers and scholars of the field, also for practitioners. The difficulties while dealing with this kind of non-contractual infringement is its subjectivity, proving it and moreover measuring the collateral obligation and a concrete sum of reward, which would constitute as fair compensation in the end of a full trial.

Throughout such difficulties, legal experts in Albania and practitioners of the field is also added the lack of legal background that our own Civil Code has, where infringement of non-material damage is only foreseen by Article 608 and 625 of the Civil Code, and for compensation on the infringement is only foreseen for non-contractual material (Article 640 through 647 of current Civil Code). Furthermore, destitute legislative tradition is coherent even today where compensation for non-material infringement especially on “public figures” becomes a bit of bashful situation for the judges, in any court. This has ensued that lawyer, judges and so on, to give a very vague interpretation of non-material infringement whenever dealing with such cases, leaving it only within the poor mold that outdated law allows.

Keywords: Albanian Public administration, responsibility, legal process, civil code practices.

INTRODUCTION

Furthermore, due to the fact that this topic needs a good platform to be well explained and studied, a platform as such, we have to agree that Article 625 of Civil Code, when interpreted in a wider scope based also on other practices of more recent times might give us the right to claim that infringements such as : biological infringement, psychological infringement, infringement on leisure, moral infringement, social infringement, and sexual infringement or infringement on the right to give birth might be finding compensation here as in other Western countries.

Nonetheless, keeping in mind wrongful legal interpretation from time to time in our country which continues to happen in this millennia, this gives me the courage to give my view on a better interpretation of Article 635 of the Civil Code and a more objective insight into the compensation that comes from such a subjective topic as “non-material infringement”

Lastly I would like to emphasize that throughout my career, as a lawyer, I have encountered Civil disputes which have aroused in me questions related to :

1. Do we find our self in a situation where infringement has occurred
2. If yes, what type of infringement has occurred
3. Which is the guilty party
4. Which are the elements responsible for this infringement

5. How would you calculate the collateral damage of such infringement and compensation
6. Has the compensation truly undone upon the ensued infringement

Being that regarding these problems there have been little to no discussions at all, or even contradictory decisions to base your work upon or there have been no work at all, I took it upon myself that such a wide and vague topic would take a lot of my time, through research and full commitment.

Ofcourse, at any point, I will never claim that at any case I have fully given an answer to the questions in the way that the law requires, but nonetheless, I hope that this work can be seen as stepping stone which will spur more legal and theoretical thought which improve my work and hopefully the current legal framework.

Not to forget that, side by side with the comments on every disposition which have been studied on a case to case basis, I will also refer to the rulings of Albania's High Court, where in special occasions I have partaken as representative. Even though such actions only find value from a theoretical prospective, they have no legal liability whatsoever; they do present an irreplaceable knowledge in the unifying of legal practice. This practice is creating a new phenomenon in jurisprudence, which must be studied not only for practical but also theoretical purposes in order to bring a betterment of the current legal framework in regards to non-material infringement.

Asking for forgiveness in a humble way, for any mistakes due to lack of experiences which is never enough while working on such topics, I am welcome at any time for constructive criticism which I will regard more as help towards continuously improving my work and reworking it sometime in the near future. Nonetheless, I hope that the conclusions and analysis done in this work have justified the trust given to me by the University while working on this thesis.

LITERATURE REVIEW OF EMOTIONAL MANAGEMENT AND EMOTIONAL INTELLIGENCE

2.1 Period of 1945-1990

With the end of the war , 1939-1944, the law that was primarily executed was the law of prewar, while the new political-economical development of the society were a determining factor for the right and rule of law in the country. At this period the rule of law was primarily based on Socialist Right, if it can be characterised as such, which followed the socialist economical theory where the State was the sole owner of capital and means of production. In such circumstances the previous legislation of Albanian governance was voided after the war to make place for new legislation which conformed the ruling ideology, on which the whole country was ruled. In this situation was put in place Law number 61, date 17.05.1945 “ Abrogation of the legal dispositions promulgated during the occupation, and nullification of penal decisions given throughout this period from Foreign Military Authorities which were valid and based over legal dispositions which were in power before April 7-nth 1939”. This law, nullified all legislation put in place during the occupation and classified it as void, while abrogated the legal rights before April 7-nth. This was followed by a series of laws in the field of obligations, until 1957 when Law nr.2359 date 15.11.1956, was put in place, “Overseeing legal actions and obligations”. This law was the baseline of overseeing obligatory relations between parties until 1981 when the “Civil Code” was enacted, which encompassed within itself the Legal-Civil relations as a whole.

The litigation of responsibility that comes from infringement according to the law “ Overseeing legal actions and obligations”

The aforementioned Law, foresees as obligatory: contracts, obligations which reside from one sided legal actions, obligations which are born from infringement and obligations which come from purloin without right. Compared with the Civil Code of 1929, this Law marked a regress of legal right of obligation in general and in infringement especially.

For example, it has to be mentioned that law established as reparable only material infringement while categorically denying monetary reward of moral infringement. Let us see specifically how this infringement finds solution in this Law particularly:

In the article 472 we are given the principles of accountability from infringement as stated :

“The person who is guilty (be it with or without conscience) of infringement illegally , towards another person or his wealth, it is obliged to compensate the amount of infringement. The person who is responsible for the infringement cannot be found guilty and answer to the law if he proves otherwise.”

According to this disposition we can clearly see the elements of who is responsible and what follows from infringement upon others based on Civil rights. As such, for a person to be charged with Civil responsibility, there are some circumstances which have to align, as: the existence of damage or infringement, the illegality of the action taken, the correlation between the cause and consequence and the culpability which forms the basis of such responsibility. Let us shortly revise the elements which make up the responsibility which is an outcome of the infringement.

1.2 Harm

Is a necessary condition in order to ensue Civil Responsibility according to the Law , which in turn proves the existence of the Harm. With **harm** in general, we see material infringement and not non-material infringement. With material infringement we understand actions by which we lower material goods, or wealth, owned by infringed party which can be compensated with monetary value. Same cannot be said for non-material infringement, which can be infringement upon their life, health, honor, dignity, which according to the Law cannot be determined in a monetary value. Doc.Andon Sallabanda, “The right of Obligations, Tirana 1962.

For such reason, the aforementioned Law does not accept compensation of non-material infringement or differently put “moral infringement”. In case we have infringement upon non-material goods, like the death of the person, it can only be compensated for monetary infringement that might have been carried in the process. Case in point: the **harm** that the person has suffered, which was obliged to feed him, is a monetary measurable infringement, which will make the person who has harmed the other party to pay tribute to the party who has been infringed upon. Even though Article 472 (see above) talks for harm beyond monetary harm, as of harm towards a person, it is interpreted as only monetary harm towards the person that has been infringed, because this is the only harm that can be measured with an amount which can be compensated.

1.3 Illegality of an action

Civil responsibility for compensation in regards to infringement, seeks to prove that the infringement was carried in an illegal way (Article 472 of the aforementioned Law). The illegal actions are an objective category and it has to do with the fact that the actions which have caused the harm while contradicting the norms of objective rights. The person who has infringed while carrying an illegal actions, opposing objective rights, has undermined a subjective right of the infringed which is clearly visible, for instance by stealing a personal belonging he has infringed the subjective right of ownership of the person.

The harm caused in this illegal manner can come as consequence of the action or lack of action in an illegal situation. The action was considered illegal if it was restricted by the law. But, when it comes the lack of action was considered illegal, when the person carrying the infringement was obliged to act and had the opportunity to act. The obligation or the opportunity to act should have competed side by side. The illegality of acting (or not acting) which has caused the infringement is a determining factor for holding responsibility towards the compensation. For these reasons, the Law has made clear the occasion, when a person has committed infringement not to be held accountable for compensation due to the fact that the infringement lacks the character of the illegal harm caused that can be put in monetary value. As such the harm caused by a person who is executing his rights or obligations, does not hold within itself the character of illegality. This implies that the author of the harm cannot be held accountable for the harm

caused of such actions, this is self explained due to the fact that the actions of the harmer are protected by the law itself. Moreover , according to the aforementioned Law (Article 474/1), the person who has carried the harm in conditions of necessary self preservation, is excluded from the responsibility of compensating, making the such kind of infringement and illegal harm. In the case of extreme circumstances, the person who has carried the harm, is not excluded from the responsibility of paying compensation, as such he is obliged monetary compensation. Nonetheless, in such cases it was up to the court to see the circumstance from a case to case basis of how the harm was inflicted and to charge or discharge the author from the obligations of paying compensation to the infringed party.

1.4 The correlation with the cause

Except the existence of the harm and its illegality, in order for there to be responsibility for compensation, it must be proved the correlation between the cause of the action and the consequence of the infringement (harm). According to Article 472 of the aforementioned Law , it is understood that the illegal action must have been the cause of the harm and the action itself is the consequence of the harm. The correlation between the cause must exist even when the inflicted harm was a result of not acting, meaning that in case of inaction and the result of the harm both of them could have been prevented, coming to the same result. In regards to the correlating cause, it has been treated by different scholars and has take a not non-significant place in the doctrine of the time.

1.5 Guilt

Civil Right in accordance with the Law of the time accepted **guilt** as a Civil Responsibility. The obligations which come as a result of inflicting harm as seen in the Article 472 of the Law, differently from the Civil Code of 1929, we see the acceptance of concept “presumption of guilty”. As such, the person who has been infringed upon does not have to prove that the author is guilty of harm, because already he is presumed guilty. Paragraph II, in the aforementioned disposition, lays out that, the person who has inflicted the harm cannot be held responsible if he can prove his innocence. This means that is up to the party who inflicted the harm to prove that he was not guilty for the harm inflicted. Nonetheless, even though as a rule of thumb, accountability for Civil Responsibility that comes from infringement makes the author of it accountable, the law in some cases has also accepted the responsibility with no guilt. Case in point would harm inflicted from an occupation or activity which hold high risk involved.

2. Accountability for harm inflicted by others

Accountability for harm inflicted from a minor under 14 years of age

In regards to such responsibility the aforementioned Law, lays out some cases in which the responsibility for inflicted harm cannot be held by its author, but by its legal guardian. Firstly, we have to mention the responsibility in case when the infliction of harm has been conducted by a child under the age of 14. Article 475 of the aforementioned Law foresees that the case of inflicted harm cause by a minor under 14, accountability shall fall on his parents or its appointed legal guardians. Also for such harm, accountable will be held people responsible for overseeing the minor, but this the accountability shall be restricted only within the time-frame that the minor is under their supervision.

METHODOLOGY

In some studies, based on the methods used, the information obtained may be of a qualitative and quantitative nature. The study is based on obtaining information through questionnaires, which are constructed with closed-ended questions. The data obtained from them are quantitative and qualitative in nature, therefore statistical techniques can be used for their processing based on the objectives of the study.

Quantitative research is pervasive in nature and is used by researchers to understand the effects of various promotional inputs on the consumer, enabling marketers to "predict" consumer behavior. etc. This type of search addresses questions about who, what, when and where consumers buy.

Research can be considered exploratory or confirmatory. Confirmatory research tests hypotheses. The results of these tests aid in decision making, suggesting a specific course of action. Exploratory research takes different approaches. They may be needed to develop ideas, leading first to the development of research hypotheses.

Some researchers often discover the reactions and activities of respondents using marketing research methods.

On the other hand, quantitative methods are needed to measure the effectiveness of these measures.

The Quantitative methodology was used to conduct this study as the analyzed data to derive the results and conclusions of the study are numerical data. The resources used are primary and secondary. Primary data were collected through questionnaires, while secondary data were obtained from the of World Bank, Municipalities etc and for the literature part books and other materials were used by foreign authors and Albanian authors.

What needs to be pointed out in this case is that accountability of the parents and appointed legal guardians is absolute accountability. This means that they cannot be relieved from accountability even if they can provide proof that they could not stop the infringement or causation of the harm. As such, the parent or appointed legal guardian is not only presumed guilty, but this presumption cannot be overruled. We can see a different approach in Paragraph II of Article 475, according to which people tasked with overseeing the minor, cannot be held accountable for the inflicted harm if they can prove their inability to stop the infringement at the time of occurrence.

4.1 Accountability for inflicted harm from a minor over 14 years of age

This is laid out in Article 476 of the aforementioned Law. Differently from a minor under the age of 14, the one who has already reached the age of 14 (considered a minor still), holds accountability for its own actions. There might be cases when the minor does not have the economic means in order to pay compensation for the harm inflicted. In such cases, the accountability for the harm inflicted will be held by his parents or legally appointed guardian. The aforementioned, can be discharged from any accountability if they can prove that their inability to stop the infringement at the time of occurrence. As noted, in this case, the accountability of the parents and legally appointed guardians is a limited accountability.

4.2 Accountability for inflicted harm from a person with the inability to act

In order to be held accountable for inflicted harm there is a number of criteria in which there is also guilt. As such, it means that can be held accountable people who can understand the consequences and importance of their actions. In these circumstances the aforementioned Law has accepted the fact that people who have been stripped of their ability to act, cannot be held accountable for inflicted harm. Article 477 of the Law lays out that inflicted harm in this case, hold accountable the people which are charged with the responsibility to oversee a person the inability to act, but this accountability is restricted. These people cannot be held accountable for the inflicted harm if they can prove their inability to stop the infringement at the time of occurrence.

4.3 Accountability for inflicted harm from legal entities, employees and employers

The aforementioned Law, in Article 480 states that:

“ Legal entities are accountable for inflicted harm from its employers or employees while they are carrying out their duties ”

The legal entity as any other person is held accountable for inflicted damage from it employees while carrying out their duties, but only when the inflicted harm has been carried out from employers or employees whom are not fit for the task that they were hired, or they have not been supervised in a suitable way while carrying out their duties.

As we can see, the disposition makes a clear differentiation from the legal entity, its employee and employers. This differentiation is important to keep in mind because it implies that the harm inflicted from the legal entity, the one held responsible should be held the legal entity as a whole. The carrying out of the duties of the legal entity is considered the actions of the legal person itself. While the employers or employees are people which are in a contractual relation with the legal entity. For the inflicted damage from the aforementioned, the legal entity is held responsible only if the damage was inflicted by employees which are hired under its supervision and were not suitable to carry on the duties or did not have the proper supervision while carrying out these duties. In order to evaluate if the employee was or not suitable to carry out these duties, it shall remain to the court to decide on a case to case basis. Furthermore the harm inflicted must be correlated with the duties which are carried by the legal entity, as such should be within the framework of the activity carried out by the legal entity.

4.4 Accountability of a governmental legal entity carried out by governmental employees while carrying out their duties in accordance with public service

This type of accountability is foreseen in Article 481 of the aforementioned Law according to which: *“For inflicted harm as a result of illegal actions carried out from public servants while accomplishing their duties in accordance with civic duties, the governmental legal entity is accountable only in the cases which are well established within the law”*. This means that the activity falls into a different category which is carried out by the public servant and as such, the legal entity is a governmental entity which has a specific activity, not of any kind. This means that the legal entity will be held accountable if this responsibility is foreseen in a specific law.

Accountability for inflicted damage as result of a high risk activity

This is one of the cases of accountability without guilt, which is laid down on Article 473 of the aforementioned Law. This disposition, explicitly states that:

*“Enterprises, institutions and organizations and legal entities which carry out duties which hold a high risk activity in regards to its surrounding, are held accountable for inflicted damage from this high risk activity, except when they are able to prove that the inflicted harm has been inflicted by a **major force**”*

Holding in mind that in such cases we are dealing with accountability without guilt, we can say that the person accountable for infringement cannot be discharged of its accountability even if he can prove is innocence in accordance with Article 472/2, by proving that he is not responsible for the infliction of the harm. The person who is responsible for the infliction of the harm will be discharged of accountability only if he proves that the damage inflicted came as result of a **major force**. Furthermore, the person charged with the compensation of the inflicted damage, can be discharged from its accountability or it can be reduced, when in the infringement has partaken has taken part the harmed party. Regarding what constitutes a high risk activity, the Law does not make a clear definition or explanation, as such its definition would be correlated with the industrial means used while carrying out such activities and would be up to the court, especially the High Court, to establish what would constitute a high risk activity.

4.5 Collective Accountability

In regards when the inflicted damage was carried out by multiple people at once, then there is **collective accountability** and common compensation. This is laid out in Article 478 of the aforementioned Law as stated: *“When the inflicted damage is carried out by more than one person, they will answer towards the affected party together in unity”*

In such cases there is no need for a pre trial agreement between the authors and the hurt parties. In order for Civil Accountability to take place, it only needs that the damage inflicted be result of the actions taken by the people as a group.

Reward for the inflicted damage

The aforementioned Law lays out instances not only when the damage is inflicted from the person responsible, but also while taking into account the guilt of towards the person that the damage is inflicted upon. In this case there is mixed accountability. This is foreseen in Article 485 of the Law according to which: *“When the inflicted damage or the amount inflicted with or without purpose or as a result of recklessness or grave negligence of the hurt party, and when they have not shown regard for the minimizing of the damage, the court on a case to case basis can reduce the monetary amount given as a reward for compensation or discharge the inflicting party from any compensation whatsoever.”* In such case, the damage is not only a consequence of illegal actions of the person responsible, but also of the damaged party. The compensation for the inflicted damage in such cases, as is interpreted from the disposition itself, will be done while keeping in mind such facts from the court which can reduce or completely discharge the inflicting party from any compensation. In order for the aforementioned article to be implemented, the affected party should have acted in grave negligence or with pretence.

4.6 Accountability for inflicted damage resulting in death or grave medical injury

When a person is killed or inflicted damage on him results in grave injury, as a result, the inflicted party are infringed in a material and non-material way. The Law does not accept compensation of non-material damage, but only of material nature. In this case, the disposition has foreseen that in this case the affected party benefits from Social Securities, and as such the compensation will be done by the Social Security Institution. When the affected party will not receive the compensation to the fullest from the Social Security, they can reach out and seek compensation from the person responsible for the damage to the fullest. On the other side, the Social Security Institution have every right to seek from the party that has inflicted the damage, whatever they have paid up to that point.

DATA ANALYSIS AND THE WORK RESULTS

This study, by its very nature, has focused on descriptive analysis. The most basic statistical analysis is descriptive analysis. Through this analysis we make the initial transformation of the data, in order to describe the basic characteristics such as: central tendency, distribution and densities. One of the most effective ways of presenting information, especially numerical ones, is to construct and present the data obtained through graphs. This, also because many people are confused by the appearance of numbers.

This study, by its very nature, is focused on descriptive analysis. Descriptive analyzes focus on measuring, estimating values, quantities, and distributing the characteristics of the variables taken into the study. Descriptive analysis is advisable to be used for processing data of measurements and observations performed in order to assess the manner and / or extent of reaction and / or dependence of an economic indicator, economic phenomenon, consumer behavior.

In the case when the afflicted damage, results in death, Article 489 of the Law has foreseen which are the people that can demand compensation for the damage. This disposition clearly states that: *“When the inflicted damage results in death, it is compensated the person which are affected be them minor or unable to work, which have been under the supervision of the deceased fully or partially and the people who have been under food care of the deceased”*. As we can see from this disposition, the condition under which minors or people unable to work is to be compensated is their status under the care of the deceased. While people who have been under food care from the decease, have right of compensation for the damage inflicted regardless if they have been or not under the supervision of the deceased.

In article 488 of the Law it is foreseen the accountability in case of medical injury of the person. In such cases the damages that might come as a result which are tied to medical expenses and such, loss or impact in the ability to work. Such are the damages that have to be compensated from the inflicting party. The compensation for the afflicting

damages, put in place as a result in reduction in the ability to work can be subject of change with the passing of the time, as requested by the affected party (Article 497)

When the inflicted damage it is done to a minor, the compensation of the damage is settled differently (Article 494,495). Firstly, it has to deal when the inflicted damage is done to a minor under the age of 18 and was not wounded in the moment of the inflicted damage. The compensation in this instance towards the minor will be comprised of the necessary medical treatment, payment for necessary prosthetics and furthermore expenses that are related to the injury of his health. When the affected minor is 16 years old, he has every right to seek compensation in regards to losing its ability to work for median wage of a unqualified worker.

Second case, is in regards to the injury of a minor above the age of 14, but not 18 years of age and that in the moment of inflicted damage has stable income from its employment. The person responsible for inflicting the damage is obliged to compensate in regards to his medical care but also damage inflicted due to loss of ability to work based on the income that the affected party had from its employment but still no less than the median income. When the minor is above 18 years of age, he has the right to seek compensation from the damage inflicted based on the median income of the category that he would be employed in before he was damaged.

5.1 Compensation of inflicted damage during the undoing of damage that is endangering socialist common wealth

The prioritization of governmental property over private property can be clearly seen in Article 483 of the Law, according to which: *“For the damage inflicted to a person, when he is undoing a possible damage towards socialist common wealth, the responsibility falls of the legal entity to which the wealth belongs to.”* The protection of socialist common wealth was an obligation for every citizen of the Republic at the time, but with this disposition they were trying to incentivize individuals more towards the idea of protecting what is **ours**.

5.2 Suing for compensation and its dispositions

With the illegal infliction of damage, the affected party is legitimized to sue for fair compensation towards the damage afflicted. The way to do this is foreseen in Article 500 of the aforementioned Law. This Law lays out in Article 77, the general rule that the right to sue is immediately conceived the moment that the damage can be foreseen, while the obligations that are executable with the request of the creditors begin once the monetary obligation is determined. Differently from this, the sue that follows afflicted damage is specially regulated from the aforementioned dispositions. Based on this the right to sue is conceived the moment that the affected party knew or had to know about the inflicted damage and about its author. So the deadline is coarsely related to the knowledge about the damage inflicted and its author because it is only at this point that the affected party can sue for compensation. Furthermore in Article 500/2 lays down that the case for compensation can be suspended except in the cases when the affected party, has presented a request for a pension from the authority until the day that this pension is granted or completely refused.

Concrete obligations are derived from legal facts being as such a specific factual source of obligations and the law being the root of them all. Studying on the obligations has been studied while keeping in mind the difference between contractual and non-contractual obligations. The ladder includes: 1.Obligations that come from inflicted damages. 2. Wide arrange of professions 3. Unasked payments 4.Unjustified wealth. But the focus of our study shall be the accountability that follows inflicting of damage.

When damage is inflicted, then the person responsible for it must be held accountable. Accountability can be seen from different perspectives. Firstly, from an internal point, where the person must be conscious about the actions that has taken and it has to do with a moral accountability. Secondly, its behavior must show resentment and ready to deal with a trial, in the case of criminal penalty but also in case of compensation towards the affected party. This last responsibility, can be distinguished through the source that it came from, a contractual responsibility in which the parties are responsible if the clauses of the contract have not been fulfilled and must be held responsible in the case of

a void contract, which in the case of the damage inflicted the author and affected party might not be connected by any contractual agreement. We can see further down what are the differentiations between them.

- **Differences of civil accountability in a contractual setting and civil accountability in a non-contractual setting**

Civil accountability is contractual when the afflicted damage results in a void contract. The debtor must compensate the damage inflicted which comes as a result from the conditions on the contract not being fulfilled. Case in point, if the goods that needed to be transported, have not been transported or have been shipped with a delay or have been damaged during the transport, the debtor is obliged to compensate for the damage inflicted. In this case we are dealing with a contractual accountability.

In this aspect, contractual damage does not only mean compensation of the damage inflicted, but also comes the implementation of the means for enforcing a contract, sole purpose of which is to oblige the contractual parties to fulfill their obligations as per sanctioned in the contract. Contractual damage presets one of the most used means for reassuring a contract.

Civil Accountability in a non-contractual setting exists when the damage inflicted is by a third party and there is no void contract. A pedestrian, injured in a car crash, will sue the driver for compensation regarding his injuries in the crash, this because there is no contractual agreement between the driver and the pedestrian.

CONCLUSIONS

From the analysis of the scientific work we have identified the immediate need that universities should change both in form and content in their work process

In practice, even though it rarely happens, there are cases when these two accountabilities cannot be distinguished from one another. For instance in the case of not fulfilling a purchase order contract, the debtor is referring for legal interpretation Article 913 of the Civil Code, where it is foreseen the term of a purchase order contract, also to Article 640 which has to do with compensation that derives from damage inflicted from a non-contractual setting.

In these cases the court has yet to take a verdict, which in my opinion is not fair, because you cannot accept the same compensation from a contractual and non-contractual setting. In another case between two parties there was a fulfillment order contract, and the suing party claimed inflicted damages from the non-fulfillment of the contract, and based their claims only in Article 608 and 640 which have nothing to do with contractual agreements but rather damage inflicted in non-contractual setting.

Even in this case the court has not ruled the legal premises of the case, but it has rather accepted it. Furthermore, from not fulfilling its monetary obligation on a rent contract, there is inflicted damage to the renter. Compensation regarding this damage he can seek it through the dispositions of the renting agreement, as a contractual damage and not as a non-contractual damage. Ruling nr.950, date 17.10.2000 Court of Appeal, Tirana.

In order not to bring more negative examples one after the other, I will recall a case from the Court of Tirana. As a result of non-fulfilled repair contract, the affected party sued in court. The case was based in Articles 608,609,618,640,644 and after putting all these dispositions in his claim they also add Article 850 which explains a “enterprise contractual agreement”. The court in its ruling, expressed that Article 608 was not implementable according to the Civil Code and due to the fact that we have a contract and the dispositions of inflicting of damage on a non-contractual bases are not implacable. (Ruling nr.606, date 17.06.1999 The Supreme Court)

Furthermore, in a ruling by the Supreme Court it expressed that it has recognized the existence of a contract between the two parties, but it recognizes the inflicted damage in a non-contractual damage based in Article 640 and 622 of the Civil Code.

The Supreme Court has turned back for due process to the court to re-establish if we are facing or not a non-contractual inflicted damage.(Ruling nr.675 date 24.02.2000). Nonetheless, we should be optimistic that in the near future clear cases of contractual responsibility should not be misinterpreted with dispositions of inflicted damage.

From the aforementioned cases, there is a thin line to differentiate these two accountabilities, which is not very clear which for some can be interpreted as contractual and for some non-contractual accountability. For this lets take an example:

A driver sees a person trying to catch a ride and accepts to take him along in his car. The person which is now travelling for free, suffers an injury in a car accident inflicted due to the fault of the driver. As such he sues the driver for wrongful injury. In this case some might think that this is a contractual accountability: one between the driver and the person which was injured there was a contractual agreement, even though with no terms. But others might think that there is no contractual agreement, be that without any rewards, but it is all in name of good faith between the two. As such, there is accountability that comes from inflicted injury and not from contractual accountability. As you can see it is not always clear to conclude with no doubt if we are dealing with a contractual damage that is inflicted from non-fulfillment of a contract or if we are dealing with inflicted damage from a non-contractual damage due to actions of a third party.

5.1 Civic accountability and penal accountability

It might happen that the same action can lead to penal accountability and civic accountability at the same time. As such these two accountabilities can co-exists with each other. But what is the difference between these two?

1. First and foremost, the differentiation between the two is derived from its purposes, objectives which are not the same in these two accountabilities. Penal accountability has in its core the protection of society against actions that can threaten public safety. Civic accountability has as its main role compensation of inflicted damages from a specific person, be that physical entity or legal entity.
2. The application of penal law and taking into criminal investigation can be only done by the prosecutor, except penal actions which can be raised from the damaged party. While compensation of civil damage is always requested by the affected itself, its representative and not from the prosecutor.
3. Penal accountability presumes that the author has acted in guilt (be that on purpose or not). Nonetheless in criminal law the author of the inflicted damage is presumed innocent until he is proven guilty or there is a executable court ruling. On the other side on civic accountability the principle of presuming guilty subsides. This means that the defendant has to prove that the damage was not inflicted by him or due to his actions.
4. The criminal law sets as crucial and lasting elements of criminal accountability the guilt of carrying out the criminal action. Civic accountability is an accountability with guilt but there are its cases when the law itself accepts accountability without the guilt of the person in question
5. In penal accountability, the accountability is always personal. The person who has committed a criminal violation will answer for it personally and will suffer its own sentence. There is penal accountability for actions taken by other people. While in civic right, except the general rules where every person answers for its own actions, there are also cases where a person can be charged with the accountability of a crime he has not committed personally. So, civic society can implemented even for damages inflicted by others
6. In the establishment of a criminal verdict the amount of guilt affects the amount of sentence conducted. While in civil right there exists the principle of reward and full compensation from amount of guilt of the author of the inflicted damage, which does not affect the set compensation. The person who has inflicted the damage, despite the guilt will obliged to compensate the damage in full

5.2 Conditions on which accountability arises from the infliction of damage

Our Civil Code foresees accountability that comes from the infliction of damage in illegal ways on Chapter 4 in Articles 608 and 647. With the arise of such accountability, the person which has inflicted the damage is obliged to compensate the person damaged by returning what has been damaged to its previous state. But the law has put some precursors, existence of which is more than necessary in order to make a person accountable. As such illegal inflicted damage, the connection of causation through action or inaction and the consequence that comes from that, including the guilt of the inflicting party are the conditions which compete in order to bring forth the civil accountability from the infliction of a damage. This chapter with see step by step each and every one of these conditions.

Damage

Civil accountability which ensues from the infliction of damage cannot be understood without understanding the damage. Due to the fact that its final purpose is the re-establishment of the damaged party in its previous state, before the infliction of the damage. Existence of the damage as a condition for the arise of accountability, is necessary for the studying of which opens a path towards correction and compensation. Furthermore we will try to explain exactly this.

Types of damages

Article 608/1 of the Civil Code states that: *“The person that through illegal means and in guilt inflicts damage to another person or to its wealth is obliged to compensate the inflicted damage.”* As such we have established what inflicted damage, which it can be is: 1. Inflicted damage to wealth or material and 2. Non-material inflicted damage. Let's take them one by one

Material damage (patrimonial)

With material damage we shall understand, damage by the result of which we are infringing a right, which has a market value, as such it can be compensated in monetary value. So this damage differentiates from one that can be inflicted physically on a person (through killing or injury). If we were to talk about inflicting damage on wealth, we would only talk about economic consequences of these damages such as: medical expenses, pharmaceutical expenses, inability to work etc.

Damages inflicted on wealth are multiple. Some would be the result of an injury or even destruction of property. They can be considered even as economical losses as a result of unfair competition.

Loss and non-achieved profit

Article 486 of Civil Code foresees the principle of full compensation of damages in case of non-executions of duties or responsibilities. Furthermore, in the case of arises in obligations due to damages inflicted on wealth, it is foreseen that the same principles as in Article 640/1 of the Civil Code which states: *“Damage inflicted on wealth shall be compensated based on the losses and the profits which have not been achieved”*

Through these means, infliction of damage through wealth can be seen in a double aspect: losses (*damnum emergens*) and profits not achieved (*lucrum cessans*).

With the term losses, we must see it as economical poverty, reduction of material goods and monetary (Thimio Kondi, Journal Justice, 1989,nr.3) caused from damaging actions such as: damaging of an object, destruction of property, expenses as a result of an accident, loss of a right etc.

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FIGHT AGAINST FINANCIAL-ECONOMIC CRIME AND ORGANIZED CRIME

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Abstract

Based on the framework of comprehensive reforms in the judiciary¹ and changes in the constitution recently in Albania, it is aiming at defining and remodelling the judiciary and the prosecution system, in order to put an end to the flourishing of corruption in the justice system and to cut off the links between crime and politics once and for all. It is established the Specialised Structure for Anti-Corruption and Organised Crime (SPAK), comprising the Special Prosecution Office (SPO) and the National Bureau of Investigation (NBI). According to the assessments of international institutions, Albania remains one of the countries with a high risk of money laundering. According to MONEYVAL², Albania has been included in the grey list, which shows a high risk of money laundering in the territory of the Republic of Albania. The institutions of the European Union during integration process have always asked Albania to do more in the fight against organized crime and corruption and especially in the fight against money laundering. In the past, in Albania has shown that politicians have been able to escape from the punishment for corruption by using the details, tactics and techniques of the judicial system, cooperating with corrupted judges, and threatening the independence of the judicial power.

Albanian Government in order to fight organized crime recently has approved a Normative Act³ which aim at fighting organised crime assets deriving from illegal activity. The article presents legal analysing on the addressing of legal and institutional measures of the government, to fight the assets deriving from organized crime, corruption, and terrorist acts. One of the legal and institutional initiatives has been called Law Enforcement Operation which was established to combat money laundering stemming from the commission of criminal activity in Albania. It is going to review weather this initiative is in line and harmony with the fundamental principles of the Rule of Law, the dominance of law and fundamental human rights and freedoms. Did it achieve the purpose for which the institution was founded? Is it still left to fight money laundering stemming from organized crime, corruption, or terrorist acts? These are the issues that the article is trying to constitutionally respond at.

Keywords: crime and corruption; money laundering; law enforcement operation; crime assets; rule of law.

Short history

In 1989 the G7 Summit established the Financial Action Task Force⁴ (FATF). The group's recommendations were signed by 26 countries and 2 international organizations, the Council of Europe, and the Persian Gulf Commission. In 1990 the Strasbourg Convention enters into force. There are established 40 recommendations which constitute international standards and have been subject to revisions in 1996 and 2003 and 9 more recommendations are added. In 1997 the MONEYVAL Committee was established pursuant to the Strasbourg Convention which covers the

¹ Balla, R., “Constitutional Reform, Criminal Justice Reform in the Prevention of Organized Crime and Corruption”, Publications of the International Scientific Conference at the Faculty of Law, Tirana University, 2017, p. 368.

² The Committee of Experts for the Evaluation of Anti-Money Laundering and Terrorist Financing Measures - MONEYVAL is a permanent monitoring body of the Council of Europe, is entrusted with the possible tasks of compliance with the standards of terrorism and its effectiveness is assigned to them with the task of making recommendations for data and requests regarding improvements to their system. Through a dynamic process of reciprocal activities, peer review and regular follow-up of its reports, MONEYVAL aims to enable capacity companies and national authorities to complete money laundering and terrorist financing more effectively. <https://www.coe.int/en/web/moneyval> (visited on 10.03.2022).

³ Based on the Albanian Constitution article 101 it is stipulated that: “The Council of Ministers, in case of need and urgency, under its responsibility, may issue normative acts that have the force of law, for taking temporary measures. These acts norms are immediately sent to the Assembly, which convenes within 5 days if it is not collected. These acts lose their force from the beginning, if not approved by Assembly within 45 days.” <https://www.parlament.al/Files/skuvendi/kushtetuta.pdf> (visited on 10.03.2022).

⁴ The FATF Recommendations set an international standard that countries must implement through measures tailored to their specific circumstances. The FATF standards contain their own Recommendations and Explanatory Reports. <http://www.fatf-gafi.org/publications/fatfrecommendations/documents/fatf-recommendations.html> (visited on 10.03.2022)

implementation of Money Laundering recommendations for Europe. Membership was initially signed by 27 European Union countries. In 2001, the Directorate for the Coordination of the Fight against Money Laundering and Financing of Terrorism was established in Albania. In 2005, the Directorate was named DPPP (Albanian FIU).

Introduction

An illicit capital needs to be laundered. Stating in a simple way, the fight against money laundering is intended to prevent the "certification" of illicit capital, or to make it more costly, to impede the illicit capital to be included at civil circulation or legal circulation capital. The lower the "expenditure" of illicit capital, the greater the cost of "laundering" it. And the lower their "cost", the higher the price criminals must pay to laundering the capital. But what is the price paid by criminals for "certifying" illegally accumulated capital? This price can be expressed in currency or at risk. In fact, if money laundering becomes more difficult, the one whom launders the money will demand a greater reward, on the other hand, the criminal will be more at risk of being detected or deceived.

The main objective of the Directorate for the Prevention of Money Laundering is therefore to make money laundering as costly as possible by reducing the creation of illegal capital and increasing the possibility of detecting crimes, as well as reducing to a minimum the money laundering committed through banks and supervised intermediaries, pushing all those who launder more and more money into the financial system.

This role is exercised through a financial intelligence activity. It can be easily understood that the fight against money laundering cannot be fought by monitoring one by one all financial operations. It is needed, as we said, to find an alarm system, which is set in motion by the entities that specifically perform those actions, or banks and financial intermediaries. These entities are in fact required to cooperate with the authorities, assessing the individual and financial actions of the clientele, and sounding the alarm whenever the requested actions raise suspicion because they are "abnormal", or not common to the activity that is expected to have a client in a certain territorial area, or economic.

The findings of the Council of Europe for Albania⁵, in the framework of the project "On strengthening capacities in the fight against organized crime in Southeast Europe", among other things, state: "The main threats to Albania are organized crime related to drugs, trafficking in human beings, economic crime and corruption". Economic crime in general and criminal groups in particular that commit crimes in the financial sphere have been and continue to be a serious threat to our country and national security. The financial capacities of these groups serve not only to consolidate and expand their further operations, but also to penetrate state structures in order to provide protection from these structures and to influence decision-making in the political aspect, legislative, executive, economic or in the field of justice. Even further, the capacity of these criminal groups, financial and technical, in some cases exceeds the capacity of Albanian law enforcement agencies. In these circumstances, the fight against economic crime, especially organized crime, poses a special challenge for law enforcement agencies in the country, especially in terms of tracking, police prosecution, but also much more complex investigations, which dictate the need to use a wider range of special investigative tools, closer co-operation between domestic and international institutions, sequestration and management of seized assets, witness protection and a more efficient judicial process.

In the Republic of Albania, the fight against money laundering has begun to be recognized, but also to be regulated by domestic legislation, only in the years of democracy, ie after the '90s. During the transition period, the rules for the fight against money laundering have been strengthened, and reformulated, but they are not reviewed throughout the way they are used, they are complete, of a general legal framework. Thus, most states have adopted 40 Recommendations of the Task Forces on Financial Action⁶ on Money Laundering and Terrorist Financing. These

⁵ Progress Report for Albania 2021 from European commission https://ec.europa.eu/neighbourhood-enlargement/albania-report-2021_en pg.38 (visited on 10.03.2022).

⁶ All FATF Recommendations which are 40 and 9 Special Recommendations on Terrorist Financing constitute a comprehensive package of measures for an effective legal and institutional regime against money laundering and terrorist financing. United Nations Security Council Resolution 1617 (2005) and the Action Plan of United Nations General Assembly Resolution 60/288 (20 September 2006), reinforce the importance of implementing these Recommendations. <https://www.unodc.org/unodc/en/money-laundering/Instruments-Standards.html> (visited on August 21st, 2017).

recommendations include the criminalization of Money Laundering and Terrorist Financing, the freezing and sequestration of terrorist financing, the prevention measures against Money Laundering and Terrorist Financing for financial institutions, intelligence units and international cooperation. But, according to MONEYVAL reports⁷ the targeted financial sanctions were not enforced, the application of the freeze of assets to all natural and legal persons was difficult.

Now, according to the latest legal amendments, reporting entities or institutions, as well as any person in the Republic of Albania, will temporarily freeze the funds or other assets of designated persons or entities, directly, as soon as they become aware of the notification. by the relevant structures of the Security Council, international organizations to which the Republic of Albania is a party, without being subject to the issuance of a temporary blocking order or the relevant decision of the Council of Ministers in accordance with legal provisions.

Prior drafting the Councils of Ministers Decision on the appointment of persons whose assets should be blocked, the Minister of Finance issues a temporary order⁸ to freeze assets and other properties for a period not exceeding 45 working days, if this may be the only way to prevent the circumvention of the implementation of the measures defined by law. Legal problems with the Order of the Minister of Finance are numerous therefore, there is now a general obligation of immediate freezing which enters into force immediately, regardless of the time of issuance of the decision by the Council of Ministers. These revised measures ensure the implementation of the freezing of funds or assets without delay.

Regarding the Order of the Minister of Finance are numerous legal issues, despite the fact that it is now a general obligation of immediate freezing which enters into force immediately, regardless of the time of issuance of the respective Decision by the Council of Ministers. These revised measures ensure the implementation of the freezing of funds or assets without delay.

Meantime, according to the above MONEYVAL report results that there is lack of mechanisms in place to identify and describe the processes for obtaining and registering information about the beneficial owner; lack of a comprehensive assessment of the associated ML/TF risks for all types of legal entities established in the country; lack of a requirement for legal entities to keep basic information and a register of shareholders or their members; The National Business Centre and the Tirana Judicial District Court are not responsible for the accuracy of the recorded data; lack of deadlines made at the request of NGOs to provide data on changes to previously submitted information, or to take reasonable steps to obtain and maintain accurate and up-to-date information for the Beneficiary Owner, while the current mechanism does not ensure that the information collected by reporting units implementing due diligence measures for the client ensures coverage of all legal entities in question; legal representatives of legal entities are not required to be residents of the country; NGOs are not required to have a person authorized to act as their representative and to provide information to the competent authorities; there is no requirement to retain the basic information and records of the Beneficiary Owners for at least 5 years after the date on which the company is dissolved or otherwise ceases to exist, the holders of the shares or the share guarantees of the holder are not prohibited and there are not measures in place to ensure that they are not misused for ML/TF; the range of sanctions that can be applied by the NBC and supervisory authorities is disproportionate and there are no sanctions imposed on associations, foundations and civil society centres that do not meet the requirements. The ability of the competent authorities to quickly ensure international co-operation on beneficial ownership information is hampered by the shortcomings identified and there is no mechanism for any formal assessment of the quality of assistance received from other countries by the Albanian authorities, other than the Police and the Anti-Money Laundering Directory.

⁷Referring to the Progress Report December 2019, MONEYVAL Committee On Fight against Money Laundering and Terrorist Financing in Albania <https://www.coe.int/en/web/moneyval> (visited on 10.03.2022).

⁸ Balla, R., "Combating Money Laundering and Terrorist Financing, Amendments to the Law on Prevention of Money Laundering, published by the European Institute, SEE I EU Cluster of Excellence in European and International Law, Verlag Alma Mater, Saarbrücken, Germany December 2018 pg.130-135.

Despite these identified deficiencies which facilitate the establishment of mechanisms for Money Laundering and Terrorist Financing, Albania has made efforts to combat money laundering⁹ and one of the recent legal and institutional initiatives has been called as Operation Force of Law. The Council of Ministers has approved the Normative¹⁰ Act no. 1, dated 31.01.2020 "On Preventive Measures in the Framework of Strengthening the Fight against Terrorism, Organized Crime, Serious Crimes and Consolidation of Public Order and Security". One of the justifications of the former Minister of Interior¹¹, has been that the judicial and legal path for the seizure of assets, or any other suspected property, such as property derived from criminal activity is very long. For this reason, based on the Strategy for the Fight Against Crime, this Normative Act has been drafted. Another initiative that should be welcomed in the fight against money laundering is the Law on Registration of Beneficiary Owners of all companies and non-profit organizations.

As mentioned above the purpose of this article is the analysis of the provisions provided by the above Normative Act, focusing on their compliance with the new amendments of Constitution¹² and international standards. So, the thesis we seek to address is finding the right legal way to fight the assets that result from committing illegal actions. Should it be legal, for example to apply the principles of the rule of law, where the rule of law should prevail.

Striking the financing of terrorism

One of the aspects that would make the fight against terrorism effective is the striking on terrorist financing. In many cases there is State-sponsored international terrorism. The financing of terrorist acts is done in various ways. Thus a state can equip, train, direct and provide facilities for terrorist activity. Terrorist organizations may have sources of funding, armaments, training, and logistics from different countries. In order to strike on and prevent the financing of terrorism, many efforts have been made to raise the fight against the phenomena of terrorism to the level of international acts. One of these acts is the International Convention for the Suppression of the Financing of Terrorism (New York: 1999). This Convention provided for the punishment of securing of unlawful and voluntary accumulation of funds or financial means, directly or indirectly. Whether such acts were committed with intent to use them, or knowing that they would be used, to commit violations foreseen by the Convention, or of an act intentionally causing death or serious bodily harm to a civilian or other person, to intimidate a population, or to coerce a government or international organization.

The obligations of the States Parties members to this Convention are: To take the necessary measures, in accordance with domestic legal principles, to dictate, and to freeze, seize or confiscate funds which are used or intended to be used for the purposes of the offenses set forth in the Convention. Establish jurisdiction over anticipated violations. Punish these violations. Arrest the perpetrators, prosecute or extradite them. Collaborate on preventive and countermeasures to exchange information and evidence necessary for criminal prosecution.

The September 11th attacks have sparked a new interest at international treaties to strengthen law and order against terrorism, everywhere in the world, especially in the United States. These international acts, in order to be effective, must define terrorism, specifically, in all cases, and rely on the application of domestic law.

The European Union has also taken numerous measures against the financing of terrorism. Removing barriers across Europe has not only helped legitimate businesses but has also provided increased opportunities for financial crime and money laundering. The enlargement of the European Union and the introduction of the new access of the States means

⁹ Based on some yearly Progress reports of the European Commission for the Efficiency of Justice which was established on 18 September 2002 by Resolution Res (2002) 12 of the Committee of Ministers of the Council of Europe. https://www.coe.int/t/dghl/cooperation/cepej/presentation/cepej_en.asp. The author has been the representative of the Republic of Albania from the years 2006-2010 at CEPEJ.

¹⁰ The Normative Act was published in the Official Journal no. 127 of 2020. <https://qbz.gov.al/alfresco/api/-default-/public/alfresco/versions/1/nodes/>. (visited on 10.03.2022).

¹¹ The ministry of interior was the ministry that proposed and exercised the legislative initiative for this Normative Act based on the Press Release of the ministry as per local media.

¹² New Constitutional Amendments approved by law no. 76/2016, dated 22.07.2016, published in the Official Journal no. 138 July 2016, they were consisting on the judicial reform.

that international financial crime is taking on great proportions in the global economy¹³. Stopping money against terrorists is one of the priorities of the European Counter-Terrorism Strategy. Within this context money laundering poses another challenge. The European Money Laundering Directive provided for the extension of the obligation to notify suspicious transactions, in relation to non-financial professions and other sectors, in the money laundering process. The new rules will also cover professions not defined in U.S. anti-money laundering legislation, such as economists, auditors, and lawyers. An international body in the fight against money laundering and terrorist financing is also the Financial Action Task Force (FATF), in which the European Commission also plays an important role. The FATF has set out recommendations that should be considered as international standards in the fight against terrorist financing. One of the things that cannot be imagined when we are thinking about terrorism and terrorist financing is counterfeiting of goods. It should be taken into consideration that a wide range of terrorist organizations are taking advantage of the counterfeit production of goods. Counterfeiting includes compact discs, clothes or cosmetics, certain types of medicines, baby food, car spare parts, and even airplanes. Terrorists are using the internet as a tool to command and control their actions. At the same time, they are using the Internet as a propaganda tool to spread their message and put pressure on governments.

In this light, another Convention that aims to expand the European Community's efforts in the fight against terrorism is the Convention on the Laundering, Search, Seizure and Confiscation of the Proceeds of Crime and the Financing of Terrorism.

Operation Force of Law

As we pointed out above, in the framework of justice reforms, but also based on international reports and legal acts, the fight against assets stemming from illegal activities is presented to Albanian institutions for immediate solutions. One of the factors that makes the world of organized crime powerful is precisely its economic advantage. The economic empowerment of criminal organizations gives them almighty. This is exactly what the Albanian government has aimed to fight money laundering mechanisms and weaken as much as possible the economic power of criminal organizations, in order to be concluded with the effectiveness of the fight against organized crime and terrorist financing.

According to the Constitution, Article 101 defines the competence of the Council of Ministers to issue Normative Acts that will have the same force as the one of laws. But this competence is conditioned by two factors the necessity and emergency. Also, one of the characteristics of the Normative Act is their temporary¹⁴ character. Are these conditions met to address the issue of Money Laundering in Albania? We can say that after the period of totalitarianism the issue of money laundering has always been part of being addressed by National Strategies¹⁵ in the fight against organized crime. So, the need for the fight against money laundering is true and real, but we cannot qualify it as an emergency issue. Money laundering and terrorist financing are issues that need to be addressed in a consistent and permanent manner through laws that enable the implementation of effective legal or institutional measures against Money Laundering. The Normative Act sets out temporary measures, but this does not strengthen the fight against Money Laundering, as stable structures are needed to be continuously trained to properly address this fight.

The purpose of the Normative Act is the emergency and temporary intervention in the conditions of the need to strengthen and intensify the fight against organized crime with the aim of consolidating security in the country. In fact, security consolidation in the country cannot be achieved with temporary measures, only for one year, as it is foreseen at the Normative Act.

13 Directive 2001/97/EC of the European Parliament and of the Council of 4 December 2001 amending Council Directive 91/308/EEC on prevention of the use of the financial system for the purpose of money laundering - Commission Declaration.
<https://op.europa.eu/en/publication-detail/-/publication/57ce32a4-2d5b-48f6-adb0-c1c4c7f7a192#:~:text=0-.Directive%202001%2F97%2FECE%20of%20the%20European%20Parliament%20and%20of,of%20money%20laundering%20%2D%20Commission%20Declaration> (visited on 10.03.2022).

¹⁴ Omari, L., Anastasi A., Constitutional Law, published by ABC, Tirana 2008, p. 35-200.

¹⁵ Omari, L., Principles and Institutions of State Law, published by "Pegi" Tirana, 2005, p. 45-100.

According to Article 3 of the Normative Act, it is determined that the provisions of this normative act apply to the category of subjects of this Act and only for the time and conditions provided in it. But how can we fight money laundering only for a certain amount of time. Will the fight against money laundering continue afterwards? Also, according to point 2 of article 3, it is determined that preventive measures will not be imposed on assets that before the entry into force of this act are in the process of judicial proceedings or for which it has been disposed by a court decision. So, we find that the scope of application of the Normative Act is unclear. What would be the category of subject by this Normative Act?

Referring to the subjects of the Normative Act, we find that according to this act are defined the category of persons whom until the moment of entry into force have been convicted by a final criminal decision inside or outside Albania. Such definition violates the principles of legal certainty and rule of law¹⁶. How can an individual whom has been tried by a final court decision and convicted according to that decision be again subject to this Normative Act, so to be subject again to the coercive measures of the property regime, which in themselves constitute a coercive measure of a punitive character. We think that through this provision the constitutional principle "No one can be tried twice for the same criminal offense" is violated. This principle¹⁷ is already sanctioned under the Criminal Procedure Code¹⁸, as one of the fundamental human rights and freedoms. The government claims that court decisions are inaccurate, as courts have not administered or ruled over the assets of criminal organizations, but still there is a legal way to review or amend that court decisions and that reason do not justify violation of the constitution as the highest act of the hierarchy of legal acts.

Furthermore, according to point 2 of article 5 of the Normative Act, the persons under investigation are defined as the subject of this legal act. How can the assets of the persons under investigation be administered as long as the court has not ruled on the assets whether they are legal or not. So, the institution operation force of law will judge on the assets of persons under investigation. Based on the constitution only the court has the discretion to determine by decision, whether a certain property is illegal property or not. According to the Constitution, "no one can be deprived of his property without a final court decision." Based on this Normative Act the established institution is an administrative body not foreseen by the constitution it has no rights over the property or other human rights.

Regarding point 3 of article 5 of the Normative Act, the category of persons in this point is for persons against whom the procedure of announcement has started or there are suspicions for involvement, in any form of terrorism and its financing, according to the provision of the legislation on measures against terrorism. For foreigners declared by the UN Security Council as designated or suspected persons, there is an international procedure approved and accepted by the Albanian state, through which all financial institutions are required to freeze or sequester the assets of these persons. From the point of view of unification and harmonization¹⁹ of legislation we cannot draft such a provision, aiming to regulate the same thing that has been regulated by a ratified international act that stands higher in the hierarchy of acts than this Normative Act, as this regulation that we intend to draft would be absolutely null. So, it cannot be ruled or judged over the properties of these foreign persons, but as well as to those who are declared according to the national legislation in force, as currently there is a certain procedure in force on how to operate in these cases by Albanian financial institutions. Such provisions of this Normative Act not only confuse the employees of their enforcement institutions, as well as the employees of criminal proceedings but in the same time employees of financial institutions, creating anarchy and disorder in different legal provisions for the same category of persons and their properties.

Regarding the definitions given in article 6 of the Normative Act, we find that the terms "Confiscation", "Property", "Element of fact", etc. are used, which are defined by other legal acts. Referring to the terms "confiscation", and "Element of fact", we have to mention that these terms are already regulated by the Code of Criminal Procedure and even the term "Element fact" makes a very vague definition of the term "fact" made by Code of Criminal Procedure

¹⁶ See above.

¹⁷ Balla, R., "Improving the Code of Criminal Procedure for the Protection of Witnesses of Justice", published in the European Journal of Interdisciplinary Studies, International Conference at Cambridge University, volume 6, issue 2, p. 88, 2020.

¹⁸ Amendments to the Code of Criminal Procedure published in the Official Journal, May 2017.

¹⁹ Based on the Law Drafting Manual - A guide to law drafting in Albania, published by the European Union, Ministry of Justice and EURALIUS, Tirana 2010, p. 22.

which is legal act adopted by a qualified majority of votes by Parliament and obtained a special rank at the hierarchy of acts. According to Kelzen's pyramid of legal acts, an act that is ranked at a secondary position at the hierarchy of acts cannot regulate otherwise than that provided for in an act that it is ranked at a higher position at the hierarchy of acts, otherwise it will be null and cannot bring any legal consequences. The same analyse applies to the term "property" which is regulated by the Civil Code. Thus, the definitions given by the Normative Act should simply refer to the respective Codes and not try to give different definitions, as they contradict the provisions of the Codes and do not serve the unification and harmonization of Albanian legislation. The seizure of assets in this way as it is stipulated by the Normative Act also violates the provisions of Articles 6 and 8 of the European Convention on Human Rights.

Article 10 of the Normative Act defines the personal preventive measures taken by the authorities of the justice system by defining regulations, procedures and deadlines which are different from those regulated by the Code of Criminal Procedure. The title itself provides for undefined declarative terms to whom they refer by "justice system authorities". Precisely for this reason this article is not in accordance with the Code of Criminal Procedure and the Constitution itself. Legal provisions²⁰ should represent a normative, regulatory character and not declarative terms that constitute a cause for different interpretations.

Article 11 of the Normative Act defines the preventive measures in cases of emergency or need and urgency, these cases are regulated and clearly defined by Code of Criminal Procedure. The provision of point 1 of this article stipulates that the General Director of the State Police may impose personal preventive measures, which have to do with the restriction of personal freedom. An unforeseen discretion by the Code of Criminal Procedure which determines that in cases of emergency or flagrante delicto it is the prosecutor who orders the taking of the security measure which must then be assessed by the court and by the end to be implemented by police. Because, in accordance with the Constitution, the restriction of fundamental human rights and freedoms can be done by anyone but a final court decision.

Article 16 of the Normative Act defines once again the subjects of this act, as they were initially defined at Article 5 thereof. The provision of this article expands the circle of persons and assets to which the foreseen measures will be applied. Thus, the assets of relatives such as spouses, children, etc up to sisters and brothers for whom the false registration is presumed will be seized. We think that this provision is an excess of competencies and conflicts with the Constitution and then with Code of Criminal Procedure, etc. It even contradicts the Normative Act itself since the circle of persons to whom this act will be applied is defined in its article 5. Article 21 further defines the rights of other persons. So, again we have entities to which this normative act is applied, confusing all the implementers of this normative act.

Article 22 of the Normative Act determines that the sequestration measure provided by this act will prevail above the sequestration measures provided by the criminal legislation, the legislation for prevention of organized crime and trafficking through preventive measures against property, or the legislation for measures against financing of terrorism and in this case these measures will take precedence. Can such a measure prevail over a measure ordered by the Court? The order of prevalence over various acts is regulated by the Constitution. Therefore, the sequestration measures taken pursuant to this act may not prevail over the sequestration measures ordered by the court.

Referring to article 23 of the Normative Act, are determined by merging measures of a procedural nature that are in contrary to the provisions of Code of Criminal Procedures. Also, Article 24 defines the time of the trial, according to Article 27 it is determined that these cases, according to this act will be reviewed with priority by the responsible authorities leaving it undefined which are these authorities. So, in other words in these articles it is intended to determine procedural deadlines that are related to the time of the trial different from those provided by Code of Criminal Procedures. Regarding the above, these provisions contradict the provisions of Code of Criminal Procedures.

²⁰ Balla, R., Some recommendations on the drafting of normative acts in order to harmonize and unify legislation, published in the scientific journal "Parliamentary Law and Legal Policies", 2005, no. 25, f. 28-43.

Article 28 determines some exceptions to the participation of the subjects of this act in having licenses or permits or benefits from public funds, while we think that these provisions should have been made in the special laws that are in force for these processes.

Moreover, transparency on the actions of this structure has been lacking. We do not have official information and data on the assets that were seized in order to judge the effectiveness of the creation of this special structure. However, the need for legal regulation should be focused on drafting and adopting appropriate legal provisions that will regulate the fight against money laundering mechanisms in a sustainable and continuous manner in Albania.

According to the yearly Progress Report for Albania for 2021 it is stipulated that: “notable progress was made in the fight against organised crime²¹, including through cooperation with EU Members States, and through the implementation of the action plan to address the FATF recommendations. The implementation of the package of temporary preventive measures to enhance Albania’s capacity to counter criminal organisations (Operation Force of Law continued throughout the year. In 2020, this resulted in 181 police operations involving 802 suspects (of whom 630 were arrested/detained, 82 wanted and 85 investigated at large). 35 criminal groups were dismantled (an increase of 46% compared to 2019), 125 members of criminal groups were arrested and almost 15 million EUR worth of assets and bank accounts were seized. The Special Prosecution Office (SPO) initiated 200 criminal proceedings – 42 for organised crime and 158 for corruption – in 2020. During the same period, 39 criminal procedures for corruption and 16 procedures for organised crime were sent to trial”.

Conclusion

In these conditions, we can conclude that Albanian institutions should make more efforts to fight against money laundering and terrorist financing, but the fight must be fully in compliance with the Constitution. So, as it is mentioned above it is appreciated the initiative and the good will of the government on fighting the money laundering, but legal measures must be drafted by providing legal provisions in full compliance with the rule of law. Albania aspires to join European structures and should definitely consolidate the rule of law, where everything should be regulated by law and aimed at their implementation. The rule of law in Albania must prevail. The provisions made in the Normative Act are more like declarative definitions of a national strategy, rather than legal provisions of a normative and regulatory character, such as the character of a legal norm. The rule of law means the establishment of appropriate legal and institutional mechanisms, in full compliance with the Constitution, to combat money laundering mechanisms and not only, but against all illegal actions.

These suggestions will improve the measures against money laundering, but this fight must continue even more fiercely and effectively in addressing properly according to the law and the principles of the rule of law. Thus, we can conclude that based on the constitutional changes and the legal package in its implementation, every Albanian citizen is hopeful that justice reform will lead the country forward, towards integration into the European Union.

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Impact of COVID-19 Pandemic on the Economy of North Macedonia

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Abstract

The COVID-19 pandemic appeared in a sudden, rapid way leaving great consequences. At that time, COVID-19 as an unstudied, globally unknown coronavirus, created panic among the authorities and the general population. Never imagining that this global pandemic would be the cause of the loss of over 5 million people, this pandemic also left consequences on the global economy by becoming an "economic pandemic". This so-called "economic pandemic" also affected the economy of the Republic of North Macedonia, the consequences of which are explained in this paper. The paper aims at the horizontal comparative analysis of the most important economic indicators, such as Gross Domestic Product, economic growth, unemployment rate, inflation, in the period before and during the shock of the pandemic wave.

Declining GDP, low economic growth, rising unemployment, decreased number of tourists, and the closure of many businesses were key features that characterized the North Macedonian economy during the onset of the pandemic. Inflation as an important macroeconomic indicator was affected in the next period, i.e. inflation began to increase in early 2021, marking unfavorable rates at the end of this year and the beginning of 2022. During this period of almost two years, the government of R.N.M affected and intervened to mitigate the effects of the pandemic through six sets of economic measures with a total of 106 measures, which were created in order to preserve jobs, preserve liquidity and recover the economy as a whole, measures which were dedicated to the affected sectors, both businesses, and citizens.

Keywords: Pandemic, Economic Growth, Unemployment, Inflation, Economic packs

Introduction

This paper focuses on the data of the national economy and the main macroeconomic indicators of the Republic of North Macedonia before the onset of the global pandemic COVID-19 (ten-year period 2010-2019) and during the pandemic 2020-2021.

As we know the massive spread of the virus unknown to the population at that time, led the World Health Organization (WHO) on March 11, 2020, to characterize COVID-19 as a pandemic, showing over 3 million cases and 207.973 deaths in 213 countries and territories (Pak et al., 2020 as cited in World Health Organization, 2020). In the following period, despite the loss of lives and uncontrolled spread of the disease, worldwide the whole global economy was hit, which resulted in shrinking aggregate supply and demand, job losses, deteriorating financial and stock markets, a general increase in the prices of goods and services (Kanitkar & Ramakumar, 2020). Analyzing the economic consequences of this pandemic, through this paper in the first part we will analyze the most important economic indicators of R.N.M in the period before the occurrence of the pandemic.

The second part will analyze the direct impact of the pandemic on the state economy, as we will see below. The third and final part will briefly describe the protection mechanisms and interventions by the Government of the Republic of Northern Macedonia to mitigate the consequences of the pandemic in the economy, financial sets dedicated to certain categories, and the efforts for faster recovery of the economy and start of economic stabilization of the country.

1. The Economy of North Macedonia Before the Pandemic

The Republic of North Macedonia as a country has been characterized by an economic growth of about 2-3% on an annual basis, excluding the period 1991-1995. As we will present the graph of economic growth of the Republic of North Macedonia in the period 2010-2019, we see that economic growth varies from 3.4% in 2010 and maintaining a constant growth of 2-3% with an upward trend in 2019. The exception is the period of 2012 when

the economy of Northern Macedonia marked a decline (entered a phase of recession) of -0.5% (State Statistical Office, 2021).

Comparing the data on the Gross Domestic Product in the period 2010-2019 (see Table 1) we can see a constant increase of the GDP of the Republic of North Macedonia from 437.296 million MKD in 2010 to 689.425 million MKD in 2019, in other words, we have an increase of 57.65% of GDP for the period of 10 years. From the following table, we can conclude that the largest part of GDP takes final consumption which varies from 93.8% share in GDP in 2010 to 79.7% share in GDP in 2019. Here we can highlight the decrease in the share of final consumption in total GDP of 14.1%. Also, we see an increase of gross investments as part of the GDP by 122.56%, as well as the increase of exports in the amount of 255.486 million MKD for the 10 year period. During the period 2010-2019, on an annual basis, we have a continuous decrease in the unemployment rate of the active working population in North Macedonia from 32.1% in 2010 to 17.3% in 2019 (see figure no.2).

2. The Economy of North Macedonia During the Pandemic

With the declaration of the global pandemic by the World Health Organization on 11.03.2020, each country began to prepare its own measures against the protection and reduction of the spread of the coronavirus COVID-19. The Republic of North Macedonia on 18.03.2020 announced a state of emergency- the cause of preventing the spread of the unknown virus, although the total number of cases of infection was only 35 persons¹.

2.1 Economic Growth During the Pandemic

The pandemic negatively affected the economy of North Macedonia, which at first glance recovery seems fast, but the consequences continue today, which will be presented in the following chapters. The stable trend of continued economic growth is clearly seen from 2019 with a significant increase of 6% in the second quarter of 2019 (see figure 3).

At the beginning of 2020, i.e. in the first quarter, a period which coincides with the beginning of the global pandemic, the effect of slowing economic growth is seen, in other words, the economy is already beginning to enter a recession. The biggest recession and the biggest impact of the pandemic due to the increase in the number of infections globally and nationally, the closure of borders, the reduction of aggregate demand and supply, the quarantines proposed by the government occurred in the second quarter of 2020, where the recession marked a negative two-digit number, respectively -16.4%. This drastic decrease comes as a result of the decrease of Gross Domestic Product during this beginning of the year, respectively from 159.090 million MKD during the first quarter to 141.610 million MKD in the second quarter of 2020.

As shown on the table 2, which also serves us in the analysis of economic growth, we see that the decrease in Gross Domestic Product in the second quarter of 2020 comes as a result of a decrease in gross investment by 53.54% and a decrease in a significant measure of export by 22.55% but also of import by 25.07%.

2.2 Unemployment

The literature recognizes the complex interrelationship between employment and overall health and well-being (Antipova, 2021, as cited in Wilkinson et al., 2020).). Negative COVID-19 impacts on the urban economy include loss of citizens' income, while movement restrictions and 'stay home' measures adversely impacted tourism and hospitality and small- and medium-sized businesses due to the closure of markets, food outlets, and social spaces². COVID-19 caused a decline in consumer demand in all industrial sectors resulting in economic recession and mass unemployment where not only part-time workers but also full-time professionals lost their jobs (Patterson, Westfall, et al. , 2020)³. This newly established "rule" which in the following period became a practice in all countries, including the USA, China, Japan, European Union countries, was transferred to North Macedonia where there was a decrease in the number of employees for a short-term period as a result of aggregate demand contraction.

As can be seen in the figure 4, the downward trend of the unemployment rate continues in 2019, but at the beginning of 2020 the change of the unemployment curve begins, i.e. in the first quarter of 2020 the unemployment rate was 16.2%, increasing to 16.7% in the second quarter, due to job cuts, temporary closure of some industries,

as well as declining aggregate demand and supply. After this peak of the high number of unemployed, in the third quarter of 2020, we have improved, respectively reduction of the unemployment rate and return of the trend to normal. This trend still continues today, where the Republic of North Macedonia marks a record decrease in the unemployment rate of 15.7% during the third quarter of 2021.

2.3 Inflation

Inflation as an important indicator of financial stability reflects the strength of the domestic currency and serves as a signal for the general rise in prices; it is worth analyzing its volatility during the pandemic period, the effects, and long-term trend of rising inflation because of COVID- 19. As the most important indicator of inflation, we have the Consumer Price Index (CPI), which examines the weighted average of prices of a basket of consumer goods and services consumed by a typical household over a period of time. According to data from the State Statistical Office⁴, the Consumer Price Index in December 2021, compared to the previous month is 100.4, while the retail price index is 100.9. The consumer price index in 2021, compared to 2020, has increased by 3.2%, while the retail price index is 4.3%. The movement of the consumer price index - living expenses in 2021 has been different for different consumer groups. An increase in indices was recorded in the groups: Transport by 9.9%, Restaurants and hotels by 5.9%, Alcoholic beverages, tobacco and narcotics by 3.8%, Food and non-alcoholic beverages by 3.1%, Health by 2.9%, Housing, water, electricity, gas and other fuels and Recreation and culture by 2.7%, Miscellaneous goods and services by 1.4%, Furniture, household and household maintenance by 1.0%, Clothing, and footwear by 0.2%. As shown in the figure 5, the percentages of increase /decrease of living expenses during 2021, are presented in monthly periods compared to the same period in 2020.

From the figure 5, we find that despite the increase of 4.87% for a period of one year (December 2020 / December 2021) we have an increase in expenditures even in special categories. Regarding this, we have the largest increase in consumer spending in the Transport sector with an increase of 16.77% in December 2021, followed by the category Food and non-alcoholic beverages with an increase of 6.87%. We record reductions in living expenses only in the category of Communications. Analyzing the phenomenon of rising prices, i.e. rising living costs, we see that the pandemic after a longer period from the beginning brought its effect and affected the rise in prices leading to rising inflation in the Republic of North Macedonia. This increase in the general price level came as a result of rising food prices (bread and corn, meat, milk, and dairy products). Additional contributions were also to the increase in the prices of oil derivate (according to the increasing movements in the price of crude oil on world stock exchanges) as well as the prices of catering services. On the other hand, the biggest negative contribution was given by the reduction of air transport prices as well as the reduction of fruit prices. According to National Bank of the Republic of North Macedonia projections, the inflation rate for 2022 is expected to be 2.4%, respectively with a downward trend from 2021 (NBRM, 2021).

2.4 Hospitality and Tourism

As the sector which was most affected and hit by the pandemic, indisputably it is tourism and hospitality. As a result of the increase in the number of infections and the closure of state borders, the hotel and tourism sector also suffered a drastic decline. The number of tourists in the country in recent years has marked a continuous increase, so if in 2010 the number of tourists was 586.241, in 2018 it increased to 1.126.935 which marks an increase of 92%. As for domestic tourists, their number in 2010 was 324,545 and in 2018 it was 419.590 (Dzambazovski & Metodijeski, 2020)⁵. As shown in the figure 6, at the beginning of 2020, following the constant increase in the number of tourists from 2019, we see the usual number of both domestic and foreign tourists for that time period (January-February). In the next month, respectively the announcement and the start of the pandemic, we have drastic reductions of domestic and foreign tourists, respectively from 47.288 tourists in February, the number dropped to 17.943 tourists in March, deteriorating the situation in April to only 741 tourists within a month. The next period is also characterized by a small number of tourists, but with an increasing tendency, where in July and August the situation with the lack of tourists stabilized. This increase in tourists in these two months came as a result of the increase in domestic tourists, while the number of foreign tourists marks a symbolic number, given the restrictive measures at the entrance and exit of state borders set by different countries, but also North Macedonia. This is confirmed with the decreased number of passengers in air transport,

where according to the data of the State Statistical Office in 2019 at the airports of North Macedonia there was an annual turnover of 2.666.774 passengers, while in 2020 this number was reduced to 781.327 passengers or 70.70% reduction. In 2021 we have an improvement of the situation, an increase in the number of passengers by 77.70% compared to 2020 or in absolute numbers 1.388.384 passengers.

3. Government Intervention and Influence in Managing the Economic Consequences of the COVID-19 Pandemic

With the declaration of the state of emergency and the declaration of the global pandemic, the Government of the Republic of North Macedonia was also preparing for a possible scenario of deterioration of the situation in the country, causing consequences on human health (disease, loss of life) but also affecting in the deteriorating economic situation in the country. In the period from 18.03.2020 to 22.06.2020, the President of the RNM took 5 decisions to establish the existence of a state of emergency. The activities of the Government of the Republic of North Macedonia in this period resulted in the adoption of 250 Decrees with legal force. The Government of the Republic of North Macedonia, since the beginning of the pandemic, has implemented six sets of economic measures to mitigate the negative effects of the corona crisis (Session of the Government of the Republic of Northern Macedonia, 2020).

3.1 Economic Sets of Measures

The first set of measures was introduced on March 18, 2020, as the first and expressed reaction of the Government to the new situation and aimed at mitigating the impact of the health crisis on the economy. The set consisted of intervention measures such as:

- Exemption from the payment of monthly fees for personal tax and profit tax for a certain period of time
- Abolition of customs duties for certain reasons and reduction of legal interest and penalty interest
- Realization of interest-free loans in the amount of 5.5 million euros through the Development Bank for the protection of liquidity of micro, small and medium companies
- Reduction of the basic interest rate of the National Bank to the level of 1.75%.

The second set of economic measures was approved on 31.03.2020 and consisted of concrete measures that had a direct impact on the real economy and direct assistance to every family and individual. 332.9 million euros have been allocated from this package and the measures that are included are:

- The possibility to postpone and restructure the payment of loans to enterprises and citizens for a period of 3 to 6 months.
- Approval of the suspension of the law of execution, prohibition of opening bankruptcy proceedings, exemption from rent payment for users of social housing
- Support for employers for the protection of jobs in the amount of 14.500 MKD (at the level of the minimum wage) for employees for the payment of salaries for April, May, and June, for companies and individual traders who have had income reductions of at least 30% (32nd session of the Government of Republic of North Macedonia, 2020).

The third set of economic measures, published on 17.05.2020, aimed at revitalizing the local economy through direct support of citizens and the economy (54th session of the Government of Republic of North Macedonia, 2020). A total of 229.3 million euros were allocated for the third package, which included:

- Issuance of payment cards, in the amount of 9.000 MKD for all unemployed persons, in the amount of 3.000 MKD for young people and employees with a net monthly salary of less than 15.000 MKD.
- Private sector support for new markets, competition, and modernization where 20 million euros have been implemented to support 400 companies;
- Vouchers for local tourism in the amount of 6.000 MKD for workers with a net monthly salary below 15.000 MKD - a total of 16 million euros have been executed;
- Payment cards for subsidizing 50% of green oil for farmers, - a total of 4.6 million euros have been executed;
- Bonuses for doctors and medical staff of infectious disease clinics and departments - 890 thousand euros for 4.260 doctors and medical staff;

- Unemployment compensation for persons who have lost their job due to COVID-19- 2.5 million euros for 3.123 persons.

The fourth set of measures was approved on 27.09.2020 as direct aid to the economic and social security of citizens, as well as to promote private consumption as a stimulator of social welfare. A total of 472.1 million euros have been allocated for the fourth package.

The most important measures of this package are:

- Deferment of the payment of profit tax and personal income tax payments until March 2021 for companies and businesses that have a decrease in income of more than 40%;
- Reduction of VAT rate for catering services and food and beverage service to 10%;
- Reduction of import duties for raw materials;
- Weekend without VAT, reduction of budget revenues or VAT refund, for which 17 million euros were spent (6th session of the Government of Republic of North Macedonia, 2020)

The fifth set contains a total of 29 measures, worth 9.7 billion MKD or about 160 million euros, and includes the following measures:

- Financial support of wages for workers for the months of February and March 2021, 1.9 billion MKD with the inclusion of about 60.000 workers per month.
- Interest-free loans for enterprises in the fields of tourism, handicrafts, hospitality, transport, industry for organizing events, private health institutions, etc.
- Financial support for 120 broadcasters in the amount of 50 million MKD for 2021.
- Financial support for registered craftsmen for 2021.
- Financial support for citizens by extending the measure for the payment of personal income tax until June 30, 2021.
- Financial support for international carriers (45th session of the Government of Republic of North Macedonia, 2021)

The sixth set of economic measures worth 17.8 million euros aims to support activities that were completely closed to prevent the spread of coronavirus and included:

- Support of all gastronomic facilities with coverage of 30% of revenues
- Support with 2.5 million euros for restaurants for weddings, event industry, playgrounds, nightclubs, private resorts for children, fitness gyms, photographers, and photo studios.
- Support with almost 1.4 million euros for categorized travel agencies.
- Financial support of 30.750 MKD for all musicians, members of musicians associations and licensed tour guides,
- 50.000 free PCR tests were provided for foreign tourists staying in the country (66th session of the Government of Republic of North Macedonia, 2021).

Conclusion

As can be seen in this paper, prior to the outbreak of the pandemic, the economy of North Macedonia was characterized by stable economic growth with an upward trend. But the impact of the pandemic caused this trend to break away and the positive flow of movement of important macroeconomic indicators to slow down. The pandemic brought its effects, one of which was the increase in the number of unemployed, but thankfully this increase stabilized in a very short period, compared to other countries which still have high unemployment rates. The decline in Gross Domestic Product, coupled with the slowdown in economic growth were also negative consequences of the global pandemic.

One of the problems brought by the pandemic in the long run, which is present even today, indisputably is the increase in the general level of prices and the increase in living expenses. Now, in the first months of 2022, the consequences of the pandemic are seen even more, where product prices are constantly increasing, while the NBRNM projects during 2022 a reduction of the inflation rate of 2.4%.

One of the hardest hit sectors was hospitality and gastronomy, which is seen with the decrease in the number of tourists during 2020, with an increasing tendency in 2021, and with hope for normality in 2022.

Seeing indications for the end of this pandemic which changed many things in the life and the way of living of the citizens, as a country aiming at Euro-Atlantic aspirations we hope in the trend of economic growth, job

creation, an increase of local productivity, namely an increase in exports and of course an increase in the standard of living and well-being of the population.

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Tables

Table 1. Gross Domestic Product- calculated by the expenditures approach-
annual period (from quarterly GDP data) * current prices (mil. MKD)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gross Domestic Product	437296	464186	466703	501891	527631	558954	594795	618106	660878	689425
Final consumption	410328	427192	431883	447970	458601	479688	489803	504206	529602	549419
Household expenditure	330344	343080	344852	360115	368311	384798	398026	411981	435205	452653
Government expenditure	79984	84112	87031	87855	90290	94890	91777	92225	94398	96766
Gross investments	106999	124926	135003	144584	159847	169942	193366	199481	213654	238145
Exports	173999	218745	211764	217803	251484	272423	301346	340860	399006	429485
Imports	254031	306677	311947	308466	342301	363099	389720	426441	481384	527624

Table nr.2 Gross domestic product by expenditure approach, current prices ⁵									
in million MKD									
	Quarter				Year	Quarter			
	2020					2020	2021		
	I	II	III	IV			I	II	III
Gross domestic product	159 090	141 610	169 632	185 599	655 931	160 521	172 333	182 618	

Final consumption	131 140	132 951	140 188	146 249	550 527	133 794	151 277	147 983
Household final consumption, including NPISHs 1)	104 812	105 705	112 979	117 894	441 389	106 547	121 439	118 387
General government final consumption	26 328	27 246	27 209	28 354	109 138	27 247	29 838	29 596
Gross capital formation	51 415	23 885	49 335	65 756	190 391	45 956	47 911	56 676
Export of goods and services	93 624	72 506	106 069	114 454	386 653	110 931	117 340	123 057
Import of goods and services	117 088	87 732	125 960	140 860	471 640	130 160	144 194	145 098

1) Non-Profit Institutions Serving Households

Table 3. Consumer Price Index

	XII 2021 ----- Ø 2020	XII 2021 ----- XI 2021	XII 2021 ----- XII 2020	Ø 2021 ----- Ø 2020	I-XII 2021 ----- XII 2020
TOTAL	105.9	100.4	104.9	103.2	102.2
Food and non-alcoholic beverages	107.2	100.6	106.9	103.1	102.8
Alcoholic beverages, tobacco, and narcotics	104.3	100.1	100.5	103.8	100.0
Clothing and footwear	101.0	100.0	100.4	100.2	99.7
Housing, water, electricity, gas, and other fuels	103.6	100.3	101.0	102.7	100.1
Furnishings, household equipment, and routine maintenance of the house	101.5	99.6	100.8	101.0	100.3
Health	104.1	100.3	102.5	102.9	101.2
Transport	115.8	101.1	116.8	109.9	110.8
Communication	99.3	100.0	99.3	99.5	99.5
Recreation and culture	103.7	100.2	103.2	102.7	102.3
Education	100.1	100.0	99.8	100.0	99.7
Restaurants and hotels	109.7	100.6	105.7	105.9	102.0
Miscellaneous goods and services	102.7	100.3	102.5	101.4	101.1

* Ø- average

Figures

Figure 1. Economic growth rate in R.N.M 2010-2019

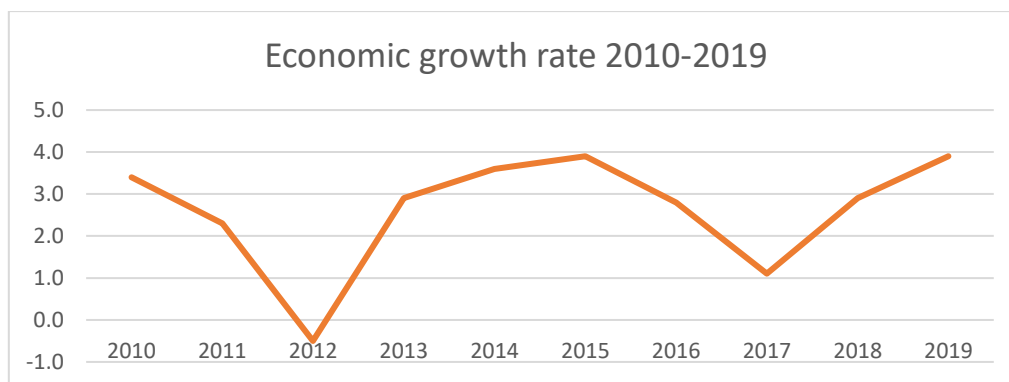


Figure 2. Unemployment rate 2010-2019

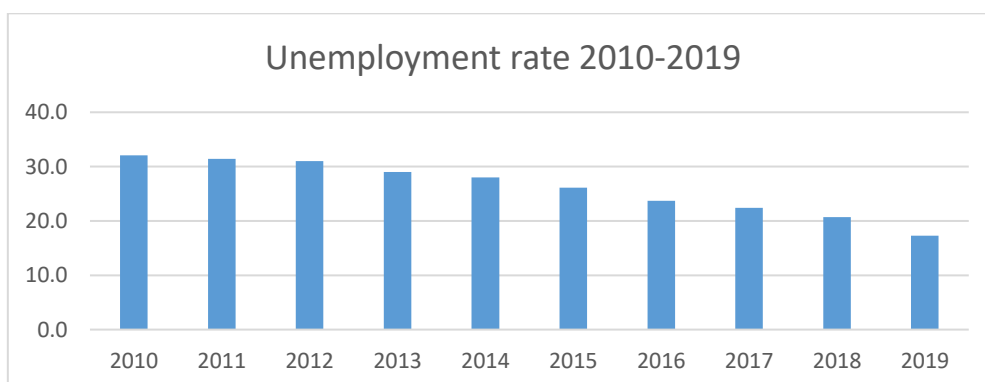


Figure 3. Economic growth in NRM 2019-2021

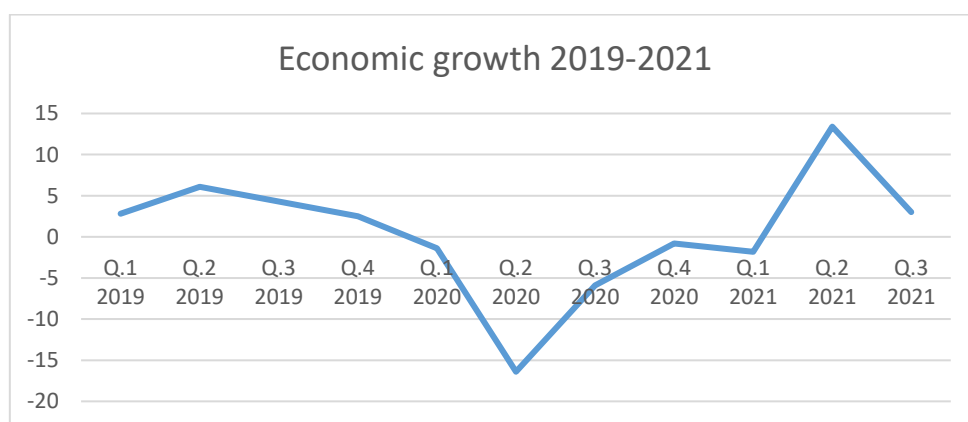


Figure 4. Unemployment rate 2019-2021

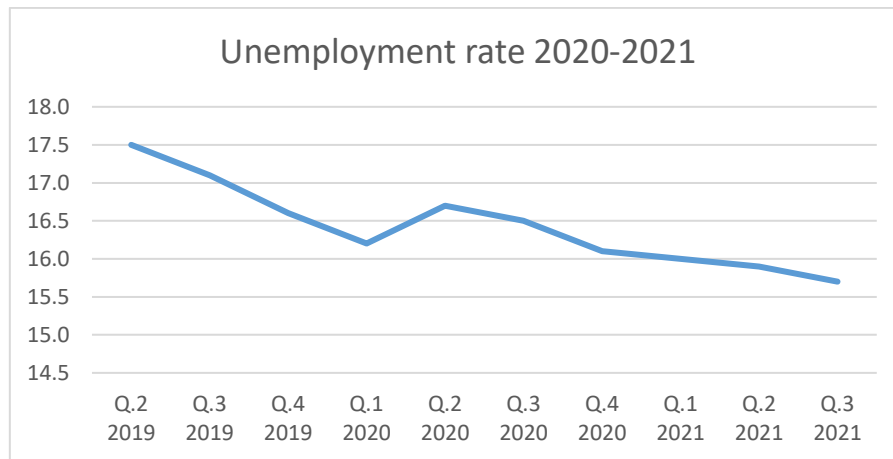


Figure 5. Living expenses 2021

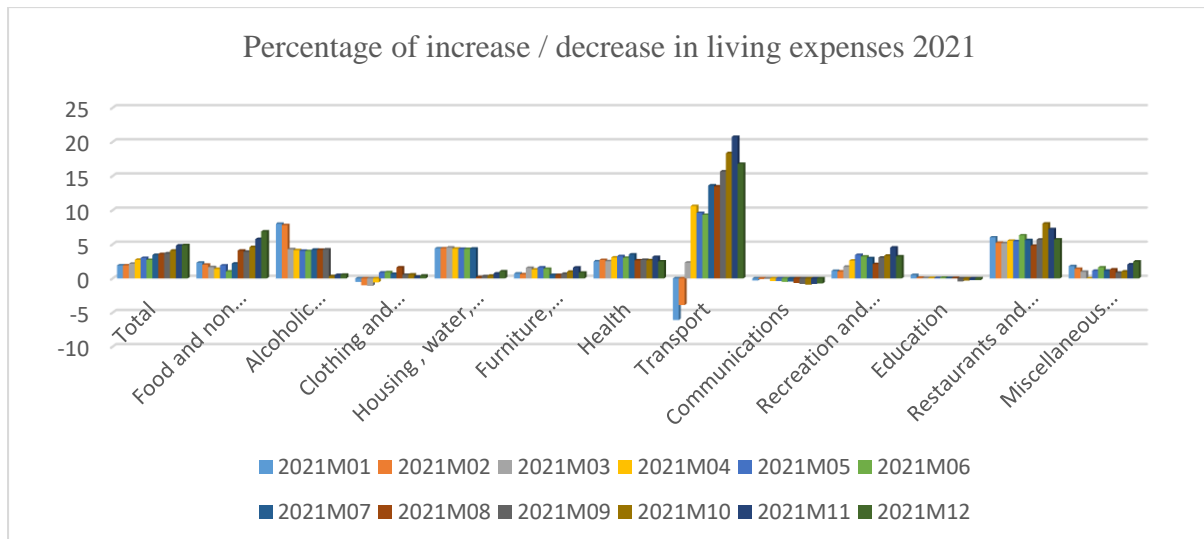
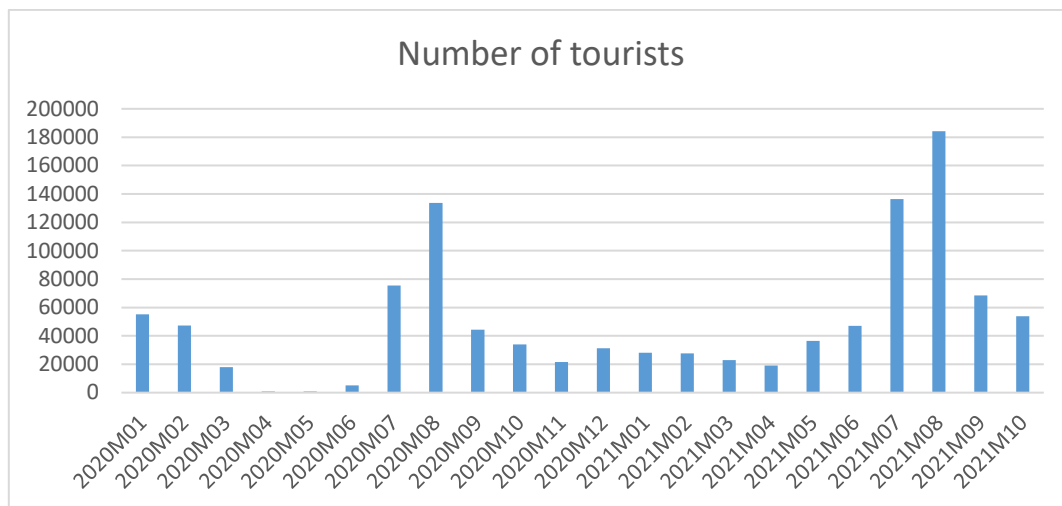


Figure 6. Number of tourists in R.N.M 2020-2021



ECONOMIC CONTEXT OF ORGANIC AGRICULTURE AND FARMS IN SERBIA-CASE STUDY

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Abstract: The economic context of organic agricultural holdings and conglomerats includes several parameters and postulates of importance for economic operators and the country. Organic agriculture has many advantages over conventional especially in the area of human health which affirms the commitment of agricultural production. Organic agriculture is associated with the multifunctional character of agriculture and to the preservation of villages, traditions, folk culture, traditional crafts, rural tourism and special type ie. eco-tourism. Consumers underdeveloped awareness, the underdeveloped market, low demand and low standard of living, high prices of control and certification, lack of use of pesticides, are just some of the many problems faced by manufacturers in this field of agriculture. Serbia has significant resources for development of agricultural production, which represents the country's export opportunity.

Key words: Economy, organic agriculture, farms, food, Serbia;

METHODS AND RESULTS

The main problem of this study is to analyze the importance of organic production, both in the modern world and in our country. The protection and enforcement of innovation as indispensable factors and sources of the creation of agricultural development is a prerequisite of competitive advantage in modern organic agriculture.

The subject of this research is conjunctive relationship between organic production and overall national economic development and competitive advantages in the modern world. Competitive advantage, and consequently agricultural development does not exist outside the framework of globalized maket, at the same time closely associated with intellectual capital and innovation process and their strategic management. Given the importance of agriculture to the economic development of the country aim of this research is the description of the direct connections and conditioning of organic production and quality management in sector of agriculture in Serbia.

The purpose of this paper is to highlight the importance of the development of organic farming, production and innovation in organic farming are there in the realization of the development of agriculture and hence competitiveness in the globalized market conditions.

INTRODUCTION

Agricultural area is an extremely important natural resource for agricultural production and people's life. Research has shown steady growth in demand for organic food and beverages in the

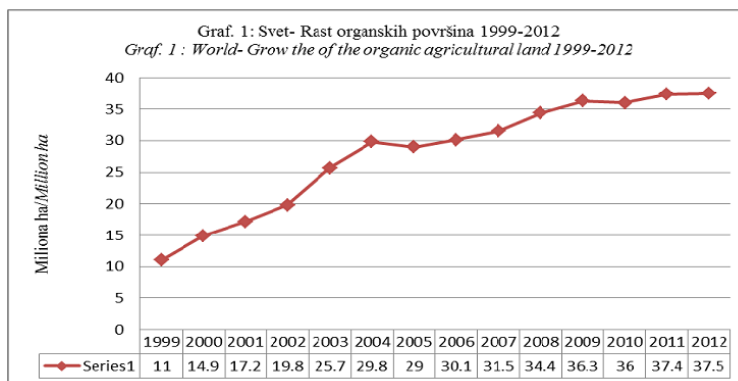
world market. The goal of organic agriculture is the production of high quality and safe food in an environmentally sustainable manner. Such production improves the health and productivity of interdependent communities - people, animals, plants and soil. The advantages of organic production compared to conventional are numerous, and the data of the competent authorities show constant growth of organic production and interest in this area. Serbia is also more present in this type of production due to available land that is not contaminated. The organic method of production has great economic importance and may contribute to the development of rural areas, and thus the entire agriculture.

1. ECONOMIC CONTEXT OF ORGANIC AGRICULTURE IN SERBIA

According to the definition of the International Federation of Organic Agriculture Movements (IFOAM), organic agriculture is a holistic production system that promotes the natural activity in the soil, maintains the health of ecological systems and humans, relies on ecological processes, biodiversity and natural cycles, taking into account local conditions, to the exclusion of inputs with harmful effects. Organic production methods relating to the use of natural substances and processes in the production and eliminate or limit the use of synthesized funds.¹

Size of land area under organic production in the world is constantly growing in the period from 1999 - 2012 and has increased more than threefold. The value of organic products in the world market reached a value of about 50 billion euros, and in 2000. amounted to 13.6 billion euros.²

Graphic 1. Growth of organic area in world for the period 1999 – 2012.



Source: FiBL –IFOAM (2014)

In Serbia, the organic area increased approximately fourteen times compared to 2008, when began to keep a record of organic production in the Ministry of Agriculture and Environmental Protection. In parallel with the surface, increasing the value of organic products, in the last fifteen years has increased more than three times. In the EU, 70% of the value of agricultural production

¹ Neskovic, S., Ecological management, Belgrade, College PEP, 2010, pp. 15.

² National Action Plan for the development of organic production for the period 2014 - 2019, Ministry of Agriculture and Environment of Republic of Serbia, pp 6-7.

makes animal production, while 30% comes from the structure of plant production. For us the situation is reversed, 30% is animal production, a 70% value makes the vegetable production. In Gross National Product agricultural production accounts for about 11.9% of which about 7.7% were agriculture, forestry and fisheries and the food industry 3.3%. The most important agricultural products of Serbia, according to data of the Serbian Chamber of Commerce are: corn, wheat, sunflower, sugar beet, soya beans, potatoes, apples, plums, grapes, and also pork, beef and milk.

In Serbia there are two basic types of organic producers:

- independent, who have a direct contract with one of the control organizations and
- subcontractors, whose production is subject to group of producers, so that the the entire production is intended for export markets, while they have secured the support of: inputs, training, certification costs covered, where the holder of the certificate is company and not the manufacturer.³

In 2014, organic production in Serbia is realized on a total area of 9,430 ha, if you include the products that are already certified or are in the process of obtaining certification. In 2013, organic farming was taking place on a total area of 8,227 ha. The increase in area in the amount of 14.6% compared to 2013, confirms the interest of producers for this type of agricultural production. According to the Ministry of Agriculture and Environment, of the total number of organic producers in Serbia is 1,867, of which 292 are certified for organic production, while the number of subcontractors is 1,575. In 2014, the most common is organic grain production, in the amount of 35%, followed by fruit production in the amount of 28%, industrial and forage crops in the amount of 15%, vegetables in the amount of 2%, medicinal and aromatic plants in the amount 1%, and other crop production in the amount of 4%. Data on organic production by region show that in Vojvodina most common this type of production, in the amount of 66%, followed by the region of Southern and Eastern Serbia, in which the organic production represented 23% of arable land, region of Šumadija and Western Serbia with 11% .

Table 1. Representation of the area under organic production in the regions in Serbia in 2014

REGIONI	OBRADIVA POVRŠINA	UČEŠĆE(%)
Beograd	18,9	0
Šumadija i zapadna Srbija	1.018,3	11
Južna i istočna Srbija	2.151,7	23
Vojvodina	6.241,2	66

Source: Simić I., Organic agriculture - unused potential of Republic of Serbia, 2015, p. 11.

³ Kalentić M., Stefanović E., Simić I., Maerz U., Organska poljoprivreda u Srbiji, Beograd: Nacionalno udruženje za razvoj organske proizvodnje Serbia organica, 2014., p. 12.

Representation of products with organic certification in the Serbian market is not enough, whether it is on the supply of fresh and processed products, which is supported by the fact of more and more frequent imports of these products into our market.⁴ Since there is often a lack of storage space, the products are only available during the peak season, when manufacturers flood the market.⁵

For the most part the production is aimed at export, in 2013 the total amount of exported organic products amounted to 7,101,301.24 kg (2012: 1,561,672.50 kg), and the realized export was in the valuation code of aprox. 10.090.801 euros. The highest value is achieved exports of frozen vegetables - raspberries, blackberries, cherries, followed by dried fruits - raspberries, blackberries, cherries and strawberries, fresh fruit - apples and plums, followed by fruit juices and fruit juices concentrates- blueberries and apples and dried herbs. From Serbia mainly exported products are those with a low degree of processing, thus have less added value.⁶ Marketing activities aimed at branding organic products and their promotion abroad are not represented sufficiently. Support should be given to exporters by strengthening, deepening and expansion of their business connections and relationships as well as support participation in fairs.⁷

2. THE LEGAL NAD INSTITUTIONAL FRAMEWORK OF ORGANIC AGRICULTURE

The first law that regulated the production of agricultural and other products by methods of organic production was adopted in 2000. In 2006 a new law was adopted and at the end of the same year he established a national sign, which marked certified organic products. Because of the new Regulation of the European Union in 2007, there was a need to harmonize the legal framework with new regulations, and in may 2010 Government adopted a new law on organic production, which is still topical.⁸ In the future we can expect the adoption of the new law, given that in 2012 and 2013, work was done on the amendments to further harmonization with the European Union, which has since changed. The provisions of the law apply to primary agricultural products, processed agricultural products used in food, feed, seed and planting material and yeasts that are used for human and animal nutrition.⁹

⁴ Nešković, S., Jovanović, Ž., Ecological Paradigm within the Context of the International Policy – Development Study, Balkan Journal of Philosophy, Bulgarian Academy of Sciences, Vol. 8, Issue 1, 2016, p. 71.

⁵ Berenji J., Milenković S., Kalentić M., Stefanović E., Nacionalna istraživačka agenda za sektor organske proizvodnje, Beograd, 2013., str. 25.

⁶ Nešković, S., Saobraćaj i ekologija u konceptu održivog urbanog razvoja, Travnik: Internacionalni univerzitet Travnik, BiH, 2014, str. 31.

⁷ National Action Plan for the development of organic production for the period 2014 - 2019, Ministry of Agriculture and Environment, pp 27-29.

⁸ Nešković, S., Jovanović, Ž., Ecological Paradigm within the Context of the International Policy – Development Study, Balkan Jopurnal of Philosophy, Bulgarian Academy of Sciences, Vol. 8, Issue 1, 2016, p. 74-75.

⁹ Nešković, S., Ecological Management, Belgrade, College PEP, 2010, pp. 53.

In the Ministry of Agriculture and Environmental Protection operates a special working group - Expert Council on organic production, which gives expert opinions and discuss professional issues in the field of organic production. Aside from the subsidies for agricultural activities, the state needs to invest in measures that will improve the quality of life of the rural population. Investments in infrastructure, education of the local population, promotion of traditional customs and traditional crafts and tourism should be part of a national action plan in the region.¹⁰

3. ECONOMIC CONTEXT OF HOUSEHOLDS IN SERBIA

According to the Regulations on Registration of agricultural holdings from 2013, the farm area is at least 0.5 hectares of agricultural land in the territory of the Republic of Serbia, where agricultural production is performed by a legal person or individual. The total number of farms in Serbia, according to data from Chamber of Commerce is 631,552, and the number of farms and permanent staff amounts to 1,442,628. According to the agricultural census in 2012, prevailing small farms with an average area of about 5.4 hectares of agricultural production is mainly done in the traditional way, without the use of modern machinery and large amounts of pesticides and fertilizers. This farm is easily converted to organic production.¹¹

Results of agricultural census in 2012 showed the following:

- The total number of registered agricultural land in 2011/2012. that was used is 89% or 3,437.423 ha. Of the total land use, 30% of the land is leased;
- Average farm size is 5.4 ha;
- Every household has an average of six plots, each of which is around 0.98 ha;
- In 2012, irrigation had used 3% of farms;
- 95% of the total number of tractors are older than 10 years;
- The average farmer is 59 years old.

The future of these small farmers in organic production is an alternative to intensive agriculture.¹² According to data of the Serbian Chamber of Commerce, the total area of agricultural land is 3,861,477 hectares, of which land used is 64.3% of the forest cover consists of 19.1%, 7.9% of unused land and other land 8.7%. As far as land use, participate in the structure: arable land and gardens - 73.1%, meadows and pastures - 20.7%, fruit orchards - 4.8%, vineyards - 0.6%, yards - 0.7% and others permanent planted in the amount of 0.1%. For arable land and gardens, the largest area under cereals (68%) dominated the area under maize (39%) and wheat (24%). Fruit, mostly plums are grown on 45% and apples at 15% of the area under fruit.

¹⁰ FAO Regional Office for Europe and Central Asia Coordination Office in Serbia, Belgrade, 2014, p. 53.

¹¹ National Action Plan for the development of organic production for the period 2014 - 2019, Ministry of Agriculture and Environment, pp 6-7.

¹² FAO Regional Office for Europe and Central Asia Coordination Office in Serbia, Belgrade, 2014, p. 7.

Organic agricultural products are mainly sold to wholesalers and processing companies, with which almost 70% of primary producers conclude contracts prior to the start of the season. Direct sales, for example, green markets and in retail stores practice only 20% of farmers. Because of this system, increase in price they obtain for their organic produce is very moderate (average 10-20%) and confirmed that added value is not generated at farm level. In the sector of present and new tendencies, namely the big supermarket chains have upped their offer of organic products. A large number of these products are imported, which confirms the fact that the development of organic production for the domestic market is not at sufficient level.¹³

According to statistical data and analysis, the following findings are:

- agriculture in Serbia is traditional and extensive (low-productive, highly oscillatory and highly dependent on climatic factors). Therefore, low marketability and low product specialization are present in agricultural production;
- in domestic agriculture dominate the so-called small and medium-sized farms in terms of area and economic power of households. Their development significantly limits the underdeveloped agricultural markets and lack of vertical integration in the production chain of agricultural products;
- despite all of the foregoing, these farms are of great importance in the local market of goods, in terms of food production, as well as from the standpoint of resources and rural environment;
- it is necessary to initiate measures aimed at their economic empowerment and building sustainable competitive advantages in both domestic and foreign markets.¹⁴

CONCLUSION

Given that the organic products occupy only 1% share of global food market, and that demand is growing steadily despite the global financial crisis, improvement and investment in Serbia in this type of production has the ability to increase exports of organic products. Export of organic food is at much lower level than the potential that Serbia has in this field of production. Although the world's land area under organic production has been constantly growing, there is an unmet demand when it comes to fruits, cereals and fodder. Serbian government should take advantage of these shortcomings. Organic products have higher market value, a good physical, chemical and biological properties of soils which in most cases is not contaminated. Favorable climatic conditions provide an incentive and opportunity for the successful development of organic production. This would solve the existential problem of a significant part of the rural population, and also significantly improve human health and environmental protection.¹⁵

¹³ Berenji J., Milenković S., Kalentić M., Stefanović E., Nacionalna istraživačka agenda za sektor organske proizvodnje, Beograd, 2013., p. 22

¹⁴ http://www.kombeg.org.rs/aktivnosti/zadruzni_savez/Detaljnije.aspx?veza=14627 (11.05.2016.)

¹⁵ Nešković, S., Jovanović, Ž., Ecological Paradigm within the Context of the International Policy – Development Study, Balkan Journal of Philosophy, Bulgarian Academy of Sciences, Vol. 8, Issue 1, 2016, p. 75.

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FORECASTING REAL EFFECTIVE EXCHANGE RATES FOR JAPAN USING FOR THE YEARS 2008-2019 USING ARIMA MODELS

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ABSTRACT

Real effective exchange rate is the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs. Forecasting of (macro)economics variables is an important part of economics analysis. ARIMA models provide forecasts of these variables by taking information from the past values to predict their future behavior. The time series models are based on the assumption that the time series involved are (weakly) stationary, the mean and variance for a weakly stationary time series are constant and its covariance is time-invariant.

The aim of this paper is to make a forecast of REER for Japan yen, taking for base the historical data of the 2008.01-2019.03. Following the steps of identification, estimation, diagnostics we successfully have forecasted the REER for Japan yen. In the first step the ARIMA(1,1,1) was identified as the best model for forecast, but after diagnostics results suggested that the AR(1)MA(1)MA(2) fits better for the forecast. The REER increases and decreases within the months and the chosen model is a good model that has predicted very close these movements.

Keywords: *REER, ARIMA, forecast*

1. Introduction

In a world where there are many national and regional currencies, exchange rates define the rate or ratio of which one of these currencies can be exchanged for any other at any given point in time (Ewans 2014). It is possible to talk about two kinds of exchange rates, real exchange rates and nominal exchange rates. The real exchange rate (RER) is defined as the relative national price levels between two economies with the corresponding nominal exchange rate being an auxiliary to convert the unit of account such that two price levels are measured in a single currency.

Nominal exchange rate is defined as the price of a currency in terms of another currency. In parallel, real currency exchange rate should be defined as the price of the currency in real terms (Yang and Zeng 2014). The history of Japanese exchange rates, though short by British or American standards, is exceedingly rich, both from the standpoint of variation in the data and in the institutions governing exchange rate arrangements and Japanese monetary conditions (Lothian 1991).

This study tries to make a forecast of exchange rates of Japanese Yen currency to US dollars using ARMA models for the period 2018 m03 to 2019 m03, by making use of historical monthly data from 2008-2018.

2. Literature Review

Real exchange rate is a useful summary indicator of essential economic information. It has occupied a major place in theoretical discussion between economists of different countries. However, among all those works there is no clear agreement on how real exchange rate should be measured. This fact has led to the existence of many alternative models, theories and indices that could be used for the construction of real effective exchange rate (Betliy 2002). Economists and policymakers often refer to the exchange rate as a key macroeconomic variable. As a relative price, the exchange rate plays a crucial role in theoretical models and open economy and transactions between countries. However, the link between the theoretical concept of the exchange rate and the empirical application is not a straightforward one (Chinn 2002).

Academic treatments of the real exchange rate typically abstract from how to measure real exchange rates when countries engage in transactions with a number of partners. By far the most common means of calculating an “effective” real exchange rate is to weight the currencies by trade weights (Chinn 2002). A country’s international transactions tend to be denominated in a range of different currencies where it faces many exchange rates and a weighted average measure of individual bilateral exchange rates against the country’s currency is necessary to summarize the country’s exchange rate position. These summary measures are often referred to as an effective exchange rate or a trade weighted exchange rate index (TWI) (Kite 2006).

The methodology of determining the nominal and effective exchange rate applied by the ECB for the case of the EU is based on a weighted geometric average of the bilateral exchange rates of the

euro relative to three sets of commercial partners of the Euro zone. The first set takes into account twelve countries, namely: Australia, Canada, Denmark, Hong Kong, Japan, Norway, Singapore, South Korea, Sweden, Switzerland, United Kingdom and US. The second set adds the ten new EU member states and China, while in the third set there are included altogether 42 countries: those in the second set to which four other candidates and the following countries are added: Algeria, Argentina, Brazil, India, Indonesia, Israel, Malaysia, Mexico, Morocco, New Zealand, Philippines, Russia, South Africa, Taiwan and Thailand (Pelinescu and Caraiani 2006).

The real effective exchange rate is calculated as a weighted average of real exchange rates of the national currency to the currencies of its main trading partners. For example, if the exchange rate of one country appreciates relative to the currency of the neighboring country with the higher inflation rate and depreciates at the same time relative to the currency of another country-partner with the lower inflation rate, the real effective exchange rate will reflect the exchange rate of the national currency of the country as a weighted average of these changes. Weights of countries in total foreign trade of the country under consideration are defined in order to calculate effective exchange rate indices. The weights reflect a relative importance of this or that currency for the other particular country. The effective exchange rate indices are calculated on the basis of the weights of bilateral trade (weights of export and import could be also used or their total average index). The formula for calculation the weights is the following (NBRK 2002):

$$W = \frac{M_i + X_i}{\sum_{i=1}^n X_i + \sum_{i=1}^n M_i}$$

Where,

W_i – weight of country i in the overall trade volume of the country, $\sum_{i=1}^n W_i = 1$

M_i – Import of the domestic country from country i

X_i – Export of the domestic country to country i

$\sum_{i=1}^n X_i$ – Exports of the domestic country to main trading partners

$\sum_{i=1}^n M_i$ – Imports of the domestic country from main trading partners

A strong Yen has repeatedly cause distress among Japanese policymakers and manufacturers. Since the demise of the Bretton Woods system in 1971, the Yen has seen several episodes of strong appreciation, including in the late 1970s, after the 1985 Plaza Agreement, the early and late 1990s and after 2008. These appreciations have not only been associated with “expensive Yen recessions” resulting from negative effects on exports; since the late 1980s, the strong Yen has also raised concern about a de-industrialisation of the Japanese economy. Between 1980 and 2017, the standard deviation of Japan’s annual real effective exchange rate was 17.0, compared to 12.3 for the U.S., 10.4 for the United Kingdom, and 5.3 for Germany (Belke and Volz 2018).

Kiyotaka, et al. 2012 examine the industry-specific REER of the yen from the beginning of 2005 to the 2012 to reveal the industry-level difference in the impact of the nominal yen appreciation vis-à-vis the US dollar and found that the level of REER is the lowest in the electric machinery industry, which suggests that the electric machinery industry still has export price competitiveness compared to the other industries.

3. Data and Methodology

The aim of this paper is to make a forecast of real effective exchange rate for Japan using ARIMA models. Popularly known as the Box–Jenkins (BJ) methodology, but technically known as the ARIMA methodology, the emphasis of these methods is on analyzing the probabilistic, or stochastic, properties of economic time series on their own under the philosophy let the data speak for themselves. The BJ-type time series models allow Y_t to be explained by past, or lagged, values of Y itself and stochastic error terms. For this reason, ARIMA models are sometimes called atheoretic models because they are not derived from any economic theory and economic theories are often the basis of simultaneous-equation models (Gujarati and Porter 2009).

ARIMA(p, d, q), model it is an autoregressive integrated moving average time series, where p denotes the number of autoregressive terms, d the number of times the series has to be differenced before it becomes stationary, and q the number of moving average terms (Gujarati and Porter 2009).

For this purpose, a time series data of real effective exchange rate (REER) for Japan has been taken for the 2008-2019 time period. These data are monthly and are generated from BIS. Established in 1930, the Bank for International Settlements (BIS) is the oldest international financial institution.

From its inception to the present day, the BIS has played a number of key roles in the global economy, from settling reparation payments imposed on Germany following the First World War, to serving central banks in their pursuit of monetary and financial stability. BIS is owned by 60 central banks, representing countries from around the world that together account for about 95% of world GDP. Its head office is in Basel, Switzerland and it has two representative offices: in Hong Kong SAR and in Mexico City (BIS n.d.).

A trade weighted index is used to measure the effective value of an exchange rate against a basket of currencies. The importance of other currencies depends on the percentage of trade done with that country. For example in calculating the trade weighted index of the Pound Sterling, the most important exchange rate would be with the Euro. If the UK exports 60% of total exports to the EU, the value of £ to Euro would account for 60% of the trade weighted index. A trade weighted index is useful for measuring the overall performance of a currency. For example, if the Pound appreciates against the dollar, that might be due to the dollar's weakness. But, if the trade weighted Sterling index increases, this shows the Pound is getting stronger against its main trading partners (EconomicsHelp n.d.).

From the AR(p) and MA(q) models, we can observe a pattern wherein *reer* is explained by its own past values and the current past values of the error term, hence called the ARMA (p, q) model is constructed as:

$$\text{ARMA}(p, q): \text{reer}_t = a_0 + \sum_{i=1}^p b_i \text{reer}_{t-i} + d_0 u_t + \sum_{j=1}^q d_j u_{t-j}$$

where model contains p lags of dependent variable and q lags of the error term.

To continue further, we have analyzed data using EViews 10 software. The following analyses are performed using the logarithm of the data.

3.1 Identification

We proceed with unit root test of the variables to be employed in our model. The results of our times series unit root test are displayed in Table 1. After taking the first difference, according to the table 1, probability of Augmented Dickey-Fuller test statistic is less than 5%, and the real

effective change rate variable is significant ($p=0,000<0.05$). Hence, by rejecting the null hypothesis, we accept that time series is stationary at the first difference.

Table 1: Results of unit root tests (ADF test statistics and probabilities)

Null Hypothesis: D(LEXCHANGE_RATE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.999973	0.0000
Test critical values:		
1% level	-3.480038	
5% level	-2.883239	
10% level	-2.578420	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LEXCHANGE_RATE,2)
Method: Least Squares
Date: 05/18/19 Time: 15:45
Sample (adjusted): 2008M03 2019M03
Included observations: 133 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LEXCHANGE_RATE(-1))	-0.656128	0.082016	-7.999973	0.0000
C	-0.000569	0.002030	-0.280437	0.7796
R-squared	0.328204	Mean dependent var		1.65E-05
Adjusted R-squared	0.323075	S.D. dependent var		0.028439
S.E. of regression	0.023399	Akaike info criterion		-4.657362
Sum squared resid	0.071721	Schwarz criterion		-4.613898
Log likelihood	311.7146	Hannan-Quinn criter.		-4.639700
F-statistic	63.99958	Durbin-Watson stat		2.013353
Prob(F-statistic)	0.000000			

We have drawn the graph at the actual level to check visually the (non)stationarity of the data and according to the graph data are not stationary.

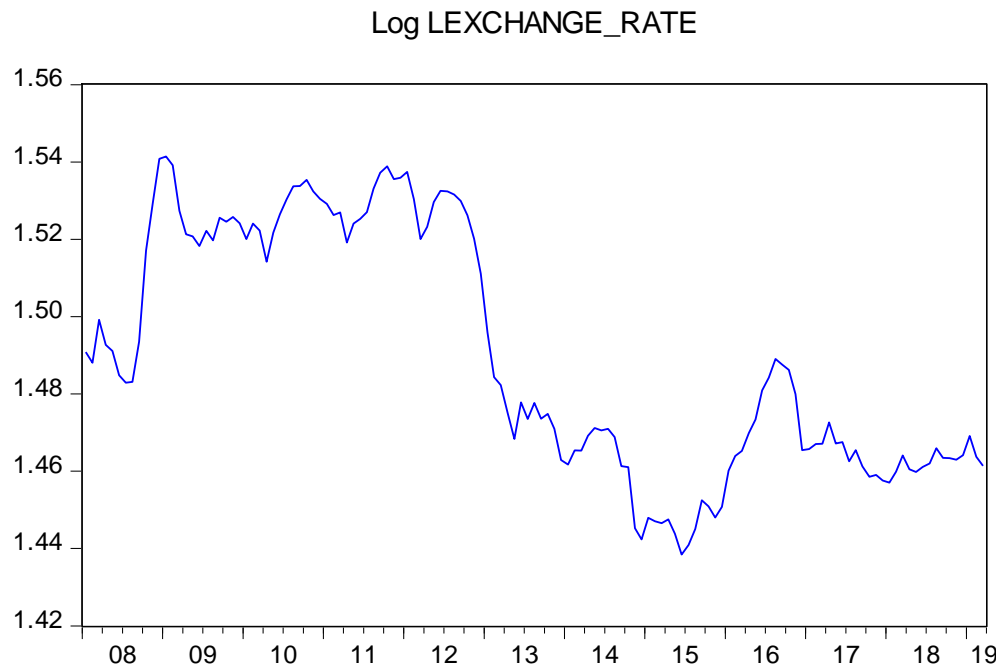


Fig. 1: Graph of REER series data

To be sure that the series is not stationary, it is plotted the correlogram as following. To plot the correlogram automatically determined 36 lags were used. “A rule of thumb is to compute ACF up to one-third to one-quarter the length of the time series. Since for our economic data we have 135 monthly observations, by this rule lags of 33 to 45 will do” (Gujarati & Porter, 2009). The broken lines on the graph represent the standard error bounds. The graph shows some significant autocorrelations that are out the standard error bounds and the autocorrelation declines very slowly to zero. From lag 1 to lag 32, the lags are very significant and the decline is very gradually to zero. This series is indicative of non-stationary series. To make stationary the data, the first deference has been used.

Now, it can be seen that there is big difference from the first correlogram. The autocorrelation of lag 1, lag 2 and lag 6, and 15 is significant. After that, the autocorrelation declines and keeps declining to zero for other lags too. As per PACF, only the lag 1 is significant. From this observation, we can see that this an ARIMA model, because both ACF and PACF have exponential decay from lag 1, that is, rapid decline from lag 1.

Table 2: Correlogram for exchange rates data for Japan

Date: 05/18/19 Time: 15:46
 Sample: 2008M01 2019M03
 Included observations: 135




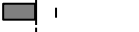

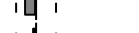







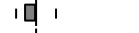

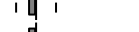
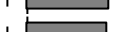


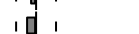





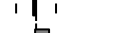
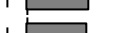


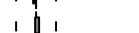





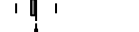



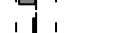





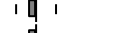

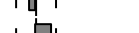

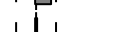
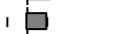


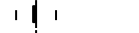

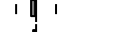

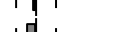

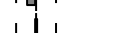






















































Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.982	0.982	132.97	0.000
		2	0.953	-0.285	259.24	0.000
		3	0.919	-0.095	377.56	0.000
		4	0.883	-0.012	487.66	0.000
		5	0.851	0.125	590.74	0.000
		6	0.824	0.071	688.16	0.000
		7	0.804	0.090	781.50	0.000
		8	0.784	-0.088	871.08	0.000
		9	0.764	-0.055	956.78	0.000
		10	0.741	-0.059	1038.1	0.000
		11	0.715	-0.048	1114.3	0.000
		12	0.683	-0.078	1184.5	0.000
		13	0.651	0.011	1248.7	0.000
		14	0.618	-0.015	1307.0	0.000
		15	0.586	-0.009	1359.8	0.000
		16	0.560	0.116	1408.6	0.000
		17	0.538	-0.013	1453.9	0.000
		18	0.520	0.032	1496.6	0.000
		19	0.503	-0.029	1536.9	0.000
		20	0.486	-0.016	1574.8	0.000
		21	0.466	-0.037	1610.1	0.000
		22	0.445	0.019	1642.6	0.000
		23	0.419	-0.147	1671.5	0.000
		24	0.390	-0.010	1696.9	0.000
		25	0.357	-0.115	1718.3	0.000
		26	0.324	-0.026	1736.1	0.000
		27	0.290	-0.053	1750.5	0.000
		28	0.257	-0.051	1761.9	0.000
		29	0.230	0.150	1771.1	0.000
		30	0.207	0.011	1778.6	0.000
		31	0.187	0.025	1784.9	0.000
		32	0.169	-0.024	1790.0	0.000
		33	0.148	-0.047	1794.0	0.000
		34	0.126	-0.009	1796.9	0.000
		35	0.099	-0.073	1798.7	0.000
		36	0.071	-0.006	1799.7	0.000

Table 3: First difference correlogram for exchange rates data for Japan

Date: 05/18/19 Time: 15:47
Sample: 2008M01 2019M03
Included observations: 134

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.344	0.344	16.170	0.000
		2	0.209	0.104	22.225	0.000
		3	0.027	-0.084	22.325	0.000
		4	-0.140	-0.169	25.061	0.000
		5	-0.159	-0.067	28.631	0.000
		6	-0.207	-0.102	34.757	0.000
		7	-0.020	0.125	34.812	0.000
		8	-0.004	-0.002	34.814	0.000
		9	0.073	0.031	35.589	0.000
		10	0.112	0.031	37.442	0.000
		11	0.147	0.089	40.648	0.000
		12	0.073	-0.032	41.436	0.000
		13	-0.028	-0.056	41.552	0.000
		14	-0.056	-0.026	42.024	0.000
		15	-0.197	-0.135	47.953	0.000
		16	-0.113	0.034	49.922	0.000
		17	-0.141	-0.058	53.003	0.000
		18	-0.030	0.024	53.142	0.000
		19	0.042	0.015	53.419	0.000
		20	0.042	-0.018	53.703	0.000
		21	0.094	0.001	55.132	0.000
		22	0.170	0.166	59.816	0.000
		23	0.112	0.002	61.881	0.000
		24	0.072	0.033	62.730	0.000
		25	0.037	0.027	62.961	0.000
		26	-0.021	0.011	63.038	0.000
		27	0.008	0.069	63.050	0.000
		28	-0.130	-0.126	65.947	0.000
		29	-0.087	-0.049	67.264	0.000
		30	-0.096	-0.079	68.893	0.000
		31	-0.040	0.035	69.183	0.000
		32	0.028	-0.002	69.327	0.000
		33	0.033	-0.007	69.529	0.000
		34	0.099	0.019	71.308	0.000
		35	0.029	-0.018	71.464	0.000
		36	0.066	0.069	72.271	0.000

The following graph represents the differenced logarithm real effective exchange rate time series and as it can be seen now the data are stationary with slightly deviations.

Thus, according to correlogram, the possible models would be as ARIMA(1,1,1); ARIMA(2,1,1); ARIMA(6,1,1), ARIMA (15,1,1). The next step is to estimate these models and define the best model.

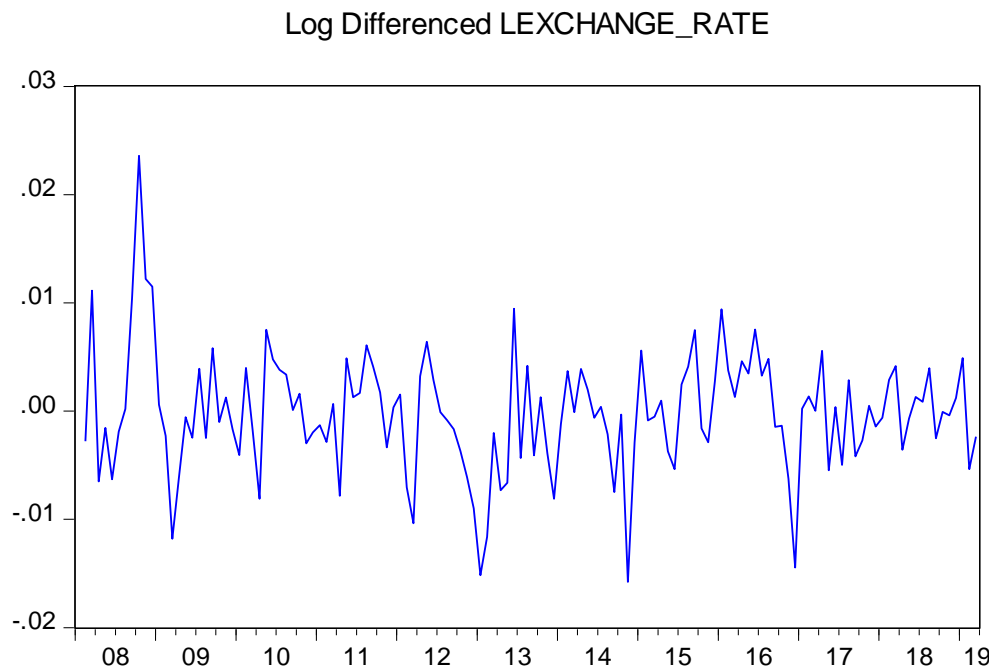


Fig 2: Differenced exchange rates for Japan

3.2 Estimation

After identifying the tentative models, in the next section the estimation of each model is done. Results of each model are given in the Appendix. Deciding for the best model is more an act of art than science. The criteria for choosing the most appropriate model is simple. We need to choose the model that has the most significant coefficients, the lowest volatility (represented by SIGMASQ), the lowest Akaike information criterion, the lowest Schwarz criterion, and the highest adjusted R-squared.

Table 4: A summarizing of criteria for choosing the most appropriate model

Differenced REER	Significant coefficients	Sigma ² (volatility)	Adj. R ²	AIC	SBIC
ARIMA(1,1,1)	3	0.000544	0.971615	-4.592564	-4.506482
ARIMA(2,1,1)	2	0.000594	0.969042	-4.501657	-4.415574
ARIMA(6,1,1)	3	0.001976	0.896971	-3.278608	-3.192526
ARIMA(15,1,1)	3	0.003831	0.800245	-2.610096	-2.524013

To find the most appropriate model, we have summarized the above-mentioned information in the above table. As it can be seen from the table, the ARIMA(1,1,1) looks the most appropriate model, as it has significant coefficients, the lowest volatility (0,000544), the highest adjusted R-square (0,971615) the lowest AIC and SBIC (−4,592564 and −4,506482).

3.3 Diagnostics

To identify the ARIMA(1,1,1) as the most appropriate model, we should perform diagnostics to be sure that there's no information left uncaptured. An ideal correlogram should be flat. However, in our example the residuals correlogram given in next page shows that the lag 3 is significant and therefore is not flat. This indicates that lag 2 has some information that must be captured; thus, we need to re-estimate the model. Re-estimation is done by adding AR(2) and MA(2).

After running the re-estimation, the general information is summarized in the Table 6 as shown in following page. Tables of estimated models are presented in the Appendix. The information from the table suggests that the AR(1) MA(1) MA(2) model fits better than the two ones, because it has the lowest volatility and with very slight differences in other criteria better than two other models.

Table 5: Correlogram of residuals

Date: 05/18/19 Time: 16:12

Sample: 2008M01 2019M03

Included observations: 135

Q-statistic probabilities adjusted for 2 ARMA terms







































































Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob	
		1	0.058	0.058	0.4668	
		2	0.218	0.215	7.0559	
		3	0.022	-0.001	7.1232	0.008
		4	-0.105	-0.161	8.6812	0.013
		5	-0.062	-0.059	9.2290	0.026
		6	-0.182	-0.126	13.997	0.007
		7	0.054	0.109	14.426	0.013
		8	-0.013	0.045	14.449	0.025
		9	0.085	0.045	15.501	0.030
		10	0.083	0.028	16.525	0.035
		11	0.134	0.105	19.209	0.023
		12	0.067	0.019	19.893	0.030
		13	-0.030	-0.056	20.024	0.045
		14	0.015	0.009	20.059	0.066
		15	-0.178	-0.131	24.942	0.023
		16	-0.017	0.023	24.989	0.035
		17	-0.120	-0.036	27.241	0.027
		18	0.007	0.014	27.249	0.039
		19	0.049	0.032	27.628	0.049
		20	0.031	0.011	27.786	0.065
		21	0.063	-0.036	28.432	0.075
		22	0.150	0.164	32.127	0.042
		23	0.073	0.046	33.002	0.046
		24	0.053	0.027	33.479	0.055
		25	0.047	0.045	33.854	0.067
		26	-0.038	-0.006	34.101	0.083
		27	0.061	0.094	34.747	0.093
		28	-0.128	-0.089	37.573	0.066
		29	-0.026	-0.058	37.694	0.083
		30	-0.076	-0.093	38.720	0.086
		31	-0.025	0.010	38.834	0.105
		32	0.040	0.013	39.123	0.123
		33	0.001	-0.014	39.123	0.150
		34	0.109	0.029	41.294	0.126
		35	-0.020	-0.033	41.364	0.151
		36	0.101	0.079	43.279	0.132

Fig 6: Residuals correlogram for exchange rates data for Russia

Table 6: A summarizing of criteria for choosing the most appropriate model after residual correlogram

Differenced Exchange Rates	ARIMA(1,1,1)	AR(1) AR(2) MA(1)	AR(1) MA(1) MA(2)
Significant coefficients	3	3	4
Sigma ² (volatility)	0.000544	0.000521	0.000519
Adj. R ²	0,971615	0.972624	0.972742
AIC	−4,592564	−4.620419	−4.624686
SBIC	−4,506482	−4.512816	−4.580959

We can construct our model as following:

$$reer_t = a_0 + b_1 reer_{t-1} + d_0 u_t + d_1 u_{t-1} + d_2 u_{t-2}$$

After selecting AR(1)MA(1)MA(2) as the best model for this data, we have run again the residual correlogram as shown in next page in Table 7. The correlogram of the residuals is flat, showing that all lags are under the broken lines which indicates that all the information has been captured, so the forecast will be based on this model. Before doing the forecast, we have run the Ljung-Box test to test for the absence of serial autocorrelation, up to a specified lag k . “The Box–Pierce and Ljung–Box Q-statistics serve as a check to see if the residuals from an estimated ARMA(p,q) model behave as a white-noise process” (Enders 2015). The results for autocorrelation in Table 8 show that the probability from the lag 1 to lag 36 is higher than 5%. This indicates that there is no autocorrelation in this model, so our model is good.

After the Ljung-Box test we have performed the normality-test histogram in Figure 3. In the right side of the figure descriptive statics are given. The histogram shows visually that the data are pretty close to the normal distribution. Finally, we have ran the Heteroskedasticity Test and we can see that this test is significant. This test was given place in the Appendix.

3.4 Forecasting the Model

We have done the forecast of REER for Japan for the year interval of 2018.03 to 2019.03. So, the essence of fitting the ARIMA model is to forecast the future values of the series using past







































































Table 7: Residuals correlogram after diagnostics

Date: 05/18/19 Time: 16:18

Sample: 2008M01 2019M03

Included observations: 135



Q-statistic probabilities adjusted for 3 ARMA terms

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob	
		1	0.034	0.034	0.1551	
		2	0.027	0.026	0.2570	
		3	0.089	0.088	1.3762	
		4	-0.077	-0.085	2.2228	0.136
		5	-0.079	-0.079	3.1000	0.212
		6	-0.150	-0.152	6.3406	0.096
		7	0.072	0.103	7.0821	0.132
		8	0.015	0.027	7.1128	0.212
		9	0.042	0.058	7.3744	0.288
		10	0.080	0.029	8.3315	0.304
		11	0.137	0.124	11.119	0.195
		12	0.049	0.023	11.479	0.244
		13	-0.017	-0.000	11.522	0.318
		14	0.015	-0.001	11.558	0.398
		15	-0.143	-0.120	14.710	0.258
		16	-0.010	0.031	14.725	0.325
		17	-0.097	-0.071	16.188	0.302
		18	0.009	0.030	16.201	0.369
		19	0.079	0.044	17.187	0.374
		20	-0.004	-0.013	17.189	0.442
		21	0.044	-0.029	17.499	0.489
		22	0.152	0.153	21.278	0.322
		23	0.060	0.039	21.880	0.347
		24	0.034	0.068	22.071	0.395
		25	0.027	0.018	22.191	0.449
		26	-0.018	0.010	22.247	0.505
		27	0.063	0.103	22.933	0.524
		28	-0.102	-0.060	24.720	0.478
		29	-0.029	-0.038	24.863	0.527
		30	-0.054	-0.121	25.378	0.553
		31	-0.020	0.003	25.451	0.603
		32	0.033	-0.012	25.644	0.644
		33	0.012	0.008	25.669	0.692
		34	0.072	0.002	26.627	0.691
		35	-0.010	-0.034	26.644	0.734
		36	0.107	0.108	28.797	0.677

values of the series itself. After plotting the forecast on EViews, we have extracted the graph shown on Figure 4. This graph does not make a much sense in the solution. To know how close is the forecast to actual values, we need to plot the forecast graph against the actual graph. To do so we cut the data set only for the period 2018.03 to 2019.03.

Table 8: Ljung-Box test for testing the autocorrelations of residuals

Date: 05/18/19 Time: 16:18
 Sample: 2008M01 2019M03
 Included observations: 135

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
		1 0.137	0.137	2.5885	0.108
		2 0.000	-0.019	2.5885	0.274
		3 -0.086	-0.085	3.6284	0.304
		4 -0.096	-0.074	4.9241	0.295
		5 0.057	0.082	5.3931	0.370
		6 0.070	0.046	6.0938	0.413
		7 0.075	0.047	6.9062	0.439
		8 -0.073	-0.090	7.6777	0.466
		9 -0.041	0.000	7.9254	0.542
		10 -0.058	-0.039	8.4318	0.587
		11 0.094	0.105	9.7440	0.554
		12 -0.008	-0.067	9.7545	0.637
		13 -0.067	-0.069	10.435	0.658
		14 -0.012	0.018	10.457	0.728
		15 -0.038	-0.004	10.683	0.775
		16 0.014	-0.006	10.713	0.827
		17 0.028	0.012	10.832	0.865
		18 0.000	-0.020	10.832	0.901
		19 0.136	0.173	13.780	0.796
		20 -0.007	-0.043	13.789	0.841
		21 -0.029	-0.027	13.928	0.873
		22 0.042	0.053	14.220	0.893
		23 -0.018	-0.009	14.274	0.919
		24 -0.035	-0.047	14.480	0.935
		25 0.079	0.085	15.526	0.928
		26 -0.016	-0.061	15.571	0.946
		27 -0.098	-0.080	17.218	0.926
		28 -0.100	-0.084	18.947	0.900
		29 -0.064	-0.008	19.665	0.903
		30 0.030	-0.003	19.823	0.921
		31 0.063	0.050	20.532	0.924
		32 0.036	0.025	20.770	0.937
		33 -0.036	-0.036	21.000	0.948
		34 -0.013	0.035	21.032	0.960
		35 -0.041	-0.006	21.337	0.966
		36 -0.021	-0.074	21.418	0.974

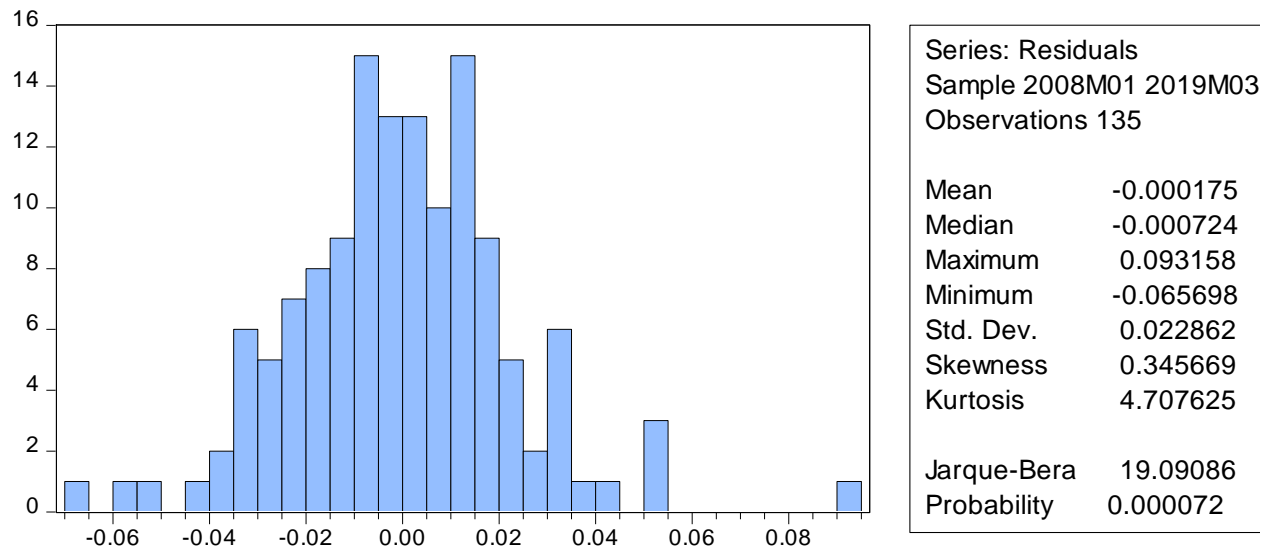


Fig 3: Normality test

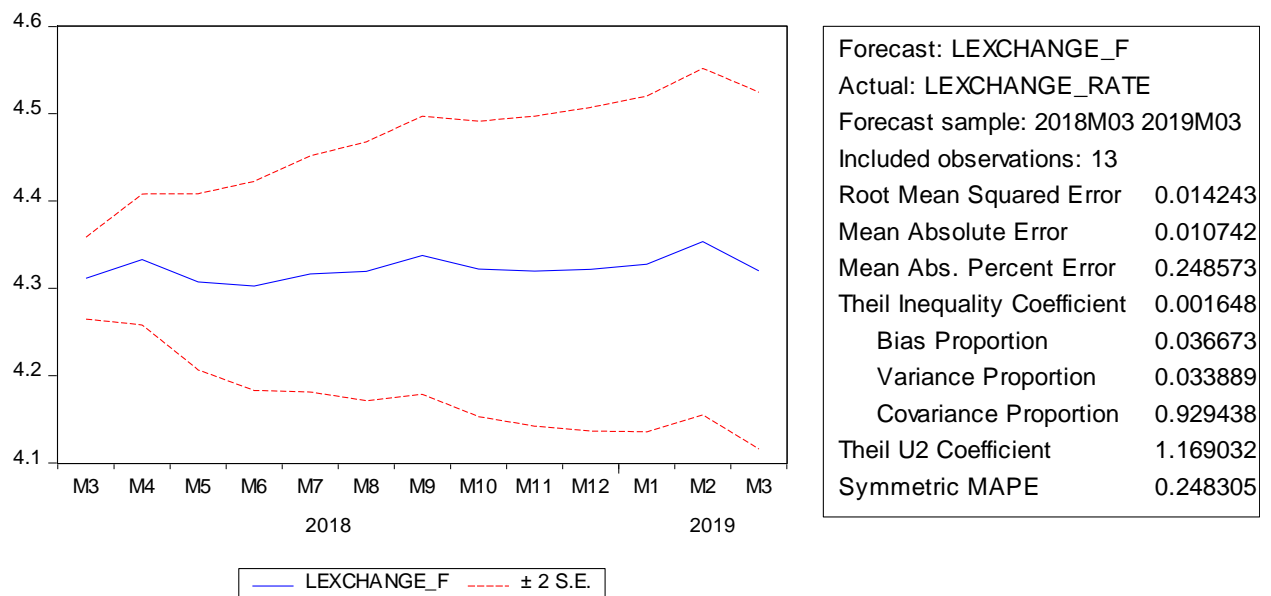


Fig 4: The graph of the forecast of REER for Japan

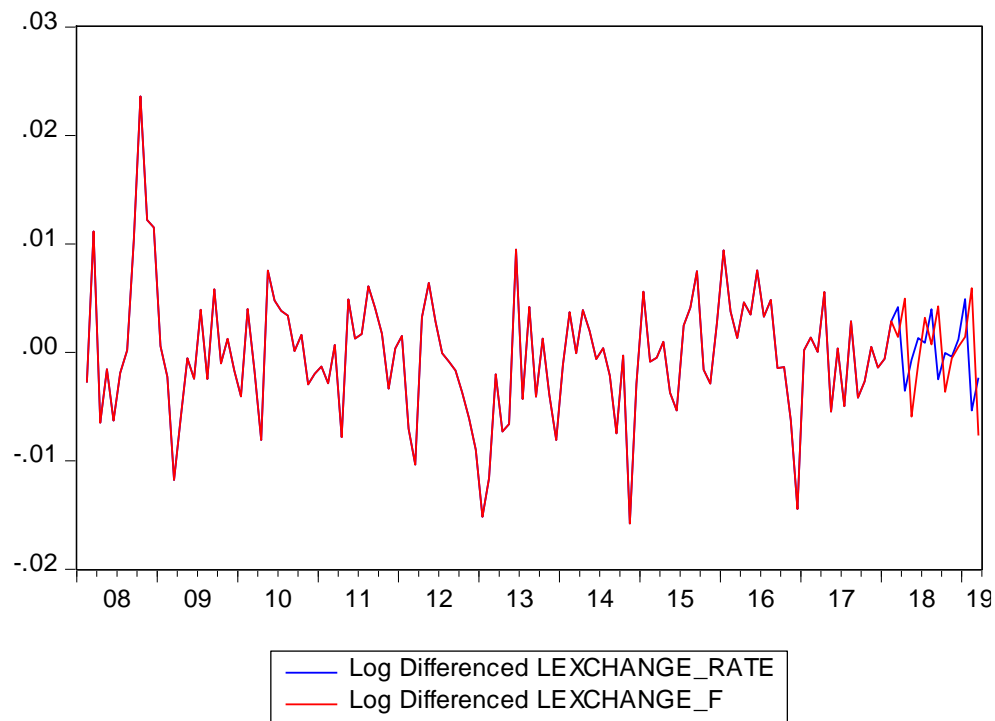


Fig 5: Forecast of REER from actual values

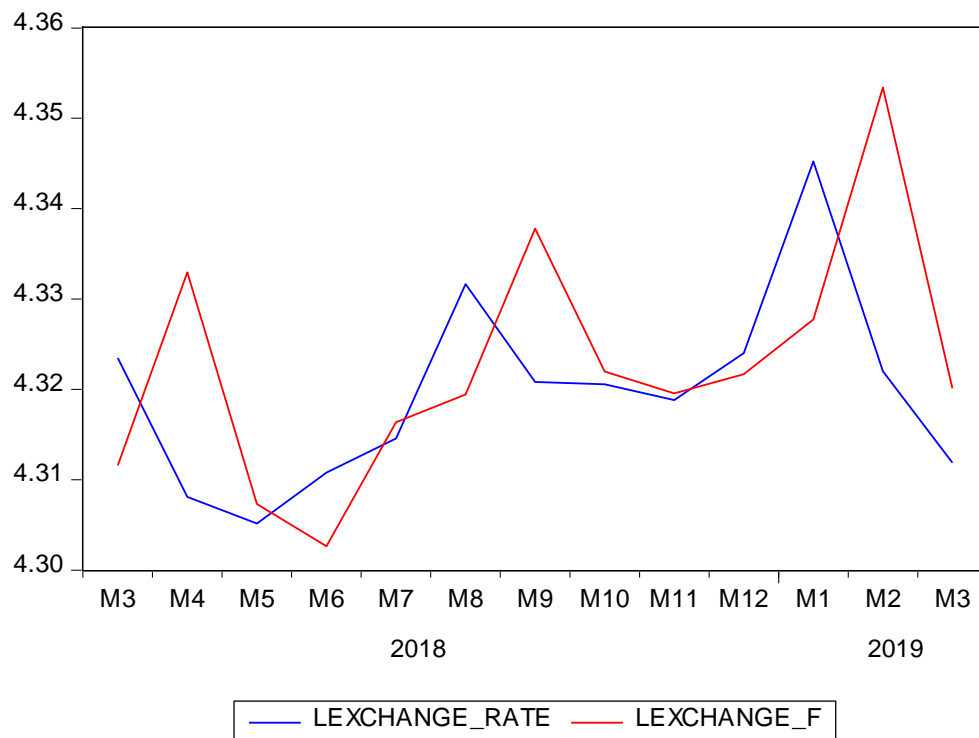


Fig 6: Forecast of the model of REER for Japan

Figure 5 and 6 give a clearer view of the forecast of REER for Japan. In Figure 6, forecasting is done by plotting the forecast graph against the actual graph. The blue line represents the actual REER, while the red color represents the forecasted REER. We can see that the forecast for month 3 of 2018 is enough close. From month 4 to month 5 there's a slight deviation, but from month 6 to month 8, the forecast is close. Slight deviations from month 9 to ten, and good forecast from month 10 of 2018 to month 1 of 2019. Slight deviation from month 2, but coming very close for the month 3 of 2019. We can conclude that our forecast is very close and the chosen model fits very good.

4. CONCLUSION

Forecasting is an important part of econometric analysis. This study tried to make a forecast of real effective exchange rate of Japanese yen to US dollars, using ARMA models. The time series models are based on the assumption that the time series involved are (weakly) stationary, the mean and variance for a weakly stationary time series are constant and its covariance is time-invariant. But we know that many economic time series are nonstationary, that is, they are integrated. If a time series is integrated of order 1 (i.e., it is $I[1]$), its first differences are $I(0)$, that is, stationary. Therefore, if we have to difference a time series d times to make it stationary and then apply the $ARMA(p, q)$ model to it, we say that the original time series is $ARIMA(p, d, q)$ (Gujarati and Porter 2009).

With a data set generated from BIS, we identified four models as possible models for our forecasting and we resulted with the $ARIMA(1,1,1)$ as the best model to continue with. However, after diagnostics analyses, there were found that lag 2 is significant, that is, it has some information to be captured. We included the lag 2 in the model and we found that the $AR(1)MA(1)MA(2)$ is the best model for our forecasting. We checked again for the residuals correlogram and there were no other information to be captured. The correlogram was flat and all lags were under the broken lines. Furthermore, after we performed the autocorrelation test, we found that all lags have been greater than 5%, so there is no autocorrelation problem in our problem. Finally, we plotted the forecast and the graph in general showed a very good estimation of the real effective exchange rate for Japan.

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APPENDIX A:

In this section we have given place to some useful tables from the identification and estimation steps.

Null Hypothesis: LEXCHANGE_RATE has a unit root
 Exogenous: Constant
 Lag Length: 1 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.299810	0.6285
Test critical values:		
1% level	-3.480038	
5% level	-2.883239	
10% level	-2.578420	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LEXCHANGE_RATE)
 Method: Least Squares
 Date: 05/18/19 Time: 15:45
 Sample (adjusted): 2008M03 2019M03
 Included observations: 133 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LEXCHANGE_RATE(-1)	-0.018797	0.014462	-1.299810	0.1960
D(LEXCHANGE_RATE(-1))	0.354904	0.082240	4.315445	0.0000
C	0.082910	0.064256	1.290304	0.1992
R-squared	0.129626	Mean dependent var		-0.000876
Adjusted R-squared	0.116235	S.D. dependent var		0.024825
S.E. of regression	0.023337	Akaike info criterion		-4.655237
Sum squared resid	0.070801	Schwarz criterion		-4.590041
Log likelihood	312.5733	Hannan-Quinn criter.		-4.628744
F-statistic	9.680504	Durbin-Watson stat		2.026580
Prob(F-statistic)	0.000120			

Tentative Models:

Dependent Variable: LEXCHANGE_RATE
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 05/18/19 Time: 16:09
Sample: 2008M01 2019M03
Included observations: 135
Convergence achieved after 19 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.418302	0.100832	43.81855	0.0000
AR(1)	0.973805	0.020531	47.43082	0.0000
MA(1)	0.277975	0.076708	3.623822	0.0004
SIGMASQ	0.000544	5.33E-05	10.22064	0.0000
R-squared	0.972251	Mean dependent var		4.439542
Adjusted R-squared	0.971615	S.D. dependent var		0.140591
S.E. of regression	0.023686	Akaike info criterion		-4.592564
Sum squared resid	0.073497	Schwarz criterion		-4.506482
Log likelihood	313.9981	Hannan-Quinn criter.		-4.557582
F-statistic	1529.947	Durbin-Watson stat		1.882965
Prob(F-statistic)	0.000000			
Inverted AR Roots	.97			
Inverted MA Roots	-.28			

Dependent Variable: LEXCHANGE_RATE
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 05/18/19 Time: 16:09
Sample: 2008M01 2019M03
Included observations: 135
Failure to improve objective (non-zero gradients) after 16 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.413900	0.101724	43.39110	0.0000
AR(2)	0.957581	0.032036	29.89124	0.0000
MA(1)	1.000000	87.93497	0.011372	0.9909
SIGMASQ	0.000594	0.001189	0.499347	0.6184
R-squared	0.969735	Mean dependent var		4.439542
Adjusted R-squared	0.969042	S.D. dependent var		0.140591
S.E. of regression	0.024737	Akaike info criterion		-4.501657
Sum squared resid	0.080160	Schwarz criterion		-4.415574
Log likelihood	307.8618	Hannan-Quinn criter.		-4.466675
F-statistic	1399.141	Durbin-Watson stat		1.306057
Prob(F-statistic)	0.000000			
Inverted AR Roots	.98	-.98		
Inverted MA Roots	-1.00			

Dependent Variable: LEXCHANGE_RATE
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 05/18/19 Time: 16:10
Sample: 2008M01 2019M03
Included observations: 135
Convergence achieved after 15 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.425975	0.040969	108.0323	0.0000
AR(6)	0.805221	0.068859	11.69370	0.0000
MA(1)	0.968906	0.032342	29.95773	0.0000
SIGMASQ	0.001976	0.000198	9.960486	0.0000
R-squared	0.899278	Mean dependent var		4.439542
Adjusted R-squared	0.896971	S.D. dependent var		0.140591
S.E. of regression	0.045127	Akaike info criterion		-3.278608
Sum squared resid	0.266773	Schwarz criterion		-3.192526
Log likelihood	225.3060	Hannan-Quinn criter.		-3.243627
F-statistic	389.8701	Durbin-Watson stat		0.920553
Prob(F-statistic)	0.000000			
Inverted AR Roots	.96	.48-.84i	.48+.84i	-.48+.84i
	-.48-.84i	-.96		
Inverted MA Roots	-.97			

Dependent Variable: LEXCHANGE_RATE
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 05/18/19 Time: 16:10
Sample: 2008M01 2019M03
Included observations: 135
Convergence achieved after 15 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.433601	0.023967	184.9889	0.0000
AR(15)	0.579558	0.089394	6.483187	0.0000
MA(1)	0.874657	0.049964	17.50560	0.0000
SIGMASQ	0.003831	0.000623	6.146537	0.0000
R-squared	0.804717	Mean dependent var		4.439542
Adjusted R-squared	0.800245	S.D. dependent var		0.140591
S.E. of regression	0.062836	Akaike info criterion		-2.610096
Sum squared resid	0.517228	Schwarz criterion		-2.524013
Log likelihood	180.1814	Hannan-Quinn criter.		-2.575114
F-statistic	179.9403	Durbin-Watson stat		0.519314
Prob(F-statistic)	0.000000			
Inverted AR Roots	.96	.88+.39i	.88-.39i	.65-.72i
	.65+.72i	.30-.92i	.30+.92i	-.10+.96i
	-.10-.96i	-.48+.84i	-.48-.84i	-.78-.57i
	-.78+.57i	-.94-.20i	-.94+.20i	
Inverted MA Roots	-.87			

Dependent Variable: LEXCHANGE_RATE
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 05/18/19 Time: 16:17
Sample: 2008M01 2019M03
Included observations: 135
Convergence achieved after 37 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.422675	0.087372	50.61869	0.0000
AR(1)	1.501957	0.215915	6.956252	0.0000
AR(2)	-0.521870	0.214310	-2.435116	0.0162
MA(1)	-0.196058	0.247383	-0.792529	0.4295
SIGMASQ	0.000521	5.14E-05	10.14562	0.0000
R-squared	0.973442	Mean dependent var		4.439542
Adjusted R-squared	0.972624	S.D. dependent var		0.140591
S.E. of regression	0.023261	Akaike info criterion		-4.620419
Sum squared resid	0.070343	Schwarz criterion		-4.512816
Log likelihood	316.8783	Hannan-Quinn criter.		-4.576692
F-statistic	1191.221	Durbin-Watson stat		2.011224
Prob(F-statistic)	0.000000			
Inverted AR Roots	.96	.55		
Inverted MA Roots	.20			

Dependent Variable: LEXCHANGE_RATE
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 05/18/19 Time: 16:17
Sample: 2008M01 2019M03
Included observations: 135
Convergence achieved after 32 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.418896	0.094016	47.00154	0.0000
AR(1)	0.966112	0.024928	38.75660	0.0000
MA(1)	0.293956	0.071050	4.137333	0.0001
MA(2)	0.231045	0.095292	2.424601	0.0167
SIGMASQ	0.000519	4.99E-05	10.40190	0.0000
R-squared	0.973556	Mean dependent var		4.439542
Adjusted R-squared	0.972742	S.D. dependent var		0.140591
S.E. of regression	0.023212	Akaike info criterion		-4.624686
Sum squared resid	0.070041	Schwarz criterion		-4.517083
Log likelihood	317.1663	Hannan-Quinn criter.		-4.580959
F-statistic	1196.492	Durbin-Watson stat		1.931690
Prob(F-statistic)	0.000000			
Inverted AR Roots	.97			
Inverted MA Roots	-.15+.46i	-.15-.46i		

Heteroskedasticity Test:

Heteroskedasticity Test: White

F-statistic	3.59E+23	Prob. F(20,114)	0.0000
Obs*R-squared	135.0000	Prob. Chi-Square(20)	0.0000
Scaled explained SS	231.3932	Prob. Chi-Square(20)	0.0000

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/18/19 Time: 16:19

Sample: 2008M01 2019M03

Included observations: 135

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000519	5.17E-15	1.00E+11	0.0000
GRADF_01^2	2.92E-15	5.75E-15	0.506941	0.6132
GRADF_01*GRADF_02	-4.15E-16	1.40E-16	-2.962745	0.0037
GRADF_01*GRADF_03	-1.77E-16	4.21E-16	-0.420531	0.6749
GRADF_01*GRADF_04	-1.00E-15	5.13E-16	-1.947733	0.0539
GRADF_01*GRADF_05	5.81E-19	2.90E-19	2.004368	0.0474
GRADF_01	2.48E-16	5.91E-16	0.420367	0.6750
GRADF_02^2	5.16E-17	3.13E-17	1.650089	0.1017
GRADF_02*GRADF_03	4.04E-16	1.02E-16	3.979799	0.0001
GRADF_02*GRADF_04	-8.12E-17	1.32E-16	-0.614959	0.5398
GRADF_02*GRADF_05	-3.39E-19	9.06E-20	-3.744838	0.0003
GRADF_02	-4.46E-17	1.54E-16	-0.289803	0.7725
GRADF_03^2	-2.00E-16	2.13E-16	-0.939865	0.3493
GRADF_03*GRADF_04	-8.06E-16	3.37E-16	-2.394676	0.0183
GRADF_03*GRADF_05	-3.18E-19	2.01E-19	-1.586199	0.1155
GRADF_03	7.68E-14	5.28E-16	145.2582	0.0000
GRADF_04^2	-3.27E-16	2.73E-16	-1.195024	0.2346
GRADF_04*GRADF_05	5.14E-19	4.24E-19	1.210087	0.2287
GRADF_04	2.21E-14	6.19E-16	35.80080	0.0000
GRADF_05^2	7.28E-23	1.69E-22	0.431707	0.6668
GRADF_05	5.38E-07	5.42E-18	9.94E+10	0.0000
R-squared	1.000000	Mean dependent var		0.000519
Adjusted R-squared	1.000000	S.D. dependent var		0.001001
S.E. of regression	4.33E-15	Sum squared resid		2.13E-27
F-statistic	3.59E+23	Durbin-Watson stat		1.933799
Prob(F-statistic)	0.000000			

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Three different approaches to solving the problem of multicriteria fractional linear programming

Abstract

In this paper, we propose a new approach to target programming based the linearization fractured linear target functions for problem solving fuzzy multiple criteria fractured linear programming. By the proposed method, decision makers need to give the information to the relative importance of target function. The applicability of the proposed method has been tested on the example of the financial structure optimization of a company. The results show the advantages of the proposed methodology in comparison with existing methods: (a) The methodology is simple for analysts as well as for decision-makers, and (b) the decision makers can determine the weight of the target function, and thereby the resulting solutions will reflect the preferences of decision-makers.

Keywords: Multicriteria, linear fractional, targeted programming.

1. Introduction

In some economic problems, goals may be more appropriately expressed as a ratio of two economic magnitudes. Economic problems presented in this way can better reflect the quality of business results. Also, the goals expressed in this way allow us to make adequate comparisons between the two business entities. Therefore, if the goals are expressed as a ratio of two economic magnitudes and if the parameters and variables of the model are linear, then the optimization of the economic problem requires multicriteria fractional linear programming. (MOFLP).

The problem of fractional linear programming with one goal was extensively researched in the second part of the twentieth century and successful methods have been developed to solve such problems ([3], [4], [5], [11]).

However, in MOFLP problems determining a successful (Pareto optimal) solution is technically demanding when the target functions are fractionally linear. Solving a multicriteria fractional linear programming model is limited to a small number of multicriteria programming methods that are not effective enough either from the point of view of analysts or decision makers [1], [2], [6], [10], [12], [13], [21]).

A particular problem grows in the application of target programming methods when deviation variables d^- and d^+ fractional linear functions are added to form constraints to the target programming model, because then nonlinear constraints are obtained that lead to model solving problems. Several methods have been developed that use target programming to solve a multicriteria fractional linear programming model ([8], [9], [15], [16], [17], [20], [22]), but there is little research in which these methods have been applied and tested in solving real economic problems ([13], [20]).

Some papers propose linearization of fractional linear objective functions and solve the thus obtained multicriteria linear programming model using standard multicriteria linear programming methods such as target programming, STEM method, fuzzy programming, etc. ([17], [19]). These methods are not efficient enough, neither from the point of view of analysts nor decision makers. In this paper, a new target programming based on the linearization of fractional linear target functions for solving unclear multicriteria fractional programming models is presented. In the proposed method, the decision maker provides information on the relative importance of the target functions. The proposed method was tested on the example of optimizing the financial structure of a company.

Therefore, the main objectives of this paper are: (1) to propose a model based on linearization of objective functions to improve target programming methods designed to solve multicriteria fractional linear programming, (2) to test the applicability of the proposed model to solve financial structure optimization problems.

2. Methods for solving problems of fractional-linear programming

We can apply a number of methods to solve the model of fractional linear programming. When choosing the method, we took into account that the simplex method can be used when solving the model. We have narrowed the choice of methods to the following three groups of methods:

1. Method of meeting the objectives,
2. Targeted programming,
3. 'Fuzzy' programming.

2.1. Goal satisfaction method

The goal satisfaction method belongs to the group of general methods of multicriteria programming. It is suitable for solving all classes of multicriteria programs, so it can also be used for solving multicriteria models of fractionally linear programming.

This method was proposed by Benson [1975] for the interactive solution of linear and nonlinear multicriteria programming models. In this method, the decision maker indicates a set of criterion levels $L_j, j=1, \dots, k$ (which must be permissible) and determines one function of the criterion, the level of which is the least satisfied (LS). The LS criterion function is then maximized subject to the original constraints and additional constraints formed by other criterion functions. An analyst, working iteratively and interactively, can reduce the value of acceptable criterion levels one or more times until the most favorable solution for the decision maker is reached.

The algorithm of this method consists of the following steps:

Step 0:

The decision maker determines a set of minimum acceptable criterion levels \underline{L}^1 , which will serve as a starting point for a later revision of the value of the criterion functions. The set \underline{L}^1 and constraints of the model should form the allowable area in step 2, otherwise the decision maker must perform a value audit \underline{L}^1 . We set $q = 1$.

Step 1: Selection of the criterion function that is least satisfied

The decision maker determines one criterion function that is least met (LS). This is the function in which the values of the criterion functions for a particular optimal (marginal) solution differ the most.

Step 2: Optimization of LS function criteria

The LS function is maximized under the condition of the original constraints and additional constraints obtained from the remaining criterion functions:

$$\begin{aligned} \max f &= f_{LS}(\underline{x}) \\ \text{u.o.} & \\ g_i(\underline{x}) &\leq 0, \quad i = 1, \dots, m \\ f_j(\underline{x}) &\geq L_j^q, \quad j = 1, \dots, k, \quad j \neq LS. \end{aligned} \quad (2.10)$$

Step 3: Decision-making phase

The decision maker indicates whether the achievement $f_{LS}(\underline{x})$ in step 2 is satisfactory. (a) If not, the decision maker changes some levels of criterion functions and determines $\underline{L}^{q+1} (\leq \underline{L}^q)$. Let $q = q + 1$. We return to step 2. (b) If the achievement $f_{LS}(\underline{x})$ is satisfactory, the decision maker is asked whether the achieved value $f_{LS}(\underline{x})$ can be somewhat weakened in order to improve the levels of other criteria. If it cannot be weakened, then \underline{L}^q and the optimized value are the best achieved criterion function of the model. Otherwise you need to go to step 4.

Step 4: Determining a new level of criterion function

The decision maker specifies the amount of mitigation $\Delta f_{LS}(\underline{x})$, which is permissible. Take $q = q + 1$. Go back to step 1.

If the model defines that the function $f_{LS}(\underline{x})$ is nonlinear, and / or some constraints are nonlinear, this model can be solved by applying the appropriate nonlinear programming method.

2.2. Targeted Programming

Target programming as an approach was first introduced by Charnes and Cooper (1961), then developed by Ijiry (1965), Lee (1972), Ignizio (1982), etc. The basic idea of target programming is to minimize the distance between the vector function Z (how is defined in model (3.1)) and aspiration levels of the vector \bar{Z} . The aspiration level of \bar{Z} is determined by the decision maker or is equal to Z^* , where $Z^* = (z_1^*, z_2^*, \dots, z_K^*)$.

In the target programming, the distance between Z_k i \bar{Z}_k , $d(Z_k, \bar{Z}_k)$, is expressed by the deviation variables n_k and p_k ($k = 1, 2, \dots, K$) where n_k are negative deviation variables,

$$n_k = \max(0, \bar{z}_k - z_k) = \frac{1}{2} \left[\bar{z}_k - z_k + |\bar{z}_k - z_k| \right], \quad (2.11)$$

and p_k are positive deviation variables,

$$p_k = \max(0, z_k - \bar{z}_k) = \frac{1}{2} \left[z_k - \bar{z}_k + |z_k - \bar{z}_k| \right]. \quad (2.12)$$

Minimizing the distance between z_k and \bar{z}_k means minimizing either n_k or p_k or $n_k + p_k$. For the problem of maximum it should be $z_k \geq \bar{z}_k$, so it is necessary to minimize n_k , while for the problem of minimum $z_k \leq \bar{z}_k$, it is necessary to minimize p_k . When $z_k = \bar{z}_k$ it is necessary to minimize $n_k + p_k$.

According to the above, model (2.13) was converted into the minimization problem of deviation variables with the help of target programming and can have one of the following forms:

(i) Min-Max form:

$$(M2) \quad \min \max g_k(n_k, p_k) \quad (2.14)$$

$$\text{p.o.} \quad \underline{A} \underline{X} \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} \underline{b}, \quad (2.15)$$

$$\underline{C}_k \underline{X} + n_k - p_k = \bar{z}_k, k = 1, 2, \dots, K, \quad (2.16)$$

$$\underline{X} \geq 0, n_k \geq 0, p_k \geq 0, n_k \cdot p_k = 0, k = 1, 2, \dots, K, \quad (2.17)$$

where $g_k(n_k, p_k) = n_k$ in case of maximization z_k , $g_k(n_k, p_k) = p_k$ in case of minimization z_k , and $g_k(n_k, p_k) = n_k + p_k$ when $z_k = \bar{z}_k$, \underline{C}_k is the k -th row of the matrix \underline{C} .

Model 2 is converted to the LP problem as follows:

$$(M3) \quad \min \lambda \quad (2.18)$$

$$\text{u. o. restrictions (2.15) do (2.17),} \quad (2.19)$$

$$\lambda \geq g_k(n_k, p_k), k = 1, 2, \dots, K. \quad (2.20)$$

(M3) can be solved by the simplex method.

(ii) Minimization of the sum of deviation forms:

$$(M4) \quad \min \sum_{k=1}^K g_k(n_k, p_k) \quad (2.21)$$

$$\text{u. o. restrictions (2.15) – (2.17)} \quad (2.22)$$

where all parameters and variables are defined in (M1) and (M2). (M4) is a linear programming (LP) problem that can be solved by the simplex method.

(iii) Minimization of the weight sum of deviation forms:

$$(M5) \quad \min \sum_{k=1}^K w_k g_k(n_k, p_k) \quad (2.23)$$

$$\text{u. o. restrictions (2.15) – (2.17),} \quad (2.24)$$

where w_k ($k = 1, 2, \dots, K$) are determined by the decision maker. (M5) is an LP problem that can be solved by the simplex method.

(iv) Lexicographic form: If the decision maker can rank the target functions by priority, then the lexicographic form of target programming can be used. In this form K of the target functions is arranged in order of priority. The goal with the highest priority is considered first, then the goal with priority to the highest, etc. The lexicographic form of target programming looks like this:

$$(M6) \quad \min a = \left\{ \sum_{k \in P_i} w_k g_k(n_k, p_k) : i = 1, 2, \dots, I \right\} \quad (2.25)$$

$$\text{u. o. restrictions (2.15) – (2.17),} \quad (2.26)$$

where I is the priority level number, and $k \in P_i$ means that the k -th goal is at the i -th priority level.

(M6) is a linear target programming model that can be solved using a multiphase simplex method or a sequential simplex method.

In models (MF1), (MF2), (MF3) and (MF4) broken linear functions $z_k(x) = \frac{C_k x + c_0^k}{D_k x + d_0^k}$ are transformed into linear functions.

To solve the multicriteria problem of fractionally linear programming with vaguely defined goals of the decision maker using the method of target programming, we propose a modification of the linearization method published in the paper (Pal et al., 2003). Since the decision maker is not able to accurately express the value of the goals to be achieved, it is proposed here to determine the goals of the decision maker using a payment table, which is formed by optimizing each individual goal function on a given set of constraints. In goal functions to be maximized, the upper limit is the maximum value of goal functions obtained by maximizing them on a given constraint set, while the lower limit is the smallest value of a given goal function on a given constraint set. In the goal functions to be minimized, the upper limit is the highest value of the goal function from the payment table, while the lower limit is the minimum value of the goal function obtained by minimizing on a given set of constraints.

The proposed modification of the method requires the decision maker to provide information on the difficulty of the goal functions. If the decision maker cannot express the relative importance of the goal functions, the weights can be calculated using one of the methods for determining the weights of the goal functions. In order to solve the model of multicriteria fractional linear programming with imprecisely determined goals of the decision maker using the method of target programming, for the goal functions to be maximized it is proposed to linearize the fractional linear goal function as follows:

$$\frac{\sum_{j=1}^n c_{kj} x_j + c_0^k}{\sum_{j=1}^n d_{kj} x_j + d_0^k} \leq z_k^* \cdot \left(\sum_{j=1}^n d_{kj} x_j + d_0^k \right), \quad k = 1, 2, \dots, k_1$$

$$\sum_{j=1}^n c_{kj} x_j + c_0^k \leq z_k^* \left(\sum_{j=1}^n d_{kj} x_j + d_0^k \right)$$

$$\begin{aligned} \sum_{j=1}^n c_{kj}x_j - z_k^* \sum_{j=1}^n d_{kj}x_j &\leq z_k^* d_0^k - c_0^k \\ \sum_{j=1}^n (c_{kj} - z_k^* d_{kj})x_j &\leq z_k^* d_0^k - c_0^k \\ \sum_{j=1}^n C_{kj}x_j + d_k^- &= Z_k^*, \quad k=1,2,\dots,k_1, \end{aligned} \quad (2.27)$$

Where z_k^* is the maximum value of the k-th function of the target on a given set of constraints, $C_{kj} = c_{kj} - z_k^* d_{kj}$, $Z_k^* = z_k^* d_0^k - c_0^k$, a d_k^- is a deviation variable ($k = 1, 2, \dots, k_1$).

A fractionally linear function that needs to be minimized can be linearized in an analogous way:

$$\begin{aligned} \frac{\sum_{j=1}^n c_{kj}x_j + c_0^k}{\sum_{j=1}^n d_{kj}x_j + d_0^k} &\geq z_k^* / \left(\sum_{j=1}^n d_{kj}x_j + d_0^k \right) \\ \sum_{j=1}^n c_{kj}x_j + c_0^k &\geq z_k^* (\sum_{j=1}^n d_{kj}x_j + d_0^k) \\ \sum_{j=1}^n c_{kj}x_j - z_k^* \sum_{j=1}^n d_{kj}x_j &\geq z_k^* d_0^k - c_0^k \\ \sum_{j=1}^n (c_{kj} - z_k^* d_{kj})x_j &\geq z_k^* d_0^k - c_0^k \\ \sum_{j=1}^n C_{kj}x_j - d_k^+ &= Z_k^*, \quad k=k_1+1, \dots, K, \end{aligned} \quad (2.28)$$

Where Z_k^* is the minimum value of the k-th target function on a given constraint set, and d_k^+ is a deviation variable ($k = k_1 + 1, k_1 + 2, \dots, K$).

Based on the above, the targeted programming model looks like:

$$\begin{aligned} \min g_k (d_k^-, d_k^+) \\ \text{u.o.} \quad C_{kj}x_j + d_k^- &= Z_k^*, \quad k=1,2,\dots,k_1, \\ C_{kj}x_j - d_k^+ &= Z_k^*, \quad k=k_1+1,\dots,K, \\ Ax \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} b, \\ x &\geq 0, \\ D_k^-, D_k^+ &\geq 0. \end{aligned} \quad (2.29)$$

Numerous target programming approaches can be used to solve the model (2.39) to solve the model of broken linear target programming:

(1) Min-max access:

$$\begin{aligned}
 & \text{Min max } g_k(d_k^-, d_k^+) \\
 \text{u.o.} \quad & \sum_{j=1}^n C_{kj} x_j + d_k^- = Z_k^*, \quad k=1, 2, \dots, k_1, \\
 & \sum_{j=1}^n C_{kj} x_j - d_k^+ = Z_k^*, \quad k=k_1+1, \dots, K, \\
 & Ax \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} b, \\
 & x \geq 0, \quad d_k^-, d_k^+ \geq 0.
 \end{aligned} \tag{2.30}$$

Therefore, d_k^- appears within the constraints formed by the goal functions to be maximized, while d_k^+ appears within the constraints formed by the goal functions to be minimized.

To solve the model (2.30) we can form the following specific model of linear programming, which is simply solved by the simplex method:

$$\begin{aligned}
 & \text{Min } \lambda \\
 \text{s. t.} \quad & \lambda - d_k^- \geq 0, \quad k=1, 2, \dots, k_1, \\
 & \lambda - d_k^+ \geq 0, \quad k=k_1+1, k_1+2, \dots, K, \\
 & \sum_{j=1}^n C_{kj} x_j + d_k^- = Z_k^*, \quad k=1, 2, \dots, k_1, \\
 & \sum_{j=1}^n C_{kj} x_j - d_k^+ = Z_k^*, \quad k=k_1+1, \dots, K, \\
 & Ax \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} b, \\
 & x \geq 0, \quad \lambda, d_k^-, d_k^+ \geq 0.
 \end{aligned} \tag{2.31}$$

(2) Minimization of the sum of deviation forms:

$$\begin{aligned}
 & \text{Min } \sum_{k=1}^K g_k(d_k^-, d_k^+) \\
 \text{u.o.} \quad & \sum_{j=1}^n C_{kj} x_j + d_k^- = Z_k^*, \quad k=1, 2, \dots, k_1, \\
 & \sum_{j=1}^n C_{kj} x_j - d_k^+ = Z_k^*, \quad k=k_1+1, \dots, K,
 \end{aligned}$$

$$Ax \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} b, \quad (2.32)$$

$$x \geq 0, d_k^-, d_k^+ \geq 0.$$

Model (2.32) is a linear programming model that is also easily solved by the simplex method.

(3) Min-max weight form:

$$\begin{aligned} & \text{Min } g_k(w_k d_k^-, w_k d_k^+) \\ \text{u.o. } & \sum_{j=1}^n C_{kj} x_j + d_k^- = Z_k^*, \quad k=1, 2, \dots, k_1, \\ & \sum_{j=1}^n C_{kj} x_j - d_k^+ = Z_k^*, \quad k=k_1+1, k_1+2, \dots, K, \\ & Ax \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} b, \quad (2.33) \\ & x \geq 0, d_k^-, d_k^+ \geq 0. \end{aligned}$$

where $w_k, \sum_{k=1}^K w_k = 1, (k = 1, 2, \dots, K)$ are the weightiness of the goal functions determined by the decision maker.

To solve model (2.33) we can form the following model of linear programming, which is solved by the simplex method:

$$\begin{aligned} & \text{Min } \lambda \\ \text{s. t. } & \lambda - w_k d_k^- \geq 0, \quad k=1, 2, \dots, k_1, \\ & \lambda - w_k d_k^+ \geq 0, \quad k=k_1+1, k_1+2, \dots, K, \\ & \sum_{j=1}^n C_{kj} x_j + d_k^- = Z_k^*, \quad k=1, 2, \dots, k_1, \\ & \sum_{j=1}^n C_{kj} x_j - d_k^+ = Z_k^*, \quad k=k_1+1, k_1+2, \dots, K, \\ & Ax \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} b, \quad (2.34) \\ & x \geq 0, \lambda, d_k^-, d_k^+ \geq 0. \end{aligned}$$

(iv) Lexicographic form: In this form K goal functions are arranged according to the priorities of the decision maker, where the objective with the highest priority is considered first, then the second, etc. The general form of the lexicographic approach of target programming is

$$\min a = \min_{k \in P_i} g_k(d_k^-, d_k^+) : i = 1, 2, \dots, K; k = 1, 2, \dots, K$$

$$\begin{aligned}
 \text{s.t.} \quad & \sum_{j=1}^n C_{kj} x_j + d_k^- = Z_k^*, \quad k = 1, 2, \dots, k_1, \\
 & \sum_{j=1}^n C_{kj} x_j - d_k^+ = Z_k^*, \quad k = k_1 + 1, \dots, K, \\
 & Ax \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} b, \\
 & x \geq 0, \quad d_k^-, d_k^+ \geq 0,
 \end{aligned} \tag{2.35}$$

where I is the priority level number, and $k \in P_i$ means that the k -th goal is at the i -th priority level.

Model (2.35) is a model of linear programming that is solved by the simplex method.

2.3. 'Fuzzy' multicriteria fractional linear programming

If there is an inaccurately determined aspiration level for each goal function in the multicriteria fractional linear programming model, then these 'fuzzy' goal functions are expressed as 'fuzzy' goals.

Let g_k be the aspiration level of the k -th function $z_k(x)$. Then the 'fuzzy' goals are expressed as

- (1) $z_k(x) > \approx g_k$ (to maximize $z_k(x)$);
- (2) $z_k(x) < \approx g_k$ (to minimize $z_k(x)$),

where $> \approx$ and $< \approx$ indicate ('fuzzy') defined aspiration levels.

'Fuzzy' fractional linear target programming can be presented as:

Find x

So they are satisfied $z_k(x) > \approx g_k, k = 1, 2, \dots, k_1$

$$z_k(x) < \approx g_k, k = k_1 + 1, k_1 + 2, \dots, K \tag{2.36}$$

with restrictions

$$Ax \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} b,$$

$$x \geq 0.$$

Now 'fuzzy' goals are characterized by their 'membership' functions. 'Membership' functions μ_k for k -th 'fuzzy' goal $z_k(x) > \approx g_k$ can be defined as:

$$\mu_k(x) = \begin{cases} 1 & \text{ako je } z_k(x) \geq g_k \\ \frac{z_k(x) - l_k}{g_k - l_k} & \text{ako je } l_k \leq z_k(x) \leq g_k \\ 0 & \text{ako je } z_k(x) \leq l_k, \end{cases} \tag{2.37}$$

Where l_k is the lower limit for k -th 'fuzzy' goal.

This 'membership' function μ_k can be expressed for k -th 'fuzzy' goal $z_k(x) < \approx g_k$ as:

$$\mu_k(x) = \begin{cases} 1 & \text{if } z_k(x) \leq g_k \\ \frac{u_k - z_k(x)}{u_k - g_k} & \text{if } g_k \leq z_k(x) \leq u_k \\ 0 & \text{if } z_k(x) \geq u_k, \end{cases} \quad (2.38)$$

where u_k is the upper limit of tolerance.

Since in the ‘fuzzy’ programming approaches the highest degree of ‘membership’ function is equal to 1, for the defined ‘membership’ functions in (2.37) and (2.38), flexible ‘membership’ goals with aspiration level 1 can be represented as:

$$\frac{z_k(x) - l_k}{g_k - l_k} + d_k^- - d_k^+ = 1, \quad (2.39)$$

$$\frac{u_k - z_k(x)}{u_k - g_k} + d_k^- - d_k^+ = 1, \quad (2.40)$$

where $d_k^- (\geq 0)$ i $d_k^+ (\geq 0)$ sa $d_k^- \cdot d_k^+ = 0$ represent negative and positive deviations from given levels, respectively.

In this approach, only negative deviation variables should be minimized to achieve given levels of ‘fuzzy’ goals.

Since membership goals (2.39) and (2.40) are nonlinear in nature, this can cause computational difficulties in the resolution process. To avoid computational difficulties, linearization of ‘membership’ functions has been proposed.

k -th ‘membership’ goal in (2.39) can be expressed as

$$L_k z_k(x) - L_k l_k + d_k^- - d_k^+ = 1, \text{ where } L_k = \frac{1}{g_k - l_k}.$$

By introducing expressions $z_k(x)$ from (2.36), the above goal can be represented as

$$L_k (c_k x + c_0^k) + d_k^- (d_k x + d_0^k) = L_k' (d_k x + d_0^k), \text{ gdje je } L_k' = 1 + L_k l_k,$$

or

$$C_k x + d_k^- (d_k x + d_0^k) - d_k^+ (d_k x + d_0^k) = G_k, \quad (2.41)$$

where $C_k = L_k c_k - L_k' d_k$, $G_k = L_k' d_0^k - L_k c_0^k$.

In a similar way, goal expressions for ‘membership’ goals are obtained in (3.50).

Using the variable substitution method, the goal expressions from (3.51) can be linearized:

$$C_k x + D_k^- - D_k^+ = G_k,$$

where $D_k^- = d_k^- (d_k x + d_0^k)$ and $D_k^+ = d_k^+ (d_k x + d_0^k)$, $D_k^-, D_k^+ \geq 0$, $D_k^- \cdot D_k^+ = 0$ since it is $d_k^-, d_k^+ \geq 0$ and $d_k x + d_0^k > 0$.

Since minimization d_k^- means minimization $D_k^- / (d_k x + d_0^k)$, i $d_k^- = 0$ when the ‘membership’ goal is fully achieved, and $d_k^- \leq 1$ when the ‘membership’ goal is not fully achieved, inclusion $d_k^- \leq 1$ in the solution leads to the introduction of the following constraint in the model:

$$\frac{D_k^-}{d_k x + d_0^k} \leq 1, \text{ to jest } -d_k x + D_k^- \leq d_0^k.$$

Thus, any such restriction corresponding to d_k^+ does not appear in the model formulation.

If 'min-sum target programming' is introduced into the model formulation, then the target programming model formulation becomes:

Find x so that is

$$\text{Min } z = \sum_{k=1}^K w_k^- D_k^-$$

So it is satisfied $C_k x + D_k^- - D_k^+ = G_k$

$$\text{with restrictions } Ax \begin{pmatrix} \leq \\ = \\ \geq \end{pmatrix} b \quad (2.42)$$

$$\begin{aligned} \text{and} \quad & -d_k x + D_k^- \leq d_0^k, \\ & x \geq 0, \\ & D_k^-, D_k^+ \geq 0, \end{aligned}$$

Where z represents the function of complete realization, which consists of negative deviation variables, and numerical weights w_k represent the relative importance of achieving aspirational levels of 'fuzzy' goals on a set of constraints. The weighting scheme proposed by Mohamed (1996) can be used to determine the values w_k^- ($k = 1, 2, \dots, K$). Here it is defined as

$$w_k^- = \begin{cases} \frac{1}{g_k - l_k} & \text{for the defined } \mu_k \text{ in (3),} \\ \frac{1}{u_k - g_k} & \text{for the defined } \mu_k \text{ in (4).} \end{cases} \quad (2.43)$$

The 'min-sum target programming' method can be used to solve the problem (2.42).

3.1. Solving models with targeted programming

We only ask the decision maker for information about the relative importance of the goal functions. If the decision maker cannot provide such information, the analyst can use appropriate methods based on the data from the payment table, calculate the weights of the objective functions and suggest to the decision maker to accept the solution, or can calculate a set of effective solutions obtained by varying the weights of the objective functions. Here we will present the solutions obtained by applying the proposed methodology of linearization of goal functions using the above four approaches to solve the target programming model. Primjenom modela (2.27) na gore navedene podatke linearizirane su funkcije cilja na sljedeći način:

$$\frac{\sum_{j=1}^{30} c_{kj} x_j + c_0^k}{\sum_{j=1}^{30} d_{kj} x_j + d_0^k} \leq z_k^* / \left(\sum_{j=1}^{30} d_{kj} x_j + d_0^k \right), k = 1, 2, 3 \text{ (goal functions that need to be}$$

maximized)

$$\begin{aligned}
 \sum_{j=1}^{30} c_{kj}x_j + c_0^k &\leq z_k^* (\sum_{j=1}^{30} d_{kj}x_j + d_0^k) \Rightarrow \\
 \sum_{j=1}^{30} c_{kj}x_j - z_k^* \sum_{j=1}^{30} d_{kj}x_j &\leq z_k^* d_0^k - c_0^k \Rightarrow \\
 \sum_{j=1}^{30} c_{kj}x_j - z_k^* \sum_{j=1}^{30} d_{kj}x_j + d_k^- &= z_k^* d_0^k - c_0^k.
 \end{aligned} \tag{3.1}$$

Targeted programming models look like this:

(1) Min max form

$$\begin{aligned}
 \min \quad &g(d_k^-), k = 1, 2, 3 \\
 \text{u. o.} \quad &\sum_{j=1}^{30} c_{kj}x_j - z_k^* \sum_{j=1}^{30} d_{kj}x_j + d_k^- = z_k^* d_0^k - c_0^k \\
 &\text{limitations (3.1).}
 \end{aligned} \tag{3.2}$$

Model (4.8) is solved by Zimmermann's approach for solving the target programming model:

$$\begin{aligned}
 \min \quad &\lambda \\
 \text{s. t.} \quad &\lambda - d_1^+ \geq 0 \\
 &\lambda - d_2^- \geq 0 \\
 &\lambda - d_3^- \geq 0 \\
 &\sum_{j=1}^{30} c_{kj}x_j - z_k^* \sum_{j=1}^{30} d_{kj}x_j + d_k^- = z_k^* d_0^k - c_0^k \\
 &\text{limitations (4.4).}
 \end{aligned} \tag{3.3}$$

(2) Minimization of the sum of deviation variables:

$$\begin{aligned}
 \min \quad &\sum_{k=1}^3 d_k^- \\
 \text{u. o.} \quad &\sum_{j=1}^{30} c_{kj}x_j - z_k^* \sum_{j=1}^{30} d_{kj}x_j + d_k^- = z_k^* d_0^k - c_0^k \\
 &\text{limitations (4.4).}
 \end{aligned} \tag{3.4}$$

(3) Minimization of the weight sum of deviation variables:

$$\min \quad \sum_{k=1}^3 w_k d_k^-$$

$$\text{u. o. } \sum_{j=1}^{30} c_{kj} x_j - z_k^* \sum_{j=1}^{30} d_{kj} x_j + d_k^- = z_k^* d_0^k - c_0^k \quad (3.5)$$

limitations (4.4),

where $w_1 = 0.5$, $w_2 = 0.3$, $w_3 = 0.2$ are the weightiness of the goal function given by the decision maker.

Model (4.11) is solved by solving the following linear programming model

min λ

$$\text{u. o. } \sum_{j=1}^{30} c_{kj} x_j - z_k^* \sum_{j=1}^{30} d_{kj} x_j + d_k^- = z_k^* d_0^k - c_0^k$$

limitations (4.4) (3.6)

$$\lambda - w_1 d_1^- \geq 0,$$

$$\lambda - w_2 d_2^- \geq 0,$$

$$\lambda - w_3 d_3^- \geq 0,$$

where $\lambda, w_1, w_2, w_3, d_1^-, d_2^-, d_3^- \geq 0$, a $\sum_{k=1}^3 w_k = 1$.

(4) Lexicographic form: Three goals are ranked according to their priority: goal 1 has priority 1, goal 2 has priority 2, while goal 3 has priority 3. The general lexicographic program looks like this:

$$\min a = \min_{k \in P_i} g_k(d_k^-) : i = 1, 2, 3; k = 1, 2, 3$$

$$\text{u. o. } \sum_{j=1}^{30} c_{kj} x_j - z_k^* \sum_{j=1}^{30} d_{kj} x_j + d_k^- = z_k^* d_0^k - c_0^k, k = 1, 2, 3$$

limitations (4.4) , (3.7)

where $k \in P_i$ means that the k -th goal is at the i -th priority level. In our model, z_1 is at the first level, goal z_2 is at the second level, and goal z_3 is at the third level. Model (3.66) was solved by the simplex method in several steps.

3.2. Solving 'fuzzy' modeling by programming

When solving the problem of optimizing a production plan with 'fuzzy' programming, it is necessary to first make 'membership' functions for goal functions (relation (3.47)), calculate the weights of goal functions (3.53) and form a target programming model (3.52) looks as follows:

$$\text{Min } \frac{1}{0.057198} D_1^- + \frac{1}{2.461424} D_2^- + \frac{1}{0.067538} D_3^-$$

u. o. limitations (4.4)

$$\begin{aligned} \sum_{j=1}^{30} (c_{1j} - 0.273726d_{1j})x_j + D_1^- &= 8173155.997 \\ \sum_{j=1}^{30} (c_{2j} - 5.563876d_{2j})x_j + D_2^- &= 1344315.9 \\ \sum_{j=1}^{30} (c_{3j} - 0.256522d_{3j})x_j + D_3^- &= 8125460.815 \\ D_1^- - 0.216528 \sum_{j=1}^{30} d_{1j}x_j &\leq 6858631.148 \\ D_2^- - 3.102452 \sum_{j=1}^{30} d_{2j}x_j &\leq 749598.94 \\ D_3^- - 0.188984 \sum_{j=1}^{30} d_{3j}x_j &\leq 5986161.369 \end{aligned} \quad (3.8)$$

3.3. Solutions

By applying the goal satisfaction method, the following solution was obtained:

Table 4.5. Solutions by the method of meeting goals

Solution	Values of variables	z_1	z_2	z_3
(1)	$x_4 = 249207, x_5 = 575000, x_6 = 500000,$ $x_7 = 500000, x_8 = 172500, x_9 = 232156,$ $x_{13} = 500000, x_{14} = 500000, x_{15} =$ $230000, x_{16} = 500000, x_{17} = 500000,$ $x_{21} = 453350, x_{22} = 500000, x_{25} =$ $32636, x_{26} = 152594, x_{27} = 230000, x_{28}$ $= 300000, x_{29} = 264500$	0.231248	4.622657	0.228204

The following set of solutions was obtained by the method of target programming:

Table 4.6. Solutions by the method of target programming

Solution	Values of variables	z_1	z_2	z_3

(1) (3.3)	Model	$x_2 = 157039, x_5 = 499792, x_6 = 500000,$ $x_7 = 500000, x_{12} = 64010, x_{13} =$ $500000, x_{14} = 45893, x_{15} = 230000, x_{16}$ $= 50000, x_{21} = 500000, x_{22} = 500000,$ $x_{26} = 65734, x_{27} = 230000, x_{28} =$ $300000, x_{29} = 264500, x_{30} = 500000$	0.24188	3.74423	0.224984
(2) (3.4)	Model	$x_4 = 345000, x_6 = 500000, x_7 = 500000,$ $x_8 = 172500, x_{11} = 10249, x_{13} =$ $500000, x_{14} = 500000, x_{15} = 230000,$ $x_{16} = 50000, x_{17} = 475143, x_{21} =$ $500000, x_{22} = 500000, x_{26} = 169847,$ $x_{27} = 230000, x_{28} = 300000, x_{29} =$ 264500	0.218005	4.50649	0.256523
(3) (3.5)	Model	$x_2 = 249473, x_3 = 1860, x_5 = 575000, x_6$ $= 171910, x_7 = 500000, x_{12} = 69444,$ $x_{13} = 446755, x_{15} = 230000, x_{16} =$ $50000, x_{21} = 500000, x_{22} = 500000, x_{25}$ $= 139177, x_{27} = 230000, x_{28} = 300000,$ $x_{29} = 264500, x_{30} = 500000$	0.252394	3.453361	0.203193
(4) (3.6)	Model	$x_4 = 345000, x_5 = 575000, x_6 = 500000,$ $x_7 = 212180, x_8 = 172500, x_{10} =$ $113829, x_{12} = 10234, x_{13} = 338275, x_{14}$ $= 50000, x_{15} = 230000, x_{16} = 500000,$ $x_{21} = 500000, x_{22} = 401730, x_{25} =$ $500000, x_{27} = 230000$ $x_{28} = 300000, x_{29} = 264500, x_{30} =$ 153597	0.262165	3.742245	0.155269

The solutions obtained using the 'fuzzy' programming method are shown in the following table:

Table 4.7. Fuzzy programming solutions

Solution	Values of variables	z_1	z_2	z_3
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(1) (3.7)	Model	$x_2 = 157039, x_5 = 499792, x_6 =$ $500000, x_7 = 500000, x_{12} = 64010,$ $x_{13} = 500000, x_{14} = 45893, x_{15} =$ $230000, x_{16} = 50000, x_{21} = 500000,$ $x_{22} = 500000, x_{26} = 65734, x_{27} =$ $230000, x_{28} = 300000, x_{29} = 264500,$ $x_{30} = 500000$	0.24188	3.74423	0.224984
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4. Conclusion

This paper proposes a methodology for linearization of fractional target functions to solve the MOFLP problem by the target programming method. The proposed methodology was tested on the problem of optimizing the company's financial structure.

To solve the optimal financial structure of the company, four approaches were used for the problem of targeted programming. The obtained results revealed the possibility of efficient application of the proposed methodology in solving the given problem.

There are many advantages of the proposed methodology compared to existing models:

- (a) The methodology is simple for the analyst as well as for the decision maker.
- (b) The decision maker may determine the weightiness of the target functions, where the solutions obtained reflect the preferences of the decision maker.
- (c) This method allows the analyst to design a set of efficient solutions by varying the weightiness of the objective functions where the decision maker can choose the preferred solution.

The presented approach is limited to solving multi-criteria fractional linear problems with unclear goals - where decision makers cannot express the desired value of goal functions.

For the next research, we propose to further expand the application of the proposed methodology that solves practical multicriteria fractional programming problems using the proposed target programming model.

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