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ABSTRACTS
Impact of Audit Quality on Relationship between Audit Committee Effectiveness and Real Earnings Management through Accretive Share Buybacks: Evidence from Emerging Market

Abdulsalam Saad Alquhaf (Corresponding author) 1  Rohaida Abdul Latif 2  
Shaker Dahan Alduais 3  Hasan Bamahros 4

Abstract

The purpose of our study is to examine whether there is any association between the Audit Committee effectiveness and the accretive share buyback used as a proxy for real earnings management of Malaysian listed companies. This study also investigates the moderating effect of audit quality on AC effectiveness and accretive share buybacks. Empirical tests address 432 firm-year observations drawn from non-financial companies listed in Malaysian market during 2010-2016. Our study applies a quantitative approach and secondary data as the main source of information for analysis. Our study performed an ordinary least squares (OLS) regression to examine the data utilized to test our hypotheses. Multivariate analyses indicate that AC effectiveness is significantly associated with accretive share buybacks. The results suggest that the effective AC contribute to improve financial report quality through mitigating accretive share buybacks activities. The results also show that the audit quality increases the associations on the AC effectiveness and accretive share buybacks. The results suggest that the AC of companies audited by Big4 auditors are more ability to mitigate real earnings management via accretive share buybacks. This study extends the existing literature by examining the moderating effect of audit quality on the relationship between AC effectiveness proxied by real earnings management in the Malaysian context.

Keywords: Audit quality, audit committee, accretive share buyback, Malaysia

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Sustainable Development Goals and Turkey

Melike Dedeoğlu

Abstract
Theories based on the classical understanding of development focus on the quantitative dimensions of the economy. In the process until the development of the concept of sustainable development, the fact that societies produce and consume more has been accepted as an indicator of welfare. The increase in the world population and the increase in needs in this direction have increased the pressure on natural resources, and the carrying capacity of nature has begun to be strained. The understanding that not only economic but also social and environmental factors should be considered in the development process of societies has laid the groundwork for the emergence of the concept of sustainable development. The concept of sustainable development was officially used for the first time in the report Our Common Future (Brundtland Report) published by the World Commission on Environment and Development in 1987. According to the report, sustainable development is defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs”. As a continuation of the "Millennium Development Goals" program covering the 2000-2015 period, the United Nations has determined 17 goals within the framework of "Agenda 2030: United Nations Sustainable Development Goals". In this study, Turkey's developments in the realization of these goals are evaluated based on the reports of both TUIK and the United Nations Sustainable Development Solutions Network and its stakeholder Bertelsmann Stiftung.

Keywords: Sustainable development, sustainable development goals, Turkey

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Network Effects of the Growing Importance of the Kaliningrad Oblast' in Logistics Chains

Jakub Doński-Lesiuk¹

Abstract
The article concerns the phenomenon of the growing importance of the Kaliningrad Oblast’, a specific exclave of the Russian Federation, in international logistics chains. Against the background of political and economic events, it indicates the determinants of the increase in freight flows to / from Kaliningrad, also referring to strictly transport factors. The description of these factors is supported by statistical data.

The analysis of the phenomenon of the growing importance of this area was presented in the context of network effects, affecting not only the neighboring countries (Poland and Lithuania), but also in a broader geopolitical context. The article is an interdisciplinary publication. It combines approaches in the field of economics, management science and international relations. Research to diagnose the actual state of affairs was financed by a project for young researchers at the Faculty of Economics and Sociology of the University of Lodz.

Keywords: International flows of goods, trans-Eurasian transport, network effects, supply chains, Kaliningrad

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Analysis of Transition to Multi-Party Political Life in Turkey and the Problem of Democratic Stability (1946-1950)

Selami Erdogan

Abstract

The Turkish state is a state that experienced democracy and multi-party life for a short time in 1908. After the transition to the republican regime, attempts were made for the transition to democracy twice, but no positive result was achieved. In 1945, with the end of World War II, a new wave of democratization started and this wave affected many countries. In this context, Turkey is one of the countries affected by this wave. In addition, Turkey's own unique conditions have also been a compelling factor for the transition to democracy. As a result of these, it seems possible to say that both internal and external factors drag Turkey into a multi-party life.

Turkey formally made the transition to a multi-party system in 1946. It was necessary to four years in order to talk about the transition to a real multi-party political life. The elections held in 1950 are considered to be election in which Turkey truly transitioned to democracy. The political events and debates between 1946 and 1950 have remarkable characteristics for Turkish democracy. In the following process, the multi-party political life was interrupted frequently. Obviously, Turkish democracy is considered to be an unstable democracy. In this study, the problems and compromises experienced in the transition to multi-party life will be analyzed. In addition, the causes of unstable democracy will be discussed.

Keywords: Multi-party system, CHP, Democracy, DP, İnönü, Bayar

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Tax Evaluation of Electricity Generation by Roof-Mounted Solar Panel Systems

Onur Ertürk1 Arzu Erdoğan Ertürk2

Abstract

It is observed that energy expenditures and environmental problems are increasing rapidly with the economic developments in today's world. Economic and technological advances lead human beings to affect the environment in direct or indirect ways. Considering the damage caused by the use of fossil resources to the environment, the search for clean energy sources that contribute to the environment has been increasing rapidly in recent years.

We see solar panels based on solar energy that is one of the renewable energy resources also as a sustainable energy resource. In this context, the "Regulation on Unlicensed Electricity Production in the Electricity Market" which was published in the Official Gazette in 2019 paved the way for the establishment of micro electricity generation facilities without a company and license. Thus, electricity can be produced by installing solar panels on the roofs of houses, factories, or buildings that are used for different purposes. Electricity consumption in the existing buildings is provided from these panels, and according to the agreements made with the authorized electricity administrations, the produced electricity is sold to the authorized electricity distribution institutions up to 10kw. This method ensures the security of the electricity supply and allows producing energy at the place of consumption.

The positive contribution to the environmental cycle by energy systems cannot be neglected. Also, there are national incentive programs to support the use of solar energy in many countries around the world. This system, which is led by European countries and applied in many countries, is also spreading in Turkey. The widespread use of renewable energy sources also indicates that it will be the main energy source.

Environmentally friendly electricity generation through solar panels has diverse effects on Turkey's economy and tax system. In order to encourage the dissemination of the solar energy systems, Income Tax and Value Added Tax exemptions are applied to individuals producing electricity. Although it seems that it does not contribute to the tax system in this respect, environmentally friendly clean energy production reduces oil and natural gas imports in the macro framework and it contributes to the reduction of the current account deficit of the country's economy. It is thought that the tax burden on citizens will decrease thanks to this system as the current account deficit of the country decreases.

In this context, the study will evaluate the contribution of environmentally friendly electricity generation through solar panels to nature, Turkey's economy, and the tax system.

Keywords: Solar energy, electricity generation, tax exemptions

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Effect of a Sanitary Crisis on Oil Prices and CO₂ Emission in the USA: Empirical Evidence from VECM Modeling

Imen Gam

Abstract
This study explores the interdependence among a sanitary crisis, environmental degradation, oil prices, natural gas prices and economic activity in the USA based on weekly data over the period January 03, 2020 to October 02, 2020, through VECM and Granger causality methods. Findings are very interesting and confirm the existence of a significant impact of a COVID-19 pandemic on WTI oil price. More importantly, bidirectional causal relations between economic growth and oil prices, and four unidirectional causal links going from natural gas prices to economic growth, from natural gas prices to CO₂ emissions, from COVID-19 infections number to economic growth and from COVID-19 infections number to oil prices, are also discovered. Taken together, our empirical findings are effective for the relevant authorities and policymakers in the United States to develop an appropriate financial and fiscal policy to boost investment and recover the economic growth without harm the environment and complicate the sanitary situation.

Keywords: COVID-19 infections, oil price, CO₂ emissions, natural gas price, economic growth, VECM, Granger causality

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The Covid 19 Impact on Romanian Insurance Industry

Marius Dan Gavriletea

Abstract
Once with Covid 19 pandemic occurrence, insurance industry has been continuously pressured to cover some of its effects. Related to legal entities there is a request that pandemic to be treated as business interruption insurance, the refuse of insurance companies is based on the fact that the pandemic has a continuous effect for the clients. Beside this, individuals are asking for inclusion of Covid infections on private health insurances, this way recovering treatments to be compensated by insurance companies. During this research we will analyze a possible effect for insurance companies in case they decide to offer coverages/limited coverages for Covid 19 risks, both to individuals and legal entities.

Keywords: Covid 19, insurance, risk
Financial Development and Economic Growth: Evidence from Romania

Marius Dan Gavriletea¹

Abstract
Financial sector has extensively developed with the contribution of the globalization in the world. This study investigated the causal interaction between financial sector and economic growth in Romania through causality analysis. The causality analysis revealed that financial sector development had a significant impact on economic growth in Romania.

Keywords: Financial development, economic growth, causality analysis

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Individual Attitude to Covid-19 Vaccines

Sevgi Gönüllüoğlu

Abstract

Individuals have both hope and fear as a type of emotion against the unknown. I wonder, the multiplicity of factors that cause the increase in questions often leaves individuals in a dilemma about making decisions.

In today's world, the pandemic, which not only a part of human society but also all societies are exposed to, has caused mixed emotional states in individuals from the beginning until today. Through the news in the media, expert opinions, word-of-mouth communication and especially social media, the society became aware of what was going on in a short time and perhaps more. It is important to reveal, by scientific methods, what the attitudes of individuals are towards the Covid-19 vaccine, which suddenly appears and upsets people's lives and needs to be brought under control as soon as possible.

In addition, the pandemic, which is a situation that has not been experienced before, creates confusion in individuals with its ignorance. This situation, which is expressed as the perceived risk in the literature, includes the losses and negative conditions that will be experienced by the possible situations. The individual may choose to hold back due to possible negative expectations as well as positive expectations about the product or situations he or she wants to buy or experience, and may delay decision-making. Individuals perceive risks for products, services or situations that were previously unknown and inventive but have no precedent, are complex, have the potential to adversely affect them in terms of health, economic, social and psychological aspects.

This study aims to determine the attitudes of people towards the Covid-19 vaccine, which is put into practice in our country simultaneously with the whole world. The research method is a descriptive research method and quantitative analysis technique was used. The population of the study is everyone who needs to be vaccinated. Due to time constraints and a sensitive period for face-to-face communication, the number of participants in the online survey, which was conducted with the convenience sampling method, was 332.

As a result of the analysis of the data, thirty-two percent of the participants in the study stated that they wanted to be vaccinated, while six percent stated that they wanted to be after everyone else. In an evaluation of vaccine origins, it is seen that the level of concern against the Chinese vaccine is higher than the German vaccine. This result reminds us that German origin products are preferred over Chinese origin products when a comparison is made at the economic level in general.

Keywords: Covid-19 vaccines, attitudes, perceived risk
The Panel Causality Relationship between Financial Development and Carbon Footprint: The Case of G20 Countries

Meral Gündüz

Abstract

The aim of this study is to examine the causality relationship between financial development and carbon footprint. For this purpose, a panel causality analysis was conducted for the period 1995-2016 in G20 countries. According to the findings obtained in the analysis, when the panel is considered in general, no causality relationship was found between financial development and carbon footprint. When the countries subject to the analysis are examined separately, financial development has been identified as the cause of the carbon footprint for the United States (p value: 0.003) and Russia (p value: 0.092). It was determined that carbon footprint is the cause of financial development for Argentina (p value: 0.041), Saudi Arabia (p value: 0.061) and Russia (p value: 0.068). For the other analyzed countries, it was concluded that there is no causality relationship between financial development and carbon footprint.

Keywords: Financial development, carbon footprint, G20 countries, panel causality

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Restarting Tourism in the Context of Passenger Vaccination: Perceived Risks and Suggestions

Iuliana Levinschi

Abstract

This paper highlights the fact that the COVID pandemic has influenced tourism to a very large extent, namely the way in which people had the courage to travel again, following the vaccination. In this sense, the travelers expressed their opinion about what initially stopped them from traveling, what were the variables that influenced them, the main perceived risks, and then they highlighted how their thoughts and perceptions changed in following vaccination. At the same time, they mentioned some aspects that they want to be considered when they will travel again and came up with proposals for the hospitality industry. The information provided is valuable for companies operating in the field, because they will know what to look for in order to try not to face further business interruptions in the event of a new wave of pandemic. We want a complete restart of tourism, but there are still exceptions and various impediments. Therefore, according to forecasts, the activity in this field will reach the level before the pandemic only in 2-3 years.

Keywords: Pandemic, tourism, vaccination, perceived risks

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The Socioeconomic and Political Ramifications of Climate-Induced Migration and Population Displacement on International Immigration Policy in the 21st Century

Mitchell Alan Kaplan

Abstract
As the environmental consequences of climate change continue to expand across national and international boundaries, many nations in the industrialized and developing world are struggling to find ways to cope with the onslaught of adverse social effects caused by this unprecedented phenomenon. Research spearheaded by environmental experts at the United Nations and other federal climate monitoring agencies suggests that the ecological disruptions caused by the dramatic shift in global weather patterns are the primary factor driving the escalation of mass migration and human population displacement in many parts of the civilized world. The mass migration of refugee populations resulting from the environmental effects of climate change has precipitated a global humanitarian crisis that shows no signs of slowing down. Weather-related events such as the drastic uptick in intense wildfires that destroyed thousands of acres of forestland in the western part of the United States in 2020 and the historic surge in severe hurricanes in the Atlantic ocean that caused torrential flooding in the Central American nations of Guatemala, Honduras, El Salvador, and Nicaragua are just two of the many fine examples of climate-induced devastation that has destroyed thousands of homes and disrupted the lives and livelihoods of millions of displaced people in the developing world leaving the most vulnerable with no alternative but to migrate across international borders in search of a safer more secure living environment for themselves and their families. This chapter will analyze the social, economic, and political issues associated with climate migration in the United States and abroad. It will examine how these issues influence the development and implementation of international policy to help global societies effectively deal with the growing influx of undocumented immigration mitigated by the climate crisis.

Keywords: Clime-induced migration, population displacement, international immigration

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Perspectives of Agricultural Trade Liberalisation

Radovan Kastratović¹

Abstract
In this paper, I review the perspectives of the liberalisation of international trade in agricultural products. The analysis presented in the paper shows that there has been a significant move towards liberalisation of these trade flows over the past several decades. However, the potential for further trade liberalisation in the sector remains. Although the tariffs have been reduced globally, in some countries they are still an insurmountable barrier to trade. Moreover, tariffs in agricultural trade are still, on average and globally, higher comparing to tariffs imposed on other product groups. Bali package suggests further trade liberalisation for agricultural products in the future. An important issue that remains to be addressed is agricultural subsidies, which, despite being regulated by the Agriculture Agreement, still pose an important problem in agricultural trade. The problem is further aggravated during the financial crisis and, more recently, the Covid-19 pandemic, all of which further impeded the reductions of subsidies. Finally, the analysis identified a proliferation of non-tariff barriers in agricultural trade in the analysed period. Ecological barriers and differences in sanitary and phytosanitary measures between the countries were revealed to strongly hinder agricultural trade flows between developing and developed countries. The liberalisation of agricultural trade and the unification of ecological, sanitary and phytosanitary, and production standards could intensify these flows and thereby improve the global allocation of the resources, reduce the existing production distortions and increase global welfare. This could particularly benefit smaller producers in developing countries, as well as all the consumers. Further liberalisation will likely require a multilateral approach, in which the World Trade Organisation could play a vital role.

Keywords: Agricultural trade, trade liberalisation, tariffs, non-tariff measures, WTO

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The Pandemics as a New Economical Challenge in the Dental Office: A Study on Two Types of Dental Offices: Small Office and an Interdisciplinary Clinic

Anca-Ștefania Mesaroș¹

Abstract
The COVID 19 Pandemics has negatively affected most economic sectors. For the Health Care providers, it has been a challenge of management from more than one point of view. Dental offices were closed for two months during the state of emergency and from then after, even more challenges were thrown their way. However, in face of these administrative and economical adversities there were different ways of coping with them. As dental offices can be divided in small offices and big clinics, our presentation will focus on comparing the measures set in place by representatives of the two categories. Two case studies are taken into consideration: one is a small dental office, run by one doctor, the other is an interdisciplinary clinic having 10 doctors and even a marketing team to manage. Although both cases studied have so far managed the pandemics with success, while observing them for more than 15 months, it was evident that significantly different approaches have been set in place. However, from a financial point of view, the differences in management between the two are not reflected in a significant manner.

Keywords: Pandemic, dental office

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Management of Dental Implant Failure: An Economical Problem for Implant Companies, Dental Clinics, Patients, and Insurance Companies

Adrian Teodor Moga-Rogoz

Abstract

According to the studies published between years 2000-2020 the rate of dental implant failure is 9.5% during the first 10 years after implantation. The moment of failure could be at any time from implantation up to 10 years in function. The medical pathology of failure is not the one to discuss because the average of failure is a mean value between all the risks of failure.

Our main concern is who is taking the financial risk for all of these failures. In this vicious circle are involve several players such as: medical practitioners, patients, dental implant manufacturers and insurance companies. In case of failure, the insurance companies are paying generally for the material damages, such as raw materials not for the whole procedure and that is dependent of their internal analysis of the case. The dental implant manufacturers are usually cover the acquisition cost for dental implants for around 1% - 3% from the total failed implants but they are not covering the cost for surgery and future prosthetics. Patients are not willing to pay again for this procedure and in general they abandon the clinic, downgrade it in reviews and more than that they are taking legal action against it.

For dental clinics 9.5% of failed dental implants are in fact higher values than this percentage because the intervention and reparation costs are much higher that the initial ones and the loss of dissatisfied patients that are seeking another clinic to solve their problem is high. For dental clinics we estimate a loss of 15 % in total income by dealing with these failed cases. We advise clinical dental managers to take into consideration these values when they are elaborating the marketing policies for implantology therapies.

Keywords: Dental implant, dental clinics, implant companies, insurance companies
Clinic Dentistry in the age of TikTok Social Media Platform

Adrian Teodor Moga Rogoz\textsuperscript{1} \quad Giulia Gavriletea\textsuperscript{2}

Abstract

The Covid-19 pandemic has brought major changes in the dental industry and managers from this industry were forced to find proper solutions to deal with this new challenge. In this context, they were focused to prevent the spread of the virus by redesigning the layout and workflow of dental clinics, to find new modalities to provide treatment services using telecommunication technologies, to adapt their marketing strategies to address customers changing needs. It is crucial for companies that operate in this sector to understand that customers’ life, habits, priorities has undergone substantial changes during this pandemic. People spend more time at home, social media usage has increased tremendously generating opportunities for dental companies to raise brand awareness, to reduce costs, to increase sales. The social media platforms such as TikTok, Facebook, Instagram offer extraordinary marketing opportunities for building dental clinics customer loyalty, for increasing sales and profit. TikTok, a relatively new released social media platform, become quickly one of the hottest apps in the world, being considered the perfect place when new customers can be reached. Since this platform is more popular among the younger generation the content that is created and distributed need to be focus on attracting, strengthening and retaining young customers. Dental clinics can produce and share educational or medical content on the platform and must be aware that online presence on social media platforms is no longer an option, is essential for their businesses.

Keywords: Dentistry, TikTok, social media platforms

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Examining the Development of Virtual Influencers in Influencer Marketing Strategy

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Abstract

The striking progress of the digitalization process, being different and visible among the products and services offered to the market, being remembered, creating demand or increasing the existing demand, etc. for this reason, it has directed businesses to seek different strategies in their marketing activities. The widespread use of social media and the increasing power of businesses that act with the effort of not doing what everyone does and being different have been effective in the emergence of the concept of influencer and triggered the development of the influencer marketing strategy as a strategy. Influencer concept; “the person who influences or changes the way people behave”, if influencer marketing; It is expressed as marketing efforts made through connections established with individuals who have a place as an opinion leader on social media, have the power of influence in front of the public, and have a high number of followers in order to promote the products and services of brands. Many influencers, whose ideas are given importance according to the content they create in social media and whose number of followers are quite high, contribute to the communication of brands with consumers. The widespread use of influencers by brands and the rapid development of digitalization have been effective in the emergence of virtual influencers produced by companies working in the field of artificial intelligence, as well as real influencers. Art, cosmetics, clothing, health, etc. Virtual influencers have become active in many areas. In this context, the aim of the study is examine in detail the development of virtual influencers in their communication on the internet and especially on social media, what content they share, the brands they work with, and their potential contributions to marketing activities.

Keywords: Influencer marketing, virtual influencer, social media, marketing communication

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The Investigation of Water Microplastics Risk Perception and its Influence on Romanians' Pro-Environmental Behavior Intention

Valeria Pop

Abstract

Trends of global plastic production, consumption patterns, or the inappropriate disposal of plastic waste point to an increase in plastic use in the future (Karbalaei et al., 2018). Plastic demand is growing exponentially, and production trends are expected to quadruple by 2050 (Suaria et al. 2016). Tiny plastic particles smaller than 5 mm, known as "microplastics" (MPs), negatively affect the environment and local economy. MPs were identified in food, in air samples, and exposure to MPs via ingestion or inhalation can adversely affect human health. The investigation of diverse aspects related to MPs is challenging because, according to Coffin & Leapman (2021), MPs do not easily fit within traditional risk-based regulatory frameworks because their persistence and extreme diversity (of size, shape, and chemical properties) result in high levels of uncertainty in hazard and exposure estimates. A large vein of research has addressed how to technically detect and assess MPs. However, there is no effective technical way to remove microplastics from the environment (Deng, 2020). Thus, people's attitudes can play a significant role in reducing microplastic emissions. Despite this reality, there are very few studies that have examined how individuals perceive microplastics. Microplastics are a challenge for both society and governments and last but not least for research. Microplastics without an awareness and a manifestation of the need to protect the environment will affect our long-term life. Microplastic pollution is a real global danger and a threat to any life on the planet.

As specified above, people's attitudes play the most important role in this type of risk that we encounter in this paper. It is not a foreseeable risk because nothing similar has happened before. It is an unpredictable risk, with a possible estimate of the level of loss and at the same time it can be a controllable risk, partially momentary.

Keywords: Water microplastics, risk perception, environmental behavior

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The Importance of the Environmental Management System within the General Management

Valeria Pop1

Abstract
There are two ways we can control the consumption of resources and energy within a company, as well as reducing the footprint on the environment. The first option is the one on its own, in which the company creates its own rules and procedures through which it controls waste of any kind. The second way to reduce the impact of the company's activity on the environment is to selectively collect the waste produced and use specialized companies to take it over and ensure their recycling or recovery. There are cases when the company wants external recognition of its actions to reduce the environmental footprint. In this case it can resort to the implementation of an environmental management system. The environmental management system is a component of the general management system that includes the organizational structure, planning activities, processes and resources necessary for the elaboration, implementation, and maintenance of the environmental policy. The environment is the place where an organization operates and which includes air, water, land, natural resources, flora, fauna, etc. The environment is an integral, essential part of any development process. The changes that the environment goes through are not only generated by natural events. Environmental changes can be generated by our management style in the society in which we operate, the lifestyle and last but not least by the practical manifestation of some development models. Conversely, any change in the physical environment can have important socio-economic consequences, which influence the quality of life. The main purpose of introducing such a system in the organization (E.M.S.) we lead is to protect human health and the environment against the potential impacts of activities, products or services. In order to build a sustainable future together, our involvement of all is necessary. Romania is the country with the highest biodiversity in Europe and it is worth fighting to keep it at the forefront.

Keywords: Environment, environmental management system, Romania

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The Impact of the Covid-19 Pandemic on Political Business Cycles in Macroeconomics - Is There a Reason for Concern?

Aleksandra Praščević

Abstract

This paper discusses the extent to which the shock of the COVID-19 pandemic has actualized the existence of politically induced business cycles in macroeconomics. The COVID-19 pandemic, as a non-economic and non-financial factor, was an unexpected and unusual shock that hit global economies, affecting aggregate supply and aggregate demand and resulting economic decline and recession in most economies, both developed and underdeveloped. It is a shock that is still acting and whose intensity and duration cannot be estimated with certainty, which makes it difficult to estimate future economic trends. Given that the pandemic has hit the economy and businesses, due to severe epidemiological closure measures, especially in certain economic sectors (tourism, entertainment industry, air transport), but also the population facing increased unemployment and poverty, most countries have implemented expansive economic policy in combating the effects of the pandemic and mitigating the economic recession. Large packages of state aid to the economy and the population in most countries were supposed to prevent the occurrence of the economic crisis and make it easier for the economy and the population. However, due to the length of the pandemic through multiple waves of COVID-19 infections, as well as to the scope of state aid packages that included fiscal stimulus, but also expansionary monetary policy, further implementation of such economic policy measures is faced with great limitations. These restrictions are imposed by the emergence of negative macroeconomic indicators in the form of rising inflation, as well as the deterioration of public finances. Most economies can no longer afford such measures, which is why they insist on the normalization of economic life and economic trends, by vaccinating the population. Although the governments’ incentives for application of fiscal and monetary expansions were largely justified, such a policy returned state intervention to the big door, but also raised the question of whether each intervention is economically justified or can be seen as politically motivated state intervention. This has returned the analysis of political business cycles in macroeconomics to the focus as current macroeconomic issue. Given the economic problems facing even the most developed countries today, such as unemployment and inflation, the question arises whether economic policy makers will be even more tempted to abuse economic policy in the future for political purposes. And more importantly, how long the present pandemic will be a good excuse for such a policy.

Keywords: Covid-19 pandemic, political business cycles, economic policy

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The Relationship between Insurance Sector and Economic
Growth

Alexandra Ioana Daniela Rus¹

Abstract
The link between economic growth and the insurance industry has been studied extensively. There are a lot of studies being conducted to find out the causal link between the two. This paper aims to examine the relationship between the insurance industry and economic growth. For economic development there is necessary the study of a well-developed sector like insurance sector. The development of insurance policies can have indirect effects on a country's economic growth. This is because the investment climate in a country has different characteristics. But, also we have to mention that the rapid growth of the insurance industry is seen as a positive sign for any country's infrastructure development. It is mainly focused on studying the role of insurance in boosting economic growth.

Keywords: Insurance, economic growth, development

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The Influence of Working Capital on Companies Performance

Alexandra Ioana Daniela Rus

Abstract

The aim of this paper is to examine if there is relationship between working capital and the company’s performance. Stability and profitability are the most important factors that determine the success of businesses. Working capital measures the variety of factors that a firm has to consider when assessing its operating budget. It is commonly used to evaluate a firm's financial health. Here, the dependent variable is working capital (WC) and the independent variable represents the company’s performance measured through Return on Equity (ROE). The statistical analysis shows that the working capital influence the company’s performance so, there is a relationship between them.

Keywords: Working capital, performance, return on equity, financial statement

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Determinants of Global Gold Prices and Returns

Ahmet Tiryaki

Abstract

The aim of this study is twofold; firstly, to analyse the main macroeconomic determinants of the global gold prices and secondly to find out the impact of macroeconomic developments in the USA on the determination of global gold prices by using the ARDL test methodology with the Quarterly data of 2000Q1-2020Q4.

Gold Prices (Dollars per Ounce) (GP), Real Gross Domestic Product for the USA (RGDP), Consumer Price Index of the USA (CPI), Federal Funds Rate of the USA (FFR), Economic Policy Uncertainty Index for the USA (EPU), Real Effective Exchange rate of the USA (RER), Total Gold reserves of all World Central banks (in USD) (GRUSD), S&P 500 stock prices (SP500), and Oil price index (OIL) are used in order to test the causal relationship.

The econometric test results indicate that, in the short run, there is positive causal effect from the factors of lags of LGP itself, D(LRGDP(-1)), D(LRGDP(-2)), D(LCPI), D(LGRUSD), D(LRER(-1)), D(LSP500(-1)), D(LOIL(-1)), D(LOIL(-2)) and D(LOIL(-3)) to the global gold prices and gold returns. On the other hand D(LGRUSD(-1)), D(LGRUSD(-2)), D(LGRUSD(-3)), D(LRER), D(LSP500), and D(LOIL) are negatively causing the gold price and returns. In the long run there is negative statistically significant causal impact from LRGDP, LRER, and LOIL to GP and positive impact from LCPI, FFR, and LGRUSD to GP.

The short run and the long run effects are theoretically expected and results (R-squared: 0.917660 and Adjusted R-squared: 0.883842) clearly implies that the macroeconomic developments in the USA have significant effect on the determination of the global gold prices and returns.

Keywords: Gold prices, gold returns, global gold reserves, ARDL
The Validity of Phillips Curve Hypothesis in Turkey

Veli Yılancı¹ Ceyda Tunç Yılancı²

Abstract
The main aim of this study is to test the long-run relationship between inflation and unemployment in Turkey, so to test the validity of the Phillips Curve hypothesis. To this end, we test the stationarity of the considered variables using a recently unit root test that allows multiple structural changes via a Fourier function. Besides we also use the Fourier ARDL Bounds test approach to the cointegration to consider the mixed integration levels of the variables also multiple smooth breaks in the long-run relationship using a Fourier function. We will conclude the paper by analysing the causality relationship between the series using the Fourier Toda Yamamoto causality test with a fractional frequency.

Keywords: Unemployment, inflation, Fourier function

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FULL PAPERS
Knowledge Management, Open Innovation, Organization Performance: The Moderating Role of IT Capability

Shadi Abualoush

Abstract

The study aimed to identify the impact of knowledge management through its processes represented in (knowledge generation, acquisition, sharing, retention, and application of knowledge) on open innovation. The study hypotheses were tested by multiple regression analysis using the statistical package in the social sciences (SPSS). To a set of results, the most prominent of which were: the application of public shareholding companies to knowledge management processes, a high average for the year, as well as the researched companies achieving medium levels of open innovation with a mean arithmetic average. The study also found a positive, statistically significant effect of knowledge management processes on open innovation, a positive statistically significant effect of open innovation on organizational performance, and a positive relationship between knowledge management on open innovation and the presence of IT capability as a mediating variable. In light of the results, the study recommended the necessity for the researched companies to adopt open innovation as a strategic option to increase employee expertise, and departments to adopt knowledge management processes because of their prominent importance in improving the competitive position, and developing the capabilities of employees at various administrative levels in the field of open innovation by exchanging experiences with external partners through training processes, seminars, and workshops, and working to provide the necessary requirements to facilitate the knowledge management process such as developing an organizational culture supportive of that, adopting a clear vision.

Keywords: Knowledge management, open innovation, IT capability, performance organization, Jordan

1. Introduction

Management and Innovation practitioners have more focused on innovation that leverages the detection of others. Innovation administration represents a strategic purpose as these organizations endeavor for a position of continued competitive advantage, which encourages an organization to source knowledge for innovation beyond the borders of the organization (Orlando et al., 2020). Chesbrough (2003) proposed that several innovative organizations have turned to an “open innovation” pattern by using multiple outside actors and sources to assist them to create and sustain innovation. Some practitioner has shown that firms’ openness to outside sources of knowledge is an essential driver of innovation performance (García-Muiña et al., 2019; Zheng et al., 2020; Yström et al., 2015). The term open innovation emerged at the beginning of the new millennium, when Chesbrough (2003) noted that organizations, have begun to explore for innovation associates. In fact, those organizations were undergoing a drop of their innovation ability. So, the unique method they had to overcome competitors was reinventing themselves by collecting external, new ideas. From then on, this alternative method of to do innovation was called open innovation (Zheng et al., 2020; Sun et al., 2020). There is not sustainability in the utilize of closed-door, in-house innovation. To hold businesses growing and performance excellence, Thus, open innovation has been proposed as a strategy to convert and hurry up the continuous innovation process and performance excellence (Yström et al., 2015). Open innovation is a more modern concept that empowers managers to have passage to outside capacities of a firm in addition to inside ones to improve their own technologies, open Innovation is viewed as a process that promotes the entrance of distinct products and

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services of a firm to markets and it is one of the most critical factors influencing the level of enhancement and survival of organizational performance (Zanjirchi et al., 2019).

The aim of the study is to analyze the relationship between knowledge management processes in open innovation, and to study the mediation effect of IT capability on the relationships between knowledge management and open innovation. In particular, this study aims to study how knowledge processes (generation, sharing, and application) contribute to the development of open innovation capacity. Moreover, we assess the mediating role of open innovation between knowledge management processes and organizations' performance. Our study presents several important theoretical and practical implications. First, this paper attempts to focus on internal factors that are vital to improving open innovation. In addition, we highlight the ability of knowledge management processes to improve performance through open innovation. Second, unlike most previous studies, which focus only on the direct impact of knowledge management on the capacity of open innovation, our study examines the mediating effect of IT capability on the relationships between knowledge management, open innovation, and performance. Third, our study may provide important results, recommendations and practical guidance for organizations, especially the Jordanian health sector, that are useful to improve their capacity for open innovation to bring outside expertise across their organizational boundaries.

2. Background and Hypotheses

2.1. Knowledge Management

In a “knowledge-based economy” Knowledge and innovation are the key promoters for economic growth, where knowledge is a vital firm asset (Sahibzada et al., 2020, Mahdi et al., 2019, Garcia-Perez et al., 2020), and they are being plying major role in the nations development. What has been different in this economy is The huge explosion of knowledge, its transmutation into a crucial factor for production, and its role as an operator of competitiveness (Nascimento et al., 2020), Knowledge is defined "as the gain of certain understanding, reasonable beliefs and personal capabilities (Raudeliuniene et al., 2020) and the combination of know-how, techniques, judgments, perspectives and values that people hold during their life"( Raudeliuniene et al., 2020), Knowledge has been developed utilizing a combination of internal and external and various capabilities to overcome the business obstacles and enhance its performance. It is considered a pre-requisite for organizational innovation( Crupi et al., 2020). Therefore, the identification, create new knowledge, and transfer this knowledge into innovations knowledge management is a crucial tool to achieve the organizational goals, increasing its performance, creating uniqueness, and take a lead in the markets (Raudeliuniene et al., 2020) Organizations are understanding that Knowledge management has become more powerful as the active use of their knowledge assets gives them the strength to innovate and react to consumer expectations in a quickly shifting environment (Ensslin et al., 2018) management of Knowledge deals with the methods, means, practices, and processes that can facilitate the efficient administration of organizational knowledge in the person, group and organizational contexts such that the knowledge is acquired, created, stored, shared and used continuously to increase organizational and innovation performance (Shujahat et al., 2020; Haamann and Basten, 2019). The main purposes of knowledge management are; Identity, facilitate the processes of acquisition, creation, storage, sharing, and application of knowledge within the organization and across its boundaries (Raudeliuniene et al., 2020), and such purposes (activities) are very useful to promote the innovation. Due to that, organizations must pay more attention for such activities over than capabilities and resources. In Conclusion, it is very important for the various organizations to develop their knowledge approach, because
its their long term assets and valuable resources to be more distinguished and differentiation and competitor (Sahibzada et al., 2020).

2.2. Open Innovation
Open Innovation paradigm allows (permits) organizations to understand and manipulate (exploit) an internal and external knowledge to employ and commercialize valuable innovations by opening companies’ boundaries (Crupi et al., 2020). Comparing with the traditional innovation paradigms which focuses on ideas creation within an organization as well as intellectual and mental capabilities of employees, (Abualloush et al., 2017) the open innovation paradigm works to accelerate the create and develop new ideas by overrun (remove) the established boundaries and utilize advantage of external technological knowledge and resources (Zanjirchi et al., 2019). Open innovation activities support enterprises to expand their existing boundaries, gain and utilize innovation sources from outside and harness the information in the organizations (Wang et al., 2018). The principal of open innovation is based on sharing organizational knowledge with various stakeholders; competitors, customers, suppliers and startup organizations (Hagedoorn and Zobel, 2015), and that leading to better and faster access to scientific resources, technical knowledge and ideas, faster achievement of innovation processes, decrease the costs and greater economic value (Zanjirchi et al., 2019). Thanks to open innovation, businesses are able to develop successful new quick and less costs products. Additionally, the developed products in collaboration with partners and stakeholders are more attractive and preferred by consumers (Cillo et al., 2019).

2.3. Knowledge Management and Open Innovation
As open innovation is mainly dependent on new knowledge acquisition, knowledge management is applied to help the creation of new ideas through the exploitation of the organization’s, human skill, i.e. staff as they create, store and distribute knowledge. Open innovation means opening the innovation process towards outside partners such as consumers or supplier (Della Peruta et al., 2016). The purposes of open innovation model is to reinforcing the innovativeness within the firms via (based on) a certain interactions and collaborations (Bonfanti et al., 2015), and such collaboration can be established as formal or informal (Crupi et al., 2020), through mechanisms of pecuniary or non-pecuniary (Della Peruta et al., 2016). Knowledge from market-based sources or science-based sources have the chance to be involved (Chen et al., 2016). However, the openness degree of the innovation process is associated with several external sources of knowledge involved and the depth of each external relationship (Chen et al., 2016).

Thus, we hypothesize that

There is statistically significant relationship between knowledge management (knowledge acquisition, knowledge creation, knowledge sharing, knowledge retention, Knowledge Application) and open innovation.

2.4. Open Innovation and Organization Performance
Open innovation assesses the degree to which a firm accesses available external technologies or resources to complement the existing resources. This type of innovation increases the options for new product development inputs and advances the evolution of new effective product processes, both of which facilitate firm performance (Li et al., 2019; Zanjirchi et al., 2019)

Outbound open innovation or external technology exploitation, refers to firms’ pursuit of commercialization or the external transfer of technologies outside to gain profit (Chesbrough, 2007). This type of innovation highlights firms’ aims to commercialize ideas and technologies by channeling them to the external market. This approach can help firms build industry
standards (Chesbrough and Appleyard, 2007), and acquire revenues from annual licensing (Chesbrough, 2006). Given that the literature on strategy points to both external knowledge acquisition and exploitation as central to the firm’s competitive advantage. Similarly, firms practicing (adopting) outbound open innovation will get monetary and nonmonetary benefits and will minimize the threats (risks) and stay competitive (Abouzeedan and Hedner, 2012). The inbound practice of open innovation is all about exploiting external knowledge to empower firms’ internal knowledge to be innovative (Zanjirchi et al., 2019). Thus, we hypothesize that there is a statistically significant relationship between open innovation (inbound and outbound) and organizational performance.

2.5. IT Capability Mediator between Knowledge Management and Open Innovation

IT capability can support external knowledge through the acquisition of external knowledge. It can facilitate a firm’s formation interactions of social media with partners (Hitchen et al., 2017), such as LinkedIn and Facebook, etc. Social interaction is adopting the exchange of external knowledge. In other words, social interaction helps firms to effective communication with target partners, increasing the depth, breadth and efficiency of the acquisition of external knowledge (Peris-Ortiz et al., 2019). Moreover, IT capability helps firms to communicate frequently with cooperators. Such activities promote the establishment of trust, which makes the owners of resources or knowledge more willing to present their knowledge to seekers. In summary, with the effective external IT capabilities, a firm can do (create) more open innovation (Zanjirchi et al., 2019). Thus, we hypothesize that IT capability positively moderates the influence of knowledge management on open innovation.

3. Research Methodology

3.1. Population, Sample and Data Collection

In order to accomplish the object of the study, a survey questionnaire was employed as a primary instrument to gather data on chosen variables. The questionnaire employed in this study was separated into two sections. The first section asks about the demographics of the respondents (i.e., gender, education level, position, and years of experience), and the next section investigates the selected variables, namely, Knowledge Management, Open Innovation, IT capability and Organization Performance. In measuring the variables, the five-point Likert-scales ranging from “1” for “strongly disagree” to “5” for “strongly agree” were adopted.

The study population consists of Jordanian governmental and private hospitals, as there are approximately 117 hospitals in Jordan, according to the Hospital Owners Association, distributed between the public and private sectors, but for the large number of hospitals (10) hospitals were selected from the largest in Jordan. The number of employees working in the health sector in Jordan, a total of 500 employees working in the health sector were selected from doctors and nurses working in Jordanian governmental and private hospitals. The questionnaires were distributed by human resources in hospitals, and we were not allowed to distribute them directly, as they were distributed to them electronically due to the conditions that hospitals are going through due to the Coronavirus pandemic, after that the questionnaires were received electronically, among the distributed questionnaire groups, approximately 330 forms were received, While the remaining 17 could not be treated. Thus, the achieved response rate reached 74.5% (330/500). Table No. 1, shown the demographic profile of the respondents to this study.
Table 1. Demographic data for respondents

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percentage%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>220</td>
<td>0.666</td>
</tr>
<tr>
<td>Female</td>
<td>110</td>
<td>0.333</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>330</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Management level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top management level</td>
<td>30</td>
<td>0.09</td>
</tr>
<tr>
<td>Middle management level</td>
<td>90</td>
<td>0.272</td>
</tr>
<tr>
<td>Operational management</td>
<td>210</td>
<td>0.636</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>330</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 5 years</td>
<td>35</td>
<td>0.106</td>
</tr>
<tr>
<td>5- less than 10 years</td>
<td>68</td>
<td>0.207</td>
</tr>
<tr>
<td>10- less than 15 years</td>
<td>105</td>
<td>0.318</td>
</tr>
<tr>
<td>15 years and above</td>
<td>122</td>
<td>0.369</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>330</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.3. Validity and Reliability

To ensure the validity of the content of this study, the study relied on measures and items previously used in previous studies by researchers in the context of the content or topic. After the questionnaire was initially drafted, it was presented to a group of academic lecturers - who have sufficient knowledge and experience in this area - and a group of practitioners to ensure that each component measures what it is intended to measure, as well as to avoid ambiguity and complexity in the formulation of the questions. Based on their suggestions, the questionnaire was modified taking into account their suggestions to achieve the validity of the questionnaire or tool. On the other hand, a Cronbach coefficient α with a cut-off value of 0.7 was used to measure the reliability of the instrument (Sekaran and Bougie, 2016). Table (2) displays the results of Cronbach α for the independent and dependent variables. Where the results showed that the coefficients of Cronbach α for all independent and dependent variables are higher (0.7) suggested, indicating that the measurement can be relied upon.

3.4. Research Results

In order to test the relationship between study dimensions knowledge management, open innovation, IT Capability and Organization Performance, validity and reliability examinations were conducted; descriptive analysis was applied to explain the opinions of the respondents to the surveys regarding the independent and dependent variables. Also, multiple regression analysis was applied to examine the study hypotheses.

As can be shown in table (2), the result of the descriptive analysis explained that the degree of significance for the components of knowledge management employed in this paper (knowledge acquisition, knowledge creation, knowledge sharing, knowledge retention, Knowledge Application) is approximately positive since the means for all variables were great (ranging from 0.810 to 0.891) Also, the standard deviations turned around 1 which presents a small range around the mean.

Table 2. Descriptive analysis (Mean and SD) and Cronbach α

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge acquisition</td>
<td>3.746</td>
<td>0.915</td>
<td>0.863</td>
</tr>
<tr>
<td>Knowledge creation</td>
<td>3.82</td>
<td>0.951</td>
<td>0.821</td>
</tr>
<tr>
<td>Knowledge sharing</td>
<td>3.714</td>
<td>0.981</td>
<td>0.810</td>
</tr>
<tr>
<td>Knowledge retention</td>
<td>3.912</td>
<td>0.854</td>
<td>0.891</td>
</tr>
<tr>
<td>Knowledge Application</td>
<td>4.01</td>
<td>0.923</td>
<td>0.832</td>
</tr>
<tr>
<td>Outbound open innovation</td>
<td>3.67</td>
<td>0.852</td>
<td>0.793</td>
</tr>
</tbody>
</table>
Table 3 shows the (multiple correlation coefficient) $R = 0.594$ which shows that there is a positive correlation between Knowledge management Process and open innovation. This suggests that the independent variables and the dependent variable change in the same direction. “$R^2$ represents the variability in the dependent variable that can be explained by the independent variable and falls between 0 and 1” (Sekaran and Bougie, 2016). The rate of ($R^2 = 0.321$) which means that 32.1 percent of the variation in the organization can be explained by the proper model and has been explained by the process of Knowledge management, In other words, it means that the utilization of Knowledge management process in organizations leads to open innovation.

Table 3. Multiple regression results for hypotheses testing

<table>
<thead>
<tr>
<th>KM dimensions</th>
<th>R</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>F-value</th>
<th>Sig(f)</th>
<th>$\beta$</th>
<th>t</th>
<th>Sig (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>knowledge acquisition</td>
<td>0.594</td>
<td>0.321</td>
<td>0.318</td>
<td>36.176</td>
<td>0.000</td>
<td>0.255</td>
<td>4.251</td>
<td>0.001</td>
</tr>
<tr>
<td>knowledge creation</td>
<td>0.262</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge sharing</td>
<td>0.221</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge retention</td>
<td>0.252</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge application</td>
<td>0.237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 also presents the influence of each dimension of knowledge management on open innovation. Where the results showed that the dimensions that have a statistical significance and influence on open innovation which is knowledge acquisition that reached ($\beta = 0.255$). This is a statistical significance because the value is ($t = 4.251, P \leq 0.05$). The knowledge creation which value has reached ($\beta = 0.262$), this is a statistical significance, because the value is ($t = 4.329, P \leq 0.05$). The knowledge sharing which value has reached ($\beta = 0.221$), this is a statistical significance, because the value is ($t = 4.561, P \leq 0.05$). The knowledge retention which value has reached ($\beta = 0.252$), this is a statistical significance, because the value is ($t = 4.412, P \leq 0.05$), The knowledge application which value has reached ($\beta = 0.237$), this is a statistical significance, because the value is ($t = 4.182, P \leq 0.05$).

Table 4 shows the multiple correlation coefficient ($R = 0.521$), which shows that there is a positive correlation between open innovation and organization performance. This suggests that the independent variables and the dependent variable change in the same direction. “$R^2$ represents the variability in the dependent variable that can be explained by the independent variable and falls between 0 and 1” (Sekaran and Bougie, 2016). The rate of ($R^2 = 0.331$) which means that 33.1 percent of the variation in the organization can be explained by the proper model and has been explained by the of open innovation dimensions, In other words, it means that the utilization of open innovation leads to organizations performance.

Table 4. Multiple regression results for hypotheses testing

<table>
<thead>
<tr>
<th>Open innovation dimensions</th>
<th>R</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>F-value</th>
<th>Sig(f)</th>
<th>$\beta$</th>
<th>t</th>
<th>Sig (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>inbound open innovation</td>
<td>0.521</td>
<td>0.331</td>
<td>0.322</td>
<td>31.145</td>
<td>0.000</td>
<td>0.265</td>
<td>4.315</td>
<td>0.001</td>
</tr>
<tr>
<td>outbound open innovation</td>
<td>0.248</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.381</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Table 3 also presents the influence of each dimension of open innovation on organization performance. Where the results showed that the dimensions that have a statistical significance and influence on organization performance, which is inbound open innovation that reached (β = 0.265). This is a statistical significance because the value is (t = 4.315, P ≤ 0.05). The outbound open innovation which value has reached (β = 0.262), this is a statistical significance, because the value is (t = 4.381, P ≤ 0.05).

In order to test hypotheses 3, which is concerned with test the mediating effect of IT capability on the relationship between knowledge management and open innovation, a many-step mediated regression testing technique, as devised by Baron and Kenny (1986).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Open innovation</th>
<th>IT Capability</th>
<th>Open innovation</th>
<th>Open innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.432</td>
<td>2.417</td>
<td>2.489</td>
<td>2.347***</td>
</tr>
<tr>
<td>Knowledge</td>
<td>0.451***</td>
<td>0.526***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>management</td>
<td></td>
<td></td>
<td>0.351***</td>
<td></td>
</tr>
<tr>
<td>IT Capability</td>
<td>0.476</td>
<td>0.571</td>
<td>0.474</td>
<td>0.471</td>
</tr>
<tr>
<td>R</td>
<td>0.371</td>
<td>0.391</td>
<td>0.369</td>
<td>0.395</td>
</tr>
<tr>
<td>Adjust R2</td>
<td>0.368</td>
<td>0.369</td>
<td>0.351</td>
<td>0.357</td>
</tr>
<tr>
<td>F-value</td>
<td>38.387***</td>
<td>34.320***</td>
<td>31.329***</td>
<td>41.512***</td>
</tr>
</tbody>
</table>

In the first regression model, Knowledge management was significantly related to open innovation as shown in Table 4 (β = 0.451, p < 0.001). In the second regression model, Knowledge management was significantly related to IT Capability (β = 0.526, p < 0.001). In the third regression model, IT Capability was significantly related to open innovation (β = 0.418, p < 0.001). In the fourth regression model, both knowledge management and IT were regressed together to open innovation. As presented in Table 4, the direct effect of knowledge management on open innovation in the first regression model (β = 0.451, p < 0.001) was reduced in the fourth regression model, but still significant (β = 0.351, p < 0.001) point out that just partial mediation effect may exist, the regression coefficient obtained from regressing the mediator to predict the dependent variable (β = 0.451) should be multiplied by the regression coefficient obtained from regressing the independent variable to predict the mediator (β = 0.526). Thus, the indirect effect of well-being on innovation through knowledge sharing = 0.526 * 0.451= 0.237.

4. Discussion and Contribution

The study offers many theoretical and administrative contributions, on the level of theoretical contributions, first: despite the study based on previous studies and published in the same context, building and developing a model with the aim of examining the relationship between knowledge management and open innovation, and the role of information technology capabilities as a mediating variable and their impact in improving the performance of organizations, However, through perusal and studies, it was found that there is a dearth of studies that discussed the relationship between knowledge management and open innovation.

As for the administrative contributions of the study, they are represented in the following. First, most organizations seek to find the best way. Many organizations try to search for the best way to try to motivate their employees to generate new ideas and innovations. This knowledge management is seen as one of the most important factors that helps organizations in rapidly changing environments to innovate openly and effectively in solving problems, so departments must provide all direct support as this helps employees generate, acquire, share, retain and apply knowledge with their peers from within the organization and motivate them. To be brought in
from outside the organization. Second, the results show that knowledge management processes have a positive relationship to open innovation. Open innovation is a process in which employees acquire and exploit outside knowledge. Knowledge management are organizational factors that motivate and encourage employees to engage in organizational goals to regulate their behavior towards their knowledge. Therefore, knowledge management processes must be used to improve and enhance the ability of employees and motivate them to external learning to improve openness to obtain knowledge from external sources.

References


The Indispensability of Ethical Principles in Social Life

Abstract

Since his existence in the world, man has necessarily been in a social life. Because man cannot live his life alone. The need for others naturally dictates certain rules. These rules, which are generally accepted as reconcilable principles on the theoretical level, may deviate from the ground of consensus in practical life. In this case, it becomes essential to develop methods that will continue to maintain these principles and minimize deviation. For centuries, people have made laws and moral rules the basis for reconciliation in various ways for the continuation of social life.

This paper aims to exemplify the actuality of moral rules in daily life, while grounding the development of moral rules in the temporal course, although the source is from different motives. The philosophical basis of many of the rules that spread, starting from our home, to education, shopping, traffic, the whole of business life, etc. is also within the limits of this declaration. As a result, the timelessness of re-emphasizing the indispensability of ethical principles that have been established since the past will be highlighted.

Keywords: Social life, philosophy, ethics, principle

JEL Classification: Y80, Z00

1. Giriş

İnsan denilen varlığın eylemleri ve bu eylemlere temel oluşturan saikler diğer canlı türlerinde olduğu gibi basite indirgenerek açıklanamaz. İnsan yaşamının ilk dönemlerindeki davranışları belki basite indirgenebilir ancak toplumsallaşması artıkça bu basitlik yerini kompleksliğe bırakır. Böyle olunca, tek tek insanların ınceleyerek onların yaşamlarının tümünde yapmış oldukları davranışları hakkında genel yargıda bulunmak da zorlaştı; ki bu da zaten mümkün değildir. Bu sebeple ancak teorik yönü sürekli olarak gelişen bazı İlkeler temelinde insan davranışlarını sıniflamak mümkün hale gelebilir. Bu İlkeler üzerinde uzlaşmak ve onları bir
sayıya sınırlamak zor olsa da asgари bir sınır konulması gerekmektedir. Aksi durumda bu ilkeler üzerine hiçbir zaman tartışma imkanı kalmaz.


İlk insanlardan itibaren oluşturulmuş olan ahlaki ilkeler, kaynak bakımından/öz olarak iki farklı kaynağı oluşturur. İnsanın aklı, tecrübeleri ve değerlerini aktardığı kaynak ilkeler birinci kaynağını oluştururken, farklı inanışlar doğrultusunda insanüstü varlığa/varıklara atıfla oluşturulan ahlaki ilkeler ikinci kaynağını oluşturur. Felsefe tarihi içerisinde her iki kaynağı da birbirine atıfta bulunan ahlaki ilkeler tartışmalar içinde kullanılır. Felsefe tarihi içerisinde her iki kaynağı da birbirine atıfta bulunan ahlaki ilkeler tartışmalar içinde kullanılır.

2. Kavramsal Çerçeve


Etiğin amaçladığı bazı durumlar şöyle ifade edilebilir: “İnsan praktığını ahlaki niteliği bakımından açıklamak, eleştirel, ahlak tarafından belirlenmiş bir bilinci geliştirmek, eleştiri için etik argümantasyon biçimini ve temellendirmeleri süreçleri oluştururmak, ahlaki eylemin insanın keyfine bağlı olmadığını, aksine insan olarak varlığını vazgeçilmesi bir niteliği olduğunu göstermek, insani semveyi öğretmek.” (Pieper, 1999).

Etiğin insanlara bir çerçeve sunar. Bu çerçevenin sınırlarını ahlaki eylemler için yön gösterir ama zorlamaz. Burada idamdan devreye girer ve insanlara sorumluluk yükler.

Çevre problemleri, hayvan hakları, feministizm, ahlak, yaşayın, kurtar, kök hücre çalışması, yapay zeka, nanoteknoloji, ası vb. alanda yapılan çalışmalar günümüz etiğinin ilgilendiği konulardır. Bu konuların temel belirleyicisi insan olduğuna göre ona ait değerlendirmeler de yine etiğin temel konularındandır.

3. Etik İlkeler ve Sosyal Yaşam


İnsanların genellikle bazı gerekliklere karşı durumda duşunmcularını yapmak zorunda bırakmak zorunda kalır. Yani bu ilkeler bir duşuncenin temeli değildir. “Göze göz, diş e diş; her şey yapılmaz; amaçları gerçekleştirmek; kişi her durumda kendi deneyimine göre davranmalıdır; koşullar ne olsun bazı şeyler yapılmaz; bir canlıya işkence edilmemeli..” gibi örnekler fiilden önceki kabulleri gösterirken, yapılıp yapılmaması ayrı bir tartışma konusudur (Kuçuradi, 2006).


İnsan sosyal bir yaşam içinde kendini gerçekleştirmir. Sosyal yaşamın düzenini de kurallara, kurallar da iyi temellendirilmiş ahlaki ilkeleri bağlandır. Böyle olmasa ve bu ilkeler üzerine anlaşılmazsa kaos meydana gelir. Etik ilkeler, iyi bir yaşamın sahip olma yolunda birer araçtır. Bu amaç ancak sosyal yaşamda açığa çıkar. İnsan, ayni zamanda yaşamını önceleyen bir


5. Sonuç


Kaynakça


Productivity Growth and Its Determinants in Western Balkan Countries

Maja Bacovic

Abstract
Western Balkan countries are still among the least developed parts of Europe, lagging behind developed countries. Labour productivity, as a source of economic growth, is far beyond the European average, and although growing, the process is rather slow. Many determinants influence such development dynamics, such as institutional development, physical infrastructure, human capital and lack of innovation due to modest research and development activities. The panel pooled OLS and fixed effects models applied in this study show a positive impact on productivity (GDP per person employed) of its lagged level, but also of the infrastructure and density of railroads. Growing public debt has a negative impact on productivity. Further analysis shows that productivity growth is positively related to capital stock growth and FDI inflows, while GDP growth is also positively related to investment and export growth but negatively related to public debt growth. Descriptive statistics analysis of the indicators of competitiveness and productivity shows that the highest linear relationship exists between the productivity and quality of railroads (0.73), followed by innovations (0.56) and technological readiness (0.54). Infrastructure is highly correlated with productivity, as well as higher education and training. As expected, the burden of government regulation is negatively correlated with productivity, as well as the effects of taxation on incentives to work. The data show that the human capital index in Western Balkan countries (all middle-income countries) is significantly lower than that in developed countries, but also the quality of education measured with harmonised test scores and learning-adjusted years of school. The development of physical infrastructure (railroads and roads) and research and development activities are all below the EU average. In order to foster productivity and income growth, Western Balkan countries should focus on straightening its determinants; otherwise, the income and productivity gap will further increase. As Balkan countries, due to their existence for a few decades as independent countries, still lack the statistical data necessary to extend research adding more variables, it will be a challenge for future research to extend the number of determinants and estimate its significance for productivity growth.

Keywords: Western Balkan, productivity, research and development, human capital, infrastructure

1. Introduction
In economic analysis, it is generally accepted that productivity growth is a major source of economic growth and welfare development. As in Margaritis, Scrimgeour, Cameron and Tressler (2005), ‘labour productivity has accounted for roughly half of the growth in per capita GDP in OECD countries over the last two decades of the XX century, with the other half primarily accounted for by increases in labour utilisation (changes are the demographics, unemployment and labour force participation rates)’. Nelson (2000) points out that ‘in the early 1950s, empirical work made it clear that “growth of total factor productivity” accounted for the lion’s share of the measured increases in output per worker. Technological advancement has been proposed as a major force behind TFP growth’. Further, quoting work by Schmookler (1952), Schultz (1953), Fabricant (1954), Kendrick (1956) and Abramovitz (1956), concluded that the growth output experienced in the United States after World War II was significantly greater than reasonably can be ascribed to input growth. Technological advancement, changing composition of the work force, investments in human capital, reallocation of resources from

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lower to higher productivity activities, and economies of scale, all were recognised as parts of the explanation.

In Western Balkan economies (Albania, Bosnia and Hercegovina, Kosovo, Montenegro, North Macedonia and Serbia), labour productivity (GDP per person employed) is far behind the European average, although slowly converging. From 1996 to 2019, labour productivity in Albania was 12.4% of the EU average, in Bosnia and Hercegovina 19.7%, Montenegro 27.1%, North Macedonia 18.3% and Serbia 18.5%, respectively (Table 2). The average annual productivity growth rate varies among the countries. The highest growth rates from 1996 to 2019 were observed in Albania, Serbia and Bosnia and Herzegovina, while in Montenegro and North Macedonia were slightly lower. The average annual GDP growth rate from 1996 to 2019 in Albania was 4.0%, while productivity (GDP per employee) growth rate was 3.84%, in Bosnia and Herzegovina was 5.2% and 5.11%, Montenegro 2.54% and 0.82%, Macedonia 2.81% and 1.02%, and Serbia 3.06% and 3.26%, respectively. Average GDP growth in Kosovo was 4.92% (from 2000 to 2019), while data on labour productivity were not available, and it was not possible to compute them as data on employment were unavailable. Employment growth was the highest in Montenegro, followed by North Macedonia, and the lowest in Bosnia and Herzegovina. Gross investment (capital formation), as a percentage of GDP, was the highest in Albania and Kosovo, but also high in all countries. Annual exports growth was the highest in Serbia, which was significantly higher than that in other countries, but also high in Albania (Table 1).

Table 1: Descriptive statistics, Western Balkan, 1996-2019 annual average

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP growth (%)</th>
<th>Labour productivity growth (%)</th>
<th>Employment growth (%)</th>
<th>Gross capital formation (% of GDP)</th>
<th>Exports of goods and services (annual % growth)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>4.00%</td>
<td>3.84%</td>
<td>1.04%</td>
<td>28.89%</td>
<td>13.12%</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>5.20%</td>
<td>5.11%</td>
<td>0.16%</td>
<td>23.88%</td>
<td>5.93%</td>
</tr>
<tr>
<td>Kosovo</td>
<td>4.92%</td>
<td></td>
<td></td>
<td>28.99%</td>
<td></td>
</tr>
<tr>
<td>Montenegro</td>
<td>2.54%</td>
<td>0.82%</td>
<td>1.99%</td>
<td>24.14%</td>
<td>4.96%</td>
</tr>
<tr>
<td>North Macedonia</td>
<td>2.81%</td>
<td>1.02%</td>
<td>1.81%</td>
<td>24.92%</td>
<td>7.46%</td>
</tr>
<tr>
<td>Serbia</td>
<td>3.06%</td>
<td>3.26%</td>
<td>1.16%</td>
<td>18.54%</td>
<td>17.21%</td>
</tr>
</tbody>
</table>

The aim of this research is to investigate the determinants of productivity in Western Balkan countries. We focus our research specifically on the structural characteristics of the countries (fixed capital and investment, education, research and development and infrastructure). As in Sorensen and Whitta-Jacobsen (2010), the hypothesis of conditional convergence states that a country’s income per worker (per capita) converges to a country-specific long-run growth path, which is given by the basic structural characteristics of the country. Three structural components are of particular importance: savings and investment as sources of capital accumulation, investment in education (investment in human capital) and population growth (in terms of its impact on the labour market).

As already mentioned, the sample in this study is Western Balkan countries, and the period from 1996 to 2019. The time frame is relevant for analysis as represents Balkan’s post-conflict period, transition from a centrally planned to market-oriented economy and political

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2 The data for Kosovo were not available
3 Based on data from World bank’s World Development indicators (retrieved in February 2021)
4 All countries experienced, to various extent, military conflicts during 90-es (with Albania as exception).
independence for each analysed country (prior to 1991, five of six Western Balkan countries were members of SFRY\textsuperscript{5}).

We will use descriptive statistics analysis on panel data, panel pooled OLS and fixed effect models. All data used in this study were extracted from international organisation databases to provide accuracy and comparability.

This study is comprised of five sections. After the introduction, the second part provides an overview of the research available in the literature. The third section provides a detailed overview of productivity and its determinants in Western Balkan countries. The fourth part relates to the research methodology and the empirical results. The discussion and conclusions of the research are presented in the fifth and final sections of the paper.

2. Literature Review

Productivity growth is an important source of economic growth. There is evidence in the literature regarding its contribution. Margaritis, Scrimgeour, Cameron, & Tressler (2005), in an analysis of the growth experience of Australia, New Zealand and Ireland over period from 1979 to 2002, concluded that increases in productivity growth, which was the largest in Ireland, was driven by both efficiency and technological change improvements and particularly by increases in labour productivity in the high-tech manufacturing sector probably originated from research and development, innovations and technology spill-overs as a result of significant foreign direct investment. They point out that productivity gains are realised at the firm level, but from the policy makers’ perspective, macroeconomic stability, appropriate regulation, efficient capital market, higher education and research and development are suggested to be important drivers of labour productivity growth.

On importance of total factor productivity (TFP) progress, there is much evidence in literature also. Barro (1998) points out that technological progress is, in fact, crucial to the long-term per capita growth that the U.S. economy has been able to sustain for two centuries. Based on an extensive literature review, Kim and Loayza (2017), categorised TFP determinants into five components: innovations, education, market efficiency, physical infrastructure and institutional infrastructure. In their research, they concluded that ‘variation of TFP across countries for the last three decades is explained the most by the physical infrastructure index, followed by the education index and the market efficiency index at a similar level, the innovation index and the institutional infrastructure index’\textsuperscript{6}.

In their study, Eichler et al. (2006) found that higher taxes reduce productivity growth, increase innovation resources, and better intercontinental accessibility leads to higher productivity growth. Productivity growth is also influenced by global trends, industrial structures and spatial spill over effects. The income taxation of highly qualified employees plays the most important role in explaining productivity growth differentials between regions in their sample. It is followed by regulation of the labour market, interregional accessibility, company taxation, intercontinental accessibility and innovation indicators such as research and development expenditures and educational attainment.

Holmes and Schmitz (2010), found that industries experiencing dramatic changes in their competitive environment were forced to increase productivity, or only plants that have large productivity gains survive increases in competition.

\textsuperscript{5} Croatia, Bosnia and Hercegovina and Macedonia become independent countries in 1991, Serbia and Montenegro in 2006 and Kosovo in 2008.

Wu, Guo, and Marinova (2017), presented new evidence on TFP and economic growth by examining the latest regional and sectoral statistics from China. They found that productivity growth is the main driver of economic growth in all three sectors: agriculture, manufacturing and services. They also found that technological progress was primarily responsible for TFP growth.

The availability of literature on structural transformation and its impact on growth is also vast. Morro (2015), studied the impact of the sectoral composition of gross domestic product on cross-country differences in GDP growth and volatility, and concluded that an increase in the share of services in GDP reduces both aggregate total factor productivity (TFP) growth and volatility, thus reducing GDP growth and volatility. Foster-McGregor and Verspagen (2017) presented a study on decomposing TFP growth in manufacturing and services, with a sample of 40 countries and a period from 1995 to 2009. Their research has shown that ‘TFP growth in manufacturing tends to outpace that in services in most economies’. They found that some exceptions exist, particularly in Asian countries, suggesting that ‘productivity growth in services need not always be lower than that in manufacturing’. McMillan, Rodrik, and Verduzco-Gallo (2014), analysing structural changes in Africa and Latin America, found that labour flows from low productivity to high productivity activities are a key driver of development. In addition, since 1990, structural change has been growth reducing, with labour moving from low to high-productive sectors.

Buera and Kaboski (2012) analysed the role of specialised high-skilled labour in the disproportionate growth of the services sector and found that the importance of skill-intensive services has risen during a period of increasing relative wages and quantities of high-skilled labour. They developed a theory in which demand shifts toward more skill-intensive output as productivity rises, increasing the importance of market services relative to home production. Their theory predicts a rising level of skills, skill premiums and the relative price of services that are linked to this skill premium.

A study that examines the productivity performance of Balkan firms within and outside the EU (Howard-Jones et al. 2017), indicates that EU membership contributed to improved productivity because of unfettered access to the custom union, which promotes opportunities for improved economies of scale and the advantages of network effects. Their study also shows that FDI has positive influence on firm’s productivity, except for manufacturing sector, which may reflect the low-tech nature of the Balkan manufacturing sector proving of no interest to foreign investors.

Analysing the potential causes of the insufficiently rapid development of Balkan countries, Gligorov (2016), points out that ‘due to frequent political and institutional changes throughout the 20th century, economic and political interests have not always been simultaneous, which slowed down the process of industrialisation; investment in infrastructure was significant but insufficient to support a faster industrialisation process; Balkan economies have a history of difficulties achieving macroeconomic equilibrium; underdeveloped entrepreneurial culture and the presence of corruption in economic transactions; internal Balkan integrations are relatively weak. This further indicates that the dominance of small and medium-sized, insufficiently internationalised companies with insufficient capacity and size of the market that would allow the use of economies of scale, slows down or in a significant number of cases, prevents their growth and growth into large, internationally competitive enterprises’.

The expansion of scientific and technical knowledge that raises the productivity of labour and other inputs of production has been seen as a source of persistent growth in income per person. ‘It is clear that all countries which have managed persistent growth in income have also had large increases in the education and training of their labour force. The systematic application
of scientific knowledge to the production of goods has greatly increased the value of education, technical schooling, and on-the-job training, as the growth of knowledge has been embodied in people – in scientists, scholars, technicians, managers, and other contributors to output.’ (Becker, 1993, p. 24). Barro (2001) pointed out that the quality of schooling is more important than the quantity measured, for example, by years of attainment. Hanushek and Kimko (2000) found that scores on international examinations — indicators of the quality of schooling capital — matter more than years of attainment for subsequent economic growth. Drori (1998) also emphasised the importance of science education: ‘Science, including science education, is highly praised as a requirement for any modern, civilised, economically vibrant society. According to the structural-instrumentalist approach, national economic growth depends on the scientific and technical capabilities of the labour force; such capabilities rely on the level of advanced scientific and technical training’. The quality of education is strongly associated with growing scientific knowledge.

3. Productivity in Western Balkan

Productivity in Western Balkan countries, measured as GDP per person employed (constant 2010 US$)\textsuperscript{7}, in the period from 1996 to 2019 has growing trends, but at various rates. The highest average annual growth rate was observed in Bosnia and Herzegovina, followed by Albania and Serbia. Still, labour productivity in Western Balkan countries is far beyond the EU average. Labour productivity in Albania was 15.7\% at the European level in 2019, in Bosnia and Herzegovina, 23.7\%; Montenegro, 27.5\%; North Macedonia, 18\%; and Serbia, 21.7\%.

<table>
<thead>
<tr>
<th>GDP per person employed (constant 2010 US$)</th>
<th>GDP per person employed (constant 2010 US$), EU=100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania 5,333 6,266 11,32 12,91 9,450 3.84% 8.2 8.9 14.8 15.7 12.4</td>
<td></td>
</tr>
<tr>
<td>Bosnia and Herzegovina 6,025 11,40 16,47 19.52 14,978 5.11% 9.3 16.1 21.6 23.7 19.7</td>
<td></td>
</tr>
<tr>
<td>Montenegro 18,63 21.27 22.64 20,464 0.82% 26.4 27.9 27.5 27.1</td>
<td></td>
</tr>
<tr>
<td>North Macedonia 11,73 12,37 14,63 14,84 13,730 1.02% 18.1 17.5 19.2 18.0 18.3</td>
<td></td>
</tr>
<tr>
<td>Serbia 8,448 9,019 5 6 14,017 3.25% 13.0 12.8 22.1 21.7 18.5</td>
<td></td>
</tr>
<tr>
<td>European Union 64.74 70.64 76.28 82.28 74,904 1.0% 100.0 0 0 0 100</td>
<td></td>
</tr>
<tr>
<td>Turkey 34.48 43.86 39,707 45.2 53.3</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s estimations based on WDI and ILO data

The ratio to the EU average has improved since 1996 (except for North Macedonia). Comparisons of output per employed (for 1996 and 2018) have shown that the average output per worker in Albania in 1996 was equal to 8.2\% of the same in the EU, while 15.7\% in 2019, in Bosnia and Herzegovina 9.3\% and 23.7\%, Montenegro 26.4\% (data for 2000) and 27.5\%, North Macedonia 18.1\% and 18\% and Serbia 13\% and 21.7\%, respectively.

As in Bacovic (2021), TFP growth in Western Balkan countries\textsuperscript{9} was volatile from 2000 to 2017. On average, the highest TFP growth was observed in Albania, followed by Serbia. In

\textsuperscript{7} Source: World development indicators. Last updated 12/16/2020. Data for Kosovo were missing.

\textsuperscript{8} From 2010 to 2019

\textsuperscript{9} Data for Kosovo were not available so TFP growth was not estimated.
North Macedonia and Montenegro, average annual TFP growth was negative in the total period, but positive in North Macedonia from 2000 to 2009, and Montenegro from 2010 to 2017. TFP growth in Serbia was negative and significantly lower from 2010 to 2017 than in the previous decade, and also declined in Albania, Bosnia and Hercegovina. (Table 3)

**Table 3: Total factor productivity growth (average annual)**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Albania</td>
<td>1.31</td>
<td>1.89</td>
<td>0.65</td>
</tr>
<tr>
<td>Bosnia and Hercegovina</td>
<td>2.32</td>
<td>2.48</td>
<td>2.15</td>
</tr>
<tr>
<td>North Macedonia</td>
<td>-0.24</td>
<td>1.21</td>
<td>-1.87</td>
</tr>
<tr>
<td>Montenegro</td>
<td>-0.79</td>
<td>-1.70</td>
<td>0.22</td>
</tr>
<tr>
<td>Serbia</td>
<td>2.08</td>
<td>4.70</td>
<td>-0.86</td>
</tr>
</tbody>
</table>

Source: Bacovic, 2021

The sectoral component may have an impact on TFP growth, as it is the highest in industry, but the lowest in services (Foster-McGregor and Verspagen (2017), Bacovic, (2021)). The share of industry\(^\text{10}\) in GDP is the largest in Serbia (annual average for the period from 2000 to 2017 is 25.8%), and the lowest in Montenegro (17%). In Albania, Bosnia and Hercegovina and Macedonia were approximately 21%. Among the analysed countries, Albania has the largest share of agriculture in GDP\(^\text{11}\), although its share declined from 23.4% (2010) to 18.9% (2017). The share of agriculture in Serbia’s GDP has declined from 18.3% to 6%, while in Macedonia, Montenegro and Bosnia share is lower than 10%. The structure of the employees is noticeable. Albania has the largest share of employees in agriculture, although it is declining. At the same time, Albania and Montenegro have the smallest share of employees in industry, while the largest and growing is evidenced in Bosnia and Hercegovina. Montenegro has the largest share of employees in services and grows, while in all other countries, except in Bosnia, there are growing trends, although share is lower, especially in Albania. The share of services in GDP\(^\text{12}\) is high in all countries, the largest in Montenegro (57.7%) and smallest in Albania (46.5%).

### 3.1. Determinants of the productivity: Institutional development, physical infrastructure, investment in research and development and education

According to the World Bank Group (2017), Western Balkan countries are now in the same place in transition reforms as the 7STEEs\(^\text{13}\) in 1996. ‘Today Western Balkans have mostly completed reforms in price and trade liberalisation, but continue to drag in privatisation, governance, enterprise restructuring, and competition policy. In addition to slowing income

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\(^{10}\) WB data. Industry corresponds to ISIC divisions 10-45 and includes manufacturing (ISIC divisions 15-37). It comprises value added in mining, manufacturing (also reported as a separate subgroup), construction, electricity, water, and gas. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3 or 4.

\(^{11}\) World Bank data: *World development indicators*. Agriculture corresponds to ISIC divisions 1-5 and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3 or 4.

\(^{12}\) World Bank data: *World development indicators*. Services correspond to ISIC divisions 50-99 and they include value added in wholesale and retail trade (including hotels and restaurants), transport, and government, financial, professional, and personal services such as education, health care, and real estate.

\(^{13}\) 7STEEs stands for the seven small transition eastern European economies. The term was introduced by the World Bank and refers to Bulgaria, Croatia, Estonia, Latvia, Lithuania, Slovakia and Slovenia.
convergence, the incomplete state of reforms took another toll during the 2008 financial crisis. Countries that had implemented advanced structural reforms and prudent fiscal management suffered shorter and less severe currency depreciation and stock market crises.\(^\text{14}\)

The institutional indicators used in this study are six key qualities of a sustainable market economy (EBRD, 2020), looking at whether economies are competitive, well-governed, green, inclusive, resilient and integrated.\(^\text{15}\) We compared the values for 2016 and 2020 and found improvements in all Western Balkan countries (Table 4).

**Table 4: EBRD: ATQ scores for six qualities of a sustainable market economy, 2016-2020**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>4.88</td>
<td>5.25</td>
<td>5.09</td>
<td>4.5</td>
<td>4.5</td>
<td>4.3</td>
<td>5.31</td>
<td>5.25</td>
<td>5.15</td>
<td>5.65</td>
<td>5.57</td>
<td>5.76</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>4.88</td>
<td>4.8</td>
<td>4.49</td>
<td>3.98</td>
<td>4.95</td>
<td>5.14</td>
<td>5.21</td>
<td>5.43</td>
<td>5.84</td>
<td>6.09</td>
<td>5.19</td>
<td>5.41</td>
</tr>
<tr>
<td>Kosovo</td>
<td>4.49</td>
<td>5.21</td>
<td>4.74</td>
<td>4.61</td>
<td>3.41</td>
<td>3.41</td>
<td>5.33</td>
<td>5.34</td>
<td>5.09</td>
<td>5.41</td>
<td>4.74</td>
<td>5.1</td>
</tr>
<tr>
<td>Montenegro</td>
<td>5.28</td>
<td>5.6</td>
<td>5.86</td>
<td>6.27</td>
<td>5.08</td>
<td>5.44</td>
<td>5.99</td>
<td>6.07</td>
<td>6.33</td>
<td>6.83</td>
<td>5.84</td>
<td>6.29</td>
</tr>
<tr>
<td>North Macedonia</td>
<td>5.74</td>
<td>5.98</td>
<td>5.71</td>
<td>5.4</td>
<td>5.03</td>
<td>5.27</td>
<td>5.75</td>
<td>5.76</td>
<td>5.63</td>
<td>6.21</td>
<td>5.8</td>
<td>6.13</td>
</tr>
<tr>
<td>Serbia</td>
<td>5.3</td>
<td>5.64</td>
<td>5.66</td>
<td>5.84</td>
<td>5.55</td>
<td>5.78</td>
<td>6.33</td>
<td>6.13</td>
<td>5.74</td>
<td>5.94</td>
<td>6.26</td>
<td>6.25</td>
</tr>
</tbody>
</table>

Source: EBRD

Indicators of physical infrastructure (rail, road), investment in R&D and human capital level (measured by tertiary educational attainment) show small variation among Western Balkan countries, but still visible gaps compared to developed countries. From Western Balkan countries, Montenegro and Serbia have the most intensive R&D activities, as well as the highest tertiary educational attainment, while physical infrastructure variations are lower. (Table 5) Investment in R&D are significantly lower than EU average (1.4% in 2017),\(^\text{16}\) also educational attainment (share of persons with tertiary education in total population in thirty European countries was 28.81% in 2019)\(^\text{17}\). Physical infrastructure is also less developed than in most developed European countries. For example. The road density in Slovenia is 1.92 km/km\(^2\), while it is less than 1 km/km\(^2\) in all Western Balkan countries.

**Table 5: Infrastructure and R&D indicators (average from 1996 to 2019, upon data availability)**

<table>
<thead>
<tr>
<th>Average for years available</th>
<th>Railroads density/km(^2)</th>
<th>Roads density/km(^2)</th>
<th>R&amp;D, % GDP</th>
<th>Educational attainment, Tertiary 25+, total (%) (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>0.015</td>
<td>0.62</td>
<td>0.12%</td>
<td>10.53%</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>0.019</td>
<td>0.44</td>
<td>0.13%</td>
<td>9.27%</td>
</tr>
<tr>
<td>Kosovo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montenegro</td>
<td>0.018</td>
<td>0.57</td>
<td>0.63%</td>
<td>17.5%</td>
</tr>
<tr>
<td>North Macedonia</td>
<td>0.270</td>
<td>0.54</td>
<td>0.31%</td>
<td></td>
</tr>
<tr>
<td>Serbia</td>
<td>0.025</td>
<td>0.49</td>
<td>0.69%</td>
<td>17.06%</td>
</tr>
</tbody>
</table>

Source: Author’s calculations based on World Development Indicators data, Knoema

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14 World Bank Group, 2017
15 Scores range from 1 to 10, where 10 represents the best result.
16 Author’s estimation based on WDI data
17 Author’s estimation based on WDI data
Quality of education

The literature on the relevance of education and knowledge is vast, providing much evidence of the positive impact of knowledge growth on economic prosperity. Becker (1993) provided strong evidence of the relevance of education and knowledge for sustainable income per capita growth. Barro (2001) emphasised the importance of the quality of education as more important than the quantity measured, for example, by years of attainment. Woessmann (2016) explained the large international differences in student achievement with a combination of three factors: family background, school resources, and institutions. These account for more than four-fifths of the total cross-country variation in student achievement. Family background and institutions contribute roughly equally to this exercise, whereas the contribution of school resources is quite limited.

Therefore, we evaluated the quality of education in Western Balkan countries using the World Bank’s estimates of the human capital index (HCI)\(^\text{18}\) and some of its components, as presented in Table 6. For the comparisons, we also used data for Slovenia and Switzerland as high-income countries. The data show that the human capital index in Western Balkan countries (all middle-income countries) is significantly lower than in the two developed countries, but also the quality of education measured with harmonised test scores and learning-adjusted years of school. In Western Balkan countries, the quality of education (in 2020) was the lowest in North Macedonia (although it improved from 2018 to 2020), followed by Kosovo and Bosnia and Herzegovina, while it was the highest in Serbia, followed by Albania and Montenegro. From 2018 to 2020, the quality of education was improved in Albania, Kosovo, Montenegro and North Macedonia and decreased in Bosnia and Herzegovina and Serbia.

Table 6: Human capital index and education indicators

<table>
<thead>
<tr>
<th>Country Name</th>
<th>Expected Years of School(^\text{19})</th>
<th>Harmonized Test Scores(^\text{20})</th>
<th>Learning-Adjusted Years of School(^\text{21})</th>
<th>Human capital index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>13.0</td>
<td>12.9</td>
<td>429</td>
<td>434</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>11.7</td>
<td>11.7</td>
<td>461</td>
<td>416</td>
</tr>
<tr>
<td>Kosovo</td>
<td>12.8</td>
<td>13.2</td>
<td>375</td>
<td>374</td>
</tr>
<tr>
<td>Montenegro</td>
<td>12.4</td>
<td>12.8</td>
<td>433</td>
<td>436</td>
</tr>
<tr>
<td>North Macedonia</td>
<td>11.2</td>
<td>11.0</td>
<td>382</td>
<td>414</td>
</tr>
<tr>
<td>Serbia</td>
<td>13.4</td>
<td>13.3</td>
<td>521</td>
<td>457</td>
</tr>
<tr>
<td>Slovenia</td>
<td>13.6</td>
<td>13.6</td>
<td>532</td>
<td>521</td>
</tr>
</tbody>
</table>

\(^{18}\) The HCI calculates the contributions of health and education to worker productivity. The final index score ranges from zero to one, and measures the productivity as a future worker of a child born today relative to the benchmark of full health and complete education. (World bank, the Human Capital Index 2020)

\(^{19}\) Expected years of school is calculated as the sum of age-specific enrollment rates between ages 4 and 17. Age-specific enrollment rates are approximated using school enrollment rates at different levels: pre-primary enrolment rates approximate the age-specific enrolment rates for 4 and 5 year-olds; the primary rate approximates for 6-11 year-olds; the lower-secondary rate approximates for 12-14 year-olds; and the upper-secondary approximates for 15-17 year-olds. (World bank, the Human Capital Index 2020)

\(^{20}\) Harmonized Test Scores are retrieved from the 2020 update of the Global Database on Education Quality (Patrinos and Angrist, 2018). The database harmonizes scores across major international student achievement testing programs measured in TIMMS-equivalent units, where 300 is minimal attainment and 625 is advanced attainment. Most recent estimates as of 2019 are used. (World bank, the Human Capital Index 2020)

\(^{21}\) Learning-Adjusted Years of School are calculated by multiplying the estimates of expected years of school by the ratio of most recent harmonized test scores to 625, where 625 corresponds to advanced attainment on the TIMSS (Trends in International Mathematics and Science Study) test, based on methodology in Filmer et al. (2018). (World bank, the Human Capital Index 2020)
3.2. Competitiveness

To examine the effects of determinants of productivity (listed in the reviewed literature) on labour productivity (measured as output per worker) in Balkan countries, we used estimated scores for the list of variables by WEF\(^\text{22}\) for the period from 2008 to 2017\(^\text{23}\). We decided to use this particular set of indicators because data for many variables were not available in other forms. We selected the following indicators: property rights protection, intellectual property protection, judicial independence, wastefulness (efficiency) of government spending, burden of government regulation, protection of minority shareholders, strength of investor protection, quality of railroads, quality of roads, quality of electricity supply, institutions, infrastructure, macroeconomic environment, higher education and training, goods market efficiency, labour market efficiency, effects of taxation on incentives to work, technological readiness and innovations\(^\text{24}\), as presented in Table 7.

### Table 7: Selected indicators of the competitiveness

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Global competitiveness index (rankings), 2008 and 2019</td>
<td>57.6</td>
<td>54.7</td>
<td>60.8</td>
<td>57.3</td>
<td>60.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property rights</td>
<td>3.7</td>
<td>0.5</td>
<td>3.2</td>
<td>-0.1</td>
<td>4.0</td>
<td>-0.7</td>
<td>4.1</td>
<td>0.2</td>
<td>3.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Intellectual property protection</td>
<td>3.4</td>
<td>1.0</td>
<td>3.0</td>
<td>0.7</td>
<td>3.6</td>
<td>0.7</td>
<td>3.9</td>
<td>1.1</td>
<td>3.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Judicial independence</td>
<td>2.6</td>
<td>0.2</td>
<td>2.8</td>
<td>0.2</td>
<td>3.6</td>
<td>0.2</td>
<td>3.1</td>
<td>0.3</td>
<td>2.8</td>
<td>0.2</td>
</tr>
<tr>
<td>Wastefulness (Efficiency) of government spending</td>
<td>3.9</td>
<td>0.8</td>
<td>2.4</td>
<td>0.1</td>
<td>3.8</td>
<td>0.1</td>
<td>3.8</td>
<td>0.5</td>
<td>3.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Burden of government regulation</td>
<td>4.6</td>
<td>1.4</td>
<td>2.5</td>
<td>0.3</td>
<td>3.6</td>
<td>0.6</td>
<td>3.7</td>
<td>0.5</td>
<td>2.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Protection of minority shareholders</td>
<td>4.0</td>
<td>0.0</td>
<td>2.7</td>
<td>-0.6</td>
<td>3.8</td>
<td>-0.4</td>
<td>4.0</td>
<td>0.1</td>
<td>3.0</td>
<td>-0.2</td>
</tr>
<tr>
<td>Strength of investors protection</td>
<td>7.2</td>
<td>7.2</td>
<td>5.5</td>
<td>5.5</td>
<td>6.3</td>
<td>6.3</td>
<td>7.2</td>
<td>7.2</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Quality of roads</td>
<td>4.3</td>
<td>1.9</td>
<td>3.0</td>
<td>1.4</td>
<td>3.5</td>
<td>1.3</td>
<td>3.7</td>
<td>0.6</td>
<td>3.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Quality of railroads</td>
<td>1.2</td>
<td>-0.1</td>
<td>2.0</td>
<td>0.6</td>
<td>2.8</td>
<td>0.9</td>
<td>2.7</td>
<td>0.5</td>
<td>2.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Quality of electricity supply</td>
<td>4.6</td>
<td>2.8</td>
<td>4.8</td>
<td>-0.2</td>
<td>4.6</td>
<td>1.6</td>
<td>4.9</td>
<td>0.5</td>
<td>5.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Institutions</td>
<td>3.9</td>
<td>0.6</td>
<td>3.1</td>
<td>0.0</td>
<td>3.9</td>
<td>-0.2</td>
<td>4.0</td>
<td>0.4</td>
<td>3.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>3.6</td>
<td>1.4</td>
<td>3.3</td>
<td>1.1</td>
<td>4.2</td>
<td>1.5</td>
<td>3.8</td>
<td>0.9</td>
<td>4.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Macroeconomic environment</td>
<td>4.6</td>
<td>0.0</td>
<td>4.8</td>
<td>-0.4</td>
<td>3.7</td>
<td>-1.8</td>
<td>5.2</td>
<td>-0.3</td>
<td>4.6</td>
<td>-0.1</td>
</tr>
<tr>
<td>Higher education and training</td>
<td>4.8</td>
<td>1.4</td>
<td>4.0</td>
<td>0.9</td>
<td>4.5</td>
<td>0.3</td>
<td>4.2</td>
<td>0.4</td>
<td>4.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Goods market efficiency</td>
<td>4.4</td>
<td>0.8</td>
<td>3.7</td>
<td>0.2</td>
<td>4.4</td>
<td>0.2</td>
<td>4.7</td>
<td>0.8</td>
<td>4.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Labour market efficiency</td>
<td>4.0</td>
<td>-0.4</td>
<td>3.5</td>
<td>-0.7</td>
<td>4.2</td>
<td>-0.3</td>
<td>4.0</td>
<td>0.1</td>
<td>4.0</td>
<td>-0.4</td>
</tr>
<tr>
<td>Effects on taxation on incentives to work</td>
<td>3.1</td>
<td>3.1</td>
<td>3.0</td>
<td>3.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.1</td>
<td>4.1</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Technological readiness</td>
<td>4.1</td>
<td>1.2</td>
<td>4.3</td>
<td>1.7</td>
<td>4.9</td>
<td>0.9</td>
<td>4.3</td>
<td>1.3</td>
<td>4.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Innovations</td>
<td>3.2</td>
<td>1.0</td>
<td>2.7</td>
<td>0.3</td>
<td>3.2</td>
<td>0.2</td>
<td>3.4</td>
<td>0.5</td>
<td>3.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>


---

\(^{22}\) World economic forum, Global competitiveness reports, 2008-2017

\(^{23}\) Reference period is 2008-2017, as for Montenegro and Serbia 2008 is the first year when competitiveness indicators were produced for two independent countries.

\(^{24}\) Methodology for estimation of the indicators is explained in GCR reports
The analysis of the indicators showed variations among countries. While Montenegro has the largest value of indicator of technology readiness in the entire period (4.9 in 2017)\textsuperscript{25}, the biggest progress since 2008 was made in Bosnia and Herzegovina (from 2.6 in 2008 to 4.3 in 2017), Macedonia (from 3.0 to 4.3) and Albania (from 2.9 to 4.1). Albania has achieved the highest progress in higher education and training index (from 3.4 in 2008 to 4.8 in 2017), as well as the best score among all countries. Serbia and Montenegro have moderate scores but slower improvement (4.6 and 4.5 in 2017). In terms of infrastructure development, the largest improvement since 2008 was achieved in Albania (from 2.2 to 3.6), followed by Bosnia and Herzegovina, Montenegro and Serbia. Scores for infrastructure are the highest in Montenegro and Serbia (4.2 and 4.1), while infrastructure has the lowest score in Bosnia and Herzegovina and Albania (3.6 and 3.3 in 2017). According to WEF, Montenegro and Macedonia have the most developed institutions (4.0 and 3.9 in 2017), while the biggest improvement since 2008 was made in Albania (from 3.3 to 3.9). The largest progress in innovation was achieved in Albania and Macedonia. Macedonia was the most innovative country in 2017 (3.4). As the maximum value for each indicator is 7, it is obvious that all Western Balkan countries still need significant improvements in all areas important for a country’s productivity.

We estimated the correlation between output per worker in Balkan countries (measured as output per worker in constant 2010 US$) and selected indicators of competitiveness. Although all indicators are positively correlated, the highest correlation was estimated with the quality of railroads (0.73), followed by innovations (0.56) and technological readiness (0.54). Infrastructure is highly correlated with output per worker, such as higher education and training. As expected, the burden of government regulation is negatively correlated (-0.52), as is the effect of taxation on incentives to work (-0.12). (Table 8)

\textbf{Table 8:} Correlation coefficients between GDP per person employed and selected indicators of the competitiveness

<table>
<thead>
<tr>
<th>GDP per person employed</th>
<th>Burden of government regulation</th>
<th>Institutions</th>
<th>Infrastructure</th>
<th>Railroads quality</th>
<th>Electricity</th>
<th>Higher education and training</th>
<th>Innovations</th>
<th>Technology readiness</th>
<th>Effects on taxation on incentives to work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burden of government regulation</td>
<td>-0.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutions</td>
<td>0.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>0.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Railroads quality</td>
<td>0.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher education and training</td>
<td>0.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovations</td>
<td>0.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology readiness</td>
<td>0.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects on taxation on incentives to work</td>
<td>-0.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s calculations

\textbf{4. Data, Methods and Empirical Results}

\textbf{4.1. Data}

Sources for all data used in this research are data provided by international organisations, in order to provide its reliability and compatibility, although such an approach has some limitations; for some indicators, we could not provide data for all countries. Therefore, we used data from the IMF (Outlook data base, October 2020), World Development Indicators (World Bank), ILO (International Labour Organisation), World Economic Forum (only since 2008, as

\textsuperscript{25} Values range for all indicators is from 0-7, 7 being the best score
it was the first year data were published for Serbia and Montenegro as independent countries) and Eurostat. For some indicators, additional computations are necessary.

All data are with annual frequency, and if expressed in currency, in constant 2010 US$, with a range from 1996 to 2019, or based on availability.

4.2. Panel pooled and fixed effects OLS estimations

Following approach by Cermakova, et.al (2020), the relationship between indicators of the competitiveness and labour productivity may be demonstrated using panel regression analyses and the following equation:

\[ Y_{pi_t} = \alpha + Y_{pi_{t-1}} + \beta X_{it} + \gamma Z_{it} + \varepsilon_{it} \]  

(1)

where the dependent variable \( Y_{pi_t} \) is GDP per employed in country \( i \) and year \( t \); \( Y_{pi_{t-1}} \) is the lagged variable with a lag of one period. The vector variable \( X_{it} \) consists of independent variables (WEF indicators of competitiveness). The vector variable \( Z_{it} \) represents public debt (% of GDP) and railroads/area (km\(^2\)).

To estimate the determinants of GDP growth, we estimate panel pooled ordinary least squares (OLS) models. Panel data increase the sample size and thus allow higher degrees of freedom and more accurate statistical tests.27

The aggregate production of an economy can be expressed as a function of capital stock, labour and TFP:

\[ Y_t = A_t K_t^\alpha L_t^\beta, \quad 0 < \alpha + \beta < 1 \]  

(2)

where \( Y_t \) denotes the aggregate production of the economy at time \( t \), \( A_t \) is the total factor productivity, and \( K_t \) and \( L_t \) represent capital stock and labour, respectively. The constants \( \alpha \) and \( \beta \) represent the share of capital and labour in income, respectively.

After taking natural logs, the following equation is obtained:

\[ \ln Y_t = c + \alpha \ln K_t + \beta \ln L_t + \varepsilon_t, \]  

(3)

where \( c \) is the intercept, \( \alpha \) and \( \beta \) are constant elasticities and \( \varepsilon_t \) is the error term.

If we divide equation 2 with \( L \), after taking natural logs, we obtain the estimate for labour productivity as follows:

\[ \ln \frac{Y_t}{L_t} = c + \alpha \ln \frac{K_t}{L_t} + \varepsilon_t, \]  

(4)

where \( \frac{Y_t}{L_t} \) denotes the labour productivity of the economy at time \( t \), \( A_t \) is the total factor productivity, and \( \frac{K_t}{L_t} \) represents capital stock per employed person. The constant \( \alpha \) represents the share of capital per labour in income per labour.

We also estimated the impact of growth in FDI inflows per person employed in labour productivity growth, as follows:

\[ \ln \frac{Y_t}{L_t} = c + \alpha L_{FDI_t} + \varepsilon_t, \]  

(5)

26 WEF methodology and estimation

27 Sequeira and Campos (2005)
As the correlation between GDP growth and productivity growth is positive and significant (0.84), we estimate the impact of investment growth, exports (percentage change) and public debt (% of GDP) on GDP growth, as follows:

\[ LY_t = c + \alpha LI_t + \beta E\%_{change} + \gamma PB\%_{GDP,t} + \varepsilon_t, \quad (6) \]

where \( I_t \) represents gross investment in country \( i \) in time \( t \), \( E\%_{change} \) is export (percentage change) and \( PB\%_{GDP,t} \) is public debt as a percentage of GDP (country \( i \) in time \( t \)).

### 4.3. Empirical results

For estimation of equation 1, as the number of observations was limited due to missing data for several years and some countries from the sample\(^{28}\), the independent variable in vector variable \( X_{it} \) which was statistically significant, was only infrastructure\(^{29}\). The methodology applied in this research and empirical results due to the small number of observations should be considered as a guide for future research. The estimation results are presented in Table 9.

**Table 9:** Estimation results (Equation 1), panel OLS (fixed effects)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per person employed (-1)</td>
<td>0.487012***</td>
<td>0.135157</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>1836.234***</td>
<td>434.1820</td>
</tr>
<tr>
<td>Rail per km(^2)</td>
<td>7.906254**</td>
<td>3.370040</td>
</tr>
<tr>
<td>Public debt (% of GDP)</td>
<td>-51.97896**</td>
<td>18.26222</td>
</tr>
</tbody>
</table>

*** \( p<.01 \), ** \( p<.05 \), * \( p<.1 \)

Source: Author’s estimations

The estimation results show a positive impact on productivity (GDP per person employed) of its lagged level, but also on the infrastructure and density of railroads. Growing public debt has a negative impact on productivity.

The estimation results for the Equation 3 are presented in table 10.

**Table 10:** Estimation results (equation 3)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>( LK_t )</td>
<td>0.368360***</td>
<td>0.075973</td>
</tr>
<tr>
<td>( LL_t )</td>
<td>0.059240</td>
<td>0.069817</td>
</tr>
<tr>
<td>( C )</td>
<td>0.010543**</td>
<td>0.005142</td>
</tr>
</tbody>
</table>

*** \( p<.01 \), ** \( p<.05 \), * \( p<.1 \)

Source: Author’s estimations

The estimation results show that capital stock growth by percentage points leads to a GDP growth of 0.37%. In addition, TFP growth (panel average) is 1.05%, which is similar to that obtained by Bacovic (2021), where the growth accounting method was applied.

---

\(^{28}\) WEF indicators used in this research were available from 2008 to 2017, also WEF did not estimated competitiveness indicators for Kosovo

\(^{29}\) Of all indicators of competitiveness, quality of infrastructure was the one statistically significant
The estimation results for Equation 4 are presented in Table 11.

**Table 11:** Estimation results (equation 4)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{K_t}{L_t}$</td>
<td>0.421530***</td>
<td>0.067362</td>
</tr>
<tr>
<td>$C$</td>
<td>0.004579***</td>
<td>0.004695</td>
</tr>
</tbody>
</table>

*** $p<.01$, ** $p<.05$, * $p<.1$

Source: Author’s estimations

The estimation results show that capital stock per employee growth by percentage point leads to a GDP per employee growth of 0.42%.

If we replace capital stock per employee growth with investment per person employed growth in Equation 4, the results are as follows (Table 12):

**Table 12:** Estimation results (modified equation 4)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{I_t}{L_t}$</td>
<td>0.076298***</td>
<td>0.022318</td>
</tr>
<tr>
<td>$C$</td>
<td>0.021938***</td>
<td>0.003654</td>
</tr>
</tbody>
</table>

*** $p<.01$, ** $p<.05$, * $p<.1$

Source: Author’s estimations

The estimation results show that investment per employee growth by percentage point leads to a GDP per employee growth of 0.08%.

The results for the estimation of Equation 5 are presented in Table 13, and show the positive effect of FDI inflow on labour productivity.

**Table 13:** Estimation results (equation 5)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{FDI_t}{L_t}$</td>
<td>0.009508*</td>
<td>0.004813</td>
</tr>
<tr>
<td>$C$</td>
<td>0.019751***</td>
<td>0.003912</td>
</tr>
</tbody>
</table>

*** $p<.01$, ** $p<.05$, * $p<.1$

Source: Author’s estimations

The estimation results for Equation 6 are presented in Table 14, showing a positive impact from investment and export growth to GDP growth, but a negative impact from public debt.
Table 14: Estimation results (equation 6)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>$L_{Y_t}$</td>
<td>0.073480***</td>
<td>0.015919</td>
</tr>
<tr>
<td>$E_x%_{\text{change}}$</td>
<td>0.001119***</td>
<td>0.000194</td>
</tr>
<tr>
<td>$P_{B%_{\text{GDP,t}}}$</td>
<td>-0.000176**</td>
<td>0.00094</td>
</tr>
<tr>
<td>$C$</td>
<td>0.02783***</td>
<td>0.004620</td>
</tr>
</tbody>
</table>

*** p<.01, ** p<.05, * p<.1

Source: Author’s estimations

5. Discussion and Conclusion

It is generally accepted that productivity growth is a major source of economic growth and welfare development. In Western Balkan economies (Albania, Bosnia and Hercegovina, Kosovo, Montenegro, North Macedonia and Serbia), labour productivity (GDP per person employed) is far behind the European average, slowly converging.

Many determinants influence such development dynamics, such as institutional development, physical infrastructure, human capital and lack of innovation due to modest research and development activities.

The panel pool OLS and fixed effects models applied in this study show a positive impact on productivity (GDP per person employed) of its lagged level, but also on the infrastructure and density of railroads. Growing public debt has a negative impact on productivity. Further, study shows that productivity growth is positively related to capital stock growth, investment growth and FDI inflows, while GDP growth is related to export growth but negatively related to public debt growth.

Descriptive statistics analysis of the indicators of competitiveness and productivity shows that the highest linear relationship exists between the productivity and quality of railroads (0.73), followed by innovations (0.56) and technological readiness (0.54). Infrastructure is also highly correlated with productivity, such as levels of higher education and training. As expected, the burden of government regulation is negatively correlated, as well as the effects of taxation on incentives to work.

The data show that the human capital index in Western Balkan countries (all middle-income countries) is significantly lower than that in developed countries, but also the quality of education measured with harmonised test scores and learning-adjusted years of school. Physical infrastructure (railroads and roads) is less developed than in developed European countries, as well as R&D activities.

To foster productivity and income growth, Western Balkan countries should focus on straightening its determinants; otherwise, the income and productivity gap will further increase.

As Balkan countries, due to a few decades as independent countries, still lack the statistical data necessary to extend research adding more variables, it will be a challenge for future research to extend the number of determinants and estimate its significance for productivity growth.
References


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Impact of Financial Inclusion on Banking Sector Development: Evidence from EU Transition Economies

Yılmaz Bayar¹, Emine Gumus², Mahmut Unsal Sasmaz³

Abstract

Financial sector has become a significant component of economic growth in recent years. In this context, banks which are the dominant actors in the financial sector especially in emerging and developing countries have potential to affect the economic growth through various channels. This study explored the effect of financial inclusion indicators on banking sector development in EU transition economies over the 1995-2015 duration through causality analysis. The causality analysis revealed a unilateral causality from financial markets access to banking sector development.

Keywords: Financial institutions access, financial markets access, banking sector development, panel causality analysis

1. Introduction

Financial sector development in terms of depth, efficiency, and stability is a significant determinant of economic growth. Financial sector can affect the economic growth through various channels such as increasing savings and fund mobilization, channelizing the funds to the profitable investments, providing diversification, hedging, and reducing costs of information and corporate governance (Schumpeter, 1961; Levine, 1997; Guru and Yadav, 2019). The banks are the dominant actor of financial system especially in emerging and developing countries. Therefore, banking sector development is expected to boost the economic growth through the aforementioned channel.

The factors underlying the banking sector development has become important for the countries given positive implications of banking industry. Therefore, many scholars have explored the determinants of banking sector development in the related empirical literature and revealed that institutional quality, rule of law, economic growth, inflation, income level, unemployment, government consumption, trade and financial openness, population density, remittances, and foreign direct investments (Filippidis and Katrakilidis, 2014; Aluko and Ajayi, 2018; Tsaurai, 2018; Pham et al., 2021).

Financial inclusion, access to financial products and services to meet their needs by households and businesses (World Bank, 2018), also has to affect to development of banking sector through raising the demand towards financial products and services by banks and bank stability. However, only a few scholars have investigated the impact of financial inclusion on banking sector development, and bank stability. On the other side, banking sector development can foster the financial inclusion through raising the bank branches and financial products and services (Iqbal and Sami, 2017). Therefore, a bilateral interaction between financial inclusion and banking sector development may be possible.

In this study, we analyzed the effect of financial inclusion indicators on banking sector development in EU (European Union) transition economies over the 1995-2018 duration.

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through causality analysis considering the limited related literature. In this context, the next sections summarized the related literature and then data and method was explained in Section 3. Section 4 conducted the empirical analysis and Section 5 concluded the study.

2. Literature Review

In the empirical literature, the scholars have generally focused the effect of institutional and economic factors on banking sector development (Filippidis and Katrakilidis, 2014; Aluko and Ajayi, 2018; Tsaurai, 2018; Pham et al., 2021). Only a few scholars have explored the effect of financial inclusion on financial development, and bank stability and revealed that financial inclusion is a significant determinant of financial development, and bank stability (e.g. see Rasheed et al., 2016; Hlophe, 2018; Anarfo et al., 2019; Lenka, 2021; Boachie et al., 2021).

In this context, Rasheed et al. (2016) explored the effect of financial inclusion on financial development in 97 countries over the 2004-2012 period through dynamic regression analysis and revealed a positive effect of financial inclusion on financial development. On the other side, Hlophe (2018) explored the causality between financial inclusion and financial development in Eswatini and revealed a unidirectional causality from financial development to financial inclusion.

Anarfo et al. (2019) explored the interaction between financial inclusion and financial development in Sub-Saharan Africa over the 1990-2014 duration through panel vector autoregressive and reached a bilateral causality between financial development and financial inclusion. On the other side, Lenka (2021) explored the interaction between financial inclusion and financial development in India for the 1980-2017 period through principal component analysis and revealed unilateral causality from financial inclusion to financial development.

On the other side, Morgan and Pontines (2014) explored the interaction between financial inclusion and financial stability in 164 countries over the 2005-2011 duration through regression analysis and revealed a positive impact of financial inclusion on financial stability. Ahamed and Mallick (2019) also researched the effect of financial inclusion on banking sector stability in a sample of 2635 banks in 86 countries over the 2004–2012 period and revealed that financial inclusion made a positive contribution to banking sector stability.

Danisman and Tarazi (2020) also analyzed the effect of financial inclusion on bank stability in European banking industry and revealed that financial inclusion had a positive impact on banking sector stability through more digital payments and ownership. Lastly, Boachie et al. (2021) explored the interaction between financial inclusion and bank stability in 18 sub-Saharan African countries through dynamic regression analysis and reached that financial inclusion had a positive impact on banking sector stability.

3. Data and Method

In the study, the causal interaction between indicators and banking sector development was analyzed through causality test. In the empirical analysis, banking sector development was proxied by deposit money banks’ assets as a percent of GDP and provided from database of World Bank. On the other side, financial inclusion was represented by indices of financial institutions access and financial markets access and both indicators were provided from IMF database of financial development index. The duration of the study was determined as 1995-2019, because financial inclusion data existed for the 1995-2019 period and all series were annual.
The EU transition economies consisted of Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia. The econometric analyses were carried out by software packages of EViews 10.0 and Stata 14.0. The causality between financial inclusion indicators and banking sector development was explored by Dumitrescu and Hurlin (2012) causality test, because the test considers the heterogeneity and yields robust findings under the presence of cross-sectional dependency.

4. Empirical Analysis

In the applied section of the paper, cross-sectional dependence analysis was firstly conducted by Breusch and Pagan (1980) LM test, Pesaran's (2004) LM CD test, and Pesaran et al. (2008) LM adj. test and the test consequences were shown in Table 2. The null hypothesis of cross-sectional independency was declined at 1% significance level in view of probability values and we concluded that there existed a cross-sectional dependency among the series.

Table 2: Cross-sectional dependence tests’ results

<table>
<thead>
<tr>
<th>Test</th>
<th>Test statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM</td>
<td>142.1</td>
<td>0.0000</td>
</tr>
<tr>
<td>LM CD*</td>
<td>4.278</td>
<td>0.0000</td>
</tr>
<tr>
<td>LM adj*</td>
<td>20.88</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

*two-sided test

The presence of homogeneity was examined by Pesaran and Yamagata (2008) delta tilde tests. The test results were shown in Table 3. The null hypothesis of homogeneity was declined at 1% significance level and, in turn we reached the heterogeneity of the cointegration coefficients. In the light of the findings of cross-sectional dependency and homogeneity tests, use of unit root and causality tests considering the cross-sectional dependency and heterogeneity leads to obtain more robust results.

Table 3. Homogeneity tests’ results.

<table>
<thead>
<tr>
<th>Test</th>
<th>Test statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \hat{\Delta} )</td>
<td>11.297</td>
<td>0.000</td>
</tr>
<tr>
<td>( \hat{\Delta}_{adj.} )</td>
<td>12.326</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The stationarity analysis of the series conducted by Pesaran (2007) CIPS unit root test considering the cross-sectional dependency and the test findings were shown in Table 4. The findings revealed that the variables of BANK, FIA, and FMA were I(1).

Table 4: Unit root test’s results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Constant</th>
<th>Constant+Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Zt-bar</td>
<td>Zt-bar</td>
</tr>
<tr>
<td>BANK</td>
<td>-1.227</td>
<td>0.747</td>
</tr>
<tr>
<td>d(BANK)</td>
<td>-2.057**</td>
<td>-2.699**</td>
</tr>
<tr>
<td>FIA</td>
<td>0.311</td>
<td>0.853</td>
</tr>
<tr>
<td>Variables</td>
<td>Constant</td>
<td>Constant+Trend</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td></td>
<td>Zt-bar</td>
<td>Zt-bar</td>
</tr>
<tr>
<td>d(FIA)</td>
<td>-2.163**</td>
<td>-2.773***</td>
</tr>
<tr>
<td>FMA</td>
<td>-0.830</td>
<td>-1.254</td>
</tr>
<tr>
<td>d(FMA)</td>
<td>-5.094***</td>
<td>-2.153**</td>
</tr>
</tbody>
</table>

*** and ** indicates that it is respectively significant at 1% and 5% level.

The causal relationship between banking sector development and indicators of financial inclusion was explored through Dumitrescu and Hurlin (2012) causality test and the results were shown in Table 5. The findings revealed a one-way causality from financial institutions access to the banking sector development. On the other side, financial institutions access had a significant impact on banking sector development.

Table 5: Dumitrescu and Hurlin (2012) causality test

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DFIA ⇛ DBANK</td>
<td>5.01124</td>
<td>3.51181</td>
<td>0.0004</td>
</tr>
<tr>
<td>DBANK ⇚ DFIA</td>
<td>2.93340</td>
<td>0.85311</td>
<td>0.3936</td>
</tr>
<tr>
<td>DFMA ⇛ DBANK</td>
<td>2.99458</td>
<td>0.93140</td>
<td>0.3516</td>
</tr>
<tr>
<td>DBANK ⇚ DFMA</td>
<td>1.26203</td>
<td>-1.28548</td>
<td>0.1986</td>
</tr>
</tbody>
</table>

The findings of causality analysis revealed that financial inclusion had a significant impact on banking sector stability in partially compatible with theoretical considerations and findings by Hlophe (2018) and Lenka (2021).

5. Conclusion

The banks are critical and dominant players in the financial system and make a contribution to the economy through fund mobilization, efficient fund allocation, decreasing the information cost and many financial services. Therefore, banking sector development is very important for the economies. In this study, we explored the effect of financial institutions access and financial markets access on banking sector development in sample of EU transition economies through panel causality analysis. The causality analysis revealed a significant causality from financial institutions access to banking sector development. In other words, financial institutions access had a significant impact on banking sector development. Therefore, banking industry can developed through encouraging the financial inclusion.

References


Impact of Inflation and Industrial Production on Unemployment in Turkey

Yilmaz Bayar¹ Mahmut Unsal Sasmaz²

Abstract
This study explored the long-run effect of inflation and industrial production on unemployment in Turkey over the January 2014-September 2021 duration through cointegration analysis. The cointegration analysis revealed that inflation positively affected the unemployment, but industrial production negatively affected the unemployment in the long run.

Keywords: Inflation, industrial production, unemployment, time series analysis

1. Introduction
The unemployment is one of the critical economic problems given its social and economic impacts. Therefore, reducing the unemployment is among the priorities of all countries. In the related literature, many institutional, social, and economic factors have been documented as the factors underlying the unemployment such as real wages, minimum wage, social protection, institutions, business environment, economic growth, financial development, inequality, capacity utilization, inflation, trade and financial openness, globalization, and FDI inflows (Luna and Cardona, 2017; Bayar and Sasmaz, 2017; Kovacı et al., 2018; Soylu et al., 2018; de Lima and Marques, 2019).

In the study, we explored the effect of inflation and industrial production on unemployment in Turkey. The theoretical foundations of the interaction between unemployment and inflation was suggested by Philips (1958) and Friedman (1977) and the theoretical foundations on the interaction between unemployment and economic growth was suggested by Okun (1970). The Philips Curve suggests that there exists a trade-off between unemployment and inflation rate in the short run, but there may be a noninflationary rate of unemployment suggested by non-accelerating inflation rate of unemployment (NAIRU) theory by Friedman (1968) and Phelps (1967 and 1968). On the other side, Okun law suggested that a 3% point increase in GDP from its long-run level leads 1% point decrease in unemployment for the US economy.

In this study, we explored the effect of inflation and industrial production on unemployment in Turkey over the January 2014-September 2021 duration through cointegration analysis. In this context, the next sections summarized the related literature and then data and method was explained in Section 3. Section 4 conducted the empirical analysis and Section 5 concluded the study.

2. Literature Review
The scholars have explored the interaction between inflation and unemployment have reached mixed findings depending on country specific characteristics as seen from the following literature summary. In this context, Thayaparan (2014) researched the effect on inflation and economic growth on unemployment in Sri Lanka over the 1990-2012 period through regression analysis and revealed a negative effect of inflation on unemployment. On the other side,
Vermeulen (2017) explored the relationship between inflation and unemployment in South Africa and revealed no significant interaction between inflation and unemployment in the short run, but a negative relationship between inflation and unemployment in the long run. In other words, inflation harmed the employment.

Sasongko and Huruta (2019) explored the causality between inflation and unemployment in Indonesia over the 1984-2017 period through Granger causality test and revealed a unilateral causality from unemployment to inflation. On the other side, Wulandari et al. (2019) also analyzed the causality between unemployment and inflation in Indonesia over the 1987-2018 period through causality and revealed a unilateral causality from unemployment to inflation.

Tenzin (2019) analyzed the interaction between inflation and unemployment in Bhutan over the 1998-2016 duration through ARDL approach and reached that inflation had a negative impact on unemployment in the short run and a positive impact in the long run. Diakhoumpa (2020) explored the interaction between inflation and unemployment in Senegal over the 1991-2018 period through ARDL approach and Granger causality test. The causality analysis revealed the no significant causality between unemployment and inflation and the cointegration analysis revealed a positive interaction between inflation and unemployment. Irge (2020) explored the effect of inflation on unemployment in Ethiopia over the 1991-2018 period through cointegration and causality tests and revealed a negative long run effect of inflation on unemployment and a one-way causality from inflation to unemployment.

The studies on the relationship between economic growth and unemployment have reached mixed findings depending on country specific characteristics (e.g. see Ball et al. (2013), Lal et al. (2010)).

3. Data and Method

In the study, the long run impact of inflation and industrial production on unemployment was analyzed by cointegration analysis. In the econometric analysis, unemployment rate was represented by the share of unemployed in total labor force. On the other side, inflation was proxied by consumer price index and industrial production was represented by industrial production index. All the series were obtained from database of Turkish Statistical Institute and study period was January 2014-September 2021 and all series were monthly.

Table 1: Description of the variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNEMP</td>
<td>Unemployment rate (%)</td>
<td>Turkish Statistical Institute (2021)</td>
</tr>
<tr>
<td>INF</td>
<td>Consumer price index (2003=100)</td>
<td></td>
</tr>
<tr>
<td>IPI</td>
<td>Industrial production index (2015=100)</td>
<td>(seasonally and calendar adjusted indices)</td>
</tr>
</tbody>
</table>

The econometric analyses were conducted through EViews 10.0 software package. The cointegration relationship among unemployment, inflation, and industrial production was investigated by Gregory and Hansen (1996) cointegration test with structural break.

4. Empirical Analysis

In the applied section of the paper, the stationarity of the series was analyzed by Zivot and Andrews (1992) unit root test with structural break and the test findings were displayed in Table 2. The null hypothesis which the variable has a unit root with structural break was declined at 5% significance level considering the critical values and in turn the series was not stationary at the level, but they became stationary after first-differencing.
Table 2: Results of Zivot and Andrews (1992) unit root test

| Variables | Model A | | Model C | |
|-----------|---------|---------|---------|
|           | Test statistic | Critical Value* | Lag length | Structural break | Test statistic | Critical Value* | Lag length | Structural break |
| UNEMP     | -4.5206 | -4.93    | 6       | December 2018   | -4.9007       | -5.08      | 6       | December 2018   |
| INF       | -1.1588 |          | 5       | August 2020     | -2.1554       |          | 5       | June 2017       |
| IPI       | -4.5966 |          | 0       | July 2020       | -4.6770       |          | 0       | March 2020      |

* The critical value at 5% significant level was provided from Zivot and Andrews (1992)

The cointegration relationship among unemployment, inflation, and industrial production index was explored by Gregory-Hansen (1996) cointegration test and the test findings were displayed in Table 3. The null hypothesis of no cointegration among the series was declined in three models and we revealed a significant cointegration among the variables. Furthermore, the cointegration test revealed a structural break in January 2020 in Model CC and C/T and in April 2017 in Model C/S.

Table 3: Results of Gregory-Hansen (1996) cointegration test

<table>
<thead>
<tr>
<th>Model</th>
<th>ADF*</th>
<th>T*</th>
<th>Critical Values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Tb</td>
<td>1%</td>
</tr>
<tr>
<td>CC</td>
<td>-5.1286** (1)</td>
<td>2020M01</td>
<td>-5.44</td>
</tr>
<tr>
<td>C/T</td>
<td>-5.5104** (1)</td>
<td>2020M01</td>
<td>-5.80</td>
</tr>
<tr>
<td>C/S</td>
<td>-5.2971* (1)</td>
<td>2017M04</td>
<td>-5.97</td>
</tr>
</tbody>
</table>

The cointegration coefficients were forecasted through FMOLS estimator of Phillips and Hansen (1990) after detection of significant cointegration among the series and the findings were displayed in Table 4. The cointegration analysis revealed that inflation raised the unemployment, but industrial production decreased the unemployment in the long run.

Table 4: Cointegration Coefficient Estimations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Std. Error</th>
<th>t-statistics</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>INF</td>
<td>0.018537</td>
<td>0.003457</td>
<td>5.362184</td>
<td>0.0000</td>
</tr>
<tr>
<td>IPI</td>
<td>-0.072802</td>
<td>0.028086</td>
<td>-2.592062</td>
<td>0.0112</td>
</tr>
<tr>
<td>C</td>
<td>12.98158</td>
<td>2.232440</td>
<td>5.814975</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Our findings were not found to be consistent with short and long run Phillips curves. However, the findings were compatible with the findings of Tenzin (2019) and Diakhoumpa (2020). On the other side, industrial production decreased the unemployment in the long run in compatible with theoretical and empirical expectations.

The short-term analysis was conducted by the differenced values of the series by FMOLS and the error term’s one-lagged value was derived from the cointegration analysis and the findings were displayed in Table 5. The ECT term was negative and statistically significant. Consequently, 18.87% of the deviations in the short-run was removed and the variables converged to the equilibrium in long-run. However, both inflation and industrial did not have a significant impact impact on the unemployment.
Table 5: Cointegration coefficient estimations

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>$ECT_{t-1}$</th>
<th>$\Delta INF$</th>
<th>$\Delta IPI$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta UNEMP$</td>
<td>-0.1887 (0.0041)</td>
<td>0.3737 (0.2534)</td>
<td>-0.9814 (0.3671)</td>
</tr>
</tbody>
</table>

5. Conclusion

The unemployment and inflation are among the main economic priorities of the countries given its social and economic impacts. Therefore, governments try to keep both unemployment and inflation at minimum levels. In this study, we explored the effect of inflation and industrial production on unemployment in Turkey for the January 2014-September 2021 through cointegration test with structural breaks. The cointegration analysis disclosed that inflation raised the unemployment, but industrial decreased the unemployment in the long run. Therefore, price stability is also an important factor for unemployment. Furthermore, industrial production also made a significant contribution to employment in the long run.

References


Economic Cooperation between Serbia and Montenegro and the Eurasian Economic Union

Predrag Bjelić¹  Miloš Rajković²

Abstract

In this paper, the authors analyze the economic cooperation of Serbia and Montenegro with the Eurasian Economic Union (EAEU), and primarily Russia as its leading member. In the context of the uncertainty of their European perspective, the question arises as to whether the influence of other actors on the Western Balkans is growing. Can regional integration and the benefits it offers replace EU accession? Intensifying cooperation with Eastern partners indicates alternative directions for the development of trade and economic relations in general in order to improve the international position. Serbia and Montenegro after the separation from joint state choose different directions international political cooperation, but how this affect the trade keeping in mind trade regime with other partners than EU countries, like EAEU, China, Turkey.

The EAEU consists of five member states: Russia, Belarus, Armenia, Kazakhstan and Kyrgyzstan. The EAEU is a regional trade organization that allows the free movement of goods, services, capital and labor within the Union. This area represents a significant market for the placement of products and services, as well as for the improvement of foreign trade relations. Nevertheless, a precondition for the development of trade, agricultural and industrial cooperation is product standardization and increased production. The benefits of participating in the Eurasian Union market will be more pronounced as Serbia and Montenegro will be able to increase the employment of existing resources, and thus improve competitiveness in foreign markets.

As one of the conclusions, it can be stated that regional integrations are justified in terms of improving the competitive position and economic cooperation between member states. In the new globalized and multipolar economic relations, wider association and cooperation on a regional basis is needed, in order to better position oneself on the international market.

Keywords: Eurasian Economic Union, EAEU, Regional integrations, trade, free trade agreements

1. Introduction

Federal Republic of Yugoslavia (FRY), joint state of Serbia and Montenegro created in 1992, was one of the first countries in the world to have preferential trade regime with the Russian Federation (Russia), apart from former soviet republics. First free trade agreement between FRY and Russia was signed in 2000. and this was an important impetus in development of mutual trade ties, even if many limitations in the application of this agreement appeared.

But the joint state of Serbia and Montenegro, that was reformed in 2003, have finally dissolve in 2006 with the decision of people of Montenegro at the May referendum to leave the state community with Serbia. But even before this date Montenegro have reclaimed its trade sovereignty in 1999 by unilateral decision of the Montenegrin government and formed Montenegro as a separate customs territory, still in the political union with Serbia. That is why we observe Serbia and Montenegro separately in international trade starting from 2000.

The interesting fact is that Serbia and Montenegro have applied the FRY free trade agreement with Russia even after the dissolution of joint state. But in 2014 when European Union (EU) have introduced trade sanctions due to the annexation of Crimea, Montenegro have joined these

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sanctions and Serbia did not join the common EU policy measure. This is important since in this paper we have then two case studies of influence of trade sanctions.

2. Serbia Economic Cooperation with the EAEU

Serbia is a country still in economic transition to a full market economy. Due to its small size it is highly dependent on economic cooperation with outside world. It’s main trade partner include EU member countries, countries regional neighbors gathered in Central European Free Trade Agreement revised in 2006 (CEFTA 2006) and countries members of EAEU. Serbia has a free trade agreements with the EU and free trade agreement with neighbors in the region of Western Balkans, and had a free trade with Russia from 2000 when still a member of joint state with Montenegro. But when Russia have asserted the formation of the customs union with Kazakhstan and Belarus, Serbia needed to sign free trade agreement with these two countries. The two new free trade agreements were signed in 2009 with Belarus, and in 2010 with Kazakhstan. That why the 2009 is an important threshold in trade relations with the later formed EAEU. This is noted also on the Figure 1 which portraits a trade relations between Serbia and the EAEU. Other important time point is 2014 when most of the western nation have introduced trade sanctions to Russia due to the Crimea annexation. Since Serbia did not joined these sanction we also marked this year on a graph in Figure 1 to observe is there any dramatic changes in trade relations with EAEU, and Russia specifically.

Figure 1: Trade between Serbia and EAEU, 2005-2020 in bil. USD

Source: Authors presentation of UN COMTRADE data

If we observe the trend of exports of Serbia to EAEU, blue line on Figure 1, we can see that it is rising up to 2009 where we have a slight fall, due to world economic crisis. From 2010 we have a significant rise in exports of Serbia to members of EAEU, possibly due to the free trade agreements that Serbia signed with Belarus and Kazakhstan. This rise reached its maximum in 2013 passing the limit of one billion USD. Even if Serbia did not joined EU trade sanctions against Russia the Serbian export to EAEU did not rise much above 1 billion USD up to 2020.

Concerning imports of Serbia from EAEU members after a sharp rise reaching maximum in 2008 above 3 billion USD, started to fall after this year and newer recovered to this position. In
2020 the import was below 2 billion USD. This has influenced the significant drop in trade deficit on the Serbian side.

If we observe export and import to individual members of the EAEU we can see that the main and dominant trade partner of Serbia from the EAEU is Russia, and with four other EAEU the export and import is much less significant. Export of Serbia to Russia was rising steadily with two major falls, in 2009 and 2015.

Since EAEU was created in 2015 by Russia, Belarus and Kazakhstan, the two new countries acceded in the same year – Armenia and Kyrgyzstan. Now the EAEU has 5 members and Serbia needed to consolidate all free trade agreements into one single document. The negotiation has started in 2016 and finally finished in 2020 when the free trade agreement between Serbia and EAEU was signed. This agreement came into force in June 2021.

**Figure 2:** Export of Serbia to members of EAEU, 2005-2020 in bil. USD

![Graph](image1.png)

Source: Authors presentation of UN COMTRADE data

Imports from Russia to Serbia, on the other side, have falling trend in the observed period 2005-2020. The maximum was achieved in 2008, before world economic crisis, reaching 4 billion USD. After world economic crisis the imports started to rise again but with falls in 2013 and 2016, and never reached the maximum from 2008.

**Figure 3:** Import of Serbia to members of EAEU, 2005-2020 in bil. USD

![Graph](image2.png)

Source: Authors presentation of UN COMTRADE data
Other EAEU members have less significant imports to Serbia. On Figure 4 we can observe individual export trend.

**Figure 4**: Export of Serbia to individual members of EAEU, 2005-2020 in bil. USD

Source: Authors presentation of UN COMTRADE data

Significant rise was achieved in Serbia’s export to Belarus and Kazakhstan after 2010, due to bilateral free trade agreements. In Armenia the rise in Serbian export is noted in 2017 and with Kyrgyzstan in 2014, on the Figure 4.
The new free trade agreement between Serbia and the EAEU signed in 2010 consolidated previous three trade agreements, with Russia, Belarus and Kazakhstan. It came into force in 2021 and is applied to new EAEU members - Armenia and Kyrgyzstan. This agreement is favourable in the list of goods on duty-free regime than previous bilateral trade agreements. This additional liberalization has been introduced through tariff quotas for:

- certain types of cheese in the amount of 400 tons per year,
- alcoholic beverages from wine, crushed fruit and pomace in the total amount of 35,000 litres of pure alcohol per year
- cigarettes in the amount of 2,000,000 thousand pieces per year.

One new thing introduced by the consolidated agreement is the possibility of cumulation of origin between Serbia and the EAEU, which includes diagonal cumulation. By the rules of origin, given in Annex 3 to the EAEU Agreement, products originating in a signatory state are still considered to be:

- products wholly obtained or manufactured in a signatory state,
- products manufactured in the territory of a signatory state using materials without origin whose total value does not exceed 50% of the value of the imported product
- products manufactured in one or more signatory states from materials originating in those signatory states (cumulation of origin).

The origin of products is proven by a special form that is a CT-2 form or a declaration of origin, which may be issued by the manufacturer, exporter or consignor for products whose value does not exceed EUR 5,000. It is planned than in 2 years E-certificate of origin (eCO) will be established. Also these new agreement introduces the Abolition of direct payment conditions.

Other side of the economic cooperation between Serbia and EAEU is defined by transfer of private capital in the form of foreign direct investments (FDI). The Russian FDI picked in 2011 with half a billion EUR in that year. After this it was much smaller but started to rise in 2016 and reached same maximum in 2019. In 2020 the FDI from Russia was really small due to global pandemic. But FDI from Russia are much smaller than EU countries FDI that enter Serbia.

**Figure 5**: Russian FDI in Serbia, 2010-2020 net value in mil. EUR

FDI from other EAEU members are negligible comparing to the Russian FDI.

3. Montenegro’s trade with EAEU

Economic integration at the regional level is considered an important initiative for achieving economic growth and development, and in that sense, the formation of the EAEU is observed. The five Member States that make up the EAEU differ significantly in territory, population and size. So, there is no balance, and Russia has a huge dominance in all areas of the Union.

Therefore, the individual cooperation of Montenegro with the EAEU countries during the observed period is very different, and has changed in accordance with the general trends in the international economic scene. The largest volume of trade was realized in the period 2006-2010, which also marks the time of large investments in Montenegro. This wave is interrupted by the global economic crisis to reach its lowest values in 2014 and 2015 in the 15 years since Montenegro became an independent state. Foreign trade is slowly starting to grow again after 2015, which coincides with the enlargement of the EAEU.

**Figure 6:** Montenegro export and import into EAEU

The difference between imports and exports is very noticeable. Throughout the period, imports significantly exceed total exports, while the rate of import diversification is quite low. We explain this by the weak competitive power of Montenegrin export branches, as well as the ongoing transitions in the process of integration into the European Union.

All countries in the Western Balkans realise that sustainable growth must be built on an improved export performance, rather than on cheap and plentiful supplies of foreign capital and credit, much of which has gone into non-export-oriented sectors.5

A special type of EAEU cooperation is investment activity. The largest inflow of FDI to Montenegro was recorded from the Russian Federation. This is a consequence of both the favorable business environment and the creation of good conditions for investment, as well as the initiated reform processes.

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**Figure 7: Trade exchange between Montenegro and EUEA**

Source: Authors presentation of UN COMTRADE data

The main problem in the inter-trade exchange between Montenegro and the EUEA is conditioned by foreign policy factors. This refers to its active participation in Euro-Atlantic integration, as well as its adjustment to EU rules. Foreign trade with the EAEU countries is in line with the development of Montenegrin exports to other partner countries.

➢ Montenegro's trade with Russia

Montenegro applies the bilateral free trade agreement signed between the FR of Yugoslavia and the Russian Federation on August 28, 2000, and ratified on May 9, 2001.

Negotiations on further trade liberalization have been underway in recent years, including negotiations on a Free Trade Agreement with Kazakhstan and Belarus, which have formed the Customs Union together with the Russian Federation since 2010, so it was necessary to provide the same conditions for exports and imports as which was agreed with the Russian Federation.

The benefits of the agreement with the Russian Federation would be significant because Montenegrin producers will be allowed to place a significantly larger number of goods on the market of over 160 million inhabitants on preferential terms than was provided for in the current agreement. The Russian Federation is a serious trade partner of Montenegro, but also a significant investor. The largest inflow of foreign direct investment existed in the period before the great economic crisis of 2008. According to a survey by the Central Bank of Montenegro, the largest foreign investor in Montenegro was the Russian Federation, which invested 348.5 million euros in 2001-2008.  

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6https://www.cbcg.me/slike_i_fajlovi/fajlovi/fajlovi_publikacije/radne_studije/sdi_kao_pokretac_privrednog_razvoja_cg.pdf
Figure 8: Montenegro's exports and import from Russia

In the period 2006-2020, we have multiple growth in the volume of foreign trade. Montenegro exported the most during 2012, and amounted to 9,537,158 euros. Imports from Russia were at a maximum in 2008, reaching over 58 million euros. However, such disproportionate values of imports and exports caused a negative trade balance during the entire observed period. Trade relations weakened sharply in the period 2013-2016, and then there is a growth trend again until 2020.

➢ Montenegro's trade with Belarus

The foreign trade exchange of Montenegro and Belarus is at a very low level. This is conditioned by the geographical position, competitive position, but also by the political course of Montenegro, which in the previous period was predominantly turned to the West.

Figure 9: Montenegro's exports and imports from Belarus

Source: Authors presentation of UN COMTRADE data
Imports from Belarus are constant and at the beginning of the period were around 111,000, while over time they grew slightly and last year exceeded 1.6 million euros. Montenegro's exports to Belarus have no continuity, and more than half of the period under analysis did not even exist.

➢ Montenegro's trade with Kazakhstan

The ranking of Kazakhstan and Montenegro according to economic indicators shows that Kazakhstan, with a population of 18.3 million and over $179 trillion\(^7\), is a geographically many times larger economy.

**Figure 10:** Montenegro's exports and import from Kazakhstan

![Bar chart showing Montenegro's exports and imports from Kazakhstan]

Source: Authors presentation of UN COMTRADE data

There is continuity of imports from Kazakhstan to Montenegro, but at a relatively low level. In 2012 alone, it exceeded 1.7 million euros. Exports to Kazakhstan are very small and during the period there are years when there are none at all. Montenegro's exports to Kazakhstan are mainly related to aluminum exports. Kazakhstan imports of aluminum from Montenegro was US$76,743 Thousand during 2017, according to the United Nations COMTRADE database on international trade.\(^8\)

In the period before the crisis caused by the covid pandemic, in 2018 and 2019 imports amounted to 222,595 and 102,038 respectively. In the last year in the observed period-2020, exports amounted to 133,263 thousand euros.

➢ Montenegro's trade with Kyrgyzstan

The percentage of exports of goods and services as a percentage of GDP for Montenegro is 42.9%, while for Kyrgyzstan it is 32.7%, while the values for exports are 66.7%, and 68.4% for Montenegro and Kyrgyzstan, respectively. However, exports from Montenegro to Kyrgyzstan did not exist for the period 2008-2018, and only in the last two years there are imports that with 390,000 reach the value of 470,000 in 2020.

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\(^7\) [https://georank.org/economy/kazakhstan/montenegro](https://georank.org/economy/kazakhstan/montenegro)

\(^8\) [https://tradingeconomics.com/Kazakhstan/imports/montenegro/aluminum](https://tradingeconomics.com/Kazakhstan/imports/montenegro/aluminum)
Figure 11: Montenegro's exports and imports from Kyrgyzstan

![Graph showing Montenegro's exports and imports from Kyrgyzstan]

Source: Authors presentation of UN COMTRADE data

Imports from Montenegro mainly consist of tobacco and pharmaceutical products. If continuity of growth is maintained in the future, a reduction in Montenegro's trade deficit can be expected. During the period, there was a trend of growth of imports which in 2016 had a maximum of over 800,000.00 euros. In 2020, the effects of the global crisis manifested themselves, so imports fell to half a million euros. Exports from Montenegro were realized in 2019 and 2020, 391,670 and 470,350 respectively.

➢ Montenegro's trade with Armenia

Foreign trade with Armenia is at a very low level. Imports from Armenia have existed since 2009 but without a growth trend.

Figure 12: Montenegro's exports and imports from Armenia

![Graph showing Montenegro's exports and imports from Armenia]

Source: Authors presentation of UN COMTRADE data

In trade with Armenia, the deficit has been pronounced for years, ie imports are not covered by exports. Montenegro's exports existed only in the period 2008-2011. The highest value of Montenegrin exports was realized in 2009 and amounted to 1,733,990 euros. The highest value
of Montenegrin imports from Armenia was also realized in 2009 and amounted to 143,441 euros.

Some positive shifts in trade performance can be observed, but with a predominantly stagnant export structure and a stagnant pattern of comparative advantages with an emphasis on lower value-added products. This points to the conclusion that Montenegro’s trade position in relations with the EAEU has not improved in line with expectations in the previous decade, and that it requires further improvement.

In the observed period, accelerated economic development and inflow of foreign direct investment were recorded, which also affected the increase in imports to Montenegro. This, along with modest exports, led to a high foreign trade deficit. In addition, the limiting factor is the low level of competitiveness as well as the large share of raw materials in exports, and geographical position. As the EAEU market is large, there are multiple opportunities but also the potential of Montenegro to improve foreign trade with all countries of this union.

4. Conclusions

The economic cooperation between Serbia and Montenegro, on one side, and the members of the EAEU is starting to become significant in last years. This is all stimulated with the applied free trade agreements. But this economic cooperation is much smaller compared to trade and investment that come into Serbia and into Montenegro from EU member countries. It is obvious that there are opportunities to expand existing cooperation with the EAEU. Although there are certain strict technical regulations in the EAEU, these markets are more accessible to Serbia and Montenegro. Given that the countries that make up this EAEU are in the process of economic development, it is clear that there are many opportunities for expanding foreign trade.

Serbia continued to co-operate by signing a free trade agreement with the EAEU, further strengthening its preferential status in this market. When we consider Montenegro, we realize that the low cooperation with EAEU is a consequence of the pro-Western position of Montenegrin diplomacy, in the first place. Montenegrin commitments in European integration and NATO alliance negatively affects foreign trade with EAEU countries. Since foreign trade is realized on the principle of cyclical circles, another aggravating factor is the geographical position of Montenegro. In practice, this means that a larger volume of trade will be realized with neighboring and closer countries, in this case EU members.

Serbia and Montenegro have a chronic deficit in the exchange of goods and services with the countries of the Eurasian Union. It must be known that these are vast markets that require large quantities of delivered goods and products. However, this primarily requires an increase in production capacity. The next step is to raise long-term competitiveness and adjust the structure of export supply. These are preconditions in order to take full advantage of the advantages brought by cooperation with the Eurasian Union. And the biggest advantages would be the positive economic effects of liberalized and increased trade, as well as increased inflows of foreign direct investment.

No economy can base its growth on self-sufficiency of real and financial resources. International trade flows and agreements play a significant role in the growth of macroeconomic variables and the overall development of the economy. However, a balance needs to be sought, and the possibilities offered by cooperation with the Euroasian Economic Union should certainly be seriously considered. Serbia and Montenegro should improve cooperation in all areas that do not undermine European Union integration strategic priorities.
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Poverty in Russia: Actual Situation and Possible Ways of Diminishing

Marina Danilina

Abstract
In this paper, the authors analyze the current state of poverty in Russia and the forecast for the next year and the measures for possible solution of this problem. The governmental methods include creating new jobs and governmental support. This will support small and medium-sized businesses, which will enable a huge number of Russians to engage in entrepreneurship. In addition, the authorities are going to create a more favorable atmosphere for increasing domestic investment. Poverty in Russia is multifaceted, and its complex nature hinders large-scale progress in its reduction. Therefore, it is not enough to work as usual; effective reforms are needed to enable the country to meet the ambitious goal outlined by President Vladimir Putin in his 2020 message to the Federal Assembly, namely, to halve poverty by 2024. Russia has the resources - both financial and administrative - to carry out the necessary reforms. The country now needs an integrated approach that would ensure inclusive, inclusive economic growth in the interests of all citizens, regardless of how well their life is developing.

Keywords: economy, Russia, poverty, development, diminishment, growth, social problem.

1. Introduction

The poverty is one of the important problems in Russia. There were 19.1 million people with incomes below the subsistence minimum in the first half of 2021, the poverty level is estimated at 13.1%, according to Rosstat. In the first half of 2020, the number of poor people was estimated at 19.4 million, and the poverty rate was 13.2%.

The Russian government is going to eliminate social inequality in the country as soon as possible. To do this, they will fight poverty with the following methods. The government will fight poverty by creating new jobs. This will support small and medium-sized businesses, which will enable a huge number of Russians to engage in entrepreneurship. In addition, the authorities are going to create a more favorable atmosphere for increasing domestic investment.

The spread of opinions among representatives of the elites on the topic of combating poverty is impressive. The head of Sberbank, German Gref, recently warned of a possible decrease in the income of Russians by 14% by 2035, "if everything moves without any changes." And it is necessary to act in accordance with the principles of sustainable development of ESG, which provide for environmental, social and managerial responsibility of companies. Gref draws attention to the challenges for Russia associated with the "green" transition: a drop in export revenue, the potential loss of the country's leadership in the global energy sector, a reduction in employment, the problem of single-industry towns and the loss of budget revenues.

According to the head of VEB of the Russian Federation Igor Shuvalov, for the first time in our history, we are experiencing a time when the accumulated socio-economic wealth — good macroeconomics, gold and foreign exchange reserves, real defense capability and sovereignty — will be able to bring the life of the average Russian family to the comfort level of the average European family in the medium term. However, it will be possible to achieve this only if there is "mobilization of the residents themselves, as well as a completely different level of dialogue between them and managers."

The head of the Accounting Chamber, Alexey Kudrin, approached the issue thoroughly: fortunately, the inspections conducted by the subordinate organization provide an extensive database for analysis. Kudrin believes that a twofold reduction in poverty can be achieved

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before 2030, but it is necessary to make adjustments to the methods used to overcome it. How many calls we hear about targeted assistance to those in need, but paradoxically, benefits are often assigned to those who do not need them, and do not reach those whom they would really help.

Parliamentarians hope that in the coming year, real incomes will rise by 3%, after which they will gradually grow by a couple of percent. However, many economists do not expect a quick recovery. The failure of last year will be able to be covered only in 2022.

There is also a crisis in the labor market. Most of all, income decreased in the non-corporate sector, that is, among sole proprietors, in small businesses and among self-employed Russians. Thus, the shadow sector of the economy turned out to be the most unprotected.

The task of fighting poverty, which passes from one decree to another and from one program to another, gradually began to resemble an unattainable mirage. Over the past six years, the number of disadvantaged Russians has not decreased. Everyone knows the objective difficulties of an economic nature, the more acutely the need for non-standard solutions on the part of the authorities is felt.

2. Analysis of the Current Statistical Data

In August, Rosstat, according to the results of the first half of the year, 19.1 million people (13.1% of the population) lived below the poverty line in Russia. That is, these more than 19 million people do not reach the level of the subsistence minimum, which is 11,653 rubles, according to their incomes. For comparison: in 2015, 19.6 million poor people (13.4%) were counted in the country with a subsistence minimum of 9701 rubles. If in 2019, the government's plans were to reduce the poverty level by half by 2024, then by a new presidential decree in July 2020, this important goal was postponed to 2030.

Rosstat published depressing data on the real disposable income of the population for the first quarter: in January-March, residents of the country became poorer by another 3.6%. It is by this amount that the balances on the accounts of Russians, which remain after deducting all compulsory expenses in the context of progressive inflation, have decreased.

The official report of Rosstat on the real standard of living in the country was supposed to come out on the eve of the President's message to the Federal Assembly. But the department suddenly postponed the release to "clarify the data", after which statistics showed a sharp acceleration in the decline in living standards. “Compared to the fourth quarter (-0.9%), the decline in income has accelerated 4 times and exceeded the figure for the entire last year (-3.2%). On average, according to Rosstat, citizens of the Russian Federation lived for the first three months of 2021 at 32,612 rubles per month, or about $ 14.5 per day, ” finanz.ru reports.

As the newspaper notes, nominally, revenues increased by 965 rubles (+ 3%). But taking into account the progressive rates of inflation and the growth of obligatory payments, no real increase came about. While working Russians received an average of 51,229 rubles a month (+ 2% in real terms), pensioners were forced to survive on state benefits of only 15,779 rubles.

Earlier, officials took credit for the fact that the average pension in the country increased by 836 rubles, or 5.6%, compared to March 2020. However, the indexation carried out by the authorities turned out to be below inflation. In fact, pensions fell 0.1% in February and 0.2% in March. In the face of a sharp decline in incomes, Russians have no choice but to gobble up their savings. According to Rosstat, in the first quarter, residents of the country received 14.3 trillion rubles in income, and spent 14.9 trillion.

As a result, citizens' savings decreased by 604 billion rubles: they are rapidly diminishing at a rate of 6.7 billion rubles a day. In the structure of household expenditures, expenditures on
housing and communal services and interest payments on previously taken loans increased by 0.8%. Already every sixth ruble (16.2%) citizens give away for compulsory payments. At the same time, debts of borrowers to banks have already exceeded 20 trillion rubles.

Rosstat believes that, on average, a Russian receives 33 thousand rubles a month, and the salary of a working person is more than 50 thousand. But according to the results of opinion polls, many respondents admit that they do not have such income. It became known the day before that the crisis hit small and medium-sized businesses especially hard, where salaries fell by 17% in the quarter.

Less than 6.5% of Russians have an income of more than 75 thousand rubles a month, and 0.1% receive less than 45 thousand. More than half of the country's population (53.7%) live below the poverty line. With an amount of less than 27 thousand rubles a month, they are forced to be content with an income of 12 dollars a day (about 900 rubles).

Every third person has an income even lower - 19 thousand rubles a month. Thus, they can spend no more than 633 rubles or $ 8.4 per day. The income of 20.4% of the country's population does not exceed 14 thousand rubles a month (6.2 dollars a day), and every tenth person lives on 10 thousand rubles a month.

The new indicator "poverty line" will be used instead of the subsistence minimum when calculating the poverty level, specified in the Ministry of Labor. According to the ministry, the initial value of the "poverty line" will be determined at the level of the last calculated value of the subsistence minimum based on the consumer basket. “This is the cost of living for the fourth quarter of 2020, which will increase quarterly in terms of inflation,” the Ministry of Labor said. In Russia as a whole, the “poverty line” will be calculated on a quarterly basis, and for the regions - every year.

It was decided to introduce a new indicator due to the fact that from 2021 a new model for calculating the subsistence level and the minimum wage (minimum wage) has been used. Their calculation is now based on the average per capita median income and median wages (previously - the food basket). Also, from 2021, the value of the subsistence minimum is set annually. “This does not ensure the comparability of data on the poverty level for past periods with current measurements and future estimates,” the department explained. In October, President Vladimir Putin announced that the main result of his work was the reduction of the level of poverty in the country. “We had 40 million people below the poverty line, today there are exorbitant numbers - more than 19 or 20, according to various estimates, but still it is not 40,” Putin said.

The Chairman of the Accounts Chamber Alexei Kudrin said in an interview with RBC that the Russian authorities in the fight against poverty "took an interesting path" by offering differentiated child benefits (50/75/100% of the regional subsistence level depending on family income). “This is a prototype of how you can move on to higher ages,” Kudrin noted.

The fight against poverty is one of the three main socio-economic initiatives of Vladimir Putin, voiced in his address to the Federal Assembly. Despite the fact that the state managed to reduce the level of poverty by two-thirds, in recent years the income of the population has stagnated and the situation has acquired a negative trend. The new measures will require up to 500 billion rubles a year and are expected to significantly reduce the number of the poor.

Vladimir Putin announced three key proposals. The first is poverty alleviation by providing benefits for low-income families with children under 7 years of age. The second is overcoming the demographic decline by increasing maternal capital and extending it to the first child. And finally, the third one is to stimulate investment in the real sector of the economy by lowering corporate income tax.
The implementation of these social and economic measures, voiced in Putin's message to the Federal Assembly, will require from 400 to 500 billion rubles a year, said the chairman of the Accounts Chamber, Alexei Kudrin. According to the Ministry of Economic Development, the total cost of the socio-economic initiatives from the message this year will be about 300 billion rubles, and starting from 2022, it will amount to more than 600 billion rubles a year.

Presidential aide Andrei Belousov says that the volume of spending on measures in the social sphere will amount to about 400 billion rubles, of which it is planned to spend 134 billion rubles on the payment of benefits for children 3-7 years old in 2020. “According to our estimates, the increase in the burden on the budget will be about 450-550 billion rubles per year, or about 2.5-3.5 trillion rubles in the future in 2026, and the most 'expensive' measures will be changes in the mechanisms for providing maternity capital, including an increase in its volumes,” says Anton Pokatovich, chief analyst at BCS Premier.

The proposed measures will allow Russia to take a serious step towards poverty alleviation. The expansion of benefits for families with children from 3 to 7 years old is aimed at this. In recent years, it has not been possible to achieve a significant reduction in the number of the poor. According to Rosstat, 19.2 million people are below the poverty line. Of course, in comparison with 1995 or even 2000, when the poverty level reached 36.5 and 42.3 million people, the situation looks better.

However, from 2000 to 2014, the poverty level in Russia only declined. Over 13 years, the number of the poor has decreased almost threefold: from 42.3 million in 2000 to 15.5 million in 2013. If in 2000 the poor accounted for almost a third (29%) of the population, then in 2013 - only 10.8%. However, since 2014, after external sanctions pressure and the end of the era of expensive oil, the level of poverty in Russia began to rise again, and in recent years has been at the level of 19-22 million people.

Finally, new measures can help to achieve positive effects. The president's package of proposals is aimed at overcoming the trap of weak demand: child benefits will restore the incomes of families in need, and this will support consumer demand, according to the Ministry of Economic Development. Economic Development Minister Maxim Oreshkin estimates that payments to families of benefits for children from three to seven years old, together with other initiatives voiced in the President's message, will reduce poverty in Russia by more than 10% by the end of 2020.

Now there are 19.2 million people below the poverty line. But already in 2020, a little less than 2 million people should leave it. And by 2024, the president set a goal - to reduce the level of poverty in Russia by half. This means that in five years there should be 10 million fewer poor people in Russia. The potential of the proposed measures could be even greater.

“Allowance for children from 0 to 7 years old will cover about a third of poor families with children. And given that the lion's share of the poor are families with children - they make up 70-80% of all the poor, this measure can reduce the poverty level by about 20%. Provided that targeting is achieved, that is, we will give an allowance to those who need it, and Rosstat will correctly assess this. It all depends on how it will be implemented,” says Vladimir Nazarov, director of the Financial Research Institute of the Ministry of Finance of the Russian Federation.

Of particular interest is Putin's desire to feed children in elementary school with hot meals at the expense of the state, regardless of whether his parents are poor or well off. This was not the case even in the Soviet years. Overall, the expansion of benefits for families with children aged 3 to 7 is a step in the right direction. “According to our estimates, the previous measure to increase child benefits for children under 3 reduced the poverty level in this category of families by almost half. This is a significant measure, but it had one drawback. It ended when the child...
was 3 years old, but from the age of three the children do not start working and do not receive wages,” - says Nazarov.

In the future, Russia may come to a universal poverty benefit, when help is provided regardless of whether you have children or not, but because you are poor.

Tatiana Maleva, director of the Institute for Social Analysis and Forecasting, RANEPA, believes that social protection measures are good, but only economic growth will help out of poverty.

For the growth of Russian GDP, Vladimir Putin proposed a number of measures to stimulate investment growth. These are the invariability of tax conditions for business for 6 years, compensation for the regions of some of the lost income due to the provision of investment tax deductions, the completion of the reform of control and supervisory activities and changes in criminal legislation in terms of the so-called economic constituents of crimes.

According to the President, "starting this year, the annual growth of investments should be at least 5%, their share in the country's GDP should be increased from the current 21% to 25% in 2024". The President also promises state investments. In the summer, the level of reserves in the National Welfare Fund will surpass 7% of GDP, which means that all oil and gas surplus profits can be invested in the real economy, primarily in road and other infrastructure.

According to the preliminary assessment of the ACRA rating agency, social and economic measures from the President's message will accelerate the growth of the Russian economy by 2021 from 0.33% to 0.56% of GDP, said Dmitry Kulikov, Deputy Director of the ACRA Sovereign Ratings and Forecasting Group. The largest contribution to the country's GDP, he said, will be made by support in the form of maternity capital - 0.12-0.15% of GDP and the creation of 225 thousand new places in nurseries - 0.09-0.15%, as well as the organization of a hot nutrition in primary school - 0.05% of the RF GDP.

According to the Ministry of Economic Development and Trade, the implementation of the President's initiatives will add 0.3 percentage points to GDP growth in 2020. An additional effect on the growth of investment activity will amount to 1 percentage point. In general, the Russian economy will grow by 1.7% this year, they predict there.

Russia spends 3% of GDP on social assistance - a lot by the standards of developing countries, but poverty in the country is declining slowly, the World Bank says. It proposed a program to reduce poverty faster and cheaper. The Russian government sets a goal to reduce the poverty level in the country to 6.6% by 2030, but if the existing conditions persist, this goal "remains unattainable," the World Bank (WB) believes. This goal is unlikely to be achieved without reforming the system of assistance to the poor, or at least without significantly accelerating economic growth, announced Apurva Sangi, the World Bank's chief economist for Russia.

At the end of 2020, the poverty level was 12.1% (17.8 million people below the official poverty line), Rosstat reported. In 2020, the impact of the pandemic was mitigated by compensatory social support measures, which even helped to reduce the poverty rate from 12.3% at the end of 2019. In 2021, the poverty rate may drop to 11.4%, based on the “cumulative effect of economic growth and changes in social support measures (assuming full and targeted implementation of the new announced measures),” the WB expects. The organization expects Russia's GDP to grow by 3.2% in 2021, according to its baseline forecast.

The WB baseline forecast for the Russian economy is based on a gradual reduction in the number of new cases of COVID-19. The institute has also made both optimistic and pessimistic forecast options:
in the positive scenario, Russia's GDP growth accelerates to 3.8, 4.8 and 3.3% in 2021–2023 (preconditions are faster vaccination, higher demand for oil in the world);

in a negative scenario, Russia's GDP grows by 2.6% in 2021, decreases by 0.7% in 2022 and increases by 0.6% in 2023 (spread of new strains of coronavirus, weak oil demand).

The current Russian system of social assistance is expensive, but not effective enough, according to the next (semi-annual) WB report on the Russian economy, presented on May 26. In particular, it is indicated there that assistance to the poor is not a priority for the Russian state, judging by the fact that the poor before the pandemic received only 10% of payments within the framework of all social assistance. The Institute has proposed a new national program to combat poverty in Russia, which will be more economical and more effective.

3. Conclusions

To conclude, poverty in Russia is multifaceted, and its complex nature hinders large-scale progress in its reduction. Therefore, it is not enough to work as usual; effective reforms are needed to enable the country to meet the ambitious goal outlined by President Vladimir Putin in his 2020 message to the Federal Assembly, namely, to halve poverty by 2024. What reforms could accelerate growth in Russia? We recommend measures that emphasize increased investment and increased productivity. Russia has made some progress, but much more can be done. For example, measures that encourage greater competition would combat distortions in the public sector. A better business climate would protect minority investors' rights and reduce bankruptcies, while a greater focus on innovation could attract more private investment in R&D. Russia has the resources - both financial and administrative - to carry out the necessary reforms. The country now needs an integrated approach that would ensure inclusive, inclusive economic growth in the interests of all citizens, regardless of how well their life is developing.

References

Economic Development of Russia in 2021: Problems and Perspectives

Marina Danilina

Abstract
In 2021, the global economy is actively recovering. The economic growth of many emerging market economies is affected by the deterrent effect of limited availability of vaccines and less, than in developed countries, space for stimulating macroeconomic policy. Strong global growth accompanied by an accelerating pace inflation in both developed economies and emerging economies markets. Along with the recovery in demand, the acceleration of inflation in most countries is also due to external factors - an increase in world prices for commodities, increasing the cost of international logistics services bottlenecks in global supply chains. In this paper, the authors analyzes the current economic situation in Russia and the possibility of economic growth. The main factors that will affect the Russian economy in 2022 are: the world and domestic Russian epidemiological picture, the conjuncture of commodity platforms, monetary exchange rate of central banks, trends in the movement of risk capital, geopolitical background.

Keywords: economy, economic development, Russia, economic growth, measures, programs.

1. Introduction
The poverty Russia has suffered from the economic "coronacrisis" not as much as most developed and developing countries; the decline in the country's economy at the end of the year will be less than the global average. The reason is that in Russia, the share of the consumer services sector that was most affected by the pandemic is less than in most countries. In addition, the measures taken by the authorities also improved the situation: without the soft budget policy of the government and the monetary policy of the Central Bank, the recession would have been much deeper. This is where the good news ends. Recovery will be harder and slower than the world average Russia's GDP, according to the IMF forecast, will grow by only 2.5% in 2021 (if the epidemic ends by spring); the World Bank forecast is 2.6% recovery growth in 2021. In any case, the Russian economy will not recoup the losses from the coronacrisis until 2022.

At this time, the world will experience rapid recovery growth. Developing economies as a whole will grow by 8% (according to the IMF forecast); Russia will be one of the outsiders (of the major developing economies, the recovery will be slower only in Belarus). All the leading developed economies will also recover from the crisis faster than Russia. There are two reasons for this: 1) in Russia, the government's support for the economy and population affected by the epidemic was less in 2020 than in developed countries, and in 2021 it will decrease even more. 2) the long-standing problems of the economy will prevent a rapid recovery: its growth potential has long been less than that of most developing and developed countries.

As a result, even in the best case (if the pandemic ends by spring, and the West does not tighten sanctions against Moscow too much), Russia will lag even further behind most of the world's economies. At the same time, there is a risk that even this relatively positive scenario is not implemented. The autumn wave of the epidemic has already slowed Russia's recovery from the crisis, even though the authorities decided not to impose strict restrictions in the style of spring quarantine. If mass vaccination of the population does not give a quick effect (and in order to

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really affect the situation, millions of citizens need to be successfully immunized in the coming months), then the way out of the crisis will be postponed for another one or two quarters.

2. Analysis of economic situation in Russia in 2021

Throughout 2021, manufacturers of electronics, cars and smart devices suffer from a growing shortage of chips. The global demand for microcircuits turned out to be 10-30% higher than the current supply. At the same time, production facilities remained close to the pre-pandemic times. The biggest blow fell on the automotive industry, which produced 30% -40% fewer cars than planned by the 2nd-3rd quarters of 2021. Coupled with huge demand, this has led to record high auto prices. Predictably, the situation affected the price of shares of companies producing semiconductors. It outperformed securities representing all key sectors of the US stock market in terms of growth rates. The semiconductor index has completely renewed its historical maximum.

Humanity has already learned to live with mutations of a dangerous virus, has developed protocols and is able to quickly respond to negative consequences. The most unpleasant scenario that can await us: another hard lockdown with the closure of international borders. This will not lead to a collapse, but it can lead to a deep correction followed by a recession in the world economy – easily.

At the beginning of the year, analysts predicted that rising inflation in the US could lead to a storm in the stock market. Inflation in the United States really accelerated: if in April 2021 it was about 4.2% (a record since 2008), then by the end of the year it was about 6.2%. Thus, annual inflation peaked in more than 30 years. The problem of inflation in the United States is a problem for the whole world, experts interviewed by "Secret" believe. Since almost all world markets are pegged to the dollar, inflation inevitably goes beyond American borders (and Russia is no exception).

“The accelerated dollar inflation will be partly exported outside the country along with the outflow of the so-called petrodollars. Globally, this will most likely affect the economy and the EU stock market. This is facilitated by the strong dependence of Europe on external energy supplies in the context of a strong rise in prices for them,” explained the senior risk manager of investment company "Algo capital" Vitaly Manzhos. However, the trend will clearly warm up inflation in Russia. According to the Bank of Russia, the main contribution to our rise in prices is made by such products as pasta, bread, meat, eggs and so on (excluding fruits and vegetables). The cost of these goods is directly dependent on world prices, which will continue to rise due to the Fed's incentives.

According to the results of this year, the Russian economy may grow by 4.2%, a record growth for many years. According to Rosstat, analysts' forecasted GDP growth rates for the year are higher than since 2012 (table 1). It is incorrect to compare with earlier estimates due to a change in the calculation method. Real GDP growth in the second quarter accelerated to 10.5% versus the same period in 2020 after falling 0.7% in the first quarter. Seasonally adjusted official estimates show that real GDP growth accelerated 3.4% in the second quarter compared to the first quarter, up from 1.0% in the previous two quarters. According to our estimates, the economy exceeded the pre-pandemic level in the second quarter and will reach almost full capacity in the second half of the year. The recovery in economic activity in the second quarter covered all key sectors of the economy.
Table 1: Dynamics of the gross domestic product in Russia (in current prices, billion rubles)

<table>
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<tr>
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<th>2011</th>
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<tbody>
<tr>
<td>GDP</td>
<td>60 114,0</td>
<td>68 103,4</td>
<td>72 985,7</td>
<td>79 030,0</td>
<td>83 087,4</td>
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<tr>
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<th>2016</th>
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<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>85 616,1</td>
<td>91 843,2</td>
<td>103 861,7</td>
<td>109 241,5</td>
<td>106 967,5</td>
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Source: Rosstat.

The most dynamic growth was recorded in the industrial sector, especially in the extractive industry (3.3% were seasonally adjusted in the second quarter versus 1.6% in the first quarter) and manufacturing (2.6% qoq. Q2 vs. 0.1% in Q1). As noted earlier, the recovery in the upstream sector holds great potential for further growth due to the relaxation of OPEC-related restrictions on oil production. In terms of manufacturing, the data indicate a slight slowdown in production after solid growth in the first half. This is likely due to disruptions in global supply chains and a decrease in external demand (mainly in China). Other sectors of the economy that are more focused on the domestic market, such as construction, wholesale and retail trade, hotel and restaurant business, also performed exceptionally well in the second quarter.

The Bank of Russia expects that the country's economy this year will grow by 4-4.5%, and the Ministry of Economic Development predicts GDP growth at the end of the year at 4.2%. The main driver for the Russian economy this year was the recovery after the pandemic, analysts agree. At the same time, half of the annual growth rate was provided by the second quarter, when the country's GDP grew by a record 10.5%, the senior economist of Otkritie Bank points out. The positive factors for the Russian economy this year were relatively high oil prices, the dynamic recovery of the economies of developed countries, as well as the absence of a sharp increase in sanctions pressure, contrary to numerous forecasts of outside observers, said the chief economist of Uralsib Bank.

However, in the second half of the year, factors slowing down economic growth began to appear. The slowdown in the fourth quarter is associated with a new wave of the pandemic and high price pressure, when it becomes more and more difficult for producers of goods and services to shift "swollen" prices to the end consumer, says Mikhail Zeltser, an expert at BCS World of Investments.

Director of the office of market research and strategy of Rosbank, Evgeny Koshelev, notes a slowdown in the growth of domestic demand due to saturation, tightening of the Central Bank's policy and intensive growth in prices in the economy.

Despite the economic recovery, the pandemic has severely limited the growth rate of Russia's GDP, says economist at Gazprombank Pavel Biryukov. "Thus, the growth rate of the economy by the end of 2021 will be only about 0.9% of the level of the pre-pandemic 2019, which is approximately two times lower than the average growth rate of the economy in 2016-2019," he predicts.

"In 2022, the rate of economic growth is likely to decline, although it will still remain higher than usual, as while the recovery growth continues. prices for food and building materials ", summed up the director of the Center for Macroeconomic Research of Sberbank Oleg Zamulin.

In the first half of the year, the Russian economy recovered faster than expected and returned to pre-pandemic levels. Demand in the domestic and foreign markets grew rapidly in the second quarter due to the previously introduced soft monetary and stimulating fiscal policy. In the summer months, Russia experienced another wave of the COVID-19 pandemic, which forced the authorities to intensify the vaccination program. As a result, the rate of vaccination has
accelerated markedly, but the proportion of the population fully vaccinated remains very low, putting the economy at risk in the event of new waves.

The geopolitical situation has stabilized after the introduction of the latest package of US sanctions on Russian debt instruments. In the absence of real competition, the ruling United Russia party won the Duma elections with a constitutional majority. The main intrigue after the elections may be a possible reshuffle in the government. In our opinion, the most vulnerable position is the position of the Minister of Finance in the light of growing demands to increase spending from the National Welfare Fund.

According to experts, in order to achieve economic growth rates above 3%, additional measures and incentives are needed. Among them - a change in the quality of productive capital and jobs, maintenance of incomes of the population, an increase in investment in fixed assets, investment in the “knowledge economy”, the development of housing construction and domestic exports.

“It can be noted that the measures taken by the government reduced the scale of the recession of the Russian economy in 2020, according to our estimates, by 1.8%,” stressed Andrei Klepach. “They added more than 3 percentage points to the real incomes of the population. Otherwise, we got the fall would not be about 5%, but 7-8% ”.

The chief economist of VEB RF noted that the termination of most measures at the end of 2020 and the limited effect of the budget rule will prevent the economy from V-shaped rebound in 2021 and restrain GDP growth in 2021-2024.

According to the expert, in order to achieve growth rates above 3%, additional social and sectoral measures are needed, including to maintain the income of the population. “The situation with the incomes of the population, as we have seen over the past 7 years, is an extremely painful point, a serious social challenge and a limitation for economic growth,” said Andrei Klepach.

Sergei Bodrunov, President of the VEO of Russia and the International Union of Economists, recalled that the main goal of modernizing not only social, but in general economic policy is a sustainable increase in the level and quality of life of the population, this is exactly what all transformations should be aimed at.

"The assessment of all ongoing reforms should be carried out precisely through the prism of growth in the well-being of Russians and their standard of living," Sergei Bodrunov quoted academician Leonid Abalkin.

Director of the Institute for Economic Forecasting of the Russian Academy of Sciences, member of the Board of the VEO of Russia Alexander Shirov noted that the main problem is in the social sphere.

“Our economy is 50% consumer demand,” Alexander Shirov is sure. “It is clear that neither the level, nor the quality of life, nor the wages that most workers receive can suit us,” the scientist noted. the quality of productive capital, of the jobs that we now have, because when 30% of jobs are low-tech and low-paid, it is difficult to expect a high level of income of the population in these sectors. 

“The economy faces fundamental challenges, and the main one is to improve the living standards and incomes of the population,” the President of the IMEMO named after E.M. Primakov of the Russian Academy of Sciences, vice-president of the VEO of Russia, Alexander Dynkin, supported his colleagues. economy. And here there is no link, pulling on which, you can pull out the whole chain, there is no one magic recipe. "

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According to Academician Dynkin, the space for innovative competition in the economy is limited by a significant share of the public sector. “Duplication of innovations means the ability to create high added value on our territory,” noted Alexander Dynkin. “If this happens, then the share of highly skilled labor in the national economy is growing and the standard of living is increasing accordingly. What resources can be used? leaders, the state property is 5-10%. China demonstrates brilliant innovative achievements with the share of state-owned enterprises in the output of GDP of about 30%. In our country, according to conservative estimates, state ownership is 45-50%.”

“In Russia, the institutions for the protection of intellectual property are weak, the risks of venture capital investments are high, we still focus on linear and vertically integrated innovation models, while the whole world has moved to non-linear, flat structures,” Alexander Dynkin added. circumstances should be taken into account.”

Academician Abel Aganbegyan named four main drivers of economic growth: investments in fixed assets, investments in the "knowledge economy", housing and export development. “We need a financial boost - we need to switch to 10-14% growth of these drivers from 2021,” Abel Aganbegyan is sure. “We have huge internal reserves. This year, for the first time, they exceeded $ 600 billion.”

According to Abel Aganbegyan, the transition to stimulating economic growth requires a change in the budgetary rule and “printing” reserves. These funds, using long-term low-interest investment loans, should be directed to technological re-equipment, the creation of a new transport and logistics infrastructure, the introduction of new capacities in high-tech industries.

Head of the International Capital Markets Department of the IMEMO named after E.M. Primakov of the Russian Academy of Sciences, member of the Board of VEO of Russia Yakov Mirkin agreed with the need to use up to 30-40% of reserves to stimulate investments within the country, including for the purchase of technologies and equipment.

The scientist cited a formula for super-fast economic growth, which includes a moderate, cautious financial boost, an increase in monetization, saturation with loans and financial instruments with a significant reduction in interest and inflation, regulation of the capital account by market methods, a reduction in the tax burden to 31-32% of GDP and the introduction of maximum incentives for foreign direct long-term portfolio investment.

According to Yakov Mirkin, a balanced increase in trade protectionism is needed, which, through trade and non-trade barriers, stimulates the movement of production to Russia, as well as a cheap mortgage program and an investment program to equalize living standards for 15-20 regions that are zones of national disaster.

All these measures, according to the scientist, will give 4-5% growth of Russian GDP and large-scale restructuring of the economy, create the basis for massive foreign direct investment and technology transfers from abroad. As a result of the forum, expert proposals will be prepared and sent to government bodies in the “Unified plan for achieving national goals until 2030”.

The recovery of the global economy will continue in the coming year. According to a study by Credit Suisse Investment Outlook 2022, global economic growth in 2022 will be 4.3%. Despite the fact that a number of central banks have begun to remove anti-pandemic stimuli, interest rates in the largest developed economies remain at levels close to zero. Under these conditions, the yield on shares will remain attractive, albeit more moderate compared to last year.

In 2022, the global economy is likely to continue its strong march towards recovery thanks to robust demand, continued favorable fiscal and monetary policies and the lifting of antiquated restrictions. We expect that under these conditions the shares will provide investors with
attractive returns of up to 10%, accompanied by strong profit margins of the companies. We believe that, in addition to returning to normalcy after the pandemic, 2022 will mark the beginning of a big transition to a world in which sustainable development is increasingly important for consumers, businesses, governments and regulators.

2022-2024, according to experts, will be difficult for the entire world community. Climatic changes are expected with an increase in the price of energy resources, an increase in the level of inflation, some talk about the devaluation of the ruble. Next year, one of the things that scares the experts is that inflation continues to rise. On October 22 of this year, the Central Bank raised the key rate for the sixth time, and this time the rate of increase was increased. The rise in prices shows an acceleration of 7.8%, but in fact inflation is much higher than forecasted. At the end of 2021, according to analysts' estimates, the indicator may reach 8%. This may happen due to restrictions on the growth of production due to the outflow of migrants from the country.

At the same time, the popularity of consumer loans has greatly increased - people take money for their needs, without thinking that they are further fueling inflation. Coupled with a boom in social benefits to curb its growth, the situation looks unusual - there is no problem with unemployment, the number of vacancies is growing, but world food prices are also growing.

The economy has never been in such a position - further forecasting practically does not work, since the pace of the real economy in this case cannot be determined, and mathematical methods do not give a clear picture of the future.

In 2022-2024, even the Accounts Chamber of Russia expects a very pessimistic scenario about what will happen to the Russian economy. IMF forecasts with world economic growth indicators of 4.9% look at least too ambitious, especially the task of realizing the gross domestic product by 4%.

It is rather difficult to make long-term forecasts for the further development of Russia. Walking on the thin ice of raising the key rate and dictating conditions in the atmosphere of an energy crisis can cause discontent both within the country and in foreign policy. Perhaps all previous crises were just a rehearsal, and the economy is inevitably cyclical - with processes of depreciation of money, lack of food and resources. In any case, the next couple of months will show what will happen to the Russian economy in 2022, where the vector will unfold, and then the picture will become clearer.

3. Conclusions

To conclude, the main factors that will affect the Russian economy in 2022 are: the world and domestic Russian epidemiological picture, the conjuncture of commodity platforms, monetary exchange rate of central banks, trends in the movement of risk capital, geopolitical background. The evolving nature of the Russian economy will still be tested for strength. The conjuncture of commodity markets, global monetary tightening, interstate tensions increase the nervousness of market participants, and with it the volatility of stocks, bonds, currencies. Based on the combination of factors of the external environment and the domestic Russian agenda, a gradual decrease in the country's GDP growth rates is seen to 3%. There are expectations of curbing inflation and softening the rhetoric of the Central Bank. The likely easing of price pressures in the economy will support long-term bonds, and the currency will be fueled by the country's strong trade balance. Stock market volatility may increase, and the trend in the 2022 indices will weaken. However, securities in the consumer sector, telecommunications and the electric power industry may be able to breathe when inflation decays and signals of a decrease in domestic lending rates.
References

Examining the Concept of Corporate Social Responsibility in the Context of Organizational Behavior and Corporate Behavior

Bekir Değirmenci

Abstract
In the last 70 years, businesses have started to give importance to “corporate social responsibility” practices in the workplace. The rapid increase in production, the foreground of demand rather than supply, and the intense competition of companies on a global scale have made corporate sustainability issues even more important. In today’s production environment, meeting social demands has become an indispensable condition in businesses. At this point, when viewed from a global perspective, more emphasis is placed on corporate social responsibility studies in the scientific world. In this study; studies on corporate social responsibility, corporate behavior and organizational behavior relations were emphasized. Within the scope of the study, doctoral studies conducted in the sample of Turkey were taken into account. The study is based on a literature review. Information about the study was collected from the official website of the "national thesis center". In the national thesis center, the concept of "corporate social responsibility" was entered in the search field. In this context, doctoral dissertations with permission were accepted as criteria. As a result of the search, 106 doctoral dissertations were found between 2006 and 2021. In the research on corporate social responsibility studies, only the works that include the concepts of "organizational behavior" or "corporate behavior" were examined. It is estimated that this study, which examines the concept of corporate social responsibility in the axis of corporate behavior and organizational behavior, will fill the gap in the literature.

Keywords: Corporate social responsibility, corporate behavior, organizational behavior

1. Introduction
In the last 70 years, businesses have started to give importance to “corporate social responsibility” practices in the workplace. The rapid increase in production, the foreground of demand rather than supply, and the intense competition of companies on a global scale have made corporate sustainability issues even more important. In today’s production environment, meeting social demands has become an indispensable condition in businesses. At this point, when viewed from a global perspective, more emphasis is placed on corporate social responsibility studies in the scientific world. In this study; studies on corporate social responsibility, corporate behavior and organizational behavior relations were emphasized. Within the scope of the study, doctoral studies conducted in the sample of Turkey were taken into account. The study is based on a literature review. Information about the study was collected from the official website of the "national thesis center". In the national thesis center, the concept of "corporate social responsibility" was entered in the search field. In this context, doctoral dissertations with permission were accepted as criteria. As a result of the search, 106 doctoral dissertations were found between 2006 and 2021. In the research on corporate social responsibility studies, only the works that include the concepts of "organizational behavior" or "corporate behavior" were examined. It is estimated that this study, which examines the concept of corporate social responsibility in the axis of corporate behavior and organizational behavior, will fill the gap in the literature.

2. Literature Review
In this part of the study, firstly, the concept of corporate social responsibility was examined. An answer has been sought to the question of why the concept of corporate social responsibility

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is important for businesses and employees. Then, in accordance with the essence of this study, the concepts of organizational citizenship and corporate citizenship were examined.

2.1. Corporate Social Responsibility

Corporate social responsibility has become a popular field of study since the 1950s. As a result of the maximum profit policies of the enterprises, the perpetuation of some activities that are harmful to nature and humanity has caused reactions at the society level. Many businesses; Its harmful activities towards its employees, society, state and nature have drawn the reaction of the public. In his study, Zink (2005) emphasized the importance of conducting CSR activities on the axis of stakeholders in order to ensure corporate sustainability (Act. Cheema et al., 2020). Today, the concept of corporate social responsibility is mostly investigating the effects on individual performance, and in this context, it has been determined that corporate social responsibility positively affects the organizational behavior of employees (Cheema et al., 2020: 11).

The concept of corporate social responsibility is seen as an activity that protects its stakeholders, employees and the ecological environment as a result of some voluntary activities of the enterprises. The contribution of the customers, who are in the position of consumers, is of primary importance in the survival of the enterprises, making a profit and realizing larger projects. In this direction, businesses that carry out their activities by using natural resources have some responsibilities and obligations towards the natural environment and humanity at the point of sustainability. It is very important for businesses to implement social projects, aid projects, regional and country-wide development, protection of cultural assets, projects that contribute to the welfare of humanity, and green projects that protect and prevent the ecological balance. Due to the win-win policy, businesses cannot be insensitive to their stakeholders and humanity. It is thought that the concept of corporate social responsibility, which continues its development and is an important management strategy today, is injected into businesses and public institutions, and at the same time, the natural environment and human life are positively affected by this situation (Gedikçi Öndoğan, 2020; 2-3).

Corporate social responsibility is an effective strategy designed as the company and brand's commitment to maximize long-term economic, social and environmental well-being through business practices, policies and resources (Ye et al., 2020: 1). Corporate social responsibility is an important strategic way to create a new value for society and businesses, to strengthen the relations of businesses with society, and to use natural resources efficiently (Cheema et al., 2020: 9-10). The concept of corporate social responsibility, which has become a subject of great interest in recent years, has been explained as corporate policies and actions that "evaluate the interests of stakeholders in terms of economic, social and environmental performance" (Simpson et al., 2020: 331).

Corporate social responsibility behaviors, which have been very popular in recent years, are studied on the axis of individuals, managers and businesses. The concept studied in many sub-dimensions such as ethics, philanthropy, social, economic and environmental has a very rich background in terms of literature. It has been found in many different empirical studies that corporate social responsibility activities applied in businesses today affect corporate citizenship and organizational behaviors of employees positively (Cheema et al, 2020: Su and swanson, 2019; Tian and Robertson, 2017).

2.2. Corporate Behaviors

Before moving on to the concept of corporate behavior, it would be appropriate to explain the concept of corporate citizenship. Businesses, whether they are customers or not, have certain obligations to all humanity and nature. Corporate citizenship is evaluated within the scope of
the understanding of philanthropy and social sensitivity towards the society of the production activities of an enterprise. Other businesses should both make a profit, and while making a profit, some projects should be implemented in a way that is sensitive to ethical, legal, philanthropic, social and environmental issues. At this point, businesses are primarily responsible for reducing crime rates, contributing to employment and producing a livable world. In their study, Karatepe and Ozan (2017) mentioned that businesses should behave respectfully to the individuals who make up the society in the geography they operate, pay their taxes regularly in line with their corporate citizenship behaviors, provide employment, and play a leading role in social responsibility projects (Cited by Gedikçi and Öndoğan, 2020: 33). Kuşakçıoğlu, while talking about corporate behavior in his study, mentioned that it is a concept that enables employees to integrate with the workplace where they work. In the related study, it is explained as "the activities carried out by adhering to the socio-cultural characteristics of the geography in which the enterprises operate in line with their objectives while explaining the concept of corporate behavior" (Kuşakçıoğlu, 2003: 53-80).

Boğan (2017) argued that employees' corporate perceptions are an important predictor of emotional commitment in their study to reveal the corporate behaviors of employees in their workplaces. In addition, in the related study, it was determined that perceived corporate behaviors (employees) had a positive and significant effect on emotional commitment. In the related study, it was found that corporate social responsibility activities have a partial mediation role in the relationship between perceived corporate behaviors and emotional commitment (Boğan, 2018: 127-128).

Demirtaş, while talking about corporate behavior in his study; He talked about the need to act fairly in competition, to have a sensitive attitude towards environmental issues, to comply with ethical and moral standards, and to use some of his profits in projects focused on social development (Demirtaş, 2015). It helps to reduce some attempts by the society to engage in illegal acts such as theft, immorality and prostitution that disturb the peace of humanity. Same time; It is among the important duties of enterprises to engage in some green activities such as water management for the natural environment, waste management, sustainable energy use, and prevention of the release of environmentally harmful wastes.

When the literature on the concept of corporate behavior is examined, it has been determined that one of the most comprehensive studies was done in Ogan (2007). The remarkable points in the related study are listed as follows (Ovalıoğlu, 2017: 3-25-26):

- Corporate behavior is an important predictor in the formation of corporate image and corporate identity.

- Corporate behavior includes the attitudes and behaviors of the employees of the enterprise. For example, the institution's self-promotion, participation in social projects, employee wage policies can be shown among these examples. Corporate behavior should not be inconsistent, in a way that does not overlap with its identity. Workplace employees represent corporate behavior. Their psychological and health needs should also be taken into account in order for them to exhibit the corporate behaviors expected from them. The employee, who is satisfied with his institution, represents his institution in the best way and makes positive contributions to the corporate identity and corporate image.

Güleryüz (2019) studied the concept of corporate behavior; In line with the interests of the stakeholders of the enterprises, he mentioned not only profit-oriented but also conscientious and philanthropic policies. In the related study, three elements of corporate behavior were mentioned. These are (Güleryüz, 2019: 100):

- The actions of businesses that provide consumers' trust and support social consensus,
• The tone of the business owners and managers in accordance with the courtesy rules,
• Making choices that are socially oriented and environmentally sensitive can be given as an example for the company logo, color and slogan selections.

While explaining the concept of corporate behavior, it is mentioned that the related concept is affected by the philosophy, identity and image of the employees of the business. It is possible to attribute the source of a positive corporate image at the social level to corporate behavior (Kuşakçıoğlu, 2003: 80).

2.3. Organizational Behaviors

In his study, Demir (2021) explained the concept of organizational behavior as "examination of the emotions, thoughts, attitudes and behaviors of employees in the workplace with scientific methods" (Demir, 2021: 182). Yavan (2016) mentioned in his study that the concept of organizational behavior is a concept used to better manage employees and get to know them more closely. The concept of organizational behavior is defined as the use of business resources and opportunities for the development of employees in order to make employees more effective and productive (Yavan, 2016: 279).

Motivation and job performance of employees in the workplace are two of the important topics examined within the discipline of organizational behavior. Motivation for work is seen as an important organizational behavior indicator for employees to show high performance (Sönmez, 2017: 135).

Corporation social responsibility policies for employees in a business help them to be better motivated to work. According to reciprocity (organizational change theory), the more a business owners and their employees try to protect a business, the more they respond to this situation by exhibiting positive organizational behavior in employees. In this direction, it is necessary to give bonuses to the employees, to honor them with some financial gains, to have more say in their participation in the business management, to consult the opinions of the employees in the decisions taken, to contribute to the career of the employees and to be aware of the developments related to their profession through in-service training. Thus, by means of positive psychological support and financial gains, it will be ensured that the employees exhibit excellent behaviors (Bozkurt, 2010: 57).

3. Conclusions

The involvement of businesses in social projects is among the business strategies and management policies that today's societies pay the most attention. In today's consumer profile, the support given to education, contributions to environmental sustainability, and businesses that act in accordance with ethical and legal structures are preferred. In other words, today's businesses should frequently include social and environmental projects in their business policies to ensure corporate sustainability. Not only consumers and customers pay attention to such practices, but also company employees are affected by corporate social responsibility practices. The economic and social supports that businesses apply to their employees help employees exhibit corporate citizenship and positive organizational behaviors. In this direction, within the scope of the study, doctoral thesis studies examining corporate social responsibility studies within the framework of corporate citizenship and organizational citizenship in Turkey between the years 2016-2021 were examined.

In the search made on the official website of the national thesis center, only three studies include studies on corporate social responsibility, organizational behavior and corporate behavior. Although it was determined that there were 106 theses in the search made with the corporate social responsibility keyword, it was seen that 103 corporate social responsibility studies among
these thesis studies did not include the concepts of organizational behavior and corporate behavior. One of the remarkable details within the scope of the research was that the differences between organizational behavior and corporate behavior were not fully revealed in the studies conducted.

The corporate citizenship behaviors of the employees are more positively affected by the corporate social responsibility policies applied in the enterprise, and this causes them to embrace the institution in the workplace where they work. Employees who own their workplaces actively and voluntarily take part in the promotion of the institution. It is known that if businesses do not give enough space to corporate social responsibility activities, employees become unfamiliar with corporate citizenship activities. Organizational citizenship behaviors, on the other hand, are explained as the fact that businesses are more committed to their work, thanks to the material and morale support of their employees, and helps to increase productivity and performance in the workplace. After mentioning this fine distinction, it is argued that the subject should be mentioned more in the empirical studies planned to be done from now on.

More scientific studies should be conducted to determine whether the corporate social responsibility activities applied in the workplace positively affect organizational citizenship and corporate citizenship perception. At the same time, it has been observed that studies examining the environmental behavior of employees are not sufficient. Studies that examine the relationship between corporate social responsibility and environment-friendly behaviors, which are not studied enough in Turkey, should be emphasized.

References


Impact of COVID-19 Pandemic on Tourism Industry: Study on North-East Region of Romania

Laura Diaconu Maxim

Abstract
As the reality has proved over time, the tourism industry is very sensitive to the global downturns, such as economic crisis, natural disasters, political instability or pandemics. This is why, in the context of the global COVID-19 pandemic, tourism was among of the first and worst affected sectors. Analysts’ opinion on tourism and crises falls into two main groups: risk perception at the individual level, on the demand side, and crisis management at the collective level, on the supply side. The purpose of the present paper is to investigate what was the impact of the COVID-19 pandemic on the tourism industry in Romania. To achieve this goal, we have conducted a survey, based on a questionnaire, on a sample of 26 respondents: representatives of travel agencies and hotels from the North-East region of Romania. All of them reported an immediate economic loss due to COVID-19 and concerns regarding the recovery. While the short term solutions for addressing these issues were focused on internal cost control and governmental subsidies, the long term perspectives include touristic services’ adjustments and transformation of the business structures.

Keywords: Tourism industry, hospitality sector, COVID-19 pandemic

1. Introduction
As the reality has proved over time, tourism industry is very sensitive to the global downturns, such as economic crisis, natural disasters, political instability or pandemics. This is why, in the context of the global COVID-19 pandemic, tourism was among of the first and worst affected sectors. The pandemic rapidly spread around the world, reaching over 209 countries and territories by the end of 2020. If we consider that urbanization and globalization drive the rapid spread of the virus (Hilsenrath, 2020), tourism might have an important role in exacerbating the resulting public health crises. Therefore, in order to stop the spread of the virus, lockdowns and travel restrictions were introduced in most of the states and regions (Al Jazeera, 2020). All these led to a substantial reduction in the number of tourists, which generated a loss of more than US$200 billion in tourism revenues in 2020 (UNWTO, 2020). This consequence was caused by the diminishing in both business travellers, which, in the context of pandemic worked remotely, and leisure travellers: according to BBC (2020), in the most visited regions of the world, the organized trips diminished by 90% in 2020 compared to 2019.

As stated by McKercher and Chon (2004), the financial losses in tourism industry were not caused by the risk associated with the virus, but more by the reaction of the governments, which led to the closure of many borders or to quarantine for tourists arriving from the affected areas, and, subsequently, by airline companies and travel agencies that cancelled trips to and from the affected areas. Financial losses suffered from tourism agents led to immediate reactions. The International Hotels and Restaurants Association highlighted the unprecedented consequences of the crisis that could generate a real financial disaster (Freifer, 2020). Meanwhile, the World Travel Agents Associations Alliance urged for immediate financial support from governments (WTAAA, 2020).

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Analysts estimate that the consequences generated by COVID-19 to the global economy have been more severe than the 2008 global financial crisis and even than the Great Depression (Roubini, 2020). The major concern is related to the time period in which the economy could regain the trend registered before the pandemic. At the European Union level, a financial recovery plan, for the next seven to ten years, has been debated (Kelly and Zubascu, 2020).

Tourism is one of the most rapidly expanding economic sectors and, undoubted, a catalyst for the economic progress. Not only it is a major source of jobs, but also a big share of these jobs is occupied by the vulnerable categories of the population: women and young workers. Meanwhile, a large amount of indirect work is involved in construction and infrastructure development, in food and drinks industry, in shopping centres etc. (Vo et al., 2019). Yet, over time, tourism was very strongly impacted by all the economic shocks generated by the outbreak of the health crises (Bhati et al., 2016). Therefore, the purpose of the present paper is to investigate what is the impact of the COVID-19 pandemic on the tourism industry in Romania.

In order to achieve this goal, the rest research is structured on four parts: a brief presentation of the theoretical aspects is included in section two, part three shows the methodological approach, the results and discussions are presented in section four and the last part concludes.

2. Literature Review

Researches related to the relationship between tourism and crisis can be groped in two main categories: risk perception at the individual level, on the demand side, and crisis management at the collective level, on the supply side (Qui et al., 2020). The perceived risks associated with tourism were investigated especially in the consumer behaviour studies (Sharifpour et al., 2014). Therefore, risk and safety issues have been analysed in various contexts, with the purpose of determining the factors that influence the differences in tourists’ risk propensity (Gössling et al., 2012). The major risks that may have a negative impact on tourism were associated especially with terrorism, war, social instability and health crises. The most cited events in the literature were the global financial crisis (2007–2008), the Influenza A H1N1 in 2009 (Page et al., 2012), the 2003 Severe Acute Respiratory Syndrome epidemic (SARS-CoV-1) (Page et al., 2006), the September 11 attack in the U.S. from 2001 (Seabra et al., 2020) and the Spanish Flu pandemic of influenza in 1918 (Rewar et al., 2015). In any of these cases, it was noticed that tourists tend to avoid the affected country or region, but their behaviour is largely influenced by their past experiences, their levels of familiarity with similar events or by some socio-demographic characteristics, such as age or level of education (Sharifpour et al., 2014). Regardless of the type of epidemic, the tourism sector has undergone great changes. In this context, nowadays, the World Travel and Tourism Council works on developing a plan for the future of tourism and travelling, by taking into account some important elements for the ‘new normal’, such as sustainability, technology, health and security (WTTC, 2020). The recovery plan proposed by OECD (2020) recommends not only providing jobs to increase the revenues, but also integrating strong climate and biodiversity actions, and building resilience.

From a supply-side viewpoint, the impact of crises on the tourism industry has also been largely debated in previous studies. Many of them used statistical approaches, such as time series, econometric and artificial intelligence, to forecast the recovery plans from various economic and social downturns (Song et al., 2019). The resulting models, even though they are based on large amounts of historical data (Sanders and Ritzman, 2001), cannot capture the impacts of sudden and unanticipated events. Therefore, statistical forecasts must be adjusted so that to capture the consequences of such events. In judgmental forecasts, the scenario analysis and Delphi technique are the most used. For example, Lin et al. (2014), by using Delphi surveys, forecasted the visitor arrivals in some long-haul individual markets. Meanwhile, Smeral (2010) developed two scenarios to forecast the demand for foreign travel immediately after the 2008
economic crisis. A similar approach was used by Alessi et al. (2014) to predict the evolution of some macroeconomic variables during the global recession. The conclusion of all these studies was that the traditional forecasting methods are less able to provide accurate results compared to judgmental forecasts.

In the view of the COVID-19 pandemic, Jiang and Wen (2020) consider that new perspectives on hospitality management and marketing are required. In addition, Cheer (2020) calls for new opportunities to re-envision tourism systems. Calgaro et al. (2014) highlight a crucial question related to destinations’ vulnerability. Their solution was a holistic destination sustainability framework to reduce vulnerability to shocks like COVID-19. This framework was developed on three critical areas in assessing tourism system vulnerability: exposure, sensitivity and system adaptiveness. While exposure refers to the intensity of the contact with the shock, sensitivity refers to system’s preparedness to defend itself and adaptiveness to the ability of the system to survive and recover from the destabilizing event.

United Nations Conference on Trade and Development (UNCTAD, 2021) made three scenarios regarding the possible evolution of the tourism in 2021 (see Table 1).

<table>
<thead>
<tr>
<th>Type of scenario</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pessimistic</td>
<td>74% - average reduction in tourist arrivals</td>
</tr>
<tr>
<td>Moderate pessimistic</td>
<td>63% - average reduction in tourist arrivals</td>
</tr>
<tr>
<td>More optimistic</td>
<td>75% reduction in countries with low vaccination rates</td>
</tr>
<tr>
<td></td>
<td>37% reduction in countries with relatively high vaccination rates (at least 50% of population)</td>
</tr>
</tbody>
</table>


According to the most pessimistic one, in 2021, the global tourism will register a 74% average reduction in tourists’ arrivals. The moderate pessimistic projection indicates a 63% average reduction. Yet, the more optimistic scenario foresees a 75% reduction in countries with low vaccination rates, while in the states with relatively high vaccination rates (where at least 50% of population is vaccinated) the decrease will be of only 37%. In this last category 55 states are included, among which the major touristic destinations.

In Romania, the tourism agencies faced a drop in activity by 80-90% in 2020 compared to previous year (Biz, 2020). However, the Alliance for Tourism in Romania considers that, despite this shrinkage, the shortcomings could be surpassed by 2025 with appropriate measures (Incoming Romania, 2020).

3. Research Methodology

Starting from the purpose of the paper, to investigate what is the impact of the COVID-19 on the tourism industry in Romania, our objectives were both to highlight the consequences of the pandemic on the business agents from tourism and to examine what can the Romanian stakeholders from this industry do to mitigate the effects of lack of international tourism during and after COVID-19. In order to achieve them, we have conducted a survey, based on semi-structured interviews on a sample of 26 respondents: 9 representatives of travel agencies and 15 managers of hotels from the North-East region of Romania. All the respondents had an extensive experience in the tourism field and, thus, tight connections with important actors in the sector.
The interview was conducted between 15th of July and 15th of August 2021 and it was structured on four major topics:

- The effects of the COVID-19 pandemic on tourism in Romania;
- The changes occurred in 2020 and 2021 in the business the respondent worked in, in terms of business indicators, personnel, working points/units;
- The estimated changes in the consumption habits of tourists visiting Romania (foreign and Romanians) following the COVID-19 pandemic;
- The measures that might be implemented by the government to support the revival of the tourism.

4. Results and Discussions

Regarding the first two aspects discussed with the 26 representatives of travel agencies and hotels managers – the effects of the COVID-19 pandemic on the Romanian tourism industry and the changes occurred in 2020 and 2021 in the business the respondent worked in, in terms of business indicators, personnel, working points/units, all the respondents mentioned that the lockdown periods from Romania and other states and the several other regional/local restrictions had a severe impact on their revenues. In 2020, the losses they registered were between 45-75% of the profit, while in 2021 they lost between 35% and 60% of their profit (see Table 2).

Table 2: Profit losses of travel agencies and hotels in 2020 and 2021

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Loss</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel agencies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>managers</td>
<td>4</td>
<td>55-65%</td>
<td>40-55%</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>65-70%</td>
<td>55-60%</td>
</tr>
<tr>
<td>Hotels managers</td>
<td>1</td>
<td>70-75%</td>
<td>55-60%</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>45-50%</td>
<td>35-45%</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>60-65%</td>
<td>55-60%</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>65-70%</td>
<td>40-45%</td>
</tr>
</tbody>
</table>

As it can be noticed in Table 2, the largest part of both travel agencies and hotels lost more than 60% of the profit in 2020, compared to 2019. In 2021 the situation improved but, however, the losses were over 55% for a more than a third of the hotels and more than half of the travel agencies included in the survey. On average, it can be noted that the highest losses were registered by the travel agencies, both in 2020 and in 2021. A possible explanation for this fact could be the reduction in the number of the persons that bought their holiday package from agencies. According to the responses of the hotels managers, many tourists made the reservations directly at the hotels, probably because they did not plan their holiday long before, as they used to do before pandemics. Yet, the average stay in a hotel in 2020-2021 was shorter than in the previous years. The profile of the hotels’ clients has also changed during the last two years, most of the hotels managers saying that if before 2020 they had all types of clients, during the summers of 2020 and 2021 most of the clients were families with children. Meanwhile, in the 2020 winter holidays they had especially young couples or groups of friends.

The restrictions imposed by authorities in 2020 and 2021 led to some major changes in terms of business indicators, personnel and working points/units of both hotels and travel agencies. As it can be seen from Table 3, 6 out of the 15 surveyed hotels shut down for more than 7 month in 2020 and up to 4 month in 2021. Regarding the impact on the employees from tourism sector, the hotels managers were forced to send a large part of their personnel in technical unemployment for several months and, in some cases, even to fire some of them. This was especially the case of the recent employed persons, with fixed-term contracts. Most of the
respondents from the travel agencies (8 out of 9) said that the majority of their employees worked remotely last year and also this one. Actually, they estimated that 90% of the work was done remotely in 2020 and up to 75% in 2021.

Table 3: Changes occurred in tourism industry in 2020 and 2021

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel agencies</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>Online working – in 8 agencies</td>
</tr>
<tr>
<td>Technical unemployment – in 2 agencies</td>
<td>Online working – in 6 agencies</td>
</tr>
<tr>
<td>Hotels</td>
<td>Shutdown</td>
</tr>
<tr>
<td>Over 7 months – 6 hotels</td>
<td>Shutdown less than 4 month – 6 hotels</td>
</tr>
<tr>
<td>5-6 months – 4 hotels</td>
<td></td>
</tr>
<tr>
<td>Less than 5 months – 5 hotels</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>Around 20% fired – in 12 out of 15 hotels</td>
</tr>
<tr>
<td>Technical unemployment – 6 months on average</td>
<td>Technical unemployment – 4 months – 5 hotels</td>
</tr>
<tr>
<td></td>
<td>4 months – in 5 hotels</td>
</tr>
<tr>
<td></td>
<td>5 months – in 2 hotels</td>
</tr>
</tbody>
</table>

The losses registered by the hotels and travel agencies in 2020 and 2021 were caused not only by the lockdown periods, but also by the other restrictions imposed by authorities. Most of the time, the hotels were forced to reduce their accommodation capacity to 50% or, even worse, to 30%, depending on the COVID-19 situation. Meanwhile, some high-capacity accommodation units and restaurants with no outdoor space had to cease their operations during a few months in 2020. Six out of fifteen hotels included in the survey were in this situation.

The reduction in the number of tourists has also been determined by the fact that almost all the cultural events from 2020 and 2021 have been cancelled, rescheduled or moved in open air spaces, but with some limitations compared to a normal situation.

The national and international travelling restrictions and lockdowns generated a reduction in the number of flights and cancellation of some routes. In this context, the representatives of the travel agencies said that they lost many clients, not only potential ones, but also tourists that had already scheduled their holidays. In most of the cases, respondents mentioned that their partners from airlines offered the possibility to the clients to change the travel dates, receive travel vouchers valid for one or two years or receive their money back. Unfortunately, almost half of the tourists that had bought airlines tickets or holiday packages from the 9 surveyed agencies took the last option, being more willing to receive their money back. The managers from the travel agencies said that, in the context of pandemics, they lost not only many leisure tourists, but also most of the business ones. Since the majority of the meetings were conducted through various online platforms and people could work remotely, many persons did not have to travel to a certain location for their job.

Apart from all the travelling restrictions imposed by authorities, the virus itself determined people to be more concerned about their health and, thus, to become fearful and anxious about travelling. It is known that emotions strongly influence the decision making process, in matters related both to work and to personal aspects (Sayegh et al., 2004) and, thus, affect can impact the willingness to travel (Anania et al., 2018). According to our travel agencies managers, almost all of their clients were very hesitant regarding the hotels, asking many details about safety and cleanliness aspects. Meanwhile, for those international destinations reachable by car (such as Greece, Austria or even Italy) most of the travellers did not opt for airplane especially due to safety concerns.

Regarding the estimated changes in the consumption habits of travellers visiting Romania (foreign and Romanians) following the COVID-19 pandemic, most of the respondents agreed
that in next 2 to 3 years the family and individual tourism will be the prevalent forms, in destinations that are not very crowded. However, the respondents were pessimists, affirming that it will take a long time until when people regain confidence in traveling.

The interviewed managers offered some solution for reviving the tourism industry in Romania. Among the measures they indicated that government could implement were: grants to tourism enterprises affected by COVID-19, capital / investment loans, reduction of local taxes and postponement of these obligations until the end of the year and stimulating the national tourism through holiday vouchers.

5. Conclusion

Our findings suggest, once again, the vulnerabilities of the tourism industry to pandemics in terms of exposure and sensitivity, on one hand, and of authorities’ capabilities and system adaptiveness, on the other hand. According to the results of our study, all the agents involved in the tourism industry, both from supply and demand side, were negatively impacted by the COVID-19 pandemic. Tourists lost their planned holidays and are reserved in making new travelling plans in order not to lose money or get the COVID-19 virus. The suppliers of tourist services lost many clients, some employees and a large amount of money. Unfortunately, the short and medium term perspectives are not too optimistic considering the fact that the pandemic is not over yet.

Among the possible solutions that could help the tourism sector in this period of crisis would be a better communication between government and tourist services’ suppliers in order to understand their needs and offer them support. Meanwhile, a better communication between travelers and tourist services’ suppliers is required so that the last ones could address customers’ needs in a post-COVID-19 era.

References


Service Quality of Low-Cost Airlines in times of COVID-19. Study on Romanian Passengers

Laura Diaconu Maxim

Abstract

The airline industry, in general, and the low-cost carriers, in particular, faced significant challenges due to the COVID-19 pandemic, the sequence of lockdowns and the provisions of safety and security legislation. Since service quality is a crucial factor for gaining competitive advantage in this industry, especially in pandemic times, the purpose of the present paper is to explore the impact of the current health crisis on the service quality of low-cost airlines, from passengers’ point of view. In order to achieve this purpose, we have conducted an online survey, based on a SERVQUAL questionnaire, applied to a sample of 342 respondents from Romania. Our results suggest that there is a change in passengers’ perception regarding the quality of the services offered by the low-cost airlines in the context of COVID-19, most of them considering that it has increased. Moreover, if the service quality was not a major determinant of the behavioral intentions before the current pandemic, when price had leading role, nowadays quality has a significant impact not only on passengers’ satisfaction, but also on their loyalty. Therefore, our findings present important information for the management of the low-cost airlines, in order to survive in the highly competitive aviation market.

Keywords: low-cost airlines, service quality, COVID-19 pandemic

1. Introduction

It is known that travel has always been influenced by a large number of external factors, such as economic or political instability, terrorism, socio-cultural changes, earthquakes or weather (Okumus et al., 2005). Therefore, the tourism industry, in general and the airline sector, in particular, are vulnerable to socio-economic and political crises and to natural disasters (Cro and Martins, 2017). In the context of COVID-19 pandemic, the entire airline industry faced significant challenges caused by the sequence of lockdowns and the imposed safety and security measures. The restrictions settled by authorities were not the only aspect that negatively impacted the tourism industry, in general, and the airlines, in particular. Individuals’ inherent risk perceptions played also a significant role in diminishing the tourism demand, because safety concerns are a key element in tourists’ willingness to travel (Simon, 2009).

During time, a growing number of studies have studied travelers’ perceived risk in different downturn contexts, from terrorist attacks (Fischhoff et al., 2004) to health crises (Mao et al., 2010). The general conclusions of these studies were that there are a lot of subjective factors that can influence the way in which risk is perceived and, therefore, the risk-taking propensity. Among the most common cited determinants can be found travelers’ past experiences, their levels of familiarity with similar events, current health status and socio-demographic characteristics, such as age or level of education (Sharifpour et al., 2014). Yet, all these aspects could also contribute to the distortion of reality. For example, in the case of SARS-CoV-2 virus, the perceived uncertainty of infection and its negative outcomes, doubled by ambiguous dissemination of various pieces of information among people, lead to public panic (Smith, 2006). These situations underline the importance of a deep investigation of tourists’ perceived risk in order to facilitate risk communication and risk management (Huang and Wu, 2017).

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In the context of a health crisis, six types of risks could influence travelers’ behavior. The time risk could lead to a psychological risk, by inducing anxiety about missing a flight due to cancellations or changes in the time-schedule caused by unforeseen consequences of the pandemic (Simpson and Siguaw, 2008). Meanwhile, the performance risk indicates the fear of tourists of not receiving anticipated vacation-related benefits (Khan et al., 2017). This type of risk might be exacerbated by the image risk in the situation in which negative rumors could create a misleading perception (Schroeder and Pennington-Gray, 2014). Moreover, the social risk can be associated with negative attitudes from friends or toward a person’s tourism activities (Sonmez and Graefe, 1998). The most cited type of risk is the health one, which refers to the perceived possibility of becoming ill (Fox et al., 2020). Since safety is a basic human need according to Maslow’s hierarchy of needs (Kozak et al., 2007), service quality is a crucial factor for gaining competitive advantage in this industry, especially in pandemic times.

Taking into account these aspects, the purpose of the present paper is to explore the impact of the current health crisis on the service quality of the low-cost airlines (LCC) in Romania, from passengers’ point of view. We have chosen the low-cost airlines from two reasons. Firstly, it is known that, during crisis periods, people tend to use more the LCC than the traditional carriers because of their lower prices. Secondly, knowing that the reduced prices of the LCC are usually on the expense of their services’ quality, it is important to see the evolution of this quality especially in the context of the current health crisis.

2. Literature review

Despite the fact that the literature evaluating the expectations and perceptions of airlines’ passengers in term of services’ quality is abundant, the studies are very different from the perspective of analyzed dimensions and used methodology. For example, several studies have investigated the quality of airlines’ services through passengers’ satisfaction and loyalty by using structural equation models (SEM). Thus, while Bogicevic et al. (2016) found that passengers’ satisfaction is generated by airport design characteristics and cleanliness, Chen and Chao (2015) underlined that passengers’ loyalty depends on five factors: ground services, convenience, in-flight services, price and travel availability. By using the SEM analysis, Kour et al. (2020) concluded that customers’ satisfaction is as mediator between airport service quality and travelers’ intent to revisit that airport and the destination chosen for the holiday.

Other researches started their analysis from the Expectancy Confirmation Theory, which indicates that customers’ satisfaction changes when consumers’ expectations are also changing (Oliver, 1980). Considering that user generated contents, such as blogs or social networks, are an important factor influencing the expected quality of a touristic service, Yuan et al. (2018) proposed the PLS-SEM method.

Meanwhile, Bogicevic et al. (2013), starting from Herzberg’s two-factor motivation theory, wanted to identify those attributes of the airport service quality and, thus, the key drivers for passenger satisfaction/dissatisfaction in the airport. They concluded that while cleanliness and pleasant environment are the major satisfiers, the security-check, confusing signage and poor dining offer are main shortcomings in the airport setting.

Traditionally, the quality of the services was measured by using the SERVQUAL analysis (Chou et al., 2011). However, to assess the quality of the airlines’ services, Ekiz et al. (2006) particularized this analysis and called it AIRQUAL. It includes five dimensions: airline tangibles, terminal tangibles, personnel, empathy and image. During time, several other aspects have been added to this analysis, such as: safety (Calisir et al., 2016), flight schedule (Chen and Chao, 2015) or quality of booking and ticketing services (Shaw, 2007).
To better understand passengers’ perceptions and expectations of services’ quality under pandemics, Tsaur et al. (2002) proposed surveys based on fuzzy set theory. Yet, there is a limited number of studies on customer perceptions of service quality during an epidemic. Chou and Lu (2011) analyzed customer perceptions of the preventive measures taken by airlines during the influenza (H1N1) from three points of view: disinfection services in the cabins, personal protective requirements and preventive equipment. The findings of other studies underline the need for social distance and hygiene measures to make the airlines’ travel attractive in times of pandemic (EY-Parthenon, 2020).

Considering the magnitude and complexity of the current pandemic, the existing airlines’ passenger studies are not very representative. Yet, a few researches focused their attention on the relationship between hotels’ service quality and customers’ satisfaction during the COVID-19 outbreak. By using Latent Dirichlet Allocation for big data analysis to identify clients’ expectations, Expectation-Maximization for clustering and adaptive-network-based fuzzy inference system for predicting the level of satisfaction, Nilashi et al. (2021) concluded that the clients seeking hotels with various facilities are also concerned with the quality of their services in the COVID-19 outbreak. Another study of Nilashi et al. (2022) confirms the significant impact of services’ quality during the current health crisis on the relationship between hotels’ services and travelers’ satisfaction. Hae Choi (2021) concludes that, since safety and hygiene are priorities not only during but also after COVID-19, changes in airport’s operating procedures will be inevitable. The most noticeable change will consist in strengthening the verification process for passengers’ health conditions.

3. Research methodology

In order to achieve our purpose – to explore the impact of the current health crisis on the service quality of low-cost airlines in Romania, from passengers’ point of view, we have conducted an online survey based on a questionnaire, in July 2021. To develop the questionnaire, we have previously conducted a focus group, on 10 persons which used the services of the low-cost airlines at least once before the current pandemic and at least once during COVID-19 outbreak. The focus group was also conducted an online platform due to the potential threat of a face-to-face meeting in the COVID-19 era. We considered that 10 persons represent an appropriate number for a focus group since this value is considered large enough to gain diverse perspectives and small enough to not become disorderly (Krueger, 1994). The participants have traveled as business and also leisure passengers. The discussions continued until a consensus was reached regarding the aspects that should be included in the questionnaire.

The final sample consisted in 342 low-cost airlines’ travelers from Romania. Initially, the questionnaire was sent to 350 persons but, after completing the questionnaires, 8 of them proved to be invalid.

The final questionnaire included 20 questions adapted from AIRQUAL and IPA analyses. We have chosen AIRQUAL because it includes the most appropriate variables for the airlines’ services (Ekiz et al., 2006). Meanwhile, IPA (importance-performance analysis) is extensively used especially in the tourism industry since it can indicate strategic action to improve competitiveness (Azzopardi and Nash, 2013). If importance is related to expectations related to the future contact with a particular good/service, performance refers to the satisfaction received after consuming a good/service. The questions were grouped in 3 categories:

- Information awareness and concern;
- Infection alert procedure;
- Social distance and hygiene during flight.
Respondents were asked to rate the importance of the attributes and their satisfaction with respect to each of them on a 1 to 5 points scale, where 1 represented very poor and 5 – excellent.

4. Results and discussions

The results we have obtained were grouped according to the three categories mentioned in the previous section. They were analyzed from the points of view of importance and performance, meaning both expectation and satisfaction related to the quality of low-cost airlines’ services.

From all the aspects included in the first group – information awareness and concern – most of the respondents considered that only two issues presented very high importance and also performance: broadcasting COVID-19 preventive information to passengers during the flight and responding to passengers’ questions related to the COVID-19 virus (see Table 1).

Table 1. Importance and performance of the some aspects included in “information awareness and concern” category

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Level of importance</th>
<th>Level of performance</th>
<th>Percentage of respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadcasting COVID-19 preventive information to passengers during the flight</td>
<td>Very high</td>
<td>Very high</td>
<td>62%</td>
<td>57%</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>High</td>
<td>29%</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>Neutral</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Reduced</td>
<td>Reduced</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Very reduced</td>
<td>Very reduced</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Responding to passengers’ questions related to the COVID-19 virus</td>
<td>Very high</td>
<td>Very high</td>
<td>59%</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>High</td>
<td>31%</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>Neutral</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Reduced</td>
<td>Reduced</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Very reduced</td>
<td>Very reduced</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Asking passengers to wear a mask during the flight</td>
<td>Very high</td>
<td>Very high</td>
<td>63%</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>High</td>
<td>24%</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>Neutral</td>
<td>10%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Reduced</td>
<td>Reduced</td>
<td>2%</td>
<td>46%</td>
</tr>
<tr>
<td></td>
<td>Very reduced</td>
<td>Very reduced</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

According to the results presented in Table 1, we can see that over 90% of the respondents expected to hear preventive information related to COVID-19 during the flight and over 80% declared that they were satisfied with the advices that they received. Moreover, also 90% of the travelers expected to obtain responses from the flight crew members to questions regarding the aspects involved by COVID-19 virus and almost 85% said they were satisfied with the answers they received. It is known that information is very important to travelers and this is why people tend to relate it to service quality (Díez-Mesa et al., 2018). Therefore, in order to alleviate passengers’ concerns and make them willing to fly again, the airline companies should clearly present information regarding the measures that have been taken against COVID-19 (Naboush and Alnimer, 2020).

A large majority of the respondents (87%) said that they expected that all the passengers wear a mask during the flight, since it was compulsory, and that the flight crew members should have ensured that everybody respects this measure. Unfortunately, less than half of them (49%) were very satisfied or satisfied with the way the flight attendances handled the situation. 47% of the respondents declared that they were unsatisfied or very unsatisfied because some of the passengers...
did not wear at all the mask during the entire flight and this did not attract any reaction from the flight crew members.

From the second group of questions – *Infection alert procedure* – most of the respondents considered that only one issue presented very high importance and performance: *requiring passengers who are ill to obtain medical approval prior to boarding*. According to the information presented in Table 2, over third quarters of persons (77%) expected that flight crew members require ill passengers to obtain medical approval for attending the flight and more than 74% declared that they were very satisfied or satisfied with the care taken regarding this issue. As previous studies underlined, all the measures taken during time to protect the health of passengers contributed to increase customers’ satisfaction and attract more clients to the company (Su et al., 2019). Meanwhile, Jeeradist et al. (2016) noticed that the warnings transmitted to passengers about airlines’ safety may strengthen the company’s positive image and increase customers’ loyalty.

**Table 2.** Importance and performance of some aspects included in “infection alert procedure” category

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Level of importance</th>
<th>Percentage of respondents</th>
<th>Level of performance</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requiring passengers who are ill to obtain medical approval prior to boarding</td>
<td>Very high</td>
<td>58%</td>
<td>Very high</td>
<td>52%</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>19%</td>
<td>High</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>13%</td>
<td>Neutral</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Reduced</td>
<td>5%</td>
<td>Reduced</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Very reduced</td>
<td>5%</td>
<td>Very reduced</td>
<td>7%</td>
</tr>
<tr>
<td>Disinfecting the entire cabin after each flight</td>
<td>Very high</td>
<td>54%</td>
<td>Very high</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>13%</td>
<td>High</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>25%</td>
<td>Neutral</td>
<td>48%</td>
</tr>
<tr>
<td></td>
<td>Reduced</td>
<td>5%</td>
<td>Reduced</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>Very reduced</td>
<td>3%</td>
<td>Very reduced</td>
<td>4%</td>
</tr>
</tbody>
</table>

Despite the fact that more than half of the passengers would have expected that the entire airline were disinfected after each flight, less than a third of the respondents were satisfied with the cleaning and disinfection that took place.

From the perspective of the *social distance and hygiene during flight* the opinions were divided. Yet, the only aspects that presented very high importance and performance for the majority of the respondents were the fact that, during the flight, passengers received disinfecting hand gel and the staff wore a mask and disposable gloves. Actually, this last aspect satisfied 95% of the passengers. On contrary, even though almost all the respondents (90%) expected to be respected the social distance inside the airplane, the majority (50%) said that they were unsatisfied or very unsatisfied with the measures taken by the low-cost company they traveled with regarding the social distance of at least 2 meters between people (see Table 3). Most of them said that there was no empty seat between travelers.

The findings regarding travelers’ expectations are in line with the conclusions of other researches that indicate that even outside of the pandemic context passengers put a great emphasis on hygiene and cleanliness (Gupta, 2018). Therefore, even more in COVID-19 context, the importance of hygiene (Gallego and Font, 2020) and social distance (Dabachine et al., 2020) in the airline industry is required.
Table 3. Importance and performance of the some aspects included in “social distance and hygiene during flight” category

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Level of importance</th>
<th>Percentage of respondents</th>
<th>Level of performance</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing antiseptic liquid soap or an alcohol-based hand gel to passengers</td>
<td>Very high</td>
<td>38%</td>
<td>Very high</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>19%</td>
<td>High</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>23%</td>
<td>Neutral</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Reduced</td>
<td>15%</td>
<td>Reduced</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>Very reduced</td>
<td>5%</td>
<td>Very reduced</td>
<td>14%</td>
</tr>
<tr>
<td>Requiring crew members to wear a mask and disposable gloves during the flight</td>
<td>Very high</td>
<td>74%</td>
<td>Very high</td>
<td>89%</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>11%</td>
<td>High</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>11%</td>
<td>Neutral</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Reduced</td>
<td>3%</td>
<td>Reduced</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Very reduced</td>
<td>1%</td>
<td>Very reduced</td>
<td>2%</td>
</tr>
<tr>
<td>Obeying social distance rules during flight</td>
<td>Very high</td>
<td>64%</td>
<td>Very high</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>26%</td>
<td>High</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>5%</td>
<td>Neutral</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Reduced</td>
<td>3%</td>
<td>Reduced</td>
<td>36%</td>
</tr>
<tr>
<td></td>
<td>Very reduced</td>
<td>2%</td>
<td>Very reduced</td>
<td>14%</td>
</tr>
</tbody>
</table>

5. Conclusions

Taking into account all the findings mentioned above, we can draw two major conclusions. Firstly, if we consider that service quality was not a main factor influencing the behavioral intentions of LCC’ travelers before the pandemic, when price was the major determinant of choosing these airlines, nowadays, in the context of the pandemic, quality gained a significant role not only for passengers’ satisfaction, but also for making them loyal.

Secondly, by linking customer’s expectations and perceptions of airlines’ service quality after COVID-19 to airlines’ priorities, managers of the LCC could identify opportunities to differentiate their companies from the traditional carriers, especially during this downturn period, when customers are even more sensitive to those aspects that may increase their level of satisfaction.

References


Serbia between the European Union and the Euroasian Economic Union: What Does Trade Statistics Demonstrate?

Radmila Dragutinović Mitrović

Abstract

to preserve and improve economic relations with its eastern partners. With intention to deepen trade relations with Russia, as one of the most important trade partners, but also with other eastern countries, Serbia signed a free trade agreement with the Eurasian Economic Union (EAEU) in 2019, which came into effect in July 2021. Bearing in mind all mentioned facts, this paper deals with statistical analysis of trends of Serbia’s trade with the EU and the EAEU in the period 2004-2020, within different trade regimes. Apart from that analysis, the intention is to compare Serbia-EU and Serbia-EAEU trade based on different trade statistical indicators, such as import and export propensity, export market diversification, changes in export diversification and competitiveness in its most important markets, export product diversification, trade structure by countries and sectors.

The aim is to get preliminary conclusions about benefits for Serbia from its trade with the EAEU and about possibility for trade diversion to that new trade market. This analysis should be observed as an initial step for further econometric analysis of trade potentials in Serbia-EAEU relations, by using gravity panel data model.

Keywords: Serbia-EU trade, Serbia-EAEU trade, CEFTA 2006, trade statistical indicators

1. Introduction

After period of conflicts in the region and sanctions, Serbia started its reintegration into the global economy from 2000, conducting various reforms, signing free trade agreements and establishing customs-free regimes on a number of goods with the EU, CEFTA 2006 and Russia as its largest trade partners. The EU has been mostly oriented on issues related to the accession process such as development aid, investment and trade in relation not only to Serbia but to the whole Western Balkan region with intention to increase all it through favorable agreements. At the same time, Serbia tried to balance between the EU and its traditional eastern partners. It is still possible since Serbia has no obligation to align its policy with the EU at this stage of the accession process (Hartwell, C. and Sidlo K. (2017). Unlike its economic relation with the EU, Serbia’s relations with Russia, Belarus and Kazakhstan are mostly oriented on improvement of the level of trade liberalization on the basis of FTA’s as well as on Russia’s investments in the Serbian energy sector and infrastructure (Lisovolik, Y. D. and E.S. Chimiris, 2018).

With a number of bilateral FTA’s signed from 2000 onward, Serbia obtained customs-free regimes on wide range of goods with many countries and several integrations. Chronology of main trade agreements and trade measures in that period is given in the following:

- FTA between the Russian Federation and FR Yugoslavia (entered into force from 2000);
- Autonomous trade measures (ATM) granted by the EU – 2000 (into force from 2003);
- Generalized System of Preferences (GSP) granted by the USA – 2005;
- Central European Free Trade Agreement (CEFTA 2006) – signed in 2006 (into force from 2007);
- Stabilization and Association Agreement (SAA) between the EU and Serbia with the Interim Trade Agreement – 2008 (into force from 2014);
- FTA between the Republic of Belarus and Serbia – 2009;
- FTA between the Republic of Turkey and Serbia – 2009 (into force from 2010);

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- FTA between the EFTA States and Serbia – 2010 (into force from 2011);
- FTA between the Republic of Kazakhstan and Serbia – 2010 (into force from 2011);
- FTA between the EAEU and Serbia – 2019 (into effects from July 2021).

The main goal of all those measures is liberalization of trade in goods and the most of them referring to the EU and CEFTA 2006 have already reflected on the Serbia’s trade path in different phases of trade regimes. Hence, the experience of Serbia-EU and Serbia-CEFTA 2006 trade patterns could help to perceive expected tendencies in Serbia’s trade flows to new EAEU market. That is why next section is devoted to the literature review of Serbia’s trade relations with the EU and CEFTA 2006, as the basis for the comparison of the size, growth, importance and structure of Serbia’s trading relationships with the EAEU and the EU, conducted in the following sections.

2. Experience of Serbia-EU and Serbia-CEFTA 2006 Trade Relations: Short Literature Review

Due to the EU trade policy, Serbia managed to benefit from trade liberalization reforms by remarkable increase of its trade value after 2000. Apart from benefits of the EU accession process, geographic proximity of the EU market ensured the EU to be Serbia’s main trading partner both on the export and import side. Consequently, other favorable trade measures granted to Serbia by third countries and integrations could not contribute to divert its trade from the EU so far. This is confirmed in rather rare empirical literature dedicated to the effects of different competing trade regimes in determining Serbia’s trade flows and its trade diversion. More precisely, analyzing the effects of trade measures, such as ATM, GSP, SAA and CEFTA 2006 on Serbia’s bilateral trade, it was found that preferential trade regimes are important determinant of Serbia’s trade and that significant liberalization of trade regime with untraditional trade partners like the USA, even asymmetrical to Serbia’s favor, cannot divert trade flows from traditional partners in the long-run (Bjelić, P. and R. Dragutinović Mitrović, 2012). One of the reasons could be that simultaneous significant positive effects of asymmetric ATM granted by the EU annulled this diversion, but also that the distance of the USA played more prominent role in bilateral trade than the degree of liberalization of trade regimes.

Trade regime variations from asymmetry to reciprocity had impact not only on bilateral exports of Serbia, but of all Western Balkan (WB) candidate countries. Asymmetrical trade preferences granted by the EU to the WB acceding countries had significant effect on boosting their bilateral exports. However, later variations in trade regime introduced by SAA appeared as insignificant at least in the early period after introducing reciprocity. This could imply that gradual introduction of symmetry in EU-WB trade regime in the initial period lowered their bilateral exports, due to their smaller international competitiveness (Dragutinović Mitrović R. and P. Bjelić, 2015).

Different trade regimes also implied changes in the area of non-tariff barriers to trade among signatories. After initial period of trade liberalization benefits (firstly through ATM granted by the EU, and later through CEFTA 2006) with significant increase of trade, it appears that non-tariff barriers have become one of the most important impediments of WB trade with the EU, also reducing CEFTA 2006 intraregional trade (Kaloyanchev, P. et al., 2018; Bjelić, P. et al., 2013). Among them, technical barriers to trade (TBT) appear as main obstacles in the Western Balkan trade with the EU, while administrative barriers to trade (ABT) were predominant

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2 These conclusions are based on the estimation of gravity panel data model of Serbia’s trade with its traditional partners (the EU and CEFTA 2006 signatories) and the USA as untraditional trade partner with favourable trade regime. The main result on standard theory-based gravity model determinants in mentioned research is that overall level of development and difference in factor endowments stimulate Serbia’s exports (which is in line with theoretical foundation that inter-industry trade is predominant in exports of less developed countries).
impediments both in intraregional CEFTA 2006 trade and trade with the EU. Contrary to the expectation, trade effects of ABT among CEFTA 2006 signatories were not significantly higher compared to the rest of the observed partners, possibly since trade benefits from that integration predominated over trade impediments in the first years after CEFTA 2006 entering into force (Bjelić, P. et al., 2013). However, it seems that some barriers still exist, since the period of rather stagnant trade continued to hold until recent years. Primarily, still high level of non-tariff barriers, but also obsolete transport infrastructure in WB region and other problems exist (Levitin, O., and P. Sanfey, 2018).

All mentioned findings and experience related to the EU and CEFTA 2006 integrations could help in analysing main achievements in Serbia’s trade relations with the EAEU. Therefore, Serbia’s trade prospects with the EAEU, the EU and CEFTA2006 through different phases of FTA’s in the period 2004-2020 are analyzed in the following sections.

3. Main trends in Serbia’s Trade within Different Trade Regimes

Recovery of Serbian economy from all consequences of conflicts and disintegration during the 1990s in the Western Balkan region, started from 2000. In that year, Autonomous trade measures (ATM) were granted by the EU, and Serbia signed FTA with Russia. In the following years, Generalized System of Preferences (GSP) has been granted by the USA, as well as bilateral FTA’s within the Western Balkan region resulted in signing CEFTA 2006 encouraged by the EU as one of fulfillment of membership criteria. Serbia has benefited from all these measures and as a result, significant increase both of exports and imports has been registered, particularly in the period before the global crisis 2008 (average annual export and import growth rates: 27.6% and 28%, respectively). Slowing down of those trends in Serbia’s total merchandise exports and imports, along with decreasing trade deficit are evident after the global crisis 2008 (annual export growth 8% and import growth 4.7%). Figure 1 presents mentioned indicators of Serbia’s involvement in the international market across different phases of FTA’s.

Figure 1: Serbia’s merchandise exports, imports and trade balance, 1997-2020, in mil. USD


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3 For instance, bureaucracy both in intraregional exports and imports continues (e.g. still higher costs and time to exports/imports than those within the EU).
3.1 Export and Import Propensity, Trade Balance and Openness to Trade

One of Serbia’s trade characteristics is high degree of dependence of domestic producers on foreign markets from 2011 onward, as indicated by export propensity indicator (Table 1). The export (import) propensity is calculated as the value of exports (imports) of good and services relative to the GDP (UNCTAD, 2021). On the import side, this indicator shows large amount of total Serbia’s income spent on imports in the whole period, particularly in the last four observed years (very high import propensity - higher than 50%; Table 1). Due to such trade expansion (almost doubled export propensity in the observed period), Serbia is the only country in the Western Balkan region which managed to increase significantly its integration into world market.

Table 1: Serbia’s export and import propensity and trade deficit of goods and services/GDP (in %)

<table>
<thead>
<tr>
<th>Year</th>
<th>Export propensity*</th>
<th>Import propensity*</th>
<th>Trade deficit of goods and services/GDP**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>25.9</td>
<td>49.0</td>
<td>23.1</td>
</tr>
<tr>
<td>2009</td>
<td>24.7</td>
<td>38.8</td>
<td>14.0</td>
</tr>
<tr>
<td>2010</td>
<td>29.5</td>
<td>43.1</td>
<td>13.6</td>
</tr>
<tr>
<td>2011</td>
<td>30.6</td>
<td>43.7</td>
<td>13.1</td>
</tr>
<tr>
<td>2012</td>
<td>32.8</td>
<td>46.7</td>
<td>13.9</td>
</tr>
<tr>
<td>2013</td>
<td>36.6</td>
<td>45.3</td>
<td>8.7</td>
</tr>
<tr>
<td>2014</td>
<td>38.8</td>
<td>47.1</td>
<td>8.3</td>
</tr>
<tr>
<td>2015</td>
<td>41.6</td>
<td>48.5</td>
<td>6.9</td>
</tr>
<tr>
<td>2016</td>
<td>44.7</td>
<td>49.6</td>
<td>4.9</td>
</tr>
<tr>
<td>2017</td>
<td>47.7</td>
<td>53.2</td>
<td>5.6</td>
</tr>
<tr>
<td>2018</td>
<td>48.2</td>
<td>55.8</td>
<td>7.6</td>
</tr>
<tr>
<td>2019</td>
<td>49.2</td>
<td>57.5</td>
<td>8.3</td>
</tr>
<tr>
<td>2020</td>
<td>45.8</td>
<td>54.2</td>
<td>8.4</td>
</tr>
</tbody>
</table>

Author’s calculation according to UNCTAD database (https://unctadstat.unctad.org/).
* Propensity scale: Very high - higher than 50%; high – 30% to 50%; moderate – 20% to 30%; low – 10% to 20%; very low - less than 10%.
** Very large deficit - more than 20%, large deficit: 5% to 20%, very low deficit/surplus (less than 5%), large surplus (5% to 20%), very large surplus (more than 20%); UNCTAD (2021).

Serbia’s large trade deficit of goods and services is characteristic of the whole period 2008-2020 both in level and relative to GDP. However, there is decreasing trend of trade deficit as a percentage of GDP which is not so much the result of GDP increase as of decreasing trend of trade deficit of goods along with increasing trade surplus of services (Figure 1 and Table 1). ^5

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^4 Observed period 2008-2020 is determined by availability of data for Serbia’s trade in goods and services in UNCTAD database.

^5 The average annual GDP growth rate was only 0.3% in the observed period. The share of services in total Serbia’s exports was around 30%, while in total imports around 20% in the whole period.
As another measure of the importance of international transactions relative to domestic, trade openness of Serbia also manifested growing trend (Figure 2). Large values (especially in the last four years) indicate large dependence of domestic producers on foreign demand and of domestic consumers on foreign supply, rather than low trade barriers (tariff or nontariff).

### 3.2 Serbia’s Export Diversification

Many developing countries tend to diversify their exports with intention to lower their vulnerability and high dependence on a few destinations. The value of trade dispersion across country’s trade partners can be measured by simple Herfindahl–Hirschman market concentration index (HHI):

$$HHI = \frac{\sum_{j=1}^{n_i} \left(\frac{x_{ij}}{X_i}\right)^2 - \frac{1}{n_i}}{1 - \frac{1}{n_i}}$$

where $X_i$ - total value of exports from country $i$, $x_{ij}$ - the value of exports from country $i$ to destination market $j$, $n_i$ - the number of partner markets to which country $i$ exports. This indicator is calculated in order to measure the level of diversification of Serbia’s exports by destination, which can be seen in the following table.

#### Table 2: Serbia’s export market diversification- Herfindahl–Hirschman index

<table>
<thead>
<tr>
<th>Year</th>
<th>Herfindahl–Hirschman index</th>
<th>Export market diversification*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>0.071</td>
<td>2004 – 2017: Moderate (0.05 to 0.10)</td>
</tr>
<tr>
<td>2006</td>
<td>0.064</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>0.060</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>0.055</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>0.056</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>0.056</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>0.063</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>0.066</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>0.062</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>0.059</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>0.054</td>
<td></td>
</tr>
</tbody>
</table>
The HHI values for Serbia are rather low in the observed period (Table 2). Serbia’s export market diversification was high in last four years, while moderate diversification was more a feature in the early observed period. Furthermore, slight decreasing trend of HHI value in the observed period may implicate positive (increasing) tendency of the dispersion of Serbia’s exports across its trading partners.

4. Serbia’s trade relations with the EU, CEFTA 2006 and the EAEU

Regarding regional orientation, the analysis of Serbia’s trade flows is divided into three directions, that is towards the EU, CEFTA 2006 and EAEU. The dynamic of Serbia’s trade flows towards the EU is close to Serbia’s total trade path (Figure 1 and Figure 3a). Stable growing trend of that exports is obvious in the whole observed period, though with different dynamic in two subperiods. Faster growth of the exports to the EU and imports from the EU were evident before global crisis 2008: average export and import growth rates in the period 2004-2008 were 31% and 21%, whereas from 2009 to 2020 were 9.9% and 5.1%, respectively. This change in dynamics as a consequence of global crisis, could also coincide with signing of SAA with the EU and Interim trade agreement (Figure 3a). Particularly, this appeared in the first years after SAA symmetry introduction in Serbia-EU trade relations, when trade reciprocity is introduced, that is when Serbian market is also opened for the EU origin goods. In the period after 2014, exports and imports grew at almost the same average annual rate (7.5% and 7.8%). Large trade deficit is another characteristic of trade relation with the EU, but decreasing in the period after 2008 by 4.3% annually.

Figure 3: Serbia’s trade with EU, CEFTA 2006 and EAEU, 2004-2020, in mil. USD

(a) Serbia – EU
(b) Serbia – CEFTA2006

6 HHI range is from 0 to 1. Countries which trade equally with its partners have HHI close to 0, while those with trade focused in a very few markets have HHI value close to 1.

7 Although SAA entered into force six years later, Interim agreement on trade and trade related issues was decisive for trade regime implementation.
As an important condition for the EU membership, the Western Balkan countries are forced to develop their regional co-operation, which resulted in signing revised Central European Free Trade Agreement in 2006 (CEFTA 2006) and entering into force in 2007. This agreement was preceded by the signing of a number of bilateral FTA’s between countries of the Western Balkans, and liberalized intraregional trade by removing customs and quotas. CEFTA 2006 appeared as more significant for intraregional trade than previous bilateral FTAs among Western Balkan countries (Weiss, S., 2020). Benefits of CEFTA 2006 for all signatories have already been evident in the first years after signing especially in 2008. CEFTA 2006 is the only integration where Serbia registered trade surplus, increasing in the whole observed period (Figure 3b). However, after initial period of liberalization and very fast growth of Serbia’s exports toward CEFTA 2006 (up to 2008 by 36% annually), a period of stagnation ensued. Recovery of Serbia’s exports to CEFTA 2006 from global crisis did not occur, resulting in average export growth at only 1.5% annually in the period 2009-2020 and remaining at similar level as in the year of CEFTA 2006 entering into force. In the same subperiod the imports from CEFTA 2006 declined by 2.3% annually. Larger drop of imports from the CEFTA 2006 than the exports resulted in the increase of surplus in Serbia-CEFTA 2006 trade by 4% annually in the observed subperiod.

Such stagnation in Serbia-CEFTA2006 trade relation continued to hold in the period of Croatia’s leaving CEFTA 2006 and its EU membership from 2013 (Figure 3b). That country was one of Serbia’s main trade partners within CEFTA 2006 integration. Apart from this, the stagnation happened for some other reasons. There still are significant impediments to intraregional CEFTA 2006 trade, such as tariff and non-tariff barriers. This is confirmed by findings that non-tariff (particularly administrative) barriers to trade within CEFTA 2006 integration significantly reduced trade between the countries in the region (Bjelic et al., 2013; Kaloyanchev, P. et al., 2018; Levitin, O., and P. Sanfey, 2018). Further reason for Serbia’s stagnant trade with CEFTA 2006 could be the diversion of Serbian exports from the region to the EU guided by more favorable trade regime in observed period. A lack of diversity in product structure could also be an impediment for intraregional trade including Serbia, since the countries in region are still relatively underdeveloped and mostly oriented to similar goods with low value added (Kaloyanchev, P. et al., 2018).

Regarding the EAEU, Serbia has concluded bilateral FTAs with three of five EAEU member states and then they are replaced by FTA with the whole integration, signed in 2019 and entered into force in July 2021. Russia dominates as traditional partner in Serbia’s trade with the EAEU.
with almost the same path as Serbia’s trade with the whole integration (Figure 3c). For instance, the share of Russia in 2020 was around 90% both in totals Serbia’s exports to and imports from the EAEU, while only 10% goes to other four countries. Among the rest of member states, Belarus took the second position with 5.5% in total Serbia’s exports to the EAEU in 2020, whereas Kazakhstan took the same position with 6% in total Serbia’s imports from EAEU.

Significant Serbia’s export growth to the EAEU was realized from 2009, due to the export increase towards Russia. Particularly, the expansion of food sector exports to Russia, resulted in the increase of that sector share from 8% (in 2004) to around 30% (2020) in total Serbia’s exports to Russia. After 2014, in the period of the EU sanctions against Russia, Russia diverted its imports of agri-food products to other countries, like Serbia, Belarus and Turkey. Approximately 80% of agri-food exports of these countries to Russia referred to sanctioned goods, whereas in terms of overall exports, embargoed products made up around 15% of Serbia’s total exports to Russia (Fritz, O. et al., 2017). Considering the imports and trade deficit in Serbia-EAEU relations, slight downward trend is registered (average growth rates in the period 2009-2020 were -1.4% and -6.8%, respectively).

Figure 4: Serbia’s export dynamics towards the EU, CEFTA and EAEU, 2004-2020 (indices, 2004=100)

Comparing the dynamic of Serbia’s exports by destinations, the fastest growth in the whole observed period was towards the EU followed by EAEU: average growth rates were 12.2% and 12%, being above total Serbia’s export growth (11.3% annually). On the other side, Serbia’s exports to CEFTA 2006 grew by 7% annually. From 2009 larger differences in Serbia’s export growth toward CEFTA 2006 on one side and to the EAEU and the EU on the other side were registered (Figure 4).

4.1 The Importance of Economic Integrations in Serbia’s Trade

Starting from 2000 and reintegration of Serbia into the international community, it continuously improves trade relations with the EU, which is one of the main results of Serbia’s negotiations as the EU candidate country. Substantial growth of trade in the whole observed period even in different trade regimes (from asymmetric to reciprocal) resulted in the increase of the EU share in total Serbia’s exports, leading to its maximum of 67% in 2020 (Figure 5a). The imports from the EU have consistently been in the range between 55% in 2005 and 63% in 2016 (58% in

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8 The majority of exports of embargoed food products from Serbia to Russia are fruits (75%) followed by dairy goods (around 15%) (Fritz, O. et al., 2017).
2020). As a result, the share of EU in total trade deficit of Serbia has declined from 60% in 2012-2013 to around 40% in last three years (Figure 5b).

**Figure 5**: Significance of the EU, CEFTA 2006 and EAEU in Serbia’s trade, 2004-2020

(a) The share in Serbia’s total exports (%)  
(b) The share in Serbia’s trade deficit (%)

Source of data: Statistical Office of the Republic of Serbia.

Unlike steady increase of Serbia’s exports to the EU over the whole period, Serbia’s trade with the CEFTA 2006 was rather stagnant. All this has led to continuous decline of the CEFTA 2006 share in total Serbia’s exports (from maximum 33% in 2010 to 17% in 2020; Figure 5a). On the import side, there was large decrease of the CEFTA 2006 share in total imports of Serbia (from approximately 8% in the first years, to around 4% in last several years).

Serbia’s exports expansion toward the EAEU resulted in the increase of the share of that integration from slightly under 5% at the beginning of the period over maximal 8.4% in 2014 to around 6% by the end of the period. Judging to this indicator of the EAEU relative importance, it seems that existing bilateral FTA’s between Serbia and three members (especially with Russia as traditional trade partner) did not have such significant benefits for Serbia, as it was expected. In import figures, the decreasing share of Serbia’s imports from the EAEU (from around 15% at the beginning to 8% in average last five years), along with described export dynamics, implicated also the drop in the EAEU share in Serbia’s total trade deficit (from maximal 30% in 2013 to 11% in 2020).

**4.2 Main Trade Partners of Serbia**

The structure of Serbia's exports by destinations was not changed much in the observed period. In relation to each of observed integrations, Serbia is mostly oriented toward its traditional trade partners both on the export and import side. Almost the same countries dominate in Serbia’s exports and imports in the whole period, and most of them are the EU countries.

The main partners in exports are Germany, Italy and Bosnia and Herzegovina, followed by Romania, Hungary and Russia in 2020. About 39% of Serbia’s exports goes to the first five countries while 59% to the top ten trade partners. Among them, four EU countries account for one third of total Serbia’s exports (Table 3a). Declining importance of the Western Balkan countries in Serbia’s exports (Bosnia and Herzegovina, Macedonia and Croatia) along with the increase of the share of some EU countries (Germany, Romania, Hungary and Czech Republic) is striking in the observed period. Considering CEFTA 2006, the share of Albania and Moldova

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9 The same dynamic of trade was obvious within the whole CEFTA2006 region.

10 Of total 28 EU members, around 14 are within top 20 Serbia’s trade partners.
is negligible (they are not even among 20 trade partners of Serbia neither in exports nor in imports). Regarding the EAEU, Russia was Serbia’s most important trade partner in the observed period, whereas other four countries did not belong to the first 30 countries in total Serbia’s exports. Despite the notable export growth to Russia, its share in Serbia’s exports slightly increased over the period (from 4.4% in 2004 to 4.7% in 2020).

Table 3: Main trade partners of Serbia

<table>
<thead>
<tr>
<th>Rank</th>
<th>2004</th>
<th>2020</th>
<th>Rank</th>
<th>2004</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Share in Serbia’s exports (%)</td>
<td>B&amp;H</td>
<td>17.8</td>
<td>Germany</td>
<td>12.9</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Italy</td>
<td>12.7</td>
<td>Italy</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Germany</td>
<td>10.0</td>
<td>B&amp;H</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Macedonia</td>
<td>7.3</td>
<td>Romania</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Slovenia</td>
<td>4.4</td>
<td>Hungary</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Russia</td>
<td>4.3</td>
<td>Russia</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Croatia</td>
<td>4.2</td>
<td>Montenegro</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>France</td>
<td>3.8</td>
<td>Macedonia</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Romania</td>
<td>3.5</td>
<td>Czech Rep.</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Hungary</td>
<td>3.4</td>
<td>Croatia</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Ukraine</td>
<td>2.6</td>
<td>Croatia</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td>% of top 10 in total exports</td>
<td>71.5</td>
<td>59.2</td>
<td>% of top 20 in total exports</td>
<td>90.1</td>
<td>83.9</td>
</tr>
<tr>
<td>(b) Share in Serbia’s imports (%)</td>
<td>Germany</td>
<td>14.2</td>
<td>Germany</td>
<td>13.6</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Russia</td>
<td>13.0</td>
<td>China</td>
<td>12.5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Italy</td>
<td>9.9</td>
<td>Italy</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>China</td>
<td>4.8</td>
<td>Russia</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Slovenia</td>
<td>3.4</td>
<td>Hungary</td>
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<tr>
<td>5</td>
<td>France</td>
<td>3.3</td>
<td>Turkey</td>
<td>4.4</td>
<td></td>
</tr>
<tr>
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<td>Hungary</td>
<td>3.3</td>
<td>Poland</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>USA</td>
<td>3.3</td>
<td>Romania</td>
<td>3.1</td>
<td></td>
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<tr>
<td>8</td>
<td>Austria</td>
<td>3.1</td>
<td>France</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Ukraine</td>
<td>2.6</td>
<td>Slovenia</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>% of top 10 in total imports</td>
<td>60.9</td>
<td>61.9</td>
<td>% of top 20 in total imports</td>
<td>80.5</td>
</tr>
</tbody>
</table>

Source of data: Statistical Office of the Republic of Serbia.

In relation to the imports, Serbia’s main partners were Germany and China with 26% of its total imports. The list of top five countries which export to Serbia also includes Italy, Russia and Hungary. These five countries account for 46% of Serbia’s imports. The dominance of the EU countries is also evident in the imports of Serbia (Table 3b). Regarding the imports from CEFTA 2006 integration, it has been relatively low, accounting for only 4% in total imports in last five years. The most significant change in Serbia’s import structure by trading partners has happened in case of China and Russia. The share of Russia in Serbia’s imports dropped from 13% in 2004 to 6% in 2020, while remarkable increase of the imports from China contributed to its growing importance (from 4.8% in 2004 to 12.5% by the end of observed period) and consequently to increasing deficit in trade with that country.

Observing by all trade partners, Serbia’s trade structure is characterized by decreasing importance of top ten trade partners in its total exports (from more 71% in the first observed years to 59% and less, by the end of the period), while their share in imports was relatively stable in the whole period (around 60%; Table 3b). This indicator may also imply larger export market diversification, that is growing dispersion of trade value across Serbia’s trade partners. This has also been confirmed by another indicator used in section 3.2 of this paper.

4.3. Product Diversification of Serbia’s Exports towards the EU, CEFTA2006 and EAEU

The exports toward the EU are concentrated in sector 7 - machinery and transport equipment (approximately 35% by the end of the period), but also includes sector 6 - manufactured goods classified chiefly by materials and 8- miscellaneous manufactured goods in most observed years.11 Concerning Serbia’s exports to CEFTA 2006 integration, the most important sector

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11 The main sectors of SITC in Serbia’s exports to: (1) the EU before 2008 are 6, 0, 8, and after 2008 sectors 7 and 6 are dominant with 0 or 8 in the third place alternately; (2) CEFTA 2006 are sectors 0, 5 and 6 until 2006 and 2013-2015, while sectors 0, 5 and 7 in 2007-2010 and 2016-2020; (3) EAEU: sectors 5, 6 and 7 until 2009, from
was food and live animals which took between one-fifth and one-fourth of total exports to CEFTA 2006 in observed period. The same sector was dominant in Serbia’s exports to the EAEU in the period from 2014 to 2020, whereas sector 6 in most of observed period before 2014, both accounting around 30%.

Table 4: The share of main three SITC sectors and product groups in Serbia’s exports

<table>
<thead>
<tr>
<th></th>
<th>EAEU</th>
<th>EU</th>
<th>CEFTA 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>71.0</td>
<td>70.7</td>
<td>59.8</td>
</tr>
<tr>
<td>2006</td>
<td>72.9</td>
<td>75.7</td>
<td>57.1</td>
</tr>
<tr>
<td>2019</td>
<td>66.6</td>
<td>73.4</td>
<td>55.4</td>
</tr>
<tr>
<td>2020</td>
<td>66.0</td>
<td>70.3</td>
<td>55.4</td>
</tr>
</tbody>
</table>

* SITC classification Rev. 4; level 1

Observing the importance of main three sectors of SITC in total exports toward three integrations, decreasing tendency can be noticed regarding their share in Serbia’s exports to the EAEU (from more than 70% in the first observed years to 66% by the end of the period). Contrary to that, the share of the first three sectors in exports toward the EU varied in the range 70-76% in the whole period, and in the exports to the CEFTA 2006 in the range 55-60% (Table 4a). However, looking at more disaggregated level of SITC than sectoral level, more precise comparison can be made about product diversification of Serbia’s exports. The main five product groups account for 26-37% of total exports from Serbia to the EU in 2004-2020. Additionally, there was decreasing trend of that share in the whole period (26.6% in 2020, Table 4b), indicating growing product diversification of Serbia’s exports to the EU. Unlike the EU, Serbia’s exports toward the EAEU is less diversified: the top five product groups take 42-55% of total exports to that integration. However, it is encouraging that this share has also decreased over time, so that those products accounted for 42.2% of total exports to the EAEU in 2020.

Table 5: Number of product groups sold on the EAEU, EU and CEFTA 2006 market

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EAEU</td>
<td>29*</td>
<td>43</td>
<td>51</td>
<td>68</td>
<td>78</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>(107)</td>
<td>(111)</td>
<td>(124)</td>
<td>(147)</td>
<td>(157)</td>
<td>(153)</td>
</tr>
<tr>
<td>EU</td>
<td>131</td>
<td>140</td>
<td>187</td>
<td>185</td>
<td>202</td>
<td>199</td>
</tr>
<tr>
<td></td>
<td>(223)</td>
<td>(230)</td>
<td>(237)</td>
<td>(245)</td>
<td>(245)</td>
<td>(226)</td>
</tr>
<tr>
<td>CEFTA 2006</td>
<td>186</td>
<td>151</td>
<td>174</td>
<td>176</td>
<td>186</td>
<td>186</td>
</tr>
<tr>
<td></td>
<td>(245)</td>
<td>(241)</td>
<td>(238)</td>
<td>(240)</td>
<td>(242)</td>
<td>(245)</td>
</tr>
</tbody>
</table>

* Out of a total of 262 product groups existing at the SITC 3-digit level; The first row refers to number of product groups with minimum export value of 1 million USD; in parenthesis is number of exported product groups with minimum export value of 10 thousand USD.

Previous conclusions about Serbia’s export product diversification could also be supported by analyzing the number of product groups sold on the observed markets. Judging to this indicator, it seems that the number of product groups exported to the EAEU registered the greatest increase compared to the other two integrations (Table 5). However, less than 80 product groups

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2010 in the most of observed years sectors 0 and 6 were dominant, with 7 or 8 in the third place in some years, while in 2020 sector 5 became the third important sector.

12 The main product group in exports to the EAEU: 057 - Fruit and nuts (not including oil nuts), fresh or dried (17% in 2020); to the EU: 773 - Equipment for distributing electricity (10% in 2020); to CEFTA 2006: 334 - Petroleum oils and oils obtained from bituminous minerals (4.2% in 2020).
with the export value larger than 1 million USD and 153 groups with export value larger than 10 thousand USD are still significantly under the number of product groups sold on the EU and CEFTA 2006 markets. These conclusions coincide with above derived that Serbia’s exports toward those two integrations are more diversified than toward the EAEU.

5. Conclusion

One of main characteristics of Serbia-EU economic relation is significant positive effects of favorable trade regimes even in the period after introduction of trade reciprocity. Furthermore, Serbia’s exports to the EU is much more diversified compared with the EAEU. On the other hand, experience of Serbia’s trade relation with CEFTA 2006 integration shows that despite trade liberalization and removing many impediments to trade, non-tariff barriers, such as administrative barriers, still exist within the region, as well as similar product structure with low value added.

The analysis of trade indicators conducted in this paper related to the EAEU indicates that Serbia benefited from bilateral FTA with Russia in the period after 2000, particularly in the period of the EU sanctions against Russia. This is also due to the fact that Russia diverted its imports to the other countries including Serbia. However, Serbia’s potentials in trade with this EAEU largest market and particularly with the other four EAEU members are still untapped. One confirmation of this may be lower product diversification of Serbia’s exports to the EAEU market, as implied by this analysis. However, FTA between Serbia and the EAEU which is entered into force in 2021 is expected to give more opportunity to boost trade with Russia and to intensify trade with Belarus, Kazakhstan and especially with Armenia and Kyrgyzstan as new markets for Serbia. It could be possible at least in the near future as long as Serbia is in the status of EU candidate country. Mutual benefits could be expected both for Serbia and the EAEU members. FTA with Serbia may also enable the EAEU countries to widen and boost their trade and investments into the whole Western Balkan region. However, to achieve all mentioned, the experience of Serbia’s relations with the EU and CEFTA 2006 could help as a guide in finding solutions for elimination trade obstacles, i.e. various trade barriers, along with the identification of possibilities for the increase of trade diversification in its different forms.

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CEO İtibarı'nın Bibliyometrik Analizi

Özüm Eğilmez

Özet

Anahtar Kelimeler: CEO itibarı, tepe yöneticisi itibarı, bibliyometrik analiz, Web of Science, R programlama dili

1. Kavramsal Çerçeve
Gün geçtikçe yaşanılan değişimler ve krizler itibar kavramının önemi gittikçe artmaktadır. Kavram kendi içerisinde çoklu bir bağlam içermektedir; ancak işletmecilik özelinde genellikle kurumsal itibar ve kişisel itibar olarak başlıca iki kavram çerçevesinde öncelik bulmaktadır. Kurumsal itibar bilindiği üzere rekabet avantajı başta olmak üzere öngörüre çeşitli avantajlar sağlamaktadır.

Kurumsal itibarın bir firmanın en önemli varlığı olduğu görüşü, kurumsal itibarın stratejik bir anlam olması ve dolayısıyla räiplerine karşı potansiyel bir etkinlik verimlilik sağlaması ile temellenmiştir (Barney, 1991). Teorik olarak kaynak tabanlı görüş dahilinde, örgütleri için bir kaynağı stratejik olarak ele alınması demek; o kaynağı (burada süreç, bilgi, yetenek, örgütün özellikleri vb. olgular kaynakların içerisinde sayılabilir) sahibi olan örgütü diğer räiplerden farklı ve kendine özgülük yatıranması, hatta diğerlerinden farklı bir performansa itici bir güç olarak ele alınmaktadır (Weigelt ve Camerer, 1988; Wry, Deephouse, ve McNamara, 2006). Stratejik bir varlık, rekabet üstünlüğü ve bu rekabet üstünliğinin sürdurülerek olması

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CEO itibarı ise bu bağlamda yine kurumsal itibar ile dirsek temasında olagelen bir kavramdır. Benzer şekilde teorik bağlam ise, yine CEO itibarının örgütün karşısında etkili olan bir değişken olarak kabul görmesi ile temellenmektedir (Fuller ve Jensen, 2002). Yönetim kademesinin güvenilirliğin, tanımlılığını, firma yüzü olması, başarılı olması gibi farklı kriterler ile bağdaştırılması, kurumunun da başarısı ile ilintilendirilmektedir.


2. Yöntem


Son yıllarda işlenebilen bilginin sayısına artması ve bunu işleyebilecek araçların geliştirmesi, bu tür bilginin istatistiksel analıma güvenilirliği ile artmaktadır. Bu şekilde veriler nitel olarak ve nicel olarak değerlendirilmektedir. Atıf sayıları, yayınların etki faktörü ve bağlı kurumlar her zaman iki konu hakkında bir takım sıralamalar yapılmasına olanak sağlamaktadır. Biblisyometrik analiz ise, araştırmaın literatürleri derleyerek yaptığı bilyografiden ziyade, elde edilen verilerin dörgeleri ile beraber istatistiksel analizini içermesi ile ön plana çıkmaktadır.

Güncümüzün veri dünyası, hemen her konuda bilgi üretilebilebileceği sağlanmıştır. Herhangi bir konunun uzmanı kendi inceleme alanındaki literatür bilgisine göre rapor üretmektedir. Bir örgüt için dahil ve harici paydaşları konu alabileceği her türlü bilgi, konununun uzmanları tarafından.

3. Bulgular ve Tartışma


**Tablo 1:** Yıl bazında ortalama atıf sayısı
Tablo 2: Yıllık bilimsel yayın sayısı

Şekil 1: CEO itibarı kavramının tematik evrimi

Tablo 3'te gösterildiği gibi veritabanında yer alan Yayınların mense ülkelerine bakıldığında ise, CEO itibarı konusunda en üretken olan ülkenin Amerika Birleşik Devletleri (ABD) (209; %47.936) olduğu görülmektedir. İkinci sırayı ise Çin Halk Cumhuriyeti (55; %12.615) almaktadır olup takibe İngiltere (35; %8.028), Avustralya (24; %5.505), Güney Kore (23; %5.275) ve İspanya (22; %5.046) yer almaktadır. H-İndex'i bağlamında ise yine ABD (46) ön plana çıkmaktadır; Çin Halk Cumhuriyeti (13), İngiltere (12), Singapur (11) ve İspanya ve Kanada (10) olarak sıralanmıştır. Çalışmaların arasında sayıca başı çekmesine rağmen, ortalama atıflar kısmına bakıldığında ise Singapur %47.92 ile ön plana çıkmaktadır. İsviçre ise sadece dört yayına rağmen %47.4 orani ile ön plana çıkmaktadır.

**Tablo 3:** En üretken yirmi ülke ve rakamları

<table>
<thead>
<tr>
<th>Ülke</th>
<th>Makale Sayısı</th>
<th>%</th>
<th>h-index</th>
<th>Atıf Sayısı</th>
<th>Ortalama Atıflar</th>
</tr>
</thead>
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Ülke \( \frac{\text{Makale Sayısı}}{} \) \% \( h \)-index \( \frac{\text{Atıf Sayısı}}{} \) Ortalama Atıflar

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<th>( h )-index</th>
<th>( \frac{\text{Atıf Sayısı}}{} )</th>
<th>Ortalama Atıflar</th>
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<td>16</td>
<td>4</td>
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</tbody>
</table>


Country Scientific Production

Şekil 2: Ülke üretkenliği bazında dünya haritası

Ülkeler arasındaki işbirliklerine bakıldığında ise ABD'nin toplam 65 yayın ile diğer ülkelerle işbirliği yapan ülke statüsünde olduğu görülmektedir. ABD kökeninden çıkarak, İngiltere, Kore, Singapur, Kanada, Avustralya, Fransa, Almanya, İsviçre ve İtalya ile birlikte çalışılmıştır. Direkt işbirliği açısından ABD ve Çin ön plana çıkmakta olup, Çin ile Avustralya, İngiltere, Kore ve Pakistan arasında çalışmalar görülmektedir. Tablo 4'te yer almamasına rağmen Türkiye ise; Bahreyn, Kuveyt, Litvanya ile işbirliği yapmıştır.

Tablo 4: Ülkeler Arası işbirlikleri (20 ülke)

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<th>Nereden</th>
<th>Nereye</th>
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<td>AVUSTRALYA</td>
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</tr>
<tr>
<td>ABD</td>
<td>ALMANYA</td>
<td>4</td>
</tr>
</tbody>
</table>
Ülkeler arası işbirliklerini gösteren Şekil 3, CEO itibarı kavramı çerçevesinde öncülüğü ABD'nin yaptığı ve tüm dünyaya çalışmalarının yayıldığı bir merkez olarak görülebilmektedir.

**Sekil 3: Ülkeler arası işbirlikleri dünya haritası**

ABD'nin yine en çok yayın ve atıf içeren yayıncı (akademik dergi) olarak incelendiğinde önü çıktıgı görülebilmektedir. Burada önemli olan ayrıntı, ilgili kavramın tematik evrimini de desteklediği gerçeğidir.

Tablo 5: CEO itibarı kavramı yer alan kaynaklar

<table>
<thead>
<tr>
<th>Kaynaklar</th>
<th>Makale</th>
<th>%</th>
<th>h-index</th>
<th>Toplam Atıf</th>
<th>Ortalama Atıf</th>
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Makale sayısının öneminden farklı olarak toplam ve ortalama atıfların genel sıralamaya alt üst etmesi, ilgili dergilerin konu bağlamını ve makalelerin içeriklerinin araştırılmasını gerektirmektedir. Bu sebeple CEO kavramını içeren yayınların alan olarak incelemesi ve en fazla yayın yapılan alanın İşletme (Business), İşletme Finansı (Business Finance), Yönetim (Management) ve Ekonomi (Economics) alanlarının olduğu ve en çok atıf alan makalelerin bu alanlarda yer aldığı (5.211;4.266; 4.703; 2.648) görülmüştür. Burada atıf sayıları ve yayın sayılarının çokluğu, yayımlanan yayınların ortak bilim alanları içerisinde yer almasından kaynaklıdır notu hatırlanmalıdır. Takiben, kavramın en fazla çalışıldığı diğer alanlar ise; İletişim (Communications), Etik (Ethics), Psikoloji (Psychology), Hukuk (Law) ve Yöneylem Araştırmaları (Operations Research Management Science) olarak yer almaktadır.
Tablo 6: WOS bilim alanına* göre CEO çalışmaları

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* Çeviri karmaşasının önüne geçmek ve kontrolün sağlanabilmesi adına bilim alanları ayırt etmemiştir.

### Tablo 7: CEO çalışmalarında ön plana çıkan yirmi yazar, yayın ve dergi bilgileri

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<tr>
<th>Ön Plana Çıkan Yazar</th>
<th>Başlık</th>
<th>Yılı</th>
<th>Makalenin Yayınlandığı Dergi</th>
<th>Makalenin Toplam Atıf Sayısı</th>
<th>Makalenin Ortalama Atıf Sayısı</th>
<th>Yazarin Makale Sayısı/Yazara Yapılan Toplam Atıf Sayısı</th>
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<td>348</td>
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<td>The burden of celebrity: The impact of CEO certification contests on CEO pay and performance</td>
<td>2006</td>
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<td>236</td>
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<td>Makalenin Ortalama Atıf Sayısı</td>
<td>Yazara Yapılan Toplam Atıf Sayısı</td>
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<td>2012</td>
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<td>ACADEMY OF MANAGEMENT JOURNAL</td>
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<td>7.88</td>
<td>2/92</td>
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<tr>
<td>BONAIUTO F</td>
<td>Food Reputation Map (FRM): Italian long and short versions’ psychometric features</td>
<td>2017</td>
<td>FOOD QUALITY AND PREFERENCE</td>
<td>6</td>
<td>1.2</td>
<td>2/8</td>
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<td>BONAIUTO M</td>
<td>Food Reputation Map (FRM): Italian long and short versions’ psychometric features</td>
<td>2017</td>
<td>FOOD QUALITY AND PREFERENCE</td>
<td>6</td>
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<td>BURKE JJ</td>
<td>Auditor Response to Negative Media Coverage of Client Environmental, Social, and Governance Practices</td>
<td>2019</td>
<td>ACCOUNTING HORIZONS</td>
<td>9</td>
<td>3</td>
<td>2/10</td>
</tr>
</tbody>
</table>
CEO itibarı olarak yapılan aramalar sonucunda Şekil 4'teki kelime ağacına ulaşılmıştır. Çalışmaların başlarında "ceo", "reputation", "corporate", "evidence" ve "performance" kelimeleri ön plana çıkmaktadır. Bunun yanında, yönetim, yönetim kurulları, firma performansı, sosyal kelimeleri diğer göze çarpan kelimeler olmuştur. Kelime ağacının geneline bakıldığında ise CEO itibarı araması sonucu, farklı alanların CEO ve CEO itibarı konulu çalışmalarla ev sahipliği yaptığı görülmektedir. Anahtar kelimeler incelendiğinde ise itibar (reputation) kelimesi 134 kez ve %10 oranıyla en çok kullanılan anahtar kelime olarak ortaya çıkmaktadır. Takip eden anahtar kelimeler ise performans (104; %8), yönetim (70; %5), kurumsal yönetim (67; %5), sahiplik (55; %4), etki (44; %3), ücret ve tazminat konuları (compensation) (42; %3) ön sıralarda yer almıştır.

Şekil 4: Araştırmaların başlıklarında en çok kullanılan kelimeler

4. Sonuç

CEO itibarı kavramı bağlamında yapılan çalışmalar sonucunda ABD (209), Çin (55), İngiltere (35), Avustralya (24) ve Güney Kore (23) yayın sayıları dikkate alındığında ilk beş ülke olarak ön plana çıkmıştır. ABD en fazla atıf alan ülke statüsünde olmakla birlikte, dünya üzerindeki bilimsel üretimnin de merkezi olma konumundadır. Dünya üzerindeki bilimsel işbirliklerinin de çıkış noktası ABD olmustur. CEO konusunda çalışma yapan yazarlar ise yine ABD menselli dergilerde yayın yapmış olup Academy of Management bu hususta başat aktör olarak karşımıza çıkmaktadır.

Kişi başına ilgili konuda yapılan yayın sayısı ve yazarların toplam atıf sayıları analiz edildiğinde T.G. Pollock (5; 860), S.D. Graffin (4; 401), S. Kim (4; 26), B. Baik ve D.B. Farber (3; 161), D. Gomulya (3; 130) ön plana çıkan yazarlar olmuştur.

Kaynakça


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Evaluation of Marketing Strategies of Retailers Turning to Online Shopping During the Pandemic Period by Content Analysis: The Case of Konya

Ümmü Salıha Eken İnan1  Betül Garda2

Abstract
Chain retailers, which produce solutions for customers who have difficulties in meeting even the most basic needs as a result of the global epidemic, have started to offer services through their websites, especially for their customers who have priority restrictions during the epidemic and then to all visitors who prefer online shopping. Customers who are accustomed to shopping for like products from virtual stores have easily adapted to shopping from virtual retail chains. In this direction, the aim of the study is to investigate the marketing strategies on the websites in shopping from virtual stores, which have increased in the retail sector with the curfews, by using the content analysis method. The universe of the study consists of retailers who sell through virtual markets in Konya. In this context, the contents of seven different virtual stores were evaluated in terms of product, pricing, promotion, and distribution strategies from marketing strategies. Subheadings were created for each strategy and the results of the analysis were examined. As a result of this study, it is expected that researches on contemporary solutions found in epidemic periods in the field of marketing will increase.

Keywords: Online shopping, marketing, marketing strategies

1. Introduction
Retailers, who have to comply with changing environmental conditions, have started to carry out marketing activities through their websites in order to meet the requests and needs of their customers in the lockdown that was implemented with the pandemic period. In order to protect themselves from the negative effects of the epidemic, customers who prefer traditional store shopping in basic consumer products started to research e-markets on online sites that offer product and brand accessibility, different payment options, different delivery conditions, product warranty, product return and ease of use. The issues such as the design of websites, ease of use, security of information to be shared on the site, implementation of pandemic rules in delivery are effective in the decisions of customers. Because there lie a business's efforts to satisfy customers' requests and needs with products and services that offer competitive value in the heart of marketing (Keegan and Green, 2015:4). This importance given to the customer has accelerated the retail sector's transformation of processes into online applications in the Covid-19 pandemic.

Retail is the offer of the products in small batches. Retailing covers all activities of products sold to final customers. Online retailing means that products are sold in batches through their websites. Retailers are expanding from specialized large chains to individual retailers (Pereault et al., 2013:295). It allowed the customers to continue to shop from the retailers they are used to and access the products without encountering any difficulties. Previously, retailers focused on online buying patterns and brand loyalty in online purchases and ignored what motivates customers to shop online (Robinson et al., 2007:89). However, the pandemic has forced them...
to redesign their virtual stores. Thus, they have synchronized their marketing processes with the online environment.

This study evaluates the marketing strategies of retailers who turn to online shopping to meet the requests and needs of customers during the pandemic period using content analysis. Marketing is a social process in which individuals and groups feel and desire, they create, present and exchange the products which they assume to have value (Kotler, 2000). In other words, marketing is known as the planning and implementation process of shaping, pricing, distributing, and holding goods, services, and ideas to ensure changes that satisfy individual and institutional objectives (Trout, 2003:19). Retailers completely activated their virtual stores by rescheduling their business processes. They prepared an environment for their customers so that they choose products without contact, make payments, access all sorts of information from the web pages, and also they receive products without contact. Promotions were continued for purchases made above a certain price, thus customer satisfaction was increased.

2. Literature Review

When the relevant field article was reviewed, the websites were handled from different dimensions and content analysis was carried out. Promotional activities of websites (Perry and Bodkin, 2000:87), site quality (Kim et al., 2004), product information quality, customer service quality and e-business quality (Lim et al., 2009; 839), customer motivations and perceptions (Robinson et al., 2007:89), online experience (Szymanski and Hise, 2000:309), low retailer visibility (Luo et al., 2012: 1131), and visual abstraction (Baxter et al., 2009: 333) were investigated.

Lorenzo, (2017) compared the international content analysis of the websites of Rakuten and Amazon.co.jp by means of 4P while Perry and Bodkin, (2000) analyzed the content of promotional activities on the websites of companies in the Fortune 100, the communication product, pricing, and dealer/retail location information, related and irrelevant advertising, sales promotion, direct marketing, basic company information, and public relations dimensions (Perry and Bodkin, 2000:87).

Kılıç (2020) evaluated the content analysis of websites selling second-hand clothing products in terms of marketing mix strategies (4P) in ten sub-themes under product, price, distribution, and promotion strategies. These sub-themes are the present state of the product, brand availability, product picture, brand information, price information, delivery information, warranty, seller information, consumer reviews, and payment information.

Kim et al., (2004) examined attitudes towards online shopping and retail website quality by comparing American and Korean consumers. The quality of the website; when evaluating information quality, trust, ease of use, visual attractiveness, and process dimensions; Lim et al (2009), e-grocery retailers' websites, contents were examined taking into account product information quality, customer service quality, and e-business quality criteria.

Park and Stoel (2002) examined the website quality of internet clothing retailers considering product information, customer service information, and Web quality. Website content analysis shows that online clothing merchants provide traditional product information but do not provide sensory and experiential product information in fashionable clothing (Park and Stoel, 2002:158).

Candemir et al., (2011) analyzed the content of the marketing mix applications of top 1000 Turkish companies' websites via 4P. They have examined each marketing strategy within their subcategories. These subcategories can be listed as the product (product categories, product specifications, product photos, product campaigns, warranty, information about product insurance, product catalog, other brands of the company, product awards, information about
product innovations, order form), price (price list, currency price list, payment alternatives, price campaigns, spot price campaign, banks), distribution (distribution points and access for dealers, business connection, distributors), promotion (social responsibility, sponsorship activities, participation in fairs and exhibitions, video, catalog, news, press release, games, sales campaigns, photo gallery, competition, joint sales campaigns, references) (Candemir et al., 2011:60).

In their study which they tried to understand the motivations and perceptions of online grocery shoppers in the UK, Robinson et al., (2007) formed four discussion groups. Life events have emerged as the catalyst to start and stop online shopping. In addition, convenience is a motivation for online shopping while problems with deliveries have caused participants to think negatively about the quality of service and forced them not to continue shopping online. Most of the participants saw online grocery shopping as complementary. They concluded that it hasn't improved yet.

In their study of e-retailers, Szymanski and Hise (2000) investigated whether the consumer was barred from e-retail experiences. They examined the effects of consumer perceptions of online convenience, commercial sales (product offerings and product information), site design, and financial security in e-satisfaction assessments. At the end of the research, they found that convenience, site design and financial security were the dominant factors in consumer e-satisfaction assessments.

3. Data and Research Methodology

The aim of this study is to research the marketing strategies of retailers who turned to online shopping during the pandemic period by means of content analysis. The main objective of the research is to examine the implementation level of marketing strategies and sub-strategies. They should correctly position their marketing strategies in their websites so that the customers do not encounter problems in purchasing especially during the periods when access to the shops is limited. At the end of the literature review, it was seen that there were studies in which marketing mix strategies were investigated with the analysis of websites. However, it has been concluded that marketing strategies are not examined in the online stores of the e-market, e-retailer, or retail chains. The importance of research is to contribute in this context.

The universe of research includes the retailers that sell basic consumer goods through their websites. In the study, the retailers whose websites are accessible to give orders were selected by sampling method and marketing strategies of these sites were examined. The retailers included in the sampling are seven different virtual stores such as A101, Şok, Migros, Carrefour, Celikkayalar, Mismar and Torku Doğrudan. The most important limitation of the research is that the virtual stores of retailers with stores in Konya have a limitation on review.

In this study, content analysis of e-retail websites was carried out using the qualitative research method. Content analysis is defined as a family of research techniques to make systematic, reliable or valid, and reproducible inferences from texts and other forms of communication (Drisko and Maschi, 2016:7). In other words, content analysis is one of the most important research techniques in social sciences. He acknowledges that and that it is not feasible to understand social phenomena without understanding how language works in the social world, society is animated in speeches, texts, and other forms of communication (Krippendoff (2004). In addition, the versatility of content analysis to process textual, visual, and auditory data makes this technique extremely powerful. (Stemler, 2015:11).

Within this context, the relevant literature was firstly scanned and the areas where content analysis was performed were taken out within the scope of the research. Content analysis is a preferred qualitative analysis technique in areas such as librarianship (White et al., 2006:22),
marketing (Lim et al., 2009; 839; Kilic, 2020:1025; Park and Stoel 2002:158), health (Macias and Lewis, 2003:43), music (Baxter et al, 2009:333), tourism, education (Vimal and Subramani, 2017:478). Qualitative analysis is the analysis of non-numeric data (Procter, 2003:309), sometimes referred to as the 'soft side' of marketing research (Burns and Bush, 2015:117). Content analysis can also be used in quantitative research. This is not the case for qualitative content analysis when standard procedures are in the way of quantitative content analysis (Elo et al., 2014:1). Due to this feature of content analysis, qualitative content analysis was used in this research.

The content analysis investigates social phenomena by treating data not as physical events but as communications created and spread to be seen, read, interpreted, legislated, and reflected according to the meanings they have for their social use (Krippendoff, 2004). The prerequisite for performing a successful content analysis is that data can be reduced to concepts that define the phenomenon of research by creating categories, concepts, and conceptual systems (Elo et al., 2014:1). In this study, 4P from marketing mix strategies was used in the analysis of websites, and subcategories of these strategies were also analyzed. The four main strategies and sixteen subcategories are shown in Table 1.

Table 1: Content reviewed from online retail websites

<table>
<thead>
<tr>
<th>Web Marketing Strategies</th>
<th>Subcategories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>Product information, product picture, brand information, product catalog, warranty terms</td>
</tr>
<tr>
<td>Price</td>
<td>Price information, payment alternatives, price campaigns, bank options</td>
</tr>
<tr>
<td>Promotion</td>
<td>Sales campaigns, banners, quick access</td>
</tr>
<tr>
<td>Distribution</td>
<td>Mode of delivery, delivery time, order tracking, return conditions</td>
</tr>
</tbody>
</table>

According to the strategies shown in Table 1, seven different e-retail websites have been examined by four academicians and three stakeholders who are experts in their fields. Before the analysis, the academicians and stakeholders were explained why and where the subcategories are included in the categories in terms of research reliability. There should be more than 70% compliance in terms of the reliability of the content analysis. Using the formula; reliability = settlement amount / (settlement amount + amount of unsettlement), the compliance was analyzed. The coding system was created as agreed upon at the end of the review and the findings obtained with these codes were processed in Table 2.

4. Findings of the Research

The findings obtained from this study were processed in Table 2. In the table, the ‘+’ information indicates that the existence of the criteria sought and ‘-’ means that criteria cannot be met. On the web pages of all the online retailers in the table, information such as product information, product picture, brand information, price information, price campaigns, sales campaigns, delivery method, and fast access was found. In addition, Carrefour conducted a coding of “OPDP” (online payment due to pandemic) which indicates that they agreed to pay completely online in order to increase the contactless rate due to the pandemic. Moreover, all the other retailers have offered alternative ways of payment to their customers. The aforementioned payment alternatives include cash payment at the door, electronic payment, contactless payment with a pos device at the door, payment options by entering a password with a pos device at the door. When warranty conditions are evaluated, warranty status is limited to electronic products in A101 and Carrefour. In Table 2, this is expressed by the abbreviation 'EO' (electronics only). According to these results, eight of the sixteen sub-criteria are available on the websites of all
Retailers. In addition, warranty terms are available only on the sites of two retailers and only on electronic products.

Table 2: Evaluation results

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>A101</th>
<th>Şok</th>
<th>Migros</th>
<th>Çalıkayalar</th>
<th>Carrefour</th>
<th>Mismar</th>
<th>Doğrudan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Information</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Product Image</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Brand Information</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Price Information</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Payment Alternatives</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>OPDP</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Price Campaigns</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Bank Options</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Product Catalogue</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sales Campaigns</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Banners</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mode of Delivery</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Delivery Time</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Quick Access</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Order Tracking</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Return Terms</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Warranty Terms</td>
<td>EO</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>EO</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

In the table, ‘+’ indicates the existence of criteria and ‘-’ means the absence of criteria, online payment can be accepted due to the ‘OPDP’ pandemic, ‘EO’ is guaranteed only in electronics.

When the evaluation results in Table 2 are examined, the retailers who were included in the sampling employed the following rates of information about the products in their virtual shops; 100% of product information, 100% of the product image, 100% of brand information, 71.42% of product catalog, 28% of warranty conditions. Among the subheadings of pricing strategies, price information in their virtual shops was found as 100%, payment alternatives 85.71%, price campaigns 100% bank options 57.15%. In addition, the sub-headings of the promotion strategy; 100% of sales campaigns, it has been concluded that posters are among 71.42% and fast access to the site is among 100%. Ultimately, the subheading of distribution strategies; 100% of delivery method, 85.71% delivery time, 42.85% of order tracking, and 57.15% of return conditions on web pages. Figure 1 shows the rate at which sub-strategies are implemented according to the main strategies on the graph.
Table 3 shows the level of implementation of marketing strategies of retailers who turned to online shopping during the pandemic period.

Table 3: Level of implementation of marketing strategies on online shopping sites

<table>
<thead>
<tr>
<th>Online Retailers</th>
<th>Level of Implementation of Marketing Strategies on Online Shopping Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>A101</td>
<td>100%</td>
</tr>
<tr>
<td>Carrefour</td>
<td>93.75%</td>
</tr>
<tr>
<td>Sok</td>
<td>81%</td>
</tr>
<tr>
<td>Migros</td>
<td>81%</td>
</tr>
<tr>
<td>Çelikkayalar</td>
<td>68.75%</td>
</tr>
<tr>
<td>Mismar</td>
<td>75%</td>
</tr>
<tr>
<td>Doğrudan</td>
<td>75%</td>
</tr>
</tbody>
</table>

5. Conclusion

In this research which examined the retailers who sold through their websites during the pandemic period, the application of product, price, promotion, and distribution strategies were examined by content analysis method. During certain periods when the spread rate of the epidemic is high, a lockdown was imposed. During these periods, retailers with traditional stores to meet the needs of customers quickly adapted to the process and reorganized their online sites to conform with shopping. Chain retailers are among the retailers whose websites have been reviewed as part of the research.

At the end of the research, it was concluded that product information, product image, brand information, price information, price campaigns, sales campaigns, quick access, and mode of delivery information were included in the pages of all retailers examined. Customers want to access information about the origin of the products, product specifications, and characteristics of the product. In addition, customers prefer brands where they develop loyalty in some product groups. The existence of the brand along with the picture of the product accelerates the purchase decision of the customers. Information about products is understandable, pictures are clear and
brands are visible. One of the promotional activities that trigger the purchase decision is the creation and sharing of product catalogs. Product catalogs are organized in the form of e-bureaucracy or e-catalog, which allows customers to see, compare and make decisions in a search. In the study, it was concluded that the two retailers did not have catalogs on their sites, but that other information about the product other than warranty was complete.

The other important variable that influences customers’ purchasing decisions is price. In addition to the presence of price information on shopping sites, campaigns/promotions related to prices should be ensured as much visibility as in traditional stores. The effective execution of this strategy provides a competitive advantage. At the same time, having different payment alternatives, including bank options will be effective in the purchase decision. It was observed that all the shopping sites meet the necessary requirements in terms of the variables such as price information, price campaigns and payment alternatives. However, the bank information will allow customers to get the convenience of safe shopping and will be effective in making extra profits from the campaigns their banks offer in certain periods.

It is thought that the strategies obtained from the results obtained in the research findings are located on online sites as sales campaigns and quick access subcomponents should be, but the posters that we are used to seeing in traditional stores are not located in the virtual stores of some retailers, and customers can be selective in perception through posters.

One of the most important issues the customers regard for distance purchases is the mode of delivery, the safety of delivery, timely delivery, order tracking and the availability of return conditions on the sites. Contactless and fast delivery during the pandemic period are among the factors that increase the satisfaction of the customers.

As a result of this research, retailers who make purchases through virtual stores are advised to show their care to their traditional stores in their virtual stores. It is important that retailers that do not have websites or make purchases through their websites immediately complete their initiatives in this regard.

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https://www.mismarsanalmarket.com/uye-olmadan-devam-et#
https://www.sokmarket.com.tr/
Evaluation of Information on Health Measures on the Websites of Konya Province Hotels during the COVID-19 Epidemic Period by Content Analysis Method

Betül Garda¹ Ümmü Saliha Eken İnan²

Abstract

Since the end of December 2019, we have been struggling with the negative effects of the Covid-19 epidemic around the world. This situation has caused a great decline in the tourism sector, the basic building block of which is human. Therefore, in the period of economic uncertainty that has arisen, it is important for the tourism certified hotel businesses in Konya to create trust by announcing the health measures and practices they have taken to their potential customers. Today, corporate web pages of hotels are the fastest means of communicating with potential customers. In this context, the aim of the study is to examine the hygiene and cleaning measures related to the COVID-19 epidemic on the web pages of 39 tourism certified hotel businesses registered in Konya Provincial Directorate of Culture and Tourism. And then it is to reveal the situation in terms of precautions that should be taken. In addition, the reflections of COVID-19 practices on the marketing strategies of hotels; Turning the threat into an opportunity is also evaluated in terms of niche market creation and differentiation efforts.

Keywords: Hotels’ website, marketing, advertising

1. Introduction

The sudden and great shock caused by the coronavirus (COVID-19) pandemic has triggered an unprecedented crisis in the world economy. According to UNWTO, as of October 2020, 100% of destinations worldwide have travel restrictions related to Covid-19. According to the World Tourism Organization, the number of international arrivals decreased by 70% in the first eight months of 2020. The most significant decrease was observed in the Asia-Pacific region as 51% in January-April 2020. This was followed by Europe with 44%, AND Middle East 40%, America 36%, and Africa 35%. It has been noted that the losses in tourism revenues in this context are 730 billion dollars, which is more than eight times the losses suffered by the tourism sector in 2009 due to the global economic and financial crisis (URL-1).

Country governments and tourism industry stakeholders draw attention to the following important points for the reopening of touristic destinations (URL-2):

• Lifting travel restrictions and implementing new health protocols

• Revitalizing demand by regaining the trust of potential travelers with new reliable label applications, health information tables, domestic tourism promotion campaigns for the tourism sector

• Re-planning the tourism sector by preparing comprehensive tourism improvement plans, rebuilding destinations, promoting innovation and investment

However, since the services in the tourism sector are interconnected, it is imperative that governments, local governments and the private sector work in a highly coordinated manner. Those who survive during this crisis will guide the tourism of the future.

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transformation, which is necessary to rebuild a sustainable and strong tourism economy, should be encouraged, strategic cooperation should be established, and the long-term consequences of the current crisis should be foreseen and necessary practices should be implemented. In this context, in our study; The possible marketing strategies and tactics were emphasized by examining whether the accommodation businesses use the health measures taken due to COVID-19 as a promotional and marketing tool on their websites.

2. Data and Research Methodology

The aim of this study is to examine the hygiene and cleaning measures related to the COVID-19 outbreak on the web pages of hotel businesses during the pandemic period by content analysis method and to reveal the situation in terms of the applications that should be. In addition, the reflections of COVID-19 practices on the marketing strategies of hotels; Turning the threat into an opportunity is also evaluated in terms of niche market creation and differentiation efforts. Especially under the current pandemic conditions, it is very important for hotel businesses to inform about health measures in order to ensure the confidence of potential guests. In order for potential customers not to hesitate while making their purchasing decision, health measures on the websites of the hotels should be positioned correctly in terms of marketing strategies. The importance of the research is to contribute to the literature in this context.

Under today's conditions, the use of the Internet has become mandatory to meet all our basic and other needs. The easiest and fastest way for hotel businesses to reach those who tend to postpone the need for a holiday due to their hesitancy in terms of health is the notifications they make on their websites. Businesses that share the health measures and practices taken by taking advantage of this advantage will manage the chaos environment we are in more effectively (Jeong and Lambert, 2001). If hotel businesses turn to health-related notifications that will meet the need for security rather than the lowest price guarantee strategy (Law and Cheung, 2006) in order to increase the effective use of their websites, they will have the advantage of presenting the product at its value. Because providing the hygiene guarantee to the consumers and emphasizing the precautions will increase the perception of high-quality service and meet a more important need. Therefore, under the conditions of the pandemic, it will cause the price to fall into the second plan in the purchase decision. The quality of the information presented on the website is important for those who book online (Yeung and Law, 2003).

The universe of the research is all 39 hotel business websites with tourism certificate registered in Konya Provincial Directorate of Culture and Tourism (URL-3). In the research, hotels with hygiene and cleaning measures related to the COVID-19 outbreak on their web pages were selected using the convenience sampling method, and their reflections on marketing strategies were examined by comparing them with the necessary practices. The most important limitation of the research is to examine the website of the hotel business located within the borders of Konya province between 1-5 October 2021. Since the study reveals the activities of the websites in a certain time period, the website may have been renewed after the evaluation process.

Content analysis was chosen as the research method because the purpose of the study was to examine the notifications of hygiene and health practices on the web page. Content analysis is defined as an unbiased and numerical method used to measure the variables in the text (Vimal and Subramani, 2017: 478). Scanning model, one of the qualitative research techniques, was used to collect data about hotel websites. For each website visited, an evaluation form arranged according to 17 criteria was used. These criteria are determined according to the Hospitality criteria found in the 'Global Guide to Restarting Tourism' published by UNWTO on 28 May 2020 (URL-4). The hotel management criteria stated in Table 1; It is specified under three
headings: Hygiene and Operations, Product and Promotion, and Strategic Cooperations. Evaluation of each criterion in the evaluation form is marked as yes (+) and no (-).

In accordance with the criteria in Table 1, the websites of 39 hotel businesses were examined by four academicians and three stakeholders who are experts in their fields. Before the examination, it was explained to the academicians and stakeholders in which category the sub-categories were included in terms of research reliability. Coding similarities and differences were compared to determine the coding reliability of researchers working in data analysis. The percentage of reliability indicating agreement between different researchers should be at least 70% (Yıldırım and Şimşek, 2006: 233). The agreement between the researchers in this study was determined as 95%.

Table 1: Criteria examined in hotel business websites

<table>
<thead>
<tr>
<th>New health protocols in hotel management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hygiene &amp; operations</strong></td>
</tr>
<tr>
<td>1. Increase the frequency of cleaning in common areas and contact surfaces.</td>
</tr>
<tr>
<td>2. Inform guests in an easy and up-to-date manner about available protocols (eg time of last cleaning, contact of health manager, etc.).</td>
</tr>
<tr>
<td>3. Discover new methods such as electrostatic sprays, ultraviolet light, among others.</td>
</tr>
<tr>
<td>4. Practice contactless check-in and provide guests with a hygiene welcome kit (including gloves, mask, disinfectant).</td>
</tr>
<tr>
<td>5. Learn more about your guest prior to arrival to provide a more personalized service.</td>
</tr>
<tr>
<td>6. Have spare rooms available for potential sick or quarantine guests.</td>
</tr>
<tr>
<td>7. Maintain physical distancing for use of all common areas</td>
</tr>
<tr>
<td>8. Use technological systems such as the “guest messaging system” to communicate directly and quickly with guests about possible situations such as reservations, refunds, cancellations or possible infections.</td>
</tr>
<tr>
<td>10. Create positions such as hygiene manager and guest representative.</td>
</tr>
<tr>
<td><strong>product and marketing</strong></td>
</tr>
<tr>
<td>12. Add new services such as food delivery or takeout (picnic) service, family experiences, co-working spaces, accommodation packages.</td>
</tr>
<tr>
<td>13. Promote domestic tourism using proximity in the short term by strengthening the local value chain (eg local producers)</td>
</tr>
<tr>
<td>14. Implement a variety of tactics to promote corporate values to local service providers and staff.</td>
</tr>
<tr>
<td><strong>strategic collaborations</strong></td>
</tr>
<tr>
<td>15. Establish strategic collaborations with health and hygienic product brands.</td>
</tr>
<tr>
<td>16. Build alliances with health centers and health care providers.</td>
</tr>
<tr>
<td>17. Carry out joint public relations and publicity activities with local suppliers, local governments and other stakeholders in the industry.</td>
</tr>
</tbody>
</table>

URL-4: UNWTO, 2020:16-18

3. Findings of the Research

There are 39 hotels with tourism certificates registered in the Provincial Directorate of Culture and Tourism in Konya. 4 of these hotels are specially certified, 2 of them are 2-star, 16 of them are 3-star, 9 of them are 4-star and 8 of them are 5-star.
According to Figure 2, 1 of the specially certified hotels, 4 of the 3-star hotels, 2 of the 4-star hotels, and 6 of the 5-star hotels have health precautions information regarding the COVID-19 period. However, data on the period of COVID-19 were not found in 2-star hotels. Accordingly, 33.3% of Konya hotels have COVID-19 precautionary information on their website.

As seen in Figure 3, all 5-star hotels in Konya have Safe Tourism Certificates. 7 of the 4-star hotels and 14 of the 3-star hotels have the Safe Tourism Certificate. However, no data on Safe Tourism Certificate was found in 2-star hotels with special certificates. In this case, 74.4% of Konya hotels have Safe Tourism Certificate.
Figure 3: Hotels with safe tourism certificate by class

Table 2 shows the list of hotel businesses operating in Konya, who use the precautions taken during the COVID-19 pandemic period on their website for marketing purposes. As shown in Table 1, 11 criteria were evaluated under the title of Hygiene and Operation, 1 criterion under the title of Product, 2 criteria under the title of Promotion, and 3 criteria under the title of Strategic Cooperations. It has been determined that the sharing of hygiene and operation information is 100%, product information sharing is 84.6%, promotional activities are 69.2% and strategic collaborations are 38.5% in the hotel businesses included in the sample.

Table 2: Evaluation results

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Class</th>
<th>Hygiene &amp; Operations</th>
<th>Product</th>
<th>Promotion</th>
<th>Strategic Collaborations</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEDEMAN</td>
<td>5</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>ANEMON</td>
<td>5</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>NOVOTEL</td>
<td>5</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>RAMADA PLAZA</td>
<td>5</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>GRAND MILLENIUM</td>
<td>5</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>BAYIR DIAMOND</td>
<td>5</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>BERA</td>
<td>4</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>HILTON GARDEN INN</td>
<td>4</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>İBİS OTEL KONYA</td>
<td>3</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MERAM SEMA</td>
<td>3</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ÖZPARK OTEL</td>
<td>3</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>ADNANBELY OTEL</td>
<td>3</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SIELLA SİLLEHAN</td>
<td>SPECIALLY CERTIFIED</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
As can be seen in Figure 4, the hygiene and operation rates of all hotels were determined as 100%. The product is 100%, the promotion is 100%, but the cooperation rates are 50%. While the hygiene and operation, product and promotion rates of 4-star hotels are 100%, their cooperation rates are 50%. Hygiene and operation rates in 3-star hotels are 100%, product, promotion and strategic cooperation is 25%. While hygiene and operation, product is seen as 50% in our specially certified hotel, no effort on promotion and cooperation has been detected.

**Figure 4:** Implementation level of criteria by hotel class

![Graph showing implementation levels of criteria by hotel class](image)

In Table 3, the level of implementation of marketing strategies by retailers who turned to online shopping during the pandemic period is shown proportionally.

**Table 3:** Implementation level of marketing strategies on websites of hotel businesses

<table>
<thead>
<tr>
<th>Hotels</th>
<th>Applications level (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEDEMAN</td>
<td>100</td>
</tr>
<tr>
<td>ANEMON</td>
<td>75</td>
</tr>
<tr>
<td>NOVOTEL</td>
<td>100</td>
</tr>
<tr>
<td>RAMADA PLAZA</td>
<td>100</td>
</tr>
<tr>
<td>GRAND MILLENNIUM</td>
<td>75</td>
</tr>
<tr>
<td>BAYIR DIAMOND</td>
<td>75</td>
</tr>
<tr>
<td>BERA</td>
<td>75</td>
</tr>
<tr>
<td>HILTON GARDEN INN</td>
<td>100</td>
</tr>
<tr>
<td>IBIS OTEL KONYA</td>
<td>50</td>
</tr>
<tr>
<td>MERAM SEMA</td>
<td>25</td>
</tr>
<tr>
<td>ÖZPARK OTEL</td>
<td>100</td>
</tr>
<tr>
<td>ADNANBAY OTEL</td>
<td>25</td>
</tr>
<tr>
<td>SIELLA SILLEHAN</td>
<td>50</td>
</tr>
</tbody>
</table>
5. Conclusion

For the management of the crisis caused by COVID-19, first of all, social, economic and social developments should be followed and the crisis should be defined in detail. This is followed by the analysis of the data. According to the results of the analysis, solution proposals should be developed and implemented. Emergency planning should be concluded by evaluating and observing the latest results. The purpose here is; It is to minimize the negative effects of the crisis caused by COVID-19 and to evaluate the opportunities it creates. When the announcement rates of health-oriented measures on the websites of hotel businesses and their reflections on marketing strategies during the pandemic period were examined, the following results were obtained:

- The measures taken against the risks during the pandemic period in 5-star hotels were applied to the marketing strategies at a rate of 50%, and the environment of trust created for potential customers was reflected on the websites. This rate is 50% in 4-star hotels and 25% in 3-star hotels.
- Dedeman hotel most actively reflected the conditions of the pandemic period in its relational marketing practices. It drew attention to the measures with the slogan of "Stay Safe Manifesto". With the slogan of 'Stay Curious, Stay Excited', health conditions attract attention within the scope of creating new products.
- Although Anemon hotel does not reflect its strategic collaborations on its website, it has used the website effectively in terms of product and promotion. Classically, he shared his applications collectively under a separate title as 'Covid 19 Precautions'.
- While Novotel Konya does not share its applications in the context of touristic products and promotion on its website, there are all applications related to the marketing mix on its international main website. The 'All Safe Label' has been emphasized and used, and protocols and standards have been shared in detail.
- Ramada Plaza prominently emphasized the 'WTTC Safe Travel' Certificate as an element of trust. With Enhanced Health Protocols and 'Commitment Video', it tried to improve the perception of trust in its guests, unlike other 5-star hotels.
- Grand Millennium and Bayır Diamond shared all their precautions and practices in detail under the title of "Hygiene Guidelines".
- Bera hotel used the pop-up window application to draw the attention of visitors to its website to hygiene practices. In addition, there is a Hes Code user guide on the site.
- Hilton Garden Inn actively benefited from the website during the pandemic period in terms of product and promotion by giving detailed information about 'Cleanstay Applications'. He shared in detail the brands he used to create hygienic environments and the companies he cooperated with.
- Ibis hotel emphasized health practices under the heading of Security. Meram Sema and Adnanbey hotel deemed it sufficient to share the 'safe tourism certificate' as a picture.
- Özpark hotel shared the Facility Outbreak Plan in detail and constantly emphasized the responsible personnel.
- Siella Sillehan, on the other hand, brought room hygiene to the fore by completely closing the food and beverage unit due to the epidemic.
- The crisis management plan is based on preventing the loss of market share by actively fighting the crisis and returning the activities of the business to its normal course quickly (Bilgin, 1998:51). Based on this basis; Among the Konya hotels, Dedeman, Ramada Plaza and Hilton Garden Inn are the hotels that use the website most actively during the crisis.
- With the crisis management plan implemented by hotel businesses, which aim to overcome the crisis caused by COVID-19 with the least damage, it is tried to eliminate the threat and keep the losses at the lowest level. It would be appropriate to create a "precautionary
data bank” by considering the experience and mistakes experienced during the crisis and to have emergency plans ready in the light of these data.

• During the economic crisis caused by COVID-19, businesses and governments primarily decide to reduce expenditure items other than mandatory expenditures. Most of the senior managers do not see promotional activities such as advertising and promotion as a compulsory method of developing image in crisis situations (Kotler 1998: 182). However, it is estimated that people who have to spend time in a closed home environment within the framework of the fight against the epidemic, based on their experiences during the pandemic period, will tend to nature tours and rural tourism activities individually instead of mass tourism activities. This situation will lead to an increase in tourism revenues if the hotels in the regions with unspoiled natural environments both have the comfort suitable for hygienic health conditions and take measures to protect the nature. In addition, the emergence of new types of tourism can be considered. In this case, it can be thought that planning advertising and promotional activities in a way that will guide new touristic trends will have a distinctive effect.

References


URL-2: https://www.unwto.org/international-tourism-and-covid-19


Does China Challenge Integration Perspective of the Western Balkan Countries?

Danijela Jaćimović¹  Nikola Milović²  Tanja Miščević³  Marta Radenović⁴

Abstract

It appears that enlargement to include the Western Balkan countries has begun to operate quite differently from the process as experienced in Central and Eastern Europe, where geopolitics consistently played an important role in their convergence. Russia has had traditionally strong historical, cultural and religious ties with the Western Balkans. Furthermore, the presence of China has become increasingly visible through their investment in infrastructure, notably in transport, energy and industrial production, as well as the development of the Balkan Silk Road, especially after the financial crisis of 2008. For each step forward in the integration process in the Western Balkans, there have been powerful pull and push factors, of almost equal strength, that have created the feeling that the path to the EU is a two-steps forward and one step back process. The underinvestment in the infrastructure sector is a chronic problem in the West Balkans, and thus China’s entry in the region may partially contribute to finding solutions to the problem. In this regard, China’s involvement could be seen as compatible with the interests of the Western Balkan countries, and even perhaps with the interests of the European Union.

Key words: EU, China, Western Balkan, enlargement, infrastructure.

1. Introductions

It appears that enlargement to include the Western Balkan countries has begun to operate quite differently from the process as experienced in Central and Eastern Europe, where geopolitics consistently played an important role in their convergence. Russia has had traditionally strong historical, cultural and religious ties with the Western Balkans. Furthermore, the presence of China has become increasingly visible through their investment in infrastructure, notably in transport, energy and industrial production, as well as the development of the Balkan Silk Road, especially after the financial crisis of 2008. For each step forward in the integration process in the Western Balkans, there have been powerful pull and push factors, of almost equal strength, that have created the feeling that the path to the EU is a two-steps forward and one step back process.

However, enlargement has turned into a matter of geopolitical competition, currently, we can observe competition between the EU, Russia, Turkey and China in Western Balkan and a deep crisis of EU governance, both internally and externally. In the meantime, China has become the most prominent third actor in the Western Balkans, being much more present than Russia or Turkey, the traditional partners for the region. China’s relations with the Western Balkan countries should be viewed in 3 dimensions. The first dimension is its bilateral relations, through which China has dedicated itself to developing friendly relationship with the Western Balkan countries. The second dimension is evident in China-CEEC relations, that is the so-called 17+1 framework which can serve as a complimentary mechanism alongside bilateral relations. The third dimension is the Belt and Road Initiative (BRI), where the BRI focuses on trade, investment, connectivity and people-to-people exchange. After Chinese President Xi

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Jinping put forward the Belt and Road Initiative at the end of 2013, the 17+1 has been integrated into the BRI and this move raised significant concern in Brussels.

China’s approach with loans and construction work on infrastructural projects in the Western Balkans has been widely welcomed and its acceptance both by the regional leaders and by citizens has surprised everybody. That is why China’s active policy in this region has, to some degree, made the EU suspicious of Beijing’s intentions, which may undermine the EU’s coherence in policymaking on China. There are two groups of reasons for concern: the political and the technical. The political concerns are connected with the Common Foreign and Security Policy (CFSP) and the obligation of candidates for EU membership to progressively align with common decisions regarding their geostrategic relationship with China, and new developments with the US. Technically, the obligation to accept and implement the EU acquis will need to bring more transparency in public procurement, more stringent environmental rules, and respect for Intellectual property rights (IPR), which might put those countries that are on the path to the EU on a collision course with China.

Since the launch of the ambitious Belt and Road initiative, China has been constantly called out for its so-called “debt trap diplomacy” schemes, referring to Chinese involvement in costly infrastructure financing throughout the weak economic systems of the developing world. The situation around public debt in Montenegro has become an extremely debatable topic, as recent infrastructure project financed by the Chinese Exim Bank have led to mounting debt. On the other hand, underinvestment in the infrastructure sector is a chronic problem in the West Balkans, and thus China’s entry in the region may partially contribute to finding solutions to the problem. In this regard, China’s involvement could be seen as compatible with the interests of the Western Balkan countries, and even perhaps with the interests of the European Union.

2. EU-China relations: prospects

The relations between EU and China started in 1975. EU and China are long-time trading partners, based on partnership strategic created in 2003 (Kwok, Lau and Summers, 2018). In the last decade we can notice a unique deepening and widening bilateral economic relations between the EU and China. This process started from China’s entry in the WTO in 2001, when their bilateral trade relations and partly of direct investments dramatically increased. The economic relations between the EU and China is problematic because China has increasingly become strategic competitor to the EU while China still failing to reciprocate market access. Also China economic policy toward Western countries make EU aware of fact that China is tough competitor. The key to China’s rising power was an export-oriented strategy with selective opening up and liberalization. The rapidly developing EU and China relations have influenced on all areas of activities, especially trade which have the centerpiece of bilateral cooperation. Since China joined the WTO, the EU’s exports in goods to China have grown on more than 10% a year and service export by over 15% (Bahri, 2010). This had benefits for EU consumers and producers, but imports from China have also grown rapidly and caused some disruption in the EU labour and product markets.

EU is the largest partner to China, while China is the EU’s second largest partner. In order to understand currently level of economic relations between EU and China, it is important to compare certain economic sectors between this two partners. It is obvious that the European economy is based largely on service sector and China on industry sector. Europe and China trade is worth more than a billion a day. The EU main export to China are motor vehicles, chemical products, aircraft and other transport equipment. In the meantime, the EU main import from China are industrial products, clothing, knitwear telecommunications equipment (Statista, 2021). China revealed competitive disadvantages in travel services, transport and non-monetary gold. The trade balance between EU and China is composite. Only Gemany, Sweden
and Finland have surplus in goods with China, and 44 percent of EU exports to China is originated from Germany. Other 25 member states have trade deficit with China. The largest have Netherlands, followed by United Kingdom than Italy.

Currently, European Union have a trade deficit with China, although the EU general trade balance is positive. In 2020, EU exports in goods to China was 202.6 billions € and European Union imports in goods from China 383.4 billions €. On the other hand EU has a positive trade balance with China with 19.7 billions € in 2020 (Hanemann and Huotariu, 2018).

Foreign direct investment flows between China and the EU are related to trade. From 2008 until 2017, the stock of the European Union FDI in China has risen from 54 billion € to 178 billion €. Meanwhile, stock of China’s FDI to EU grew nearly tenfold reaching 59 billion in 2017 (Melchers, 2021). In last few years EU FDI in China has declined. The EU player have complained for many barriers faced in China where investor protection is poor and market access is uneven. But situation became differen when Chinese FDI in the EU declined by 40% from 2017 to 2018. (Bahri, 2020) Total Chinese outflows FDI have began to decrease because Beijing’s stronger capital controls and domestic credit but also stricter screening procedures in investment implemented by EU countries. In 2020, EU and China reach agreement in principle on investment. This agreement will create better balance between China-EU trade relations. The European Union has been traditionally much more open to China for FDI. Also China commits to open up number of key sectors to the EU. As the comission president Ursula Von der Leyen said this agreement will rebalance economic relations with China (EU Comission, 2021).

However, trade and FDI are not only important part of EU and China cooperation. Movement of people between this to economies is an important part of partnership. Most notably, EU become the second most popular destination for Chinese tourists, attracting 13% of Chinese outbound visitors and China become largest travel market in terms of outbound travels (Garcia-Herrero, Kwok, Xiangdong, Summers, Yansheng, 2017). More than 60 flights between EU and China every week, bring 6 million of Chinese visitors to the EU in 2018. European Union residents can visit Chinese 19 cities for up to 72 hours with visa-free transit arrangement. In the 2017. EU residents spent nearly 3 billion € in China, while China residents spent nearly 7 billion € in EU. Also the largest group of students who are not from EU comes from China. Chinese applicants to universities in UK increased by 30 percent in 2019 (The Guardian, 2019). Also, Germany and France are top destination for students from China.

The ability of China and EU to engage effective on human rights will be important measure of the quality of the bilateral relationship. Still, there is so much work to be done in field of human rights where there is biggest disagreement between China and EU. This issues are very senstive because for EU is difficult to interfere in Chinese internal organization and policy but on the other hand China refused to admit any abuse of human rights.

The European Union and China have many common interests in energy and climate change issues. EU and China are significant importers of energy and both shared some concerns about energy security. Both economies have made development of non fossil fuel resources and they are starting to rapidly increase use of renewables. In 2016, China and EU signed roadmap agreement of energy cooperation that will promote bilateral collaboration and exchanges in energy infrastructure, security, market transparency and others. In the future, EU and China aim to strengthen cooperation in low carbon energy system, standard setting, energy legalisation and policy (García-Herrero at al., 2017). We must point that companies in the EU hold 40% of world’s patents for renewable energy technologies. Also China become significant investor in energy sector globally. From 2010 to 2014, China invest in energy in the EU amounted to 18.17 billion € (EU Comission, 2019). Neither the China nor EU want to see strong protectionism in
energy sector and both of them were big supporters of the nuclear deal with Iran. We must say that EU and China were strong supporters of the climate deal in Paris 2015. China is the world’s biggest carbon emitter and in the same time the largest investor in renewable energy. The EU welcomes the role that China have as one of the biggest brokers of the Paris Agreement. A commitment of China to peak their emissions before 2030 would give stimulus to fight climate change globally. Also we must notice that EU is a leader in global climate governance long period and in the 22nd EU-China summit held last year EU recognized China as a global partner in reducing greenhouse gas and preserving biodiversity. Also EU encouraged China to be even more ambitious.

The enormous growth of Chinese ICT companies ranging from mobile infrastructure, financial technology, software and hardware to e-commerce means that Chinese companies may pass their Western counterparts in these areas (García-Herrero at al., 2017). The products and services that EU and China create and design together may become as important as what they sell to each other. The role played by Chinese and European actors in the global innovation network vary across industries and also are changing over time. Fundamental new technologies remain in domain of European multinational cooperations. But we have to point out that many of this MNCs are located in China. Large number of young, comparatively low cost and hardworking Chinese engineers have become integral part of these MNCs. Also, bilateral relations between China and EU is reflected in innovation networks growth between universities and research bodies 2003 (Kwok, Lau and Summers, 2018). For example in 2017 an agreement has been made between China Construction Bank International and Oxford University on regenerative medicine and engineering research. So we must conclude that in the field of innovation, technology and science there is a lot of common interests for both.

3. China and Western Balkans: challenges

The Chinese Belt and Road Initiative represents a transcontinental long-term policy and investment programme with the aspiration to provide infrastructure development and the acceleration of the economic integration of countries along the route of the renowned Silk Road. China’s President Xi Jinping launched the Initiative in 2013.

The main objective of the BRI is providing connectivity between the Asian, European and African continents as well as their adjacent seas, while establishing and strengthening partnerships among the countries taking part in the initiative. At the time of writing, 143 countries are taking part in the Initiative (Belt and Road Portal, 2021). The BRI covers six development corridors of transportation, energy, and telecommunications infrastructure. The BRI also encompasses the 21st Century Maritime Silk Road which connects China to Southeast Asia, Indonesia, India, the Arabian Peninsula, Somalia, Egypt and Europe.

The funding for the Belt and Road Initiative is be provided by policy banks (the Agricultural Development Bank of China (ADBC), the China Development Bank (CDB) and the Export-Import Bank of China (CHEXIM)), state owned banks (the Agricultural Bank of China (ABC), the Bank of China (BOC), the China Construction Bank (CCB) and the Industrial and Commercial Bank of China (ICBC)), state owned funds (the China Investment Corporation (CIC) and the Silk Road Fund (SRF)), and international financing institutions (the Asian Development Bank (ADB), the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB)). To fully fund BRI projects, approximately 4 to 8 trillion USD will be needed, using diverse funding channels such as BRI bonds, private capital investment and public-private partnerships (PPP), but also State-Owned Enterprise (SOE) (Belt and Road Initiative, 2021).

In Europe there are different impressions of the BRI and the accompanying 17+1 countries taking part in the initiative (where 17 are states in Central and Eastern Europe while 1 represents
China). In general, the BRI is perceived as the major strategic initiative coming from China with a strong mercantile and investment component around the principal transport routes that connect China and Europe. Another feature of the EU view of the BRI is that Europeans see it mostly as being an issue between China and Europe, while other countries in between are considered intermediate steps and not Chinese policy targets per se. The in-land Chinese and China-close neighborhood role of the BRI are not very visible in European explanations and assessment (Hackaj, 2018).

Nevertheless, China’s role as an infrastructure developer is quite visible in the transport and energy sectors. In the Balkans, an array of high-speed railway lines, motorways and power stations are being planned, financed and built by Chinese companies. Chinese infrastructure projects in the wider SEE region total an estimated €9 billion (CEFTA, 2018). The economic presence of China in the Western Balkans Six (WB6) countries is framed in terms of the BRI. Chinese investment provides the Western Balkans countries with a significant inflow of capital. Infrastructure financing, which often leads to lending to sovereign nations or the use of a sovereign guarantee, can create challenges for sovereign debt sustainability. In this case the creditor itself is a sovereign entity, and is linked to the aforementioned policy banks, creating challenges that often affect the bilateral relationship of the two governments (Hurley et al., 2018).

However, China has been constantly called out on the ‘debt trap diplomacy’ underlying its BRI or new Silk Road approach. This type of diplomacy refers to offering projects/loans on terms that end up being too difficult for countries to repay, eventually compelling them to accept political or economic concessions instead (e.g. Sri Lanka or the Maldives). The primary aim of the BRI is not to put countries in a debt trap to seize their assets. Some analysts say it is clear that China has approached its investments strategically and has factored in the host countries’ abilities to repay loans (The Wire, 2021). China is considered an economic powerhouse that wields enormous financial leverage, which in turn brings political influence, making it harder for poorer countries to assert their interests.

For the WB6 countries, we consider the movement in a country’s overall public debt-to-GDP ratio, as well as the concentration of that debt with China as a creditor. The level of government debt is presented in the following table:

**Table 2: Public debt (% GDP) in Western Balkans countries, 2012-2020**

<table>
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</thead>
<tbody>
<tr>
<td>Montenegro</td>
<td>57.6</td>
<td>58.7</td>
<td>65.2</td>
<td>63.4</td>
<td>63.3</td>
<td>70.1</td>
<td>76.5</td>
<td>103.3</td>
<td>92.2</td>
<td>84.2</td>
</tr>
<tr>
<td>Serbia</td>
<td>58.8</td>
<td>70.4</td>
<td>74.7</td>
<td>67.5</td>
<td>59.2</td>
<td>53.7</td>
<td>52.1</td>
<td>58.3</td>
<td>60.7</td>
<td>60.4</td>
</tr>
<tr>
<td>North Macedonia</td>
<td>34.0</td>
<td>38.1</td>
<td>38.1</td>
<td>39.9</td>
<td>39.4</td>
<td>40.6</td>
<td>40.2</td>
<td>51.2</td>
<td>53.5</td>
<td>54.2</td>
</tr>
<tr>
<td>Albania</td>
<td>65.6</td>
<td>72.4</td>
<td>72.7</td>
<td>72.4</td>
<td>70.2</td>
<td>67.7</td>
<td>66.3</td>
<td>76.1</td>
<td>74.9</td>
<td>73.2</td>
</tr>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>37.7</td>
<td>40.2</td>
<td>40.3</td>
<td>39.0</td>
<td>34.7</td>
<td>33.4</td>
<td>32.2</td>
<td>37.4</td>
<td>38.2</td>
<td>38.0</td>
</tr>
<tr>
<td>Kosovo*</td>
<td>9.1</td>
<td>10.7</td>
<td>13.1</td>
<td>14.4</td>
<td>16.6</td>
<td>16.9</td>
<td>17.5</td>
<td>21.83</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*In line with UNSC Resolution 1244/1999
(f) - forecast
Source: European Commission (2021)
Note: Data on public debt for all WB countries are from the Central Bank/Ministry of Finance websites of each country.
According to the Ministry of Finance, Montenegro’s public debt in 2020 amounts to €4,330 million, and has exceeded 100% of GDP, i.e. it stands at 103.28% of estimated GDP. External debt stands at €3,835 million, i.e. 91.46% of GDP, with domestic debt at €495.56 million (11.82% of GDP). In terms of external debt, the largest share of individual lenders relates to debt to China's Exim Bank, totaling €640.54 million. The increase in government debt in the fourth quarter of 2020 was primarily due to the issuance of bonds on the international market in the amount of €750 million. Additionally, the increase in debt was influenced by the withdrawal of credit funds for the implementation of infrastructure projects, primarily the construction of the priority highway section Smokovac-Uvac-Matesevo, in the amounts of US $13.46 million and €7.71 million.

Serbia’s public debt stood at €27,055 million at the end of 2020, while its external debt stands at €15,235 million. In terms of direct liabilities on foreign debt, Serbia has no debts with Chinese banks.

North Macedonia's total public debt stands at 59.5% of GDP, or €6,527 million, while the goverement debt stands at 50.7% of GDP. At the end of the fourth quarter of 2020, the external debt of the central government was €2,606,0 million. In the structure of that public debt, there are no evident Chinese banks loans, but there are an array of capital projects, some of which are being implemented under the BRI umbrella, which contributed to an increase public debt in the period 2017-2019.

In Albania, public debt at the end of 2020. amounts to 1,223 million leke, out of which 1.51 mil. represents an euro debt to China, based on bilateral lending.

In Bosnia and Herzegovina, public debt amounts to 11,561.2 million KM at the end of 2020. There are no Chinese loans in the debt portfolio. The largest creditor is the European Investment Bank with an outstanding loan of 2,019.54 million KM, at the end of 2020.

As regards Kosovo, the level of public debt at the end of 2020. was €1,487.69 million, with external debt of €525.8 mil. or 7.55% of GDP. The domestic debt is actually larger and amounts to €961.90 mil. Observed in terms of individual creditors, the largest part of the external debt is from IDA (€132,2 mil.) There are no Chinese creditors in the debt portfolio.

Focusing on the data for 2020, and the forecasts for 2021 and 2022, for both EU Member States and WB6 countries, we cannot see a pattern of rising indebtedness of all countries participating in BRI. The structure of a country's debt portfolio plays a significant role in the story of public debt sustainability. However, Hurley et al. (2018) identified in their research that, among the mentioned countries, Montenegro finds itself in a position to come under additional debt distress in the process of BRI-related financing, i.e. highway construction. It should be noted that Montenegro's loan from the Chinese Exim Bank is being used for investment in infrastructure, i.e. highway construction, which represents a key to increasing productivity and growth. Research has shown that public debt may undermine growth at very high levels of indebtedness, but Montenegro expects that the public debt to GDP ratio will fall, once the GDP growth rate turns positive again.

Even though there are numerous claims of China’s “debt trap diplomacy”, it is not safe to assume that it is all part of a Chinese prearranged strategy to impose Beijing’s role as financier and investor. A better explanation might be that Chinese participants who deal with distorted economic and political incentives approve more BRI deals (Ferchen and Perera, 2019).

3. Political and technical concerns over China’s presence in the Western Balkans
Over the past decade, China has become the most prominent third actor in the Western Balkans, being much more present than Russia or Turkey, the traditional partners in the region. China’s approach is not new, and has been used in other parts of the world, with loans and construction work on infrastructural projects (Zweers et al., 2020), but its acceptance both on the part of the leaders of the WB6, as well as by citizens, has surprised everybody. The issue is even more of a reason for concern when European integration is the main strategic goal for all the WB6, meaning that their laws, procedures and practices have to be aligned with those that exist and that have been developed in the EU.

Bearing all this in mind, there are still two group of reason for concern and areas for those regional countries to consider: these are the political and technical spheres.

The political considerations are connected to the EU Common Foreign, Security and Defence Policy and the obligation of candidates for EU membership to progressively align with common decisions that the EU 27 might reach regarding their geostrategic relationship with China, and new developments with the USA. As we said, Western Balkans governments, being increasingly disappointed by the lack of progress in EU accession, welcome greater Chinese economic engagement in the region. However, despite the many advantages of China’s economic engagement both for China, on the one hand, and the EU and WB countries themselves, on the other, the model of Chinese state-led engagement can run contrary to the EU’s reform agenda (Shopov, 2020).

The technical group of reasons are closely connected with the WB6’s obligation to accept and implement the EU acquis. Of course, that type of obligation is not something that China should follow so closely, but bearing in mind the level of its engagement in the Balkans, it can (and indeed already does) create a lot of ‘lifting of eyebrows on the part of Europeans’. Let us list some of those concerns.

One of the most important issues for the accession countries is to reform public procurement as reflected by its inclusion in the ‘fundamentals’ cluster in the new enlargement methodology, because public procurement needs to facilitate open market competition and take place in a transparent process that is open to all companies on the basis of non-discrimination and equal treatment. China, instead, requires countries to select Chinese contractors for much of the implementation of projects when offering loans for infrastructure development. Large Chinese infrastructure projects are therefore often implemented through inter-governmental agreements, which opens the door for lex specialis (special law) procedures that bypass public procurement law (Clingendael Spectator, 2020).

EU loans come attached with a wide host of conditions and procedures that are intended to guarantee the financial feasibility, environmental sustainability and the quality of infrastructure development, as well as adequate labour conditions and transparency of procedures throughout the supported projects. The availability of China as an alternative lender means that if EU institutions deny funding to a project for feasibility reasons, the WB6 governments can often turn to the Chinese, as happened in the case of the Bar–Boljare highway in Montenegro.

Countries that seek to accede to the EU are required to abide by the Stability and Growth Pact (SGP) on fiscal surveillance – being Chapter 17 of the acquis – which regulates EU standards

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5 The name the Western Balkan was created at the end of the 1990s for the countries established after the dissolution of the former Yugoslavia, including Albania as a separate country in the region. So, the Western Balkans covers Albania, Bosnia and Herzegovina, Kosovo*, North Macedonia, Montenegro and Serbia, and is also known as the WB6.
on budget deficits and maximum debt levels. The relatively small Western Balkans countries that assume relatively large amounts of debt risk being unable to abide by these rules, or ultimately even repay their debts. Second, owing a large share of foreign debt to a single country poses dependency risks. In the case of Montenegro, its high levels of debt to China could open the door to undue geopolitical influence. The main problem is not Chinese funding in and of itself, but the means through which the funding is provided (i.e. state-to-state engagement) and the (lack of) conditions attached if the loan is not in line with both EU and good governance standards.

The Western Balkans remains one of the most polluted regions in Europe, with one reason being that the WB countries still depend to a large extent on low-level lignite coal for electricity production. Environmental sustainability is one of the standards by which European investment banks decide on their funding, so the EU has not provided funding for polluting coal plants. China, a large exporter of coal, which is itself heavily reliant on coal plants for energy, is providing the WB region with an alternative to the EU by funding coal-plant investments. While WB countries are so far not technically bound by EU environmental standards, any and all plants will need to be retrofitted in order to continue operations if EU membership is secured. Specifically, the EU requires coal plants to comply with its ‘Best Available Techniques’ standards under its Industrial Emissions Directive (Directive 2010/75/EU), which would require tremendous levels of investment. Additionally, with EU plans for a new green deal underway, a more costly EU Emissions Trading System (EU ETS) would be a death knell for the business models of these polluting coal plants (Zweers, 2020).

And finally, when talking on state aid, the Stabilisation and Association Agreement (SAA) and the Energy Community Treaty oblige the WB6 countries not to introduce state aid measures that might distort competition between the EU and the WB6 countries. Large state aid measures favoring certain energy sources, such as coal, over others are not compatible with the SAA and ultimately with wider EU treaties. Strict EU rules on state aid mean that WB governments need to reduce state intervention in the economy, whereas in the Chinese economic model, the state has a much larger role.

Considering the current geopolitical tensions, it will certainly be important to watch Chinese influence in the Western Balkans over the years to come. It is especially worth keeping an eye on the transition in terms of the Chinese approach in the Western Balkans from a merely economic presence to a more diversified presence, how this presence might manifest itself in actual influence, and what impact this will have on EU-China relations.

5. Conclusion

Chinese presence and its increasing economic role in the Western Balkan region has been a matter of attention of policymakers and researchers in the region and beyond over recent years. As EU accessions seems to be increasingly open-ended and potentially never-ending, other forces, like China, Russia and Turkey, stand to gain. Their economic, diplomatic and political influence is greater than it was two decades ago.

The global forces active in the region have all stated that they have nothing against European integration in principle, but over time they have worked hard to present themselves as credible economic and political counterparts for the Western Balkan countries. It has created a geopolitical balance in the very fragile political and economic environment in the region.

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6 The annual budget deficits of EU member states must not exceed 3 percent of GDP and public debt must not exceed 60 per cent of GDP. The consolidated Version of the Treaty on the Functioning of the European Union, Art 126, https://webgate.ec.europa.eu/lpfs/mwikis/thinktank/index.php/Article_126_TFEU
Associated with the enlargement equilibrium, some authors assume that geopolitical tension will rise, where Chinese, Russian and Turkish involvement will continue to grow, with weaker EU and US presence in the region (Garčević, 2019).

It has raised the concern, lately, from a side of the Western partners, the EU and the US, that Western Balkan countries could become politically and economically dependent on these other forces over time.

The EU is the dominant economic and political force in the region, still. However, could Western Balkan leaders playing the Chinese and Russian card to gain leverage with the EU?

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Sustainability Accounting and Sustainability Reporting of Public Sector Entities: Some Issues of Underlying Concepts*

Danica Jovic

Abstract

From the last decade of the twentieth century to these days, Sustainable Development, Sustainable Development Goals, Sustainable Accounting, and Sustainable Reporting have gradually drawn the attention of different stakeholders of the business, public and not-for-profit organizations all around the world.

Contemporary profound changes in economic, social, and environmental domains of human activities, on the one hand, and striving for realization of intergenerational equality and equal opportunities for every human being, on the other hand, call for a paradigm shift in the delivery of different types of goods and services for all organizations.

The theoretical expectation that public sector entities are leaders in accepting and implementing requirements relating to sustainable development and reporting, based on their purpose and goals, is surprisingly wrong, which has been attested by the results of numerous studies. More specifically, the assumed expectation is not backed by research as the results obtained have shown that the state of affairs is quite the opposite. Public sector entities are significantly lagging behind the private sector ones.

An attempt to find the reasons for the given situation is the main aim of this paper. Our work is based on the analysis of the impact of accountability and stewardship concepts, professional accountants' competencies, and legal and professional accounting regulative on the opportunities and limitations of sustainable reporting of the public sector entities.

Keywords: public sector entities, sustainable development, sustainable reporting, the accounting profession

1. Introduction

The concept of sustainable development is relatively new. It first appeared in the Brundtland Report – „Our Common Future” which discussed the problems of environmental degradation, published in 1987 by the United Nations World Commission on Environment and Sustainable Development. The members of the Commission tried to find a way for achieving the aspirations for a "better life" of each individual the constantly growing world population using limited natural resources but without their destruction and minimal environmental degradation. Their solution is the development and application of sustainable development concept, which Commission was then defined as „development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Their solution is the development and application of the sustainable development concept, which was then defined as „development that meets the needs of the present without compromising the ability of future generations to meet their own needs”( paragraph 27). At a first glance, the definition is with little simple words, elegant, and clear – understandable. But, at the same time, this definition suggests that implementation of the sustainable development concept has two relative limitations and one prerequisite. The first limitation is the achieved level of technology and social organization development and their impact on natural resources and environment and, the second one is the ability of the natural environment to absorb and neutralize the effects of all human activities in a particular area as well as on the whole of the Earth. A prerequisite for

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sustainable development at the national and global levels is equality and solidarity. Equality for poor population and underdeveloped countries, and solidarity from rich population and developed, especially highly developed countries.

From its inception until today, the concept of sustainable development has evolved significantly and found its application, with more or less success, in all spheres of human activity and their impact on the environment, economy, and society. During development, the concept became increasingly complex. This can be illustrated by the following facts:

(a) Nowadays numerous supranational and international organizations deal with sustainable development issues and related concepts of sustainability accounting and sustainability reporting; and

(b) In 2015 United Nations’ Sustainable Development Goals (SDGs) were adopted at the UN summit in New York. There are 17 universal goals, comprising 169 targets and multiple success indicators for each target. SDGs have been recognized as general guidelines of Global Development until 2030 across almost the whole of the world.

UN SDGs are addressed to every organization without any exception or special connotation. They invite governments, businesses, and the general public from all the countries to take necessary action to tackle challenges imposed by climate changes, poverty, inequality, environmental pollution, and other contemporary threats to the long-term survival of humanity.

Researches conducted in the last 5 years have drawn numerous conclusions, among which two deserve particular interest:

(1) Achieved levels of implementation of UN SDGs are significantly different among the countries as well among organizations in one country.

(2) Almost by definition Public Sector Entities (PSE) are significantly lagging behind the private ones in the acceptance and implementation of requirements relating to sustainable development and sustainable accounting and reporting.

The first conclusion is expected, although it represents a departure from the universality of the concept of sustainable development. But that is the real state of affairs. In highly developed market economies, corporate sector entities are more exposed to sustainability reporting requirements than entities in underdeveloped or developing countries. Understandably, there are also differences between organizations in one country because different industries have impacts on the economic, social, and natural environment different in intensities and durations.

But the second conclusion is unexpected - almost surprising. How is it possible that public sector entities do not meet the requirements of the concepts of sustainable development and sustainability reporting? How is it possible when we know that their primary purpose of existence is not to make a profit but to function in the general interest of the community as a whole?

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2. Differences between Public and Private Sector Entities and Achieved Levels of Sustainability Reporting

2.1 Lack of Terminological and Conceptual Consistency

At the very beginning of the process of searching for answers to the questions asked, it is necessary to keep in mind the following facts. The terms public sector, sustainability accounting, and characteristics of public sector entities have no unequivocal definitions. Different authors use different criteria and approaches when defining the public sector (Khury, B. and Van der Torre, A., 2002, Stiglitz, J.E., 2004, Funnell, W. and Cooper, K., 1998, IPSASB®, 2015). This paper uses the definition of the International Public Sector Accounting Standards Board (IPSASB®) according to which the public sector includes national, regional, state/provincial, and local governments and related government entities. Related government entities cover a wide range of entities such as various ministries and their departments, programs, committees, commissions or agencies, and state social security funds, trusts, and statutory authorities, and international governmental organizations (IPSASB® 2021). According to the same source, the public sector does not include public sector companies.

Even though in the past two decades sustainability accounting has become a generic term and that there are a significant number of papers and research dealing with the issue, it is still difficult to find in academic and professional literature its clear, comprehensive, and functional definition. Very often the term sustainability accounting is used as a synonym for several other terms such as environmental accounting, social accounting or, non-financial accounting. But these are not synonyms. Social accounting, environmental accounting, and non-financial accounting can be seen only as of the phases (stages) of the historical development of the concept of sustainability accounting. In this paper, the term sustainability accounting is used in the sense assigned to it by Zvezdov and Schaltegger, according to which sustainability accounting entails systems, methods, and processes of creating sustainability information for transparency, accountability, and decision-making purposes. This includes the identification of relevant sustainability issues of the company (reporting entity – author's note), defining indicators and measures of sustainability, data collection, comprehensive monitoring, and measurement of effects and communication with internal and external stakeholders (Zvezdov D. and Schaltegger S., 2013). The definition refers to business entities, but it is equally applicable to public sector entities. Analyzing the ever-growing literature on sustainability accounting, Schaltegger and Burritt concluded that there are two main streams of thought. One of them is at the level of philosophical discussion concerning the issue of accountability and whether accounting has a positive contribution to sustainable development or not. The second stream represents the point of view of management, which examines problems related to the complexity of information related to the manifold terms and tools used to achieve sustainability (Schaltegger, S.S., and Burritt R.L., 2010).

2.2 Distinctive Characteristics of Public vs. Private Sector Entities

There is no single view in the academic and professional literature as to whether public and private sector entities differ significantly from each other or not. It is possible to come across both answers. In the academic literature, this issue has been addressed by many authors, who in the debate have respected the different criteria (Christensen, T. and all, 2007, Pratt, J. and all, 2007, Stiglitz, J.E., 2004, Freeman, R.J. and Shoulders, C.D., 2003). The same issue was in the focus of consideration of professional accounting organizations and international organizations that base their activities on the data obtained from the financial statements of public sector entities (IPSASB, 2005, IPSASB, 2009, IPSASB, ED, 2011, UN DESA, 2010, Eurostat, 2013, IMF, 2014). Nevertheless, it is possible to find conclusions that most authors agree on. But it is important to point out that the differences in attitudes of authors are mainly
due to the following factors: different levels of sublimation, usage of different names for essentially the same distinctive feature, and belonging of authors to different accounting “schools”. Based on the performed analysis, we believe that, from the financial and accounting point of view, the following categorization of the distinctive characteristics of the public sector can be performed: the multiplicity of goals, where the primary goal is not to make a profit but function in the general interest of the social community as a whole, specific "ownership structure", i.e. the absence of own instruments capital, absence of market competition, and i.e significant volume of non-exchange transaction, manner and structure of management and leadership conditioned by political will, functioning in a multi-hierarchical system, legally defined business and financial frameworks, "longevity" of the public sector, statistical bases of accounting, public accountability, regulatory role, the role and importance of the budget, character, i.e. nature of resources and the dominant focus on services, not product. The highlighted characteristics of public sector entities are not in conflict with the concept of sustainable development or the concept of reporting on sustainable development. On the contrary, most of them (especially functioning in the general interest of the social community as a whole and public accountability) are mutualistically and synergistically related to the goals of sustainable development. Based on the above, it can be concluded that, in principle, the distinctive characteristics of public sector entities to private ones cannot be the cause of their significant lagging in the acceptance and implementation of requirements relating to sustainable development and sustainable accounting and reporting.

2.3 Objectives and Purposes of Financial Reporting of Public vs. Private Sector Entities

Given that sustainability reporting can also be seen as an extension of financial reporting, it is worth exploring whether the described differences between private and public sector entities are the cause of different financial reporting objectives. Generically, public and private sector entities have the same basic goal of financial reporting - to provide (useful) information to users of general-purpose financial statements. However, the identity of the generic purpose does not mean the sameness of the concretized goal and the process of financial reporting. Concretization of the goal of financial reporting is always in the function of information needs users of general-purpose financial statements.

According to the IASB Conceptual Framework for Financial Reporting in effect, which is relevant for the financial reporting of private sector entities, „the purpose of general-purpose financial reporting is to provide financial information on the reporting entity that is useful to current and potential investors, lenders and other creditors when making decisions about providing resources to the entity. These decisions include buying, selling, or holding instruments of equity and debt capital and approval or withdrawal (cancellation) of loans and other forms of borrowing” (IASB, 2012).

The Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities states that the objectives of financial reporting by public sector entities are to provide information about the entity that is useful to users of GPFRs for accountability purposes and for decision-making purposes.

These two definitions are very similar but only similar. We should be aware of the differences between them. The objective of financial reporting of private sector entities is narrower to the objective of financial reporting of public sector entities, it refers only to the reporting of financial information, and for public sector entities, the objective is to report information in general. There is no difference in the requirement that the presented information must be useful, but there is a difference in determining the user of that information, in other words, to whom information must be useful. The users of financial reports of private sector entities are limited to investors only. This definition of the goal of financial reporting and users of financial
statements of private sector entities is a consequence of the fact that in the current period of economic development in the process of obtaining financial resources for activities of companies the key role play developed capital markets and securities markets. Therefore the cycle of financial reporting of private sector entities begins and ends with investors and creditors who use the presented financial information primarily in the process of making economic decisions on investing or disinvesting capital in the company. On the other hand, the list of users of financial reports of public sector entities is much more broadened and, according to the results of the IPSASB research, in the literature most often mentioned are taxpayers and other parties who on an „involuntary“ basis provide resources to the public sector entities, citizens, and other users of services of public sector entities, legislative and supervisory bodies, political or elected officials and their staff, donors (including international organizations) and other parties to provide resources to public sector entities voluntarily, national statistical institutions, current and potential institutional and individual creditors, and buyers of government’s bonds and other instruments of debt capital, users of public sector entity services who pay fees for those services, suppliers, and employees, media and representatives or advisors of the previously listed user groups (IPSASB®, 2021). All of them could be classified into two groups: service recipients and resource providers. Users of general purpose financial statements employ presented information to evaluate the performance of the reporting entity, assess its liquidity and solvency, assess the long-term sustainability of its activities and services, assess its ability to adapt to changing circumstances in demographic and economic (national and international) spheres, assesses the degree of achievement of the goals for which the resources were collected (provided), assesses the method of financing current activities, whether current activities are financed from resources provided in the current period from taxation or from borrowed sources and the likelihood of need of additional resources to financing the activities of the reporting entity in the future as well as the possibility of obtaining these resources from various sources. So, in terms of the purpose for which the information presented in the financial statements is used, there is the same relationship. The purpose for which information from financial reports of private sector entities is used is exclusively to make economic decisions relating to providing resources to the entity. When we talk about the public sector, the information is used for institutional and public accountability purposes and a wide range of decision-making.

Comparing the objectives of financial reporting and the kinds of users of financial statements of private and public sector entities, it can be concluded that the differences between them do not explain the causes of differences between these entities related to the application of sustainable development requirements, ie reporting on sustainable development. Public sector entities have a far greater number of types of users of financial statements and consequently far more requests for different information compared to private sector entities. In addition, one of the explicit requirements is the presentation of the information necessary to assess the achieved degree of public accountability. Although public accountability is one of the basic concepts integrated into the definition of sustainability accounting, it is not mentioned in defining the objectives of private sector entities, ie it was abandoned during the revision of the Conceptual Framework.

2.4 The Accountability and Stewardship Concepts

The concept of public accountability can be used in four different contexts: institutional and organizational contexts, the context of social transactions, and the context of a complex environment. In the institutional context, public accountability implies a set of rules and activities through which the control of the adequacy of the functioning of a certain institution or authoritative body is realized. The organizational context of the concept of public accountability assigns him the role of a starting point for the formation of informal and formal
mechanisms that the organization applies in situations or activities that require coping with risks resulting from different expectations or uncertainties. The concept of public accountability in the context of social transactions is one of the basic ways in which individuals establish relationships of mutual trust, primarily through continuous communication between subordinating actors in which one actor “lays down account” for activities undertaken based on tasks and instructions received from another actor. The most comprehensive meaning the concept of public accountability has in context functioning, either organization or individual, in an environment that could be called chaotic, that is, in an environment where they in front of an individual or organization are placed multiple, different, and often conflicting expectations. In this context, the concept of public accountability is one of the means of governing in a “chaotic” environment.

The concept of public accountability has its deep historical roots. According to Dubnick, the conceptualization of public accountability as a method of governance occurred in the eleventh century when French King William the I took power from English rulers (Dubnick, M.J., 2002). In that period, between the sovereign and his vassals, in addition to the relationship between ruler and subordinate, a special kind of community was created in which ties and mutual relations were established based on solemn oaths that belong to the sphere of ethics and morals. Every community has its morality which determines which norms and customs can be characterized as good or evil, what are the ideals and virtues, as well as what are the duties and obligations and what are the rights of community members, and what are fair and what is not?

The public sector entities and the public sector as a whole represent a significant part of one social community whose governance structures are originally based on elected representatives. Hence, it is logical to expect that the mutual relations of the public sector entities as well as the relations of the public sector entities and the social community are based on generally accepted moral principles. Consequently, public sector entities must be publicly accountable, not only to entities at a higher hierarchical level but to each individual and the community as a whole. Namely, in democratic countries, its citizens transfer part of their rights and obligations to the state, ie to public sector entities and their administration. The transfer of rights and obligations is carried through parliamentary elections in which citizens express their free will and elect their political representatives who will represent them and act in their best interests. Because citizens transfer part of their rights to public sector entities, it is justified that they expect that public sector entities demonstrate public accountability for the efficient and effective use of resources that „belong” to all present and future generations of one social community, that is, to be publicly accountable for the stewardship of entrusted to them by someone else’s property.

The stewardship concept is another concept that has been neglected in defining the concretized financial reporting objectives of private sector entities. Similar to the concept of public accountability, the concept of stewardship, occupied little space in academic and professional discussions until 2007. That year, as part of the activities on the convergence project, The International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) decided that the only goal of financial reporting of the private sector entities is to present financial information primarily aimed meeting information needs of current and potential investors and lenders (IASB, 2015). This decision abandons the second goal of financial reporting of private sector entities – providing information that will enable the owners of the reporting entity to assess how well the management protects and managed assets belonging to them, or to assess how successful and competent management is in performing the responsibilities transferred to him. The stewardship concept is still relevant for the financial reporting of public sector entities and as such do not impose difficulties on sustainability accounting and reporting, in contrary.
It may seem that there are no differences between a system of governance based on public accountability, and the agency model management whose conceptualization is related to the emergence of companies in the form of open capital companies (with a large number of owners). In open capital companies their owners - shareholders or members of the company – transfer part of their rights to professional management which should manage the company in a way that is in the best interest of its owners. However, these two concepts are similar only in their form, while they are essentially significantly different. The two most significant differences are the basis of an occurrence and the nature of interpersonal relationships. Namely, the basis for the emergence of the relationship based on public accountability is the formation of a moral community – that is, these relations are based on moral principles. The interrelationships in the agency system of governing are based on a contract between the principal and his agents. In addition, when forming a relationship based on public accountability there is no mutual independence, ie autonomy of individuals, unlike the agency model in which individuals who enter into a contract with each other are, in principle, completely autonomous.

In principle, management structures in the public sector are formed in a way that emphasizes the need for public accountability for implemented activities and thus should be more propulsive to the application of the concepts of sustainable development and sustainability accounting in relation to the private sector entities. But, as we have seen at the beginning of the paper that is contrary to the results of aforementioned the researches.

3. Impacts of the Other Factors on the Achieved Level of Sustainability Accounting and Sustainability Reporting of Public Sector Entities

3.1 Professional Accountants' Competencies

By the nature of things, professional accountants are an unavoidable factor in preparing and presenting sustainability reports in private as well in the public sector. This view is confirmed by the following facts. According to IFAC 8 of 17 SDGs and their 17 targets are in direct relation to accounting (IFAC 2016). Because of that, an indisputable fact is that accountants can influence the achievement of SDGs. For that, there is a necessity to transform and adjust accounting according to the new challenges arising from sustainable development. Makarenko and Plastun state that professional accountants with their specific professional skills and involvement in governance, risk management, business analysis, decision support, due diligence, anti-corruption activities, and ensuring transparency, today are reassessing their roles because of sustainability development (Makarenko, I. and Plastun, A. 2017)3. One of the basic tasks of accountants which needs to be adjusted is to valuate various forms of assets. Valuing assets has always been a difficult and responsible job that is becoming more and more demanding and complex in modern times for many reasons. Some of that reasons are connected with environmental and social issues, namely with sustainable development goals. For example, the valuation of tangible and intangible assets, as well as the measurement of inventories, very often is affected by environmental impairment. In the case of property, plant, and equipment, impairment arises from an incident of contamination, physical damage, or non-compliance with environmental regulations. Intangible assets such as greenhouse gas emission allowances are subject to an impairment test on their carrying value if they exceed the amount recoverable from use or realization. Provisions include possible liabilities that give rise to expenses. Some provisions caused by waste disposal, pollution, decommissioning, and restoration of land are

3 Peter Bakker in his speech at The Prince’s Accounting for Sustainability pointed out: "If the world wants to address our many challenges — if the business wants to restore societies’ trust — business must be more transparent and acknowledge that the resources we exploit or conserve and the social benefits we engender or lose, must be factored into a company’s value and thus into day-to-day management. This is not a matter of incremental change, but a radical transformation. And it’s the accountants who will lead the way".
directly dependent on issues of sustainable development (IFAC 2011). Besides those "pure" accounting considerations professional accountants should consult all the relevant and applicable standards, regulations, and requirements for disclosing environmental information.

Our opinion is that competencies of licensed professional accountants currently employed in the public sector do not pose a problem for the implementation of sustainability reporting requirements for at least two reasons: (1) public sector accounting reforms implemented at the end of the last and the beginning of this century and the transition to the accrual basis of accounting already have caused a significant improvement in the competencies of professional accountants, and (2) these competencies are under the constant supervision of professional associations that require continuous lifelong education of accountants. However, at the same time, we think that there is a need to make improvements in the area of higher education for accountants where it is necessary to modernize curricula that lag behind the achievements in accounting practice. The most likely reason for this situation is the fact that academic research of public sector accounting has until recently been negligible and overshadowed by academic considerations of private sector accounting.

3.2 Legal and Professional Accounting Regulative

The basic characteristics of accounting regulations related to sustainability reporting are their dominant focus on private sector entities, numerous sets of standards and guidelines produced by different bodies dealing with sustainability reporting, mutual incoherence of those sets of standards, and voluntary of their application. It is necessary to point out the fact that the rules that apply to the private sector cannot be just transposed and applied to the public sector. During the period of intensive reforms of accounting of public sector entities, we have witnessed weaknesses of such patterns and their negative implications.

Public sector entities differ in many respects from those in the private sector and accordingly, regulation needs to be adjusted. The activities which have been taken by IPSASB since 2013 to date, and which resulted by the publishing of three Recommended Practice Guideline applicable in sustainability reporting of the public sector are encouraging.

5. Conclusion

The concept of sustainable development highlights intergenerational equality, efficiency, and effectiveness and is based on three basic principles. Those are the principle of ecological sustainability, which requires development to be compatible with the maintenance of vital ecological processes, biodiversity, and biological resources, the principle of social and cultural sustainability, the respect of which ensures that development is compatible with the culture and traditional values of social communities and contributes to the strengthening of their identity, and the principle of economic sustainability, which requires that development be economically efficient and that resources be managed in such a way that they can be used successfully by future generations.

In this paper, we attempted to find the reasons for the significant lag of public sector entities behind private sector entities in terms of accepting and implementing the requirements of the concept of sustainable development and sustainability reporting. Analyzing the impact of the lack of terminological and conceptual consistency, distinctive characteristics of public vs. private sector entities, objectives, and purposes of financial reporting of public vs. private sector entities, the accountability and stewardship concepts, professional accountants’ competencies, and legal and professional accounting regulative we concluded that none of them is the cause of aforementioned lagging. But when we talked about the influence of the distinctive characteristics of public sector entities, we used the wording “in principle”. The reason for such
a formulation is the fact that among the other distinctive characteristics there is the one that indicates that the manner and structure of management and leadership in public sector entities are conditioned by political will. Given that the analysis shows that the other factors considered do not affect the difference in the degree of acceptance of the concept of sustainable development and sustainability reporting of the public sector entities, it is concluded that the impact of political will is the main culprit for significant difference between public and private sector entities.

Given that private sector entities do not exist in a vacuum, ie that they function in a certain political system, the question arises of how they managed to overcome political constraints. We believe that the pressure of market competition as well as the pressure of the attitudes of customers of private sector entities about the meaning and importance of sustainable development have a much stronger impact on of behavior of the companies in the context of sustainable development and reporting in comparison to the public sector entities.

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Personel Güçlendirmenin Örgütsel Özdeşleşmeeye Etkisinde Duygusal Zekanın Düzenleyici Rolü

Lina Karabetyan

Özet

Anahtar Kelimeler: Personel güçlendirme, örgütsel özdeşleşme, duygusal zeka, düzenleyici etki

The Moderator Effect of Emotional Intelligence in the Effect of Employee Empowerment on Organizational Identification

Abstract
Supporting employees is an important factor in achieving sustainable competitive advantage. Personnel empowerment is a new management concept that has emerged and increased its importance due to global change and competition. Organizations have started to search for various ways to make their human resources more efficient, and efforts to provide organizational identification with personnel empowerment have emerged as one of these applications. Organizational identification process is a very important process that helps personnel to act in the interests of the organization. Individuals with high emotional intelligence have the ability to solve problems, develop empathy, understand the feelings of others, be happy and manage stress. Employees with high emotional intelligence who have developed a strategy to meet the different challenges and developments of the organization with personnel empowerment will improve their organizational identification behavior more quickly and increase their performance levels. The main purpose of this study is to reveal the regulatory role of emotional intelligence in the effect of employee empowerment on organizational identification for banking sector employees. As a result of the correlation analysis; It was determined that personnel empowerment was positively related to emotional intelligence by 38.3% and was positively related to organizational identification by 61.2%. In addition, emotional intelligence and organizational identification are positively correlated with 62.4%. As a result of the regression analysis; It was determined that both independent and interaction variables had a significant effect on the dependent variable. It has been revealed that emotional intelligence personnel empowerment is a moderator variable in its relationship with organizational identification.

Keywords: Personnel empowerment, organizational identification, emotional intelligence, moderator effect

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1. Giriş


ÇalışıNLara daha fazla sorumluluq verildiğinde veya organizasyondaki karar alma süreçlerine katılım ve karar serbestliği fırsatları verildiğinde personeller, organizasyonel hedefleri kabul etme ve bunları kendi hedefleri olarak algılamakta ve etkileyebilir. Bu ortak hedefler, bir çalışanın kendisini kuruluşun belirlediği bir karşılık verme olası atIndexları o kadar artar.

Bir çalışan bir kuruluşla ne kadar özdeşleşirse, güçlendirilmiş duyugalar gibi belirli psikolojik ödülleri o kadar fazla deneyimleme olasılığı artacaktır. Daha spesifik olarak, çalışanlar kendilerini daha büyük ve daha güçlü bir varlıkla (örgütle özdeşleşme) ne kadar çok bağlarlarsa, o kadar yüksek öz saygı seviyeleri ve öz-yeterlilik ve kolektif yeterlilik algıları yaşayacaklar ve kendilerini o kadar güçlü hissedeceklерdir.

Güç paylaşımı, personellerin güçlerini artırmak için yararlı bir yoldur. Çünkü güç paylaşımı, vermek ya da almak yerine farklı bir yoldur. İlham verici ve yetkinliği ifade eder. Örneğin Kanter (1979)'e göre “başkalarını güçlendirek, lider gücünü azaltmaz; bunun yerine bunu artırabilir, özellikle tüm organizasyon daha iyi performans gösterirse” şeklinde özetlenmiştir. Diğer taraftan, göze çarpan ve paylaşılabilen bir örgütle özdeşleşme olmadan, güç paylaşımı muhtemelen başarısız olacaktır.

Personel güçlendirme ile örgütsel özdeşleşme arasında, yukarıda bahsi geçen ilişkilerden yola çıkılarak bu çalışmanın temel amacı; personel güçlendirme dahil yeni bir örgütle özdeşleşmeye etkisinde duygusal zekanın düzenleyici rolü olarak belirlenmiştir. Bu bağlamda; personel güçlendirme, örgütsel özdeşleşme ve duygusal zekanın cinsiyet bilançosu deneyimle olasılığı artmıştır.

2. Kavramsal Çerçeve

2.1. Personel Güçlendirme

ve bireylerin mevcut uzmanlıklarının kuruluşun performansını iyileştirmek için kullanılmasıdır.

Güçlendirme kavramının çoklu tanımlarından bağımsız olarak, felsefesi, organizasyonun değişen ortama evap verme yeteneğini artırmayı ve yenilikçi ve yaratıcı fikirleri desteklemeyi amaçlamaktadır. Ayrıca, güçlendirilmiş personellerin yaratıcı fikirleri benimsemelerine ve işlerini yapmanın geleneksel yollarını terk etmelerine olanak tanımaktadır. Dahası, güçlendirme süreci çalışanların üstlerinden çözüm beklemeden hedef belirleme, karar verme ve karşılaştıkları sorunları çözme çalışmalarına katkılarlarını yardımcı olmaktadır (Bowen ve Lawler, 1995: 36).


2.2. Örgütsel Özdeşleşme


a) örgütsel üye olma duygusu, aidiyet ve gurur,

b) örgütte sadakat ve örgütün hedeflerine destek,
c) çalışanlar arasında benzerlik algılaması şeklinde üç boyutta ele alınmıştır.


2.3. Duygusal Zeka


3. İstatistiksel Analiz
3.1. Çalışmanın Amacı ve Önemi

3.2. Araştırmanın Hipotezleri ve Model
Araştırmanın ana hipotezi personel güçlendirme ve örgütSEL öZELEŞME ilişkisinde duygusal zekanın düzeylere bir rolü olduğu bicimindedir. Geliştirenl hipotezler tablo 1 de yer almaktadır.

<table>
<thead>
<tr>
<th>Hipotezler</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H₁</strong></td>
</tr>
<tr>
<td><strong>H₁a</strong></td>
</tr>
<tr>
<td><strong>H₁b</strong></td>
</tr>
</tbody>
</table>
3.3. Araştırma Evreni ve Örneklem


3.4. Veri Toplama Aracı

Yapılan çalışma, deneysel olmaman nicel bir araştırma tasarımına sahip olup çalışma metoduna göre tarama modelidir. Çalışmada kullanılan anket, deneysel olmayan nicel bir araştırma tasarımına sahip tarama modelidir. Çalışmada kullanılan anket, geçiş bir literatür taramasının neticesinde geçerlilik ve güvenilirliği daha önce yapılan araştırmalarda onaylanmış olan ölçeklerden faydalanarak hazırlanmıştır. Bu ölçekleri aşağıdaki gibi açıklamak mümkündür:


**Duygusal Zeka Ölçeği:** Petrides ve Furnham (2000a, 2001) tarafından geliştirilen Duygusal Zeka Öğeleri–Kısa Formu’nun (DZÖÖ-KF) Türkçe versiyonunun geçerlilik ve güvenilirliğinin incelenmesidir. 4 faktörlü yapının örneklem verisine iyi uyum gösterip göstermediğini anlamak amacıyla doğrulayıcı faktör analizleri yapılmıştır. Ölçeğin, kuramsal

3.5. İstatistik Bulgular ve Değerlendirme

3.5.1. Anketin Güvenirliği

Anket çalışmasından elde edilen veriler için güvenirlik testi olarak Cronbach Alpha, İkiye Bölme (split), Paralel, Mutlak Kesin Paralel (strict) testleri uygulanmıştır. Cronbach Alpha değerinin %70’ine üzerinde olması, anket çalışmasının başarılı olduğunu ifade etmektedir. Kimi araştırmacılardan ise %75 değerinin geçilmesi esas alınmaktadır (Sart vd., 2018; Sart 2020). Diğer ölçeklerin de %70’in üzerinde olması, anketin iç tutarlılık gösterdiğini ve sonuçlara güvenilebileceğini ifade etmektedir. Bu çalışmada yapılan anketin güvenirlik analizi sonuçları; Cronbach-Alpha = 0.905, Paralel = 0.906, Split = 0.904-0.906 ve Strict = 0.906 olarak belirlenmiştir.

3.5.2. Demografik ve Genel Bilgiler Yüzde Dağılım Bilgileri

Çalışmanın ilk aşamasında ankette cevap verenlere yönelik genel bilgiler aşağıda verilmiştir:

• Çalışanların %52.3’i kadın ve %47.7’si erkektir.
• Çalışanların % 38.5’i 25-35 yaş, % 36.7’si 36-45 yaş ve %24.8’i 46 ve üzeri yaş arasında olduğunu belirtmiştir.
• Çalışanların %44.1’i evli, %36.9’u bekar ve %19’u boşanmış/dul olarak belirlemiştir.
• Çalışanların %18.8’i 1-10 yıl arası, %28.7’si 11-15 yıl arası, %24.3’ü 16-20 yıl arası ve %28.2’si 20 yıl ve üzeri meslek kademine sahiptir.
• Çalışanların %71.9’u üniversite, %21.4’ü yüksek lisans ve %6.7’si doktora düzeyinde eğitimlidir.

3.5.3. Açıklayıcı Faktör Analizi Sonuçları

Ölçeklere ilişkin açıklayıcı faktör analizini yapmadan önce, veri setinin faktör analizine uygun olup olmadığını test edilmiştir. Veri setinin, açıklayıcı faktör analizine uygun olduğunu gerçekleştirilen testler ile onaylanmasının sonrasında, faktör yapısının ortaya konulması için faktör tutma metodu olarak varimax dönürmeye Yöntem ve temel bileşenler analizi yönteminden yararlanılmıştır.

Tablo 2: Faktör analizi sonuçları ve cevap ortalamaları

<table>
<thead>
<tr>
<th>Personel Güçlendirme Ölçeği</th>
<th>Varyansı Açıklama Yüzdesi</th>
<th>Cronbach-Alpha (CA)</th>
<th>Cevap Ortalaması</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anlam</td>
<td>%22.10</td>
<td>0.918</td>
<td>4.15</td>
</tr>
<tr>
<td>Yeterlilik</td>
<td>%19.64</td>
<td>0.913</td>
<td>4.07</td>
</tr>
<tr>
<td>Seçim</td>
<td>%15.89</td>
<td>0.910</td>
<td>4.01</td>
</tr>
<tr>
<td>Etki</td>
<td>%13.92</td>
<td>0.908</td>
<td>4.06</td>
</tr>
<tr>
<td>KMO= 0.921; Bartlett χ2=6708.56 ve p= 0.000; %71.55</td>
<td>Varyans Açıklama Yüzde:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duygusal Zeka Ölçeği</th>
<th>Varyansı Açıklama Yüzdesi</th>
<th>Cronbach-Alpha (CA)</th>
<th>Cevap Ortalaması</th>
</tr>
</thead>
<tbody>
<tr>
<td>Öznel İyi Oluş</td>
<td>%24.16</td>
<td>0.920</td>
<td>4.07</td>
</tr>
<tr>
<td>Özkontrol</td>
<td>%20.05</td>
<td>0.918</td>
<td>3.93</td>
</tr>
</tbody>
</table>
Duygusallık | %16.34 | 0.916 | 4.02
Sosyallık | %10.98 | 0.912 | 3.67

KMO= 0.924; Bartlett χ²=7933.17 ve p= 0.000; Varyans Açıklama Yüzde: %71.53

<table>
<thead>
<tr>
<th>Örgütsel Özdeleşme Ölçeği</th>
<th>Varyans Açıklama Yüzdesi</th>
<th>Cronbach-Alpha (CA)</th>
<th>Cevap Ortalaması</th>
</tr>
</thead>
</table>
| Örgütsel Özdeleşme | %70.54 | 0.911 | 3.99

KMO= 0.930; Bartlett χ²=7281.22 ve p= 0.000; Varyans Açıklama Yüzde: %70.54

Faktör yapısında, personel güçlendirme için 4 faktör, duygusal zeka için 4 faktör ve örgütsel özdeleşme için 1 faktör öz değerleri 1'den yüksek olarak elde edilmiştir. Her üç ölçek için extraction (çıkarma) sütununda 0.20’nin altında soru yoktur, böylece soru çıkarımına gidilmemiştir.

3.5.4. Korelasyon Analizi Sonuçları

Faktör analizi ile belirlenen 3 ana boyuta yönelik korelasyon analizi sonuçları Tablo 3’de verilmiştir.

Tablo 3: Korelasyon analizi sonuçları

<table>
<thead>
<tr>
<th>Personel Güçlendirme</th>
<th>Duygusal Zeka</th>
<th>Örgütsel Özdeleşme</th>
</tr>
</thead>
<tbody>
<tr>
<td>r (Personel Güçlendirme)</td>
<td>1.000</td>
<td>.383*</td>
</tr>
<tr>
<td>p</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>r (Duygusal Zeka)</td>
<td>1.000</td>
<td>.624*</td>
</tr>
<tr>
<td>p</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>r (Örgütsel Özdeleşme)</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

*0.05 için anlamlı ilişki

Ele alınan boyutlar birbiriyle pozitif yönlü anlamlı ilişkili çıkmıştır. Personel güçlendirme arttıkça duygusal zeka %38.3 artmakta ve örgütsel özdeleşme %61.2 artmaktadır. Duygusal zeka örgütSEL özdeşleştSey %62.4 arttırmaktadır.

3.5.5. Regresyon Analizi Sonuçları

Çalışmada, personel güçlendirme ile örgütsel özdeleşme arasında duygusal zekanın düzenleniyici etkisinin araştırılmasıyla yönelik regresyon analizi uygulanmıştır. Regresyon analizleri sonuçları Tablo 4’de verilmiştir.

Tablo 4: Personel güçlendirme ile örgütsel özdeleşme arasında duygusal zekanın düzenleniyici etki analizi

<table>
<thead>
<tr>
<th>Bağımlı Değişken: ÖÖZ</th>
<th>Katsayısı</th>
<th>St. hata</th>
<th>t istatistiği</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sabit</td>
<td>0.983</td>
<td>0.136</td>
<td>7.228</td>
<td>0.000*</td>
</tr>
<tr>
<td>PG</td>
<td>0.684</td>
<td>0.127</td>
<td>5.385</td>
<td>0.000*</td>
</tr>
<tr>
<td>PG*DZ (moderator)</td>
<td>0.579</td>
<td>0.131</td>
<td>4.419</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

R² = 0.704   F₁,₉₈₀₅₈ = 24.68 F₀₉₈₀₅₈ = 0.000   Harvey test (p) = 0.217 LM test (p)= 0.119 Jarque-Bera (p)=0.224

*0.05 için istatistik anlamlı değişken
Baron ve Kenny (1986), düzenleyici etki analizine göre, etkinin varlığında söz etmek için bağımsız değişkenin (personel güçlendirme) bağımlı değişken (örgütsel özdeşleşme) üzerinde anlamlı bir etkisinin olması gerekmektedir. Bu koşulun yanı sıra, bağımsız değişikle düzenleyici değişken (duygusal zeka) çarpım sonucu elde edilen etkileşim değişikinin de bağımlı değişken üzerinde anlamlı bir etkisinin olması gerekmektedir. Tablo 4 incelendiğinde, hem bağımsız hem de etkileşim değişikinin bağımlı değişken üzerinde anlamlı bir etkisinin olduğu görülmektedir. Bu durumda, ana hipotez H1 kabul edilmiştir, duygusal zeka personel güçlendirmenin örgütsel özdeşleşme ile düzelteındaki değişkendir.

Model sonuçlarında görüleceği üzere; PG algısı 1 br. artışta ÖÖZ boyutu 0.684 br. artmaktadır. PG*DZ etkileşim değişkeni ÖÖZ üzerinde pozitif yönde anlamlı ilişkilidir ve etkileşim boyutu 1 br. artışta ÖÖZ boyutu 0.579 br. artmaktadır. Böylece, H1, H1a, H1b hipotezleri doğrulanmıştır.

4. Sonuç

amaçına yönelik olarak, duygusal zeka seviyesi yüksek personel işe alımlarda tercih edilebilir. Aynı zamanda, personelin duygusal zeka seviyelerini geliştirecek programlar ve şirket içi eğitimler düzenlenebilir.

Çalışanlar ve işletmeler üzerinde önemli etkileri olan personel güçlendirme ve örgütSEL özdeşleşme değişkenleriyle ilgili olarak farklı örneklemeler için araştırmaların yapılması ve yeni ölçeklerin geliştirilmesi gerekmektedir. Bu çalışma İstanbul il ile sınırlı tutulmuştur, farklı bölgelerde çalışma tekrarlanabilir.

Kaynakça


BioNTech ve Sinovac Aşıları ile İlgili Twitter Mesajlarının Duygu Analizi

Gözde Koca¹

Özet


Anahtar Kelimeler: Duygu analizi, Twitter, Kovid-19 aşları, veri madenciliği, orange data mining

Sentiment Analysis of Twitter Posts Related to BioNTech and Sinovac Vaccines

Abstract

Vaccination campaigns are carried out around the world to end the Covid-19 pandemic. However, the success of these vaccination campaigns is largely directly proportional to the genuine willingness of individuals to be vaccinated. Social media platforms such as Twitter are a valuable source of information about attitudes and sentiments towards Covid-19 vaccines, which can be tracked almost instantly. In this study, 10000 Tweets in Turkish about BioNTech and Sinovac vaccines in October 2021 were analyzed using the Orange Data Mining program with sentiment analysis. As a result of the analysis, it was seen that the feeling of joy was dominant in both types of vaccines.

Keywords: Sentiment analysis, Twitter, Covid-19 vaccines, data mining, orange data mining

1. Giriş


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Bu çalışmada da Ekim 2021’de BioNTech ve Sinovac aşıları ile ilgili Türkçe olarak atılan 10000 Tweet duygu analizi ile Orange Data Mining programı kullanılarak incelenmiştir. Bu doğrultuda Çalışmanın ilk kısmını oluşturan birinci bölümün sonunda ilgili literatür sunulmuştur. Üçüncü kısımda ise araştırmanın veri ve yönteminden bahsedilmiş, dördüncü kısımda araştırmanın ampirik analizi ile devam edilmiştir. Son olarak çalışma, sonuç kısmını tamamlamıştır.

2. Literatür Taraması


3. Veri ve Yöntem

Bu çalışmada Twitter'dan çekilen Tweetler veri olarak kullanılarak, Orange Data Mining programı ile duygu analizi yapılmıştır.

3.1. Twitter


3.2. Duygu Analizi

Duygu analizi, metinde ifade edilen özel duygu veya görüşlerin ortaya konulması ve ölçülmeleri eylemi olarak tanımlanmaktadır. Bunu yapmanın birden fazla yol bulunmaktadır. Bu çalışmada da “VADER” (Valence Aware Dictionary ve sEntiment Reasoner) (Hutto ve Gilbert,

4. Ampirik Analiz

Bu çalışmada Twitter'da “#BioNTech, BioNTech, #sinovac, sinovac” olarak atılan Tweetleri analiz etmek için Orange Programı kullanılmıştır (Orangedatamining.com, 2021). Öncellikle Twitter Geliştirici (Developer) Hesabı kullanılarak “Twitter API Key” girişleri yapıldıktan sonra, Şekil 1’de görüldüğü gibi Türkçe dilinde 5000’er Tweet çekilerek analiz yapılmıştır.

**Şekil 1:** Twitter’dan veri çekme ekranı

Twitter’dan veriler çekilirken Şekil 2’de verilen aşamalar uygulanarak gerçekleştirilmiştir.

**Şekil 2:** Orange programında veri analizi tasarıımı

Şekil 3: BioNTech ve Sinovac aramalarına ait kelime bulutu

Şekil 4’tedeki BioNTech içerikli atılan Tweetlerde görülen duygular verilmiştir. Ele alınan 5000 Tweet incelendiğinde %58’inin “sevinç”, %34’ünün “şaşkınlık”, %6’ının “korku” ve %3’ünün “üzüntü” içerdiği görülmektedir. Kızgınlık ve nefret duygularının yok denecek kadar az olduğu söylenebilir.

Şekil 4: BioNTech içerikli tweetlerde görülen duygular

Şekil 5’tedeki Sinovac içerikli atılan Tweetlerde görülen duygular verilmiştir. Ele alınan 5000 Tweet incelendiğinde %56’sının “sevinç”, %34’ünün “şaşkınlık”, %5’inin “korku” ve %4’ünün “üzüntü” içerdiği görülmektedir. BioNTech Tweetlerinde olduğu gibi yine kızgınlık ve nefret duygularının yok denecek kadar az olduğu söylenebilir.
Şekil 5: Sinovac içeriği tweeterlerde görülen duygular

Bahsi geçen bu duygular, Tweetlerin alındığı zamana göre değişim göstermektedir. Çünkü aşı ile ilgili meydana gelen gelişmelerin bireyler üzerinde yaşattığı duygular farklılaşmaktadır. Şekil 4 ve Şekil 5 incelendiğinde her iki aşının da aynı duyguları yansıttığı görülmektedir. Ayrıca Tweetler neredeyse hepsinde pozitif içeriklidir.

Tablo 1’de BioNTech ve Sinovac içerikli atılan Tweetlerin konu grupları gösterilmektedir. Gruplar en sık olandan en aza doğru sıralanmıştır.

<table>
<thead>
<tr>
<th>BioNTech</th>
<th>Konu Anahtar Kelimeleri</th>
<th>Konu Anahtar Kelimeleri</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BioNTech, doz, 2, sinovac, aşık</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Şahin, uğur, pfizer, firma, nobel</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Whatsapp, Instagram, Twitter, Facebook, Tweet</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Mustasyon, covid 19, küresel</td>
<td>4</td>
</tr>
</tbody>
</table>

Her iki aşıcınca ilk grup aşılar, ikinci grup aşının özelliği, üçüncü grup sosyal medya platformları ve dördüncü grup ise aşının yayılımı ile ilgilidir.

5. Sonuç


Bu çalışma, sadece Twitter’da yer alan verilerin analizine dâhil edilmesiyle oluşturulmuştur. Diğer sosyal medya platformlarında yer alan veriler analiz edilerek duygusal analizi gerçekleştirebilir. Çalışma, yalnızca Türkçe dilindeki Tweetleri kapsamadığı için, Türkçe olmayan Tweetlerin farklılıkları ve duyularını yansıtmamaktadır. Ayrıca, bu çalışma belirli bir zaman diliminde çekilen Tweetlerden oluşturulduğundan dolayı, başka zaman dilimlerinde pipot of the text.
atulabilecek Tweetlerden kaynaklanan farklı duygular da göz ardı edilmektedir. Gelecekteki çalışmalarda așılara ilgili değişimler ve farklı aşıların yorumları incelenebilir.

Kaynakça

Alsabban, M. (2021, June). Comparing two sentiment analysis approaches by understand the hesitancy to COVID-19 vaccine based on Twitter data in two cultures. In 13th ACM Web Science Conference 2021 (pp. 143-144).


An Analysis of Factors Affecting Profitability in the Banking Sector: The Case of Banks Traded in Borsa Istanbul

Aysegul Berrak Koten

Abstract

The banking sector is one of the basic building blocks for the Turkish economy as in many countries. Banks have an important role in transferring capital accumulation to the real sector. Therefore, the profitability of the banking sector is of great importance for the future of the economy. This study aims to determine the determinants of profitability in banks traded in Borsa Istanbul. Panel regression analysis was applied for 12 banks for the period 2010.Q1-2021.Q2. As a result of the analysis, it was found that the liquidity risk did not have statistically a significant effect on the return on assets. Credit risk was found to be significant in terms of decreasing return on assets of operating expenses. Considering the coefficient sizes, the reducing effect of credit risk is higher than operating expenses. On the other hand, size, capital, net interest income, non-interest income, and sector share were found to be significant in terms of increasing the return on assets. Of the positively effective variables, size and capital were found to be the most effective increasing variables. Sector share was found to have the lowest increasing effect.

Keywords: Banking sector, profitability, panel regression analysis

1. Introduction

Banks, which act as financial intermediaries between savers and investors, are one of the most important parts of the financial system not only in developing economies but also in developed economies (Ahamed, 2017: 4; Djalilov and Piesse, 2016: 70). Banks, which also function as a fund transfer mechanism in financial systems, have important effects on the increase in capital in the country, the growth of real sector companies, the acceleration of industrialization, and the development and growth of the economy (Menicucci and Paolucci, 2016: 88).

The main function of banks is to act as a bridge between individuals and institutions supplying funds and individuals and institutions demanding funds in an economy. Banks, one of the important elements of monetary and credit policy in the economy, aim at profit maximization while fulfilling the function of transferring resources from units with financing capacity to units with financing deficits. Banks have to operate more efficiently with a wider range of products to maintain their profitability in the face of the pressure and risks brought by some factors such as technological developments, globalization, government intervention, and capital adequacy. In particular, as a result of globalization, foreign banks’ operating in domestic markets has increased interbank competition and narrowed their profit margins (Pasiouras & Kosmidou, 2007: 224).

This study aims to determine the factors affecting profitability for 12 banks traded in the stock market. For the period 2010.Q1-2021.Q2, the eight different independent variables that were thought to be effective on return on assets were interpreted with the help of the panel regression analysis. In the first stage of the study, previous studies in the literature were included, in the next stage, the importance of profitability for banks was mentioned, and in the final stage, the results of the econometric analysis were interpreted.
2. Literature Review

Many studies have been conducted in the national and international literature on the factors affecting bank profitability. When the literature on bank profitability is examined, it is seen that bank-specific, sector-specific and macroeconomic variables are used as determinants of bank profitability. Some of these studies are mentioned below.

Naceur & Goaied (2001) found that variables such as portfolio composition, labor efficiency, capital efficiency, and capital level positively affect the bank profitability variable in their study including the banks in Tunisia covering the period of 1980-1995.

Mamatzakis & Remoundos (2003) examined the banks in Greece between 1989 and 2000 and found variables such as past profitability, capital ratio, loan-to-asset ratio, personnel expenditures, money supply, bank scale as significant determinants on profitability measured by return on assets and return on equity.

Athanasoglou et al. (2006), in their study on Southeast European countries, concluded that GDP and inflation have a positive effect on bank profitability.

Pasiouras & Kosmidou (2007), in their study covering the period between 1995 and 2001 including 15 European Union countries, found that the profitability of the bank sample consisting of local and foreign banks was significantly affected not only by bank-specific variables but also by market structure and macro variables.

Gungor (2007) revealed that both micro and macro determinants had significant effects on bank profitability in banks in Turkey between 1990 and 2005. A positive relationship was found between operating expenses and return on assets; and a negative relationship between the increase in non-performing loans and the return on assets. It was concluded that the inflation rate, economic growth, and the share of the banking sector in the economy, among the macroeconomic variables, were positively related to profitability.

Ben Naceur & Omran (2008) found that credit risk positively affects bank profitability, while macroeconomic factors have no effect on bank profits in their study on the banks of MENA countries using the data from 1989 to 2005.

The study of Sufian & Chong (2008) using the empirical findings of banks in the Philippines between 1990 and 2005 shows that the profitability of banks is negatively related to bank size, credit risk, and non-interest expenses, while non-interest income and bank capital have a positive effect on bank profitability.

Alp et al. (2010), in their study of banks in Turkey covering the years 2002-2009, argues that the variable of return on assets is affected positively by the bank capital and bank size variables, but negatively affected by the variables of credit risk and operating expenses.

Davydenko, in his study (2011) analyzing the banks in Ukraine determined that the factors determining the level of profitability between the years 2005-2009 were capital ratio, credit risk, expense management, loan-to-asset ratio, deposit-to-asset ratio, bank scale, concentration ratio, inflation rate, and financial crisis, respectively.

In their bank profitability model in Spain covering the period 1999-2009; Trujillo-Ponce (2013) found that variables such as past profitability, loan-to-asset ratio, deposit-to-asset ratio, credit risk, bank capital, expense-income ratio, economic growth, sector concentration were significant.

Chronopoulos et al. (2015) revealed variables such as past profitability, bank capital, bank size, growth in assets, credit risk, income diversification, loan-to-asset ratio, and loan concentration as important determinants of bank profitability in the United States for the 1984-2010 period.
Bapat (2017) stated that the expense-income ratio and non-performing loans were the variables that negatively affected bank profitability in India between the years 2006-2013.

Belke & Unal (2017) concluded that the profitability of banks, which is measured by the return on assets, between the years 2005-2015, varied depending on whether the banks are traded in the stock market or not.

In his study covering the period 2009-Q1-2016-Q3, Isik (2017) found that the internal variables specific to banks that affect bank profitability in Turkey differ according to the ownership structure of the banks. Isik and Belke (2017), in their study using the data of 12 deposit banks operating in Turkey between the years 2010-2015, stated that the scale of the bank affects the profitability of the bank negatively, but the credit risk has a positive effect on it.

Yao et al. (2018) examined the factors affecting the profitability of 28 commercial banks operating in Pakistan. According to the data obtained as a result of the study, the variables that determine the profitability of Pakistani banks are bank internal variables such as equity ratio, loan loss provision, management efficiency, liquidity level, bank asset size, financial structure, transaction costs, labor efficiency.

Aydemir et al. (2018) concluded that there was an inverted U-shaped nonlinear relationship between the profitability of deposit banks and the loan deposit ratio in Turkey between 2002 and 2015.

Turkdonmez and Babuscu (2019) examined the effects of internal and external factors on return on assets and return on equity, using quarterly data of 11 banks between 2010 and 2017. It was revealed that the variables of inflation, GDP, average deposit interest, among external factors, had a positive significant relationship; and equity/total assets, sector share, and asset quality, among internal factors, had a positive significant relationship.

Rolle et al. (2020) found that GDP, bank scale and capital adequacy ratio significantly affected profitability for banks in Pakistan in the period between 2014-2018, while the inflation and liquidity ratios were not significantly effective variables.

Kirci and Boran (2020) analyzed the data of 23 commercial banks operating in Turkey between 2005 and 2016 and reported that the profitability of the banks with a strong capital structure was also high.

Koroleva et al. (2021), in their study covering the years 2007-2019 in China, found that size, credit quality, and liquidity positively affected bank profitability, while the GNP variable affected profitability negatively.

Celik and Kaya (2021) aimed to determine the internal factors at the bank level that affected the profitability of domestic and foreign deposit banks operating in the Turkish banking sector between 2009 and 2017. According to the results obtained in the study, the asset profitability of domestic deposit banks is significantly affected by variables such as bank age, loan-to-deposit ratio, financial asset ratio. When the findings obtained from the panel data analysis are evaluated in terms of foreign banks, it was observed that the main determinants of the profitability of the banks were the growth in deposits, deposit-to-loan ratio, capital adequacy ratio, personnel expenses, net wages, and commission incomes, respectively. It was also determined that there was an inverted-U-shaped, non-linear relationship between the loan-to-deposit ratio and the profitability measures of deposit banks.

Arslan & Gocmen Yagcilar (2021) determined according to the results of the study covering the period 2006-Q4-2020-Q2 in the Turkish banking sector that the return on assets of banks was significantly and negatively affected by the bank scale and efficiency ratio variables, and significantly and positively by the equity ratio, liquidity ratio, and net interest margin variables;
and that return on equity, which is another profitability indicator, was significantly and negatively by to non-performing loans, efficiency ratio, loan-to-deposit ratio variables and significantly and positively affected by the net interest margin variable. They stated that in terms of profitability performances of banks, it is important to have certain levels of capital representing their equity ratios, increase the share of net interest margins and liquid assets in total assets, ensure efficiency and reduce the ratio of non-performing loans to total loans.

Akgunes (2021), in his study using the data set for the 2008-2019 period, analyzed the relationship between the profitability of the banks in the BIST Bank index and the financial risk and macroeconomic variables. It was concluded according to the findings obtained from the analysis that inflation and liquidity risk increased the profitability of the bank, but market capitation and credit risk did not have a statistically significant effect.

3. The Importance of Profitability in the Banking Sector

Profitability is the main reason for the existence of a business, and companies live on as they generate profits. Banks are also profit-oriented businesses. One of the most important economic factors to be taken into account in the 21st century is the profitability of the banking system (Alexiou & Sofoklis, 2009: 95). The performance of the banks in terms of profitability also reveals the success of the bank management.

Bank profitability can generally be defined as the difference between the profit from assets and the sum of the costs of liabilities and legal liabilities. In the literature, bank profitability is expressed as a function of internal (micro) and external (macro) determinants. Internal factors consist of accounts found in the balance sheet and income statements and are therefore called micro or bank-specific variables. External factors, on the other hand, are factors that are not related to bank management but reflect economic and legal conditions that affect the performance of financial institutions (Menicucci & Paolucci, 2016: 91). Studies on the determinants of bank profitability use variables of internal factors such as size, capital, risk management, expense management, a securities portfolio, and non-performing loans (Saira et al., 2011: 3798).

“Return on assets”, one of the profitability indicators, shows the profit obtained by the enterprises over their total assets. The return on assets ratio is, on the other hand, found by dividing profit before tax by total assets. Return on assets is an indicator that determines the efficiency of a bank as it shows how much profit it makes on each unit of average active assets.

One of the most important factors affecting bank profitability is the capital ratio. As it is known, the ratio of equity to total net assets shows the extent to which businesses finance their net assets with equity. In recent years, the rapid spread of banking activities to the international arena has brought the concept of capital adequacy to the fore (Lui & Wilson, 2010: 1855). While banks were ranked according to their asset sizes in the past, capital adequacy has become the most important criterion today. One of the important instruments in the hands of supervisors regarding the soundness of the financial structure is capital adequacy regulations, and the level of compliance of banks with these regulations is an important indicator of the soundness of their financial structure. Banks need to have sufficient capital for the risks they are exposed to for the healthy functioning of the financial system. The main element of this structure in terms of regulations is the regulations regarding capital adequacy and internal systems. Having sufficient equity against the losses that may occur due to the risks exposed means capital adequacy. Banks in Turkey are obliged to calculate, achieve, maintain and report the capital adequacy ratio to be determined as not less than 8% in accordance with the procedures and principles stipulated in the regulation to be issued by the regulatory and supervisory authority (Banking Regulation and Supervision Agency - BRSA).
The expenses incurred by the banks while continuing their activities have a significant impact on the profitability. In studies on this subject, personnel expenditures are generally used to represent operating expenses and are proportioned to total assets. The ratio of personnel expenditures to total assets, besides being a variable that shows labor productivity, can also be considered as a cost element since it is an important item in the operating expenses of banks (Gunes, 2015: 268). In the calculation of resource cost, the effect of indirect costs, also called operating expenses, should be taken into account. The most important of these is personnel expenses (Dagidir, 2010: 27).

Another variable taken into account in terms of bank profitability is risk management. Risk, measured by asset quality or liquid asset level, can be reduced by banks diversifying their portfolios and/or increasing their liquid assets, especially in conditions of increasing uncertainty. It should also be considered that holding excess liquid assets in banks reduces the risks that may arise, as well as the profitability (Ebenezer et al., 2017: 27). Liquidity is considered to be one of the primary points in banking, which means that liabilities and clearing debts can be paid whenever desired. To determine the liquidity level, the share of loans or liquid assets in total assets or the conversion rate of deposits to loans are used as variables (Gill et al., 2010: 5). When the international studies on the determinants of profitability are examined, it is observed that especially the liabilities of banks, their capital adequacy, liquidity status, credit policy and quality, operational efficiency, and bank sizes are the variables that have a significant impact on profitability.

Another variable affecting bank profitability is the securities held by banks. The securities ratio can be expressed as the ratio of securities portfolio to total assets. When the balance sheets of banks operating in Turkey are analyzed, it is seen that securities mainly consist of government debt securities. Especially since the 1990s, the fact that the banks became the largest source of funds for the public instead of transferring funds to the real sector has changed the balance sheet structures considerably (Gungor, 2007: 44). Non-interest incomes arise as a result of non-traditional activities of banks such as fees and commissions, dividends, and commercial income. According to Yao et al. (2018) the effect of this variable on profitability can be positive or negative. The increase in non-interest incomes may contribute to the decrease in the volatility of the profit and the increase in the stability of the profit due to the “diversification effect”. However, this can distract banks that often engage in unconventional activities from their core business. This can result in reduced profitability. (Aydin, 2019: 184)

Non-performing loans, which are among the determinants of profitability, are among the important variables. Non-performing loans are one of the important indicators used to measure the asset quality of banks and reflect the performance in loan collection (Alp et al., 2010: 6). The non-performing loans ratio is calculated as the ratio of non-performing loans to total assets. As it is known, companies request loans from banks to meet their loan needs. They have to repay the loans they have received on the due date and with pre-adjusted interest. Firms with increasing financing costs do not face a problem as long as economic progress is achieved. However, when the economy enters a recession, the operating profits that cover the costs of the firms decrease and bankruptcies can occur in the long run. This causes an increase in bad loans of banks. Thus, the profitability of banks deteriorates and turns into possible losses. The same effect is present in individual loans. People whose incomes decrease due to inflation face the risk of not being able to pay their loan debts and the bad loan volume of banks increases even more. The good management of the credit risk by the bank management affects the profitability performance. During the loan phase; banks’ good assessment of the credit risk of their customers and pricing accordingly, having sufficient collateral for the loans they give will reduce the bank loans going into default or the losses that will occur as a result of default. As the ratio of banks' loan provision expenses to total loans increases, the net interest margin
increases, while the return on assets decreases. Controlling the operational costs of banks positively affects the profitability performance as expected. Banks reflect their non-interest expenses to interest margins. Therefore, as non-interest expenses increase, the net interest margin also increases (Jumono et al., 2019: 95).

4. Econometric Analysis
4.1. Purpose and Importance of the Study
Banks have a very important place in the economies of countries and they have undertaken some basic duties for the healthy functioning of the economy. These basic duties are; financial intermediation, providing liquidity, supporting the financing of investments by providing fund accumulation, ensuring maturity harmony by facilitating the use of short-term resources in long-term investments, ensuring the effectiveness of monetary policies, and ensuring the development of national and international trade by offering various payment and loan options. Due to these important duties, the banks need to have a healthy structure for the economy to continue its activities effectively. Having a healthy structure for banks is only possible through the improvement of the profitability of banks. As a result, the profitability of banks is very important for banks to continue their activities effectively at the micro-level, and for the stability of the financial system at the macro level. From this point of view, this study aims to determine the factors affecting profitability for 12 banks traded in the stock market and to reveal the effects of return on assets with the help of panel regression analysis for the period 2010.Q1-2021.Q2.

4.2. Sample and Data
In the study, it is aimed to determine the factors affecting the return on assets, which is the dependent variable, for the banks traded in Borsa İstanbul for 46 quarter periods between 2010.Q1-2021.Q2. According to Dietrich & Wanzenried (2014), return on assets is an important indicator that shows how much profit the bank management can generate with current assets and how effectively the assets are used. For this reason, it has become the most common measure in the evaluation of bank profitability in the literature. The return on assets ratio consists of the combination of net profit margin and asset turnover. This ratio is important in terms of evaluating how efficiently banks use their assets and therefore how much profit they make from their investments. The analyzes were performed with Stata version 16.0. After the literature review, the variables frequently used in studies that do not cause multicollinearity (VIF value less than 5) were discussed, and the variables used in Table 1 are given.

Table 1: Variables used in the analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
<td>Return on Assets (RoA)</td>
</tr>
<tr>
<td>Net Profit (Loss) for the Period/Total Assets</td>
<td></td>
</tr>
<tr>
<td><strong>Bank-Specific Independent Variables</strong></td>
<td>Credit Risk (CRISK)</td>
</tr>
<tr>
<td>Non-Performing Loans / Total Loans and Receivables</td>
<td></td>
</tr>
<tr>
<td>Size (SIZE)</td>
<td>Natural Logarithm of Total Assets</td>
</tr>
<tr>
<td>Liquidity Risk (LRISK)</td>
<td>1/(Liquid Assets / Total Assets)</td>
</tr>
<tr>
<td>Operating Expenses (OEXP)</td>
<td>Other Operating Expenses / Total Assets</td>
</tr>
<tr>
<td>Capital (CAP)</td>
<td>Total Equity / Total Assets</td>
</tr>
<tr>
<td>Net Interest Income (NIIN)</td>
<td>Net Interest Margin / Total Assets</td>
</tr>
</tbody>
</table>
In the study, 12 banks traded in Borsa Istanbul are discussed and given in Table 2.

Table 2: Banks constituting the study sample

<table>
<thead>
<tr>
<th>BANKS</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AKBANK T.A.Ş.</td>
<td>AKBNK</td>
</tr>
<tr>
<td>ALBARAKA TÜRK KATILIM BANKASI A.Ş.</td>
<td>ALBRK</td>
</tr>
<tr>
<td>GARANTI BBVA</td>
<td>GARAN</td>
</tr>
<tr>
<td>TÜRKİYE HALK BANKASI A.Ş.</td>
<td>HALKB</td>
</tr>
<tr>
<td>ICBC TURKEY BANK A.Ş.</td>
<td>ICBCT</td>
</tr>
<tr>
<td>TÜRKİYE İŞ BANKASI A.Ş.-A</td>
<td>ISATR</td>
</tr>
<tr>
<td>TÜRKİYE İŞ BANKASI A.Ş.-B</td>
<td>ISBTR</td>
</tr>
<tr>
<td>TÜRKİYE İŞ BANKASI A.Ş.-C</td>
<td>ISCTR</td>
</tr>
<tr>
<td>QNB FİNANSBANK</td>
<td>QNBFB</td>
</tr>
<tr>
<td>ŞEKERBANK T.A.Ş.</td>
<td>SKBNK</td>
</tr>
<tr>
<td>TÜRKİYE SINAİ KALKINMA BANKASI A.Ş.</td>
<td>TSKB</td>
</tr>
<tr>
<td>TÜRKİYE VAKIFLAR BANKASI T.A.O.</td>
<td>VAKBN</td>
</tr>
<tr>
<td>YAPI VE KREDI BANKASI A.Ş.</td>
<td>YKBNK</td>
</tr>
<tr>
<td>TÜRKİYE KALKINMA BANKASI A.Ş.</td>
<td>KLNMA</td>
</tr>
</tbody>
</table>

4.3. Research Method

In the study, first of all, the presence of cross-section dependency was determined for the banks traded in the stock exchange, and then homogeneity tests were applied. Accordingly, the stationarity of the series was analyzed with the first-generation unit root tests by Im et al. (2003), Maddala and Wu (1999), and Choi (2001), and the second-generation panel unit root test of CADF unit root test. In the next stage, Chow test and Breush-Pagan test were applied to determine which panel regression model should be used. Then, the suitability of the fixed effects model was determined with the Hausman test. As a result of the estimation of the fixed effects model, Wooldridge test was used for autocorrelation and Greene test for heteroscedasticity.

4.4. Findings and Evaluation

4.4.1 Horizontal Section Dependency and Homogeneity Tests

In the analyses of the panel data, first of all, it should be examined whether the variables are homogeneous. The fact that the variables are homogeneous or heterogeneous changes the form of the unit root and cointegration tests to be applied (Hsiao, 2003: 56). On the other hand, if a cross-section dependency is present, it is necessary to apply second-generation unit root tests (Wooldridge, 2010: 67). In this study, since there are 14 banks (N=14) and 46 quarters (T=46), the Berusch Pagan (1980) CDLM1 test, which is suitable when the time dimension is greater than the cross-section dimension (T>N), was applied. (With the A, B and C shares of Türkiye İş Bankası A. Ş., a sample consisting of 14 banks was evaluated.)
Table 3: Cross-section dependency and homogeneity test results

<table>
<thead>
<tr>
<th></th>
<th>CDLM1 Test Statistics</th>
<th>LMadj Test Statistics</th>
<th>CDLM1 p-value</th>
<th>LMadj p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets (RoA)</td>
<td>7.564</td>
<td>9.589</td>
<td>0.005</td>
<td>0.000</td>
</tr>
<tr>
<td>Credit Risk (CRISK)</td>
<td>8.909</td>
<td>10.215</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Size (SIZE)</td>
<td>7.505</td>
<td>8.993</td>
<td>0.007</td>
<td>0.001</td>
</tr>
<tr>
<td>Liquidity Risk (LRISK)</td>
<td>9.327</td>
<td>10.479</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Operating Expenses (OEXP)</td>
<td>10.572</td>
<td>11.332</td>
<td>0.002</td>
<td>0.005</td>
</tr>
<tr>
<td>Capital (CAP)</td>
<td>11.467</td>
<td>12.771</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Net Interest Income (NIIN)</td>
<td>10.559</td>
<td>11.594</td>
<td>0.001</td>
<td>0.007</td>
</tr>
<tr>
<td>Non-Interest Income (NOIN)</td>
<td>9.378</td>
<td>10.245</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Sector Share (SECS)</td>
<td>11.375</td>
<td>12.885</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient homogeneity test (statistical value)</td>
<td>Δ = 19.463</td>
<td></td>
<td>p=0.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Δadj = 21.337</td>
<td></td>
<td>p=0.001</td>
<td></td>
</tr>
</tbody>
</table>

Since the probability values of the test results were less than 5%, the null hypothesis (the slope coefficients are homogeneous) was rejected and it was determined that the coefficients were heterogeneous. The cross-sectional dependence between units was also determined (p<0.05).

4.4.2. Results of First-Generation Panel Unit Root Test

First-generation unit root tests are divided into two as homogeneous and heterogeneous models. Since the coefficients are heterogeneous, first-generation unit root tests will be used by Im, Pesaran, and Shin (2003), Maddala and Wu (1999), Choi (2001) based on the heterogeneous model assumption.

Table 4: Results of first-generation panel unit root tests

<table>
<thead>
<tr>
<th>Financial Ratios</th>
<th>Maddala&amp;Wu Test</th>
<th>Im, Pesaran &amp; Shin Test</th>
<th>Choi Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level</td>
<td>1. Level Difference</td>
<td>Level</td>
</tr>
<tr>
<td></td>
<td>Trend+constant</td>
<td>Constant</td>
<td>Trend+Constant</td>
</tr>
<tr>
<td>Return on Assets (RoA)</td>
<td>0.123</td>
<td>0.001*</td>
<td>0.135</td>
</tr>
<tr>
<td>Credit Risk (CRISK)</td>
<td>0.141</td>
<td>0.008*</td>
<td>0.152</td>
</tr>
<tr>
<td>Size (SIZE)</td>
<td>0.116</td>
<td>0.000*</td>
<td>0.128</td>
</tr>
<tr>
<td>Liquidity Risk (LRISK)</td>
<td>0.159</td>
<td>0.004*</td>
<td>0.169</td>
</tr>
<tr>
<td>Operating Expenses (OEXP)</td>
<td>0.215</td>
<td>0.000*</td>
<td>0.255</td>
</tr>
<tr>
<td>Capital (CAP)</td>
<td>0.317</td>
<td>0.000*</td>
<td>0.384</td>
</tr>
</tbody>
</table>
### Financial Ratios

<table>
<thead>
<tr>
<th>Financial Ratios</th>
<th>Maddala&amp;Wu Test</th>
<th>Im, Pesaran &amp; Shin Test</th>
<th>Choi Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level</td>
<td>1. Level Difference</td>
<td>Level</td>
</tr>
<tr>
<td></td>
<td>Trend + constant</td>
<td>Constant</td>
<td>Trend + Constant</td>
</tr>
<tr>
<td>Net Interest Income (NIIN)</td>
<td>0.187</td>
<td>0.003*</td>
<td>0.199</td>
</tr>
<tr>
<td>Non-Interest Income (NOIN)</td>
<td>0.148</td>
<td>0.011*</td>
<td>0.164</td>
</tr>
<tr>
<td>Sector Share (SECS)</td>
<td>0.213</td>
<td>0.000*</td>
<td>0.271</td>
</tr>
</tbody>
</table>

*The stationary variable for 0.05, the in-table values are “p” values.

As a result of panel unit root tests, it was determined that the variables for the first level difference were I(1), that is, stationary. In this case, the analysis will be studied by taking first-level differences.

### 4.4.3. Results of the Second-Generation Panel Unit Root Test

If a cross-section dependency is present in the panel data, using the second-generation unit root tests provides more consistent, efficient, and powerful estimation. Since cross-sectional dependence was determined in this study, second-generation unit root tests should be used (Ozel et al., 2013: 168). CADF, one of the second-generation unit root tests, was used. The results of the CADF test developed by Pesaran (2007) are given in Table 5.

**Table 5:** Results of the panel CADF unit root test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Level</th>
<th>1. Level Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets (RoA)</td>
<td>-1.067</td>
<td>-1.103</td>
</tr>
<tr>
<td>Credit Risk (CRISK)</td>
<td>-1.188</td>
<td>-1.214</td>
</tr>
<tr>
<td>Size (SIZE)</td>
<td>-0.954</td>
<td>-1.022</td>
</tr>
<tr>
<td>Liquidity Risk (LRISK)</td>
<td>-0.887</td>
<td>-0.980</td>
</tr>
<tr>
<td>Operating Expenses (OEXP)</td>
<td>-1.215</td>
<td>-1.289</td>
</tr>
<tr>
<td>Capital (CAP)</td>
<td>-0.990</td>
<td>-1.018</td>
</tr>
<tr>
<td>Net Interest Income (NIIN)</td>
<td>-0.758</td>
<td>-0.907</td>
</tr>
<tr>
<td>Non-Interest Income (NOIN)</td>
<td>-1.116</td>
<td>-1.256</td>
</tr>
<tr>
<td>Sector Share (SECS)</td>
<td>-1.358</td>
<td>-1.404</td>
</tr>
</tbody>
</table>

*Ho is rejected for 0.05, a stationary variable

In CADF tests, the maximum length of lag was taken as 2 and the optimal length of lag was determined according to the Schwarz information criterion. It is seen that the null hypothesis was rejected at the 5% significance level. The results of the unit root test show that the series are not stationary at the level, in other words, they contain a unit root, and the variables are stationary at the I(1) level. In this case, regression analysis will be performed by taking first-level differences.
4.5. Results of the Panel Regression Estimation

Panel data estimation methods are performed using pooled, fixed, and random effects. Pre-tests are needed to determine which method to choose (Baltagi, 2005: 78). For the panel regression estimation process, Chow and Breush-Pagan (BP) tests are applied in the first stage. For Chow test, hypothesis H0 is a pooled regression model and hypothesis H1 is a stationary-effects model (SEM), while H0 hypothesis for BP test is a pooled regression model and H1 is a random-effects model (REM) (Bayar & Sezgin, 2017: 55).

Table 6: Results of panel regression estimation method selection test

<table>
<thead>
<tr>
<th>Test</th>
<th>Probability (p)</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow (F test)</td>
<td>0.000</td>
<td>H0 rejected</td>
</tr>
<tr>
<td>BP (X2 test)</td>
<td>0.001</td>
<td>H0 rejected</td>
</tr>
</tbody>
</table>

As can be seen in the table above, the H0 hypothesis was rejected for both tests. Therefore, it was necessary to choose between REM and SEM models. In this case, selection will be made for two models with the help of the Hausman test. The hypotheses of this test are given below and the test results are presented in Table 7.

H0: There is a random effect (REM)
H1: No random effect (SEM)

Table 7: Hausman test results

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-square Statistics</th>
<th>Chi-square SD</th>
<th>Probability (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>578.209</td>
<td>2</td>
<td>0.000</td>
</tr>
<tr>
<td>Period random</td>
<td>612.443</td>
<td>2</td>
<td>0.000</td>
</tr>
<tr>
<td>Cross-section and period random</td>
<td>645.975</td>
<td>2</td>
<td>0.000</td>
</tr>
</tbody>
</table>

According to the Hausman test results, the H1 hypothesis was accepted and the SEM model was selected. In addition, while analyzing this model, different solution algorithms were tried and the "Cross-section SUR algorithm", which gives the smallest total squared error value, was used.

Table 8: Results of panel regression estimation

<table>
<thead>
<tr>
<th>Dependent Variable: F(RoA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method: Panel EGLS (bidirectional stationary effects)</td>
</tr>
<tr>
<td>Number of Horizontal Cross-Sections: 14</td>
</tr>
<tr>
<td>Total Number of Panel Observations (Balanced): 619</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ratios</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCredit risk (CRISK)</td>
<td>-2.367441</td>
<td>0.620966</td>
<td>-3.812512</td>
<td>0.0003*</td>
</tr>
<tr>
<td>FSize (SIZE)</td>
<td>2.419587</td>
<td>0.527947</td>
<td>4.583009</td>
<td>0.0000*</td>
</tr>
<tr>
<td>FLiquidity Risk (LRISK)</td>
<td>-0.286207</td>
<td>0.153834</td>
<td>-1.860495</td>
<td>0.0665</td>
</tr>
<tr>
<td>FOperational Expenses (FEXPENS)</td>
<td>-2.122207</td>
<td>0.877523</td>
<td>-2.418407</td>
<td>0.0178*</td>
</tr>
<tr>
<td>FCapital (CAP)</td>
<td>1.800905</td>
<td>0.420354</td>
<td>4.284256</td>
<td>0.0001*</td>
</tr>
</tbody>
</table>
The independent variables considered in the model have the power to explain the return on assets by 79.5%. Liquidity risk was not found to be statistically significant in terms of return on assets (p>0.05). Credit risk was found to be significant in terms of decreasing return on assets of operating expenses. Considering the coefficient sizes, the reducing effect of credit risk is higher than operating expenses. On the other hand; size, capital, net interest income, non-interest income, and sector share were found to be significant in terms of increasing the return on assets. Of the positively effective variables; size and capital were found to be the most effective increasing variables. Sector share was found to have the lowest increasing effect.

5. Conclusion

Banks are important financial institutions for the economies of countries that transfer the funds they collect to those who need funds. For banks to have a healthy structure, they must be able to earn a steady profit. Based on this requirement, this study aimed to analyze the factors affecting the profitability of banks. This study aimed to determine the determinants of profitability for 12 banks traded on the stock exchange using the panel regression analysis for the period 2010.Q1-2021.Q2.

In this study, it was observed that the return on assets of the bank increased when the size of the bank increased and that there was a positive relationship between the two variables. It can be said that the ability of banks, which can collect enough deposits due to their size, to effectively utilize the deposits they collect, is also effective in their profitability. On the other hand, the issue of optimum bank size is still discussed in the academic literature.

The relationship between the variable of capital and bank profitability was found to be positive and significant. This shows that banks with a strong capital structure have low costs of funds and are more profitable due to the decrease in the need for foreign capital.

Banks, which are likely to fail in case of lack of liquidity, have to bear an opportunity cost when they hold more liquid assets than necessary. This study investigated the effect of liquidity on profitability and found no significant effect of liquidity ratio on bank profitability. On the other hand, managing the increase in liquidity effectively and transferring it to future returns can have a positive impact on profitability.

A negative and significant relationship was found between credit risk and return on assets. It can be concluded that due to the asymmetric information problem in the banking sector, the credit risk cannot be managed effectively. The good management of the credit risk by the bank management affects the profitability performance. During the loan phase; banks’ good assessment of the credit risk of their customers and pricing accordingly, having sufficient collateral for the loans they give will reduce the bank loans going into default or the losses that will occur as a result of default. As the ratio of banks’ loan provision expenses to total loans increases, the net interest margin increases, while the return on assets decreases.
The effect of operating expenses on the measure of return on assets was found to be negative and statistically significant. This indicates that banks could not manage their expense items effectively during the research period. The relationship between the net interest income of the banks from their ordinary activities and the profitability of the bank was found to be positive. According to the estimation results, the increase in non-interest income items also affects the return on assets positively.

The sector share, which is one of the sector-related variables that affect bank profitability, is the ratio of the total assets of all banks in the sector to GDP. In this study, the sector share was found to be significant in terms of increasing the return on assets at the lowest rate. With this ratio, attempted to determine the role of the total assets of the banks in the GDP variable and to reveal its effect on the return on assets of the banks. The sector share reflects the development of the banking sector and the importance of the financing provided by the banks in the economy.

The results obtained in this study are important both for the success of the bank management and for the future of the financial system. It is thought that the results of the study will be beneficial for both banks and institutions that supervise banks to increase the profitability of banks and ensure stability. When the results are evaluated in their entirety, although micro variables are the main factor in the profitability of banks, macroeconomic factors should not be ignored at this point, as well. Not only a healthy and effective management that allows banks to grow but also the course of macroeconomic indicators will reveal different results in terms of profitability of banks. In future studies, taking into account the ownership structure of the banks, the data can be analyzed by categorizing the deposit, participation, investment, and development banks, it can be investigated in detail whether there is a meaningful difference in terms of profitability. Determinants of profitability can be analyzed separately according to bank types and common determinants can be determined. Thus, it may be possible to approach the policies to be implemented related to the sector from a broader perspective.

**References**


COVID-19 Küresel Salgın Sürecinde Tüketicilerin Alışveriş Davranışlarındaki Değişimler

Müslüme Narin¹

Özet


Anahtar Kelimeler: COVID-19 küresel salgını, dijital ekonomi, çevrimi alışveriş, e-ticaret

Changes in Consumers' Shopping Behaviors During the COVID-19 Global Pandemic Process

Abstract

The global pandemic of COVID-19, which has affected the whole world, has significantly affected the order of daily life and consumer behaviour as well as the entire economy. Due to the restrictions and closures experienced since March 2020, most of the economic activities have shifted to digital environments. The technologies of Industry 4.0, which provide some advantages, have played an active role in this process. Especially during the closure periods when workplaces were closed and people could not leave their house, traditional shopping behaviour of consumers have changed and turned into online shopping. In other words, consumers who comply with the call to “stay at home” have performed many transactions such as meals, grocery shopping and bill payments in digital environment. The aim of this study is to evaluate the change in consumer behaviour before and after the global pandemic by means of e-commerce data.

Keywords: COVID-19 global pandemic, digital economy, online shopping, e-trade

1. Giriş


Özellikle internetin insan hayatına girmesiyle birlikte ekonomide hızlı bir dijital dönüşüm gerçekleşmiş, sanal piyasaların boyutu genişlemiştir. Ekonomideki bu dijital dönüşüm, haneciliklerin alcı olarak nihai tüketim mallarına yönelik taleplerini ve üretim faktörleri olarak emek sahiplerinin istihdam olanaklarının dijital piyasalar üzerinden yürütülmesine yol açmıştır.

2019 yılı Aralık ayından itibaren dünyayı etkisi altında alan COVID-19 küresel salgını, tüm ekonomiyle birlikte haneciliklerin tüketim kalıpları ve tüketici davranışlarını da

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değişmiştir. Tüketici davranışlarındaki değişmede dijital ortamların gelişmesi, diğer bir ifadeyle Endüstri 4.0 kapsamındaki teknolojiler de etkin rol oynamıştır.


2. Tarihsel Süreçte Küresel Salgınlar ve COVID-19

Salgın (epidemi), belirli bir alan, topluluk ve süre içerisinde beklenenden daha fazla sayıda vaka görülmüşdür. Oysa küresel salgı (pandemi), bir hastalığın farklı ülkelerde, kıtalarda ya da dünyanın geneli gibi oldukça geniş bir alanda yayılırak nüfusun büyük bir bölümünü etkilemesi durumudur (Sağlık Bakanlığı, 2018: 4-5).

Insanlık tarihinde çok sayıda salgın gerçekleşmiş ve bu salgınlar milyonlarca kişinin ölümüne yol açmıştır. Diğer salgınlar gibi, içinde bulunduğumuz dönemde yaşanan COVID-19 küresel salgını da ekonomik, sosyal, toplumsal ve kültürel alanlarda bir sığın大发IIIयोग्य अर्थव्यवस्था से अधिकृतकर है। भारत की लॉयल्स और आर्थिक व्यवस्था के बीच एक सीधी लिंक है।

**Tablo 1: Tarihsel süreçte küresel salgınlar**

<table>
<thead>
<tr>
<th>Tarih</th>
<th>Salgın</th>
<th>Tahmini Ölüm Sayısı</th>
</tr>
</thead>
<tbody>
<tr>
<td>165 - 180 dönemi</td>
<td>Antonine Salgın</td>
<td>5 Milyon</td>
</tr>
<tr>
<td>249 - 270 dönemi</td>
<td>Cyprian Vebasi</td>
<td>Günde 5 Bin</td>
</tr>
<tr>
<td>541 - 542 dönemi</td>
<td>I. Veba Salgın (Jüstinyen Vebasi)</td>
<td>30 – 50 Milyon</td>
</tr>
<tr>
<td>735 - 737 dönemi</td>
<td>Japonya Çiçek Salgın</td>
<td>1 Milyon</td>
</tr>
<tr>
<td>1347 - 1351 dönemi</td>
<td>Kara Ölüm (2. Veba Salgın)</td>
<td>200 Milyon</td>
</tr>
<tr>
<td>15.yy. - 17. yy.</td>
<td>Çiçek Hastalığı (Yeni Dünya Çiçek Salgın)</td>
<td>56 Milyon</td>
</tr>
<tr>
<td>1629 - 1631 dönemi</td>
<td>İtalya Vebasi</td>
<td>1 Milyon</td>
</tr>
<tr>
<td>1665 - 1666 dönemi</td>
<td>Londra Büyük Vebasi</td>
<td>100 Bin</td>
</tr>
<tr>
<td>1817 - 1923 dönemi</td>
<td>Kolera Salgınları (1-6)</td>
<td>1 Milyondan fazla</td>
</tr>
<tr>
<td>1885 - Günümüz</td>
<td>3. Veba Salgın</td>
<td>12 Milyon</td>
</tr>
<tr>
<td>1800 sonu</td>
<td>Sari Humma Salgın</td>
<td>100 - 150 Bin</td>
</tr>
<tr>
<td>1852 – 1860 dönemi</td>
<td>Rusya Kolera Salgın</td>
<td>1 Milyon</td>
</tr>
<tr>
<td>1889 – 1890 dönemi</td>
<td>Küresem Grip Salgın</td>
<td>1 Milyon</td>
</tr>
<tr>
<td>1918 - 1919 dönemi</td>
<td>İspanyol Grişi</td>
<td>40 – 50 Milyon</td>
</tr>
<tr>
<td>1957 - 1958 dönemi</td>
<td>Asya Grişi</td>
<td>1,1 Milyon</td>
</tr>
</tbody>
</table>

2.2. COVID-19 Küresel Salgın


Türkiye’de dâhil ülkelerde salgın ile mücadele etmek için ülkelerin gerekli vaka ve verir uygulamaları için biraj makale etmekle birlikte Türkiye’de dâhil ülkelerde de virüsün yayılım hızı ve şiddetini yüzünden WHO, 11 Mart 2020 tarihinde küresel salgın olarak ilan etmiştir (Saatçi, 2020: 155).

Tablo 1

<table>
<thead>
<tr>
<th>Tarih</th>
<th>Salgın</th>
<th>Tahmini Ölüm Sayısı</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968 - 1970 dönemi</td>
<td>Hong Kong Gribi</td>
<td>1 Milyon</td>
</tr>
<tr>
<td>1981 - Günümüz</td>
<td>AIDS (HIV)</td>
<td>35 Milyondan fazla</td>
</tr>
<tr>
<td>2002 - 2004 dönemi</td>
<td>SARS</td>
<td>770</td>
</tr>
<tr>
<td>2009 - 2010 dönemi</td>
<td>Domuz Gribi</td>
<td>200 Bin</td>
</tr>
<tr>
<td>2012 - Günümüz</td>
<td>MERS</td>
<td>850</td>
</tr>
<tr>
<td>2014 - 2016 dönemi</td>
<td>Ebola</td>
<td>11 Bin</td>
</tr>
<tr>
<td>2019 - Günümüz</td>
<td>COVID-19</td>
<td>4.831.604 (06.10.2021)</td>
</tr>
</tbody>
</table>


3. İnsanları Dijital Ortamlara Yönelten Unsurlar, Çevrimiçi-Geleneksel Yüz Yüze Alışveriş ve Değişen Tüketici Davranışları
Teknolojisinin gelişmesiyle birlikte teknoloji kullanımı birçok alana olduğu kadar ekonomik hayat da geçmiş. Ekonomik hayat içinde çevrimiçi alışverişin en çok artış perakende sektöründe gerçekleştiği görülmür.

3.1. İnsanları Dijital Ortamlara Yönelten Unsurlar
İnsanları dijital ortamlarda çevrimiçi alışverişe yönelten unsurlar; kolaylık, fiyat takibi ve zaman tasarrufu sağlaması olarak sıralanmıştır (Retailer Insider, 2020).


3.2. Çevrimiçi ve Geleneksel Yüz Yüze Alışverişin Artıları ve Eksileri

Tüketicilerin yüz yüze alışveriş tercihlerinin arttığı kadar eksiğeleri de bulunmaktadır. Bununla birlikte teknolojinin gelişmesiyle birlikte insanların hayatına giren çevrimiçi alışverişin de artması ve eksileri vardır. Her iki alışverişin de zamana ve mekâna göre üstün ya da düşük olduğu yanlara mevcuttur. Çevrimiçi ve geleneksel yüz yüze alışverişin artıları ve eksiği aşağıdaki özetlenmiş (Bidhuri, 2020):

Çevrimiçi alışverişin artıları; geniş bir ürün çeşitliliğine erişilebilmesi, alışveriş mağazalarının 7/24 hizmet vermesi, mağazalarda bulunmayan çevrimiçi ürünlerde özel fırsatlar olabilirilmiş, tüketiciyile nakit bulundurma zorunluluğu bulunmaması, banka ve kredi kartı ile ödeme yapılabilmesi, ihtiyaç duyulan ürünün önümüzdeki olduğu filtre uygulaması, ürünleri karşılaştırma olanakları bulunmaktadır (Bidhuri, 2020):

Çevrimiçi alışverişin eksiği; ürünün kalitesinin kontrolünün zor olması, teslimat için bekleme süresinin olması, kredi kartı bilgilerinin kötüye kullanılma riski, alınan giysi veya ayakkabı denememesi, ürün denememesi için beden ve numarada uyumsuzluk olması olarak sıralanabilir.

Geleneksel yüz yüze alışverişin artıları; mağazada yeni kıyafet denemenin getirdiği psikolojik tatmin, satın alınan giysilerin yakından incelenme olanağı, ürün satın alındığı andan itibaren evde bırakılabilmesi, kişisel bilgilerin paylaşılma zorunluluğunun olmadığı, ürün işık altında kolaylıkların olmasıdır.

Geleneksel yüz yüze alışverişin eksiği; bir ürünü almak için mağaza dolaşmanın yorucu olduğu, mağaza dolaşmayı zorunlulukla reddetmesi, pazarlık sonucu elde edilen indirimlerin yalnızca mağaza içinde geçerli olması, mağazalardaki kıyafetlerin insanın uyumuna uyumsuz olması, özellikle salgın döneminde bu rahatsızlığın daha çok olması şeklinde ifade edilebilir.

3.3. COVID-19 Sürecinde Değişen Tüketici Davranışları


COVID-19 salgını ile birlikte tüketici alışverişlerinde nakit kullanmanın yerine temassız ödeme tercih eder olmalarıdır. Mastercard’ın 19 ülkeden 17.000 kişinin katılımı ile yaptığı araştırmada, katılımcıların %46’sı sahip oldukları mevcut kartlarını temassız kullanımı tercih eder hale gelmişlerdir. Bu oran 35 yaş altındakilerde %52 düzeyine çıkmıştır. Araştırmaya katılanların büyük kısmı (%82) temassız ödeme yönteminin daha temiz olduğunu, dokunma ve ödeme sırasındaki huz açısından daha avantajlı olduğunu belirtmişlerdir (FinTech İstanbul, 2020).

4. COVID-19 Küresel Salgın Sürecinde E-Ticaret

4.1. E-Ticaretin Tanımı ve Gelişimi


4.2. COVID-19 ve E-Ticaretin Hacmi


2019 yılında %8 seviyesinde başlayıp, yılın büyük kısmında %10’nun altında seyreden e-ticaret oranları; 2020 yılının ilk çeyreğinde de %12 bandında yatay bir görünüm sergilemiştir. İlk COVID-19 vakasının görüldüğü 2020 Mart ayında sonra, özellikle kapanmaların yaşandığı dönemde hızlı bir şekilde artmış, ancak yılsonuna doğru düşmeye başlamıştır.

**Tablo 2:** En çok artış gösteren sektörler

<table>
<thead>
<tr>
<th>Sektörler</th>
<th>2019 (Milyar TL)</th>
<th>2020 (Milyar TL)</th>
<th>Değişim (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gıda-Süpermarket</td>
<td>1,4</td>
<td>5,3</td>
<td>283</td>
</tr>
<tr>
<td>Kimya-Metallerjii</td>
<td>0,3</td>
<td>0,9</td>
<td>189</td>
</tr>
<tr>
<td>Beyaz Eşya</td>
<td>13,4</td>
<td>30,6</td>
<td>129</td>
</tr>
<tr>
<td>Ev-Bahçe Dekorasyon</td>
<td>2,8</td>
<td>5,7</td>
<td>105</td>
</tr>
<tr>
<td>Çiçekçilik</td>
<td>0,7</td>
<td>1,3</td>
<td>86</td>
</tr>
<tr>
<td>Yeme-Içme</td>
<td>5,0</td>
<td>8,1</td>
<td>61</td>
</tr>
<tr>
<td>Elektronik</td>
<td>8,6</td>
<td>13,4</td>
<td>56</td>
</tr>
<tr>
<td>Ayakkabı-Giyim ve Aksesuar</td>
<td>13,9</td>
<td>19,3</td>
<td>28</td>
</tr>
</tbody>
</table>


Tablo 2’de de görüldüğü gibi, salgın döneminde kapsayan 2020 yılı içerisinde e-ticaret oranı en çok artan sektörler, %283’lük oranlı gıda-süpermarket olmuş, bu sektör %189 ile metalürji ve kimya sektörü izlemiştir.

E-ticaret hacmi en çok artış gösteren sektörler olduğu kadar, azalış gösteren sektörler de olmuştur. E-ticaret hacmi artış gösteren sektörler Tablo 3’te yer almaktadır. Bu sektörler eğlence-sanat, seyahat-organizasyon ve taşımacılık, havayolu taşımacılığı ve konaklama olarak sıralanabilir.

**Tablo 3:** En çok azalış gösteren sektörler

<table>
<thead>
<tr>
<th>Sektörler</th>
<th>2019 (Milyar TL)</th>
<th>2020 (Milyar TL)</th>
<th>Değişim (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eğlence-Sanat</td>
<td>0,6</td>
<td>0,3</td>
<td>-50</td>
</tr>
<tr>
<td>Seyahat-Organizasyon ve Taşımacılık</td>
<td>9,0</td>
<td>5,0</td>
<td>-46</td>
</tr>
<tr>
<td>Havayolu</td>
<td>15,4</td>
<td>9,2</td>
<td>-40</td>
</tr>
<tr>
<td>Konaklama</td>
<td>2,1</td>
<td>1,4</td>
<td>-37</td>
</tr>
</tbody>
</table>


5. **Sonuç**


Zorunlu kısmi ve tam kapanmalar yüzünden geleneksel ticaretin ve tüketim yöntemlerinin durduğu bu süreçte alıcılar ve satıcılar alışverişlerini dijital ortamlar üzerinden sürdürmüştü. Binlerce yılda süregelen genel ticaret ve alışverişi kurallarından sonra dijital ortama uyum
saglamak zaman almıştır. İnternetten satış yapan e-ticaret siteleri de bu süreci kendi lehine çevirmiştir. Mevcut e-ticaret şirketlerinin piyasa payı artmış, yeni birçok e-ticaret şirketi de kurulmuştur.


Yapılan araştırmaların taraflarından kullanılan bu çalışmada, dijital ekonomiye geçiş sürecine ilişkin yeterli veri seti oluşturulamamıştır. Bu yüzden çalışmada ampirik bir analiz yapılamamıştır.

Kaynakça


The Importance and Expectations of the Free Trade Agreement between Republic of Serbia and Eurasian Economic Union

Ivana Popović Petrović

Abstract

The Free Trade Agreement between the Republic of Serbia and Eurasian Economic Union was signed in 2019 and it had just entered into the force in July 2021. The main aim of this paper is to point out the importance of newly open market of more than 180 million of habitants and potential buyers, for Serbian economy. These expectations of trade increase, primarily would be analyzed by elements of the Agreement, important for the trade regulation. Many economic opportunities couldn’t be seized unless relations between signatories are thoroughly regulated and that is the reason for observing the content of this Agreement as the best basement for further achievements.

Pointing the main objectives of the Agreement, as expansion and promotion of the free mutual trade and all economic relations with the improvements of procedures for its implementation, the focus of the paper would be the analysis of the Agreement and its Annexes as its integral part: List of goods exempted from free trade regimes of both parties, Joint administration, Technical barriers to trade, Sanitary and Phytosanitary Measures, Anti-dumping Procedures and Countervailing Measures, Dispute Settlements Body, Joint Committee.

The Agreement has regulated many issues, especially very sensitive ones, like the Rule of Origin, as a part of the Annex 3, with a special reference on the issuing, verification, certification and mutual recognition of the Certificate of origin. It is expected that this issue, with detailed regulation in Agreement, would represent the great contribution to the facilitation of the trade flows. This Agreement is also good example of creating one transparent mechanism for the settlement of disputes, with the final aim to achieve mutually agreed solution. A special contribution of this Agreement would be pointing all important elements of the procedure for anti-dumping investigations. These elements would be compared to elements in other free trade agreements, with the assessment of the opportunities that this agreement provides.

Keywords: Free trade agreement, certificate of origin, list of exempted goods, dispute settlements body

1. Introduction

Serbia is a signatory of the Free Trade Agreement with the Eurasian Economic Union and its member states, starting from 2019 and its implementation has just started in July 2021. This Union is one of contemporary and young integrations consisting of the Russia, Belarus, Kazakhstan, Armenia and Kyrgyzstan. By signing this Agreement, Serbia added the Armenia and Kyrgyzstan to the list of bilateral agreements, already signed, with Russia, Belarus and Kazakhstan, which resulted in making the free trade zone. That way, the basement for the unification of the preferential trade regime for all Union countries was established, for their accessing the Serbian market and vice versa. One of two main reasons for this Agreement with Serbia was the alignment of the preferential trade regime between all the Union’s countries and the partner country of Serbia and the second important reason was the intention to make the cooperation stronger by creating more favorable environment for mutual trade.² The Agreement was signed on October, the 25th 2019, for an indefinite period.

The EAEU was created in 2014, by signing of the Agreement between Russia, Belarus and Kazakhstan, which entered into the force starting from the January the 1st 2015. The same year the Union was extended by the membership of Armenia and Kyrgyzstan. The process of the Union’s establishing started on the July the 1st 2011, when the customs union was established

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2 Eurasian Economic Commission, Eurasian Economic Union — Figures and highlights — Trade, Trade Policy Department, 2020, p. 6.
between Russia, Belarus and Kazakhstan. This customs union was upgraded by the establishing of the Eurasian Economic Union, in 2014, with the envisaged establishment of free movement of labor, capital, goods and services, which are certainly the determinants of the common market. This was planned as a higher stage of integration. For the common external customs tariff of all three members, the customs tariff of Russia is determined. The main aim of the Union is a free flow of goods, services, labor force, capital, with plans for further and deeper integration with the common monetary policy and currency.

Becoming the part of the free trade zone, Serbia obtained almost the free market access, for more than 99% of goods from the Customs tariff. These countries reciprocally obtained free access on Serbian market. On the other side, expected benefits are firstly oriented towards Armenia and Kyrgyzstan, whose goods couldn’t be imported at the Serbian market duty-free before and after these benefits, the EAEU expect benefits from expanded scope of preferential trade between Serbia and other three countries.

Analyzing results of current implementation of this Agreement, some opinions are focusing that the most pronounced results are obtained in the liberalization of the labor movement.³

By some authors, the level of intra-trade of this Union is still very low comparing to other regional economic integrations. By their opinion, the hard economic times and the currency depreciations of the member countries are the main reasons for slow increase of the EAEU’s intra-trade, during last decade. In fact, during the last few years, these countries have achieved variable dynamics of the mutual trade. At the beginning of its associating, these countries have obtained the rise of its mutual trade, every year. It was 29% in 2010, 34% in 2011 and 9% in 2012. After this period came the period of its mutual trade decrease which lasted until the 2017, and it was stopped owing to the stabilization of the oil prices and changes of their currencies. Starting from 2014 until today, the share of their intra-trade was between 12.3-14.6%. ⁴

Positioning this Agreement, which main function is creation of the Regional trade integration, the most important is its relation towards other international agreements, especially the connection, or relation that this Agreement has with the World Trade Organization Agreement, (Marrakesh Agreement), concerning its priority.⁵ It is regulated in the Article 3, where it is determined that if any inconsistency between these two agreements appear, then the provisions of the WTO Agreement would be applied. Regulations of the EAEU are in compliance with the WTO regulations. The legal system of the Union and all member countries is planned to be aligned with the WTO Agreement. In cases that this process is not completed, than the WTO agreement would always prevail.⁶ Each Party shall accord national treatment to goods of the other Party in accordance with Article III of the GATT 1994.


2. The Elements of the Agreement and Expectations of Their Impact on Further Cooperation — The Market Access

Pointing at the main objectives of the Agreement, as expansion and promotion of the free mutual trade and all economic relations with the improvements of procedures for its implementation, the focus of the Paper would be the analysis of the Agreement and its Annexes as its integral part.7

The basement for defining the free trade regime between the signatory parties is the content of Article 4 — Free trade regime. By its regulation, the signatories are obliged not to apply customs duties, or other charges with the equivalent effect to customs duties. This rule has its exceptions, making possible the implementation of tariffs for goods listed in Annex 1 — List of Goods Exempted from Free Trade Regime upon Importation to the Customs Territory of the Republic of Serbia from the Member States of the Eurasian Economic Union and for goods mentioned in the List 2 — “List of Goods Exempted from Free Trade Regime upon Importation to the Customs Territory of the Eurasian Economic Union from the Republic of Serbia”. These customs duties and customs charges are planned to be applied in accordance with the rule of the most-favored nation treatment (Article 1-GATT 1994).

Concerning the fact that Lists of exceptions are also stated in order to define exactly which products will be subject to customs duties, all other products will have duty-free access to the markets of the signatory countries. For the most of products, the Parties, or signatories, will not apply customs duties and any charges, importing goods with the origin of any signatory.

Creating a List of exceptions is the common step, or content in the most free trade agreements, aiming in such a way, to protect the signatories’ domestic producers of a small, but significant part of the products produced in their territories, or for some other reason. Within the customs tariff of each country, such products are generally represented with only a few percents share.

The List of goods which are exempted from the free trade regime, by importing them on the customs territory of the Republic of Serbia from the member states of EAEU, is as follows:

**Table 1:** List of goods exempted from free trade regime, upon importation to the customs territory of the Republic of Serbia from the member states of EAEU

<table>
<thead>
<tr>
<th>Description</th>
<th>Goods originating from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>White sugar</td>
<td>the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic</td>
</tr>
<tr>
<td>Undenatured ethyl alcohol of an alcoholic strength by volume of 80 % vol. or higher; ethyl alcohol and other spirits, denatured, of any strength</td>
<td>the Republic of Armenia, Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic</td>
</tr>
<tr>
<td>Undenatured ethyl alcohol of an alcoholic strength by volume of less than 80 % vol; spirits, liqueurs and other spirituous beverages</td>
<td>the Republic of Armenia, from the Republic of Belarus, the Republic of Kazakhstan or the Kyrgyz Republic</td>
</tr>
<tr>
<td>Cigars, cheroots, cigarillos of tobacco or of tobacco substitutes</td>
<td>the Republic of Armenia, from the Republic of Belarus, the Republic of Kazakhstan or the Kyrgyz Republic</td>
</tr>
<tr>
<td>Retreaded or used pneumatic tyres of rubber</td>
<td></td>
</tr>
</tbody>
</table>

Tractors, (other than tractors of heading 8709), new  
the Russian Federation

Tractors, (other than tractors of heading 8709), used

Motor vehicles for the transport of ten or more persons, including the driver, used,

Motor cars and other motor vehicles principally designed for the transport of persons, (other than those of heading 8702) including station wagons and racing cars

Motor vehicles for transport of goods, new  
the Russian Federation

Motor vehicles for transport of goods, used

Note: The HS Codes for products are listed in the Annex to the Agreement;

The above List is given according to the original data from Annex 1 of the Agreement. It can be noticed that the Exemption List is defined for imports into Serbia from individual member states of the Union, not from the Union as a whole. For example, White sugar, as a product listed in the List of Exemptions from the Free trade regime, it is considered as an exemption only when white sugar is imported to Serbia from Armenia, Belarus, Kyrgyzstan and Kazakhstan, Russia is not listed, therefore. This means that the import duty on this product will be paid, entering the Serbian market, if it is imported from the mentioned countries, except from Russia. The same situation is listed for the wide group of alcoholic beverages, which will not be burdened with the payment of import duties if it comes from Russia, while for other member states of the Union, this possibility does not apply. Or, for example, the vice versa situation according to which the List of exemptions includes Tractors that are imported exclusively from Russia, but not Tractors from other member states of the EAEU.

The List of products which are the subject of the tariff rate quotas for the import on the customs territory of the Republic of Serbia from the member states of the EAEU, means that these products could be imported at the territory of Serbia with the duty free regime, under tariff quotas, but only from above mentioned countries. We can notice that the products from Russia are not at this List.

Table 2: The List of goods, subject to the tariff rate quota for importation to the customs territory of the Republic of Serbia from the member states of the EAEU

<table>
<thead>
<tr>
<th>Originating from:</th>
<th>Description</th>
<th>Duty free quota quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>the Republic of Armenia, the Kyrgyz Republic, the Republic of Kazakhstan</td>
<td>Processed cheese, not grated or powdered</td>
<td>100 tons per year</td>
</tr>
<tr>
<td>the Republic of Armenia, the Republic of Belarus, the Kyrgyz Republic, or the Republic of Kazakhstan</td>
<td>Spirits obtained by distilling grape wine or grape marc, others</td>
<td>50 000 liters of pure (100 %) alcohol per year</td>
</tr>
<tr>
<td>the Republic of Armenia, the Republic of Belarus, the Kyrgyz Republic, or the Republic of Kazakhstan</td>
<td>Cigarettes containing tobacco</td>
<td>2 000 000 thousand items per year</td>
</tr>
</tbody>
</table>

Note: The HS Codes for products are listed in the Annex to the Agreement;
All these listed products, within the defined quantity, would be treated with the duty free regime when they are imported at the Serbian territory. For higher quantity of products would be applied the out-of-quota tariff rate according to laws of Serbia and to Article 5 of the Agreement which is dedicated to Most-Favored-Nation Treatment. This List is the subject of the Annex 1.

The Annex 2 is oriented towards the topic of determining exceptions from the free trade regime at importing all further listed products from the Republic of Serbia, on the customs territory of the EAE Union. This Lists consists of many different products, starting from the chicken meat, sugar, wine, all the way to the products which are result of the textile industry and especially important for Serbian export, the motor cars and motor vehicles.

**Table 3:** List of goods exempted from free trade regime, upon importation to the customs territory of the Eurasian Economic Union from the Republic of Serbia

<table>
<thead>
<tr>
<th>Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat and edible offal, of the poultry of heading 0105, fresh, chilled or frozen</td>
</tr>
<tr>
<td>Processed cheese, not grated or powdered</td>
</tr>
<tr>
<td>White sugar</td>
</tr>
<tr>
<td>Sparkling wine</td>
</tr>
<tr>
<td>Undenatured ethyl alcohol of an alcoholic strength by volume of 80 % vol. or higher; ethyl alcohol and other spirits, denatured, of any strength</td>
</tr>
<tr>
<td>Undenatured ethyl alcohol of an alcoholic strength by volume of less than 80 % vol; spirits, liqueurs and other spirituous beverages</td>
</tr>
<tr>
<td>Cigars, cheroots, cigarillos of tobacco or of tobacco substitutes</td>
</tr>
<tr>
<td>Retreaded or used pneumatic tyres of rubber</td>
</tr>
<tr>
<td>Cotton yarn (other than sewing thread), containing 85 % or more by weight of cotton, not put up for retail sale</td>
</tr>
<tr>
<td>Woven fabrics of cotton, containing 85 % or more by weight of cotton, weighing not more than 200 g/m²</td>
</tr>
<tr>
<td>Woven fabrics of cotton, containing 85% or more by weight of cotton, weighing more than 200 g/m²</td>
</tr>
<tr>
<td>Woven fabrics of cotton, containing less than 85 % by weight of cotton, mixed mainly or solely with man-made fibres, weighing not more than 200 g/m²</td>
</tr>
<tr>
<td>Woven fabrics of cotton, containing less than 85 % by weight of cotton, mixed mainly or solely with man-made fibres, weighing more than 200 g/m²</td>
</tr>
<tr>
<td>Other woven fabrics of cotton</td>
</tr>
<tr>
<td>Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery</td>
</tr>
<tr>
<td>Compressors of a kind used in refrigerating equipment</td>
</tr>
<tr>
<td>Tractors (other than tractors of heading 8709)</td>
</tr>
<tr>
<td>Motor vehicles for the transport of ten or more persons, including the driver, used</td>
</tr>
<tr>
<td>Motor cars and other motor vehicles principally designed for the transport of persons (other than those of heading 8702), including station wagons and racing cars</td>
</tr>
<tr>
<td>Motor vehicles for transport of goods, used</td>
</tr>
</tbody>
</table>


It can be noticed that, unlike the previous List of exemptions, for goods originating from EAEU, this List provides a list of goods that are exempted from the free trade regime, originating from Serbia, but for their accessing territories of all member states of the Union, without specifying at least one country where import duties wouldn’t have to be paid. Therefore, for these products
from Serbia, when they are imported to the territory of any member states, import duties will have to be paid.

The structure of the List of goods which are subjects of the tariff rate quota regime when they are imported to the EAEU territory from the Republic of Serbia is very similar to the list from the Table 2. This regulation gives the possibility for Serbian exporters to access the EAEU market without tariffs for these products, but only within the regulated quantity. For all imports over that quantity, customs duty has to be paid.

**Table 4:** The List of goods subject to the tariff rate quota for importation to the customs territory of the EAEU from the Republic of Serbia

<table>
<thead>
<tr>
<th>Description</th>
<th>Duty free quota quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other cheese</td>
<td>400 tons per year</td>
</tr>
<tr>
<td>Spirits obtained by distilling grape wine or grape marc, others</td>
<td>35 000 liters of pure (100%) alcohol per year</td>
</tr>
<tr>
<td>Cigarettes containing tobacco</td>
<td>2 000 000 thousand items per year</td>
</tr>
</tbody>
</table>

Note: The HS Codes for products are listed in the Annex to the Agreement;

These possibilities for the export from Serbia towards EAEU countries are opened, but with limitations which are determined by the quantity of the exported products. In Annex 2 the main information explains this possibility with limitations. It means that the EAEU would allow the import from Serbia as the duty-free, but only within the tariff rate quota. Their levels are determined by the quantity of the product exported from Serbia, 400 tons of cheese, 35000 of alcohol and 2 000000 thousand of cigarettes.

### 2.1. Joint Administration

The Union has already established the Joint Committee and the Commission as the basic elements of the organizational structure. Preparing and concluding this Agreement, the Union has established the Joint Committee, as the institutional body with the numerous assignments, which is the subject of the Article 28.

The Agreement determines the need to form a joint body, as the part of the joint administration, that would be in charge of monitoring and examining the process of the Agreement’s implementation, finding new possibilities for the trade improvement and promotion of mutual trade relations. The predicted form of this body would be the Joint Committee with the representatives of both sides, mostly people from Government at the Ministerial level from Serbia and the representatives from Union at the other side. The Committee is also responsible for submission to all signatories, possible amendments to the existing Agreement.

Meeting of the Joint Committee should be organized at least once in a two years, but for the normal functioning in a meantime, it is determined that signatories could organize special sessions no later than 30 days after the request is made. The manner of such organization of joint bodies indicates the seriousness of the approach to potential specific topics that must be resolved, which would determine and improve further trade relations between the signatories.

In order to achieve faster operability, the Joint Committee should establish sub-committees, or working groups, for resolving special and individual tasks.

In order to facilitate the communications between the signatories, they have to form the Contact points during the first month after the entrance into the force of the Agreement. These contact points should be formed in all signatories, or parties of the Agreement. Beside the facilitation
of the Agreement’s implementation, the main aim of their foundation is ensuring the full implementation of the Agreement. Their task is to receive objections referred by other signatories, or Parties and to provide answers to these complaints.

The Agreement has regulated the possibility for all countries, possible new members of the EAEU, to accede to this Agreement when they become members of the Union. It also provides that, if any of the members of the Union decides to withdraw from the Union, it will also withdraw outside the framework of this Agreement.

2.2. Technical Barriers to Trade

The Agreement obliges the parties to cooperate and exchange information on standards, technical regulations, metrology, procedures, including accreditation, testing and certification, with a view to increase the mutual understanding of their respective systems and preventing the implementation of any technical barriers to trade between them. If any signatory considers that other signatory has taken any measure which provokes new technical barrier to mutual trade, it can organize technical consultations under the auspices of the Joint Committee, with the aim to find the acceptable solution. All suggestion should be defined in conformity with the provisions of the Agreement on Technical Barriers to Trade, in Annex 1A to the WTO Agreement.

2.3. Trade Facilitation Measures

A few important contributions of this Agreement, included in its numerous articles, they are connected with the Trade Facilitation issue. The most modern agreement reached under the auspices of the WTO, adopted in 2013, at the WTO’ Bali Ministerial Conference, the Trade Facilitation Agreement (TFA) covers several different areas, all together leading to the facilitation of trade flows. These issues are covered within the individual articles of the TF Agreement, where some of these issues are processed, or mentioned: Sanitary and Phytosanitary Measures — SPS, The origin of goods, Transit of Goods. All these articles are harmonized with corresponding articles of the GATT 1994. As the TF Agreement today is a set of many heterogeneous issues, during the process of negotiation under the auspices of the WTO, starting from 2004, this issue was not so wide-ranging. At its start, it included only some articles of the GATT, Articles V, VIII and X, with noticed importance of the customs clearance procedures and their expediting. When the TF Agreement was adopted, it became obvious that the Agreement covered some other important areas that facilitated trade flows, as modern instruments for the expediting of the movements, release and clearance of goods at frontiers. These elements today are very important component of many Regional Trade Agreements (RTAs).

Chart 1: RTAs containing Trade Facilitation components (in percentage of total Agreements)

Data from picture 1, point out the fact that contemporary RTAs, more than 95% of them, contain TF components. Although this study doesn’t include all contemporary articles of the TF Agreement, in the moment this study was published, one year after the adoption of the TF Agreement in 2013, it pointed out the importance of the TF issue. It encompassed the GATT Articles V, VIII, X and the widespread issue of the customs cooperation. Some of today’s most important issue of the TF as the Rules of origin and SPS have been set aside;

2.4. Sanitary and Phytosanitary Measures

The aim of the Article 10 — Sanitary and Phytosanitary Measures is the harmonization of existing SPS measures, in mutual trade of the EAEU with Serbia, but in accordance with the Agreement on the Application of Sanitary and Phytosanitary Measures, in Annex 1A to the WTO Agreement. They undertook to work on the issues of information exchange and further development of SPS measures with the aim to decrease the negative impact of possible measures for intra-trade, which could be introduced by either party. If the problem persists, the signatories of the Agreement could organize technical consultations with the Joint Committee to find the solution.

2.5. The Origin of Goods

The origin of goods is very sensitive issue and that is the reason why the space of one whole annex is dedicated to this topic. This is the Annex 3, “Rules of Origin”. This issue means the legal basement for the determination of the economic nationality of the goods. It was the subject of the GATT 1994 and the modern TF Agreement of the WTO and they both contain some provisions necessity to determine the origin of goods.

This Free Trade Agreement regulated many issues, especially very sensitive issues like the Rule of Origin. The origin of goods is important to be defined, as the country where the good was made, because of the implementation of some trade measures, especially trade preferences across the free trade zone. The further explanation of rules connected with the Rules of Origin, mentioned in the Article 11, they are developed as a part of the Annex 3, with a special pointing out on the procedure for issuing and mutual recognizing of the Certificate of origin. The Rules of origin are an integral part of many free trade agreements, regulating, that way, the granting of the preferential tariff regime. The special contribution of this Agreement, similar to other regional trade agreements, with the aim of making free trade zone, certainly is the thoroughly addressing the problem of the Rules of Origin. The aim of these Rules is its implementation, the way it brings the reduction of costs, by implementation of the preferential regimes for signatories of the Agreement. Without the mutual recognizing of this document, preferential regime couldn’t be operable and the free trade regime couldn’t be established.

For the mutual recognition of these rules, the basement is the “certificate of origin”, as a document which should be issued only by an authorized body, indicating the country of origin. To be specified as a country of origin is simple when the product is wholly produced in one country, not in a few of them. If it is a case, when at least two, but even a few countries are included in that process, for one product’s completion, than the signatories would use the “criterion of sufficient working (processing)”. This means that the product would be considered as a product which is originating from the country where the last substantial processing phase took place. The Origin Criteria is defined in the Article 3 of the Annex 3.

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The signatories of the Agreement are obliged to designate the “authorized body”, as the organization, or a body for issuing and confirmation of the certificate of origin. They are also obliged to designate the “verification authority”, as the mechanism with a few duties: to control the issuance of these certificates, declarations of origin, the credibility of data in these documents and the control of these criteria compliance by the manufacturers.

The Article 10 of the Annex 3, regulates the rules for obtaining the status of the product being imported under the free trade regime. For these goods, the valid and truly completed certificates of origin, at the form named Form CT-2, should be submitted to the customs authorities of the importing country. This certificate should be submitted for goods under one consignment and in original and hard copy. The period of validity is one year, starting from the date of issuing by the authorized body. It is also possible to issue the officially certified duplicate if the original document is damaged or lost. The issuer of this document and the applicant are obliged to have the copy of the certificate for at least period of three years.

The Article 13 of the Annex 3, allows the use of the Declaration of origin instead of the Certificate of origin, with the aim to make the procedures faster in the case of importing the small consignments, with the customs value less than five thousand Euro. But, in the case that customs authorities of the importing country doubt the validity of the information stated in the declaration, they may request a certificate of origin at the Form ST-2.

The procedure of verification is also regulated by subsequent articles of the Annex 3 and the requirements and procedures for correct filling of the Certificate of origin and its appropriate layout and data content. For the facilitation of the administrative procedures concerning the implementation of the Certificate of origin, the signatories are obliged to start using the Electronic origin certification and verification system no later than in two years.\(^{10}\)

2.6. Transit

The issue of transit, dedicated to the Transit of goods, always the integrative part of many Agreements of the free trade, is situated in the Article 12 - Transit of Goods. This issue is in the accordance with the Article V of the GATT 1994, which became the part of this Agreement, as well.

The freedom of transit (Article V, GATT 1994) is one of the main issues used as starting points for the work on the Trade Facilitation, under the auspices of the WTO, beside the Article VIII and X of the GATT 1994. The WTO General Council has decided to start these negotiations on August the 1\(^{st}\) 2004. The main waited goal when these negotiations have started, was clarifying and improving the expediting, the movement, release and clearance of goods with special focus on goods in transit.\(^{11}\)

The EAEU-Serbia Free Trade Agreement has regulated the procedure for transit. For the transit of goods through the territory of a third country, the “certificate of non-manipulation” must be provided. This is the document which has to be issued by customs authority of the third country, whose territory was used for transit of these goods. They have to confirm that these goods had


been under their control and that these goods didn’t pass through some production process, or that they were not replaced by another goods.\textsuperscript{12}

2.7. Anti-dumping Procedures and Countervailing Measures

These measures are covered by the Agreement. In the Article 18, it was decided that all signatory countries of the Agreement, apply Anti-dumping and Countervailing Measures, but in accordance with the GATT 1994, ie, Article VI of the GATT 1994 and in accordance with the related agreements. Important determinant in this Agreement is the fact that if Serbia has to start conducting the anti-dumping investigations towards any of signatory country, or start anti-dumping proceedings and reviews, it would be oriented only toward that individual country, not toward import from the EAEU as the Union. (Article 18-Paragraph 3)

2.8. Dispute Settlements Body

The Agreement stipulates that if any dispute arises between at least two signatories, than they should implement procedures and rules from the Annex 5 of the Agreement, dedicated to the “Dispute Settlement”.\textsuperscript{13} The aim of the Annex 5 is introduction and implementation of one transparent mechanism for resolving all misunderstandings that may arise during the implementation of this Agreement. The signatories, having any problem, should try to resolve it using the method of consultations with the possible result of finding the mutually agreed solution. If not, there are some other, upgraded forms of dispute settlement procedures as: recourse to good offices, conciliation or mediation. If it doesn’t lead to the result, the complaining signatory could ask for establishing the Arbitral Panel, made of three members, with appropriate qualifications, defined in the Article 8 of the Annex 5. Their decisions and reports have to be accepted without any conditions and all information about taken measures should be sent towards the Joint Committee.

The importance of taking into the Agreement, the modern issue of dispute settlement body is of the great importance for EAEU member states. Otherwise, member states could be concerned about resolving any possible disputes and disagreements, because Serbia is still not a member of the WTO. The representatives of the EAEU consider it very important to introduce this element into the Agreement.\textsuperscript{14} The expectations of the EAEU Economic Commission is also oriented towards Serbia obligations to provide the Union’s exporters with all legal guarantees and general conditions under the auspices of the WTO, already Serbia still is not its member.\textsuperscript{15}

3. Conclusion

It is expected that the main advantages for Serbia as the signatory of this Agreement, would be oriented primarily towards domestic producers and exporters of cheese and fruit, with increased export of cigarettes and certain types of alcohol without customs duties. This Agreement enables the export of two thousand tons of cigarettes, 35,000 liters of pure alcohol, 400 tons of cheese.

After a few years of this Agreement’s implementation, it is expected that Serbian exporters primarily would use benefits of approved duty free quota quantity and this favorable market access. After that phase, some steps towards changes of exported products structure should be


\textsuperscript{13} Free trade Agreement between the Republic of Serbia and the Eurasian Economic Union and its member states, \textit{Dispute Settlement}, (Annex 5) – Article 9, pp. 44-55.


\textsuperscript{15} Eurasian Economic Commission, \textit{Eurasian Economic Union — Figures and highlights — Trade}, Trade Policy Department, 2020, p. 6.
done, from raw materials to semi-finished and finished products, because it is expected to raise the level of processing of products which are planned to be exported to this large market. This is the aim of all improvements of the exports oriented products structure, oriented towards this Union as well as others.

Beside the already intensive trade that Serbia realized with Russia, expecting the more intensive trade with Belarus, the Agreement sheds light on new trade relations with Armenia and Kyrgyzstan, countries with which Serbia hasn’t achieved such high level of trade relations.

Concerning the structure, the Agreement is very similar to many other agreements forming the free trade zone. As in other similar RTAs, this Agreement is also based on the compliance and giving the priority to the WTO Agreements if any disagreement happens.

This Agreement consists of many structural elements that are an essential part of any agreement constituting the free trade zone. First of all are elements of the market access approach, as the clear separation of products under the free trade regime from the exceptions listed in the List of exceptions. The free trade regime is applied for all products, except for products at the Lists of exemptions. The greatest expectations are oriented towards exporters of some group of products, whose products are classified as the subject of the tariff rate quotas.

As many Regional trade integrations Agreements include some of elements for the Trade facilitation process, this Agreements especially, deals in great detail with issues such as: Rules of Origin, Transit, Sanitary and Phytosanitary Measures. Detailed regulation of the Rules of origin implementation is oriented towards decreasing the possibilities to implement some of administrative non-tariff barriers and to implement duty free regime only for goods with origin. Clear procedure for its implementation is expected to facilitate the application of the preferential regime for all signatories. That way, the costs of all participants in trade would be reduced and greater competitiveness at these markets of all trading parties, would be ensured. The Agreement regulates the group of Technical and Administrative non-tariff barriers in a same time and especially SPS measures which have the dual nature and belong to both groups of non-tariff measures. Establishing the Dispute Settlements Body, creators of this Agreement have predicted the way for finding solutions if something goes wrong in mutual relations of signatories. The seriousness of the signatories` approach to this integration` institutionalization, is indicated by the complete structure of the joint bodies that will be formed, in order to achieve the desired level of cooperation and overcome all obstacles.

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Population Aging and Unemployment in EU Member Countries: A Panel Data Analysis

Emre Şakar

Abstract

Unemployment is one of the most important socio-economic problems that countries have to deal with. Therefore, it is crucial to specify the determinants of unemployment to struggle it with right economic policy tools. Depending on the improvements of living standards, average life expectancy has increased around the world. Together with decreasing fertility rates, the rising life expectancy has led to population aging. In this regard, many researchers have focused on the economic implications of population aging. In this study, the causality between population aging and unemployment has been investigated for the term 1991-2019 in European Union member countries by applying the causality test of Emirmahmutoglu and Kose (2011). The causality analysis discloses significant unilateral causality from population aging to the unemployment in Estonia, France, Germany, Portugal, Romania, and Spain and a significant unilateral causality from unemployment to the population aging in Greece, Ireland, Italy, and Slovenia.

Keywords: Population aging, unemployment, labor market, European Union member countries, causality analysis

1. Introduction

The demographic and population structure of a country is the most important building block that affects and shapes its social, economic and cultural form. Population aging is one of the crucial demographic phenomena in 21st century throughout the world. Population aging refers to a change observed when the prolongation of the average life expectancy and the decrease in birth rates occur simultaneously. Proportionally increasing elderly population due to decreasing fertility rates have many social and economic implications. Especially, population size and its age composition are the essential determinants of labor market structure. In this regard, a change in the demographic structure probably will directly affect the labor supply and thus the labor markets. While the aging of the population increases the number of older workers in the total labor supply, it also decreases the rate of young people, which results in the aging of the workforce.

There are many different economic dimensions of population aging such as economic growth, employment, savings, consumption and productivity (Bloom, Canning & Fink, 2011; Lee, Mason & Park, 2011). According to United Nations report, the share of people aged 65 years or over is 9.3 per cent in 2020, and it is expected to increase by 16.0 per cent globally by 2050 (UN, 2020). In this study, the causality between population aging and unemployment in European Union member countries has been examined for the years between 1991 and 2019 through Emirmahmutoglu and Kose (2011) causality analysis. In this context, Section 2 summarizes the literature about population aging and unemployment, Section 3 describes data and econometric methodology. Empirical analyses are conducted in Section 4, and Section 5 concludes the study.

2. Literature Review

The interaction between population aging and unemployment has been analyzed by limited number of studies in the related literature, and the direction of causal interaction differs

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depending on the countries (e.g., Fuch & Weyh, 2014, Akanni & Čepar, 2015, Bayar, 2020, Cinel & Yolcu, 2021). By constructing decentralized equilibrium model, Pissarides (1989) concluded that population aging decreases unemployment and wage rates. In their study, Fuch and Weyh (2014) investigated the relationship between population aging and unemployment in East Germany for the period 1996-2012, and their overall empirical analysis showed that declining unemployment rate is affected by a declining youth share and an increasing old-age share. Using the multiple regression analysis method, Akanni and Čepar (2015) investigated the effect of population aging on unemployment and entrepreneurial activities in 210 municipalities in Slovenia for 2009, and they revealed that the registered unemployment rate is also higher in municipalities with a higher aging index and a higher average age. If the aging index (mean age) is 1% higher, the registered unemployment rate is on average 0.532% to 0.670% (2.431% to 3.379%) higher (Akanni & Čepar, 2015). Bayar (2020) examined the causality between population aging and unemployment for the years from 1991 to 2019 in European Union transition economies applying panel data analysis and disclosed that there is no causality between the variables. Cinel and Yolcu (2021), using the ANOVA method, investigated the effects of education level, age and gender on the unemployment rate in Turkey. Finally, they determined that education level, age and gender have a statistically significant impact on unemployment rates (Cinel & Yolcu, 2021).

Moreover, unemployment can be affected by the channels of population aging’s adverse effect on the economic growth. In this frame, Oliver (2015) investigated the impact of population aging on economic growth for the years between 1975 and 2011 in Japan and disclosed that while an increase in the 70-74 population age group decreases economic growth, an increase 75 and over population age group raises economic growth in Japan. Hsu (2017) explored the effect of population aging in Taiwan by using data for the years between 1951 and 2014. The results indicate that population aging has negative effect on future economic growth (Hsu, 2017). Applying the panel data analysis for 142 countries for the period 1960-2014, Lee and Shin (2019) explored that population aging negatively affects economic growth only when it reaches a certain high level. Pham and Vo (2021) examined the impact of population aging on economic growth for the term 1971-2015 in 84 developing countries by using panel data regression analysis; they found that there is a positive effect of the elderly population on economic growth.

3. Data and Method

In the study, the mutual interaction between population aging and unemployment in EU member economies for the period of 1991-2019 has been checked through Emirmahmutoglu and Kose (2011) causality test considering the presence of cross-sectional dependency among the series. The population aging has been proxied by the population ages 65 and above as a percent of total population, and the unemployment has been represented by unemployment as a percent of total labor force. All the series are annual and obtained from World Bank database.

Table 1: Dataset description

<table>
<thead>
<tr>
<th>Variables</th>
<th>Variable Description</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGING</td>
<td>Population ages 65 and above (% of total population)</td>
<td>World Bank (2021a)</td>
</tr>
<tr>
<td>UNEMP</td>
<td>Unemployment, total (% of total labor force)</td>
<td>World Bank (2021b)</td>
</tr>
</tbody>
</table>
The study sample includes 27 EU member countries (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden). The study period has been specified as the years covering from 1991 to 2019 since the unemployment data is available over the 1991-2019 period. In the empirical analyses, EViews 10.0 and Stata 15.0 statistical programs have been used.

The causality between population aging and economic growth has been examined by Emirmahmutoglu and Kose (2011) causality test. The Emirmahmutoglu and Kose (2011) causality test is the extended version of Toda-Yamamoto (1995) causality test for the heterogeneous panel data. It regards the presence of both cross-sectional dependency and heterogeneity. Therefore, the test does not require the series to be stationary. In other words, it can be used with both I(0) and I(1). Furthermore, the test can be applied in case of significant or insignificant cointegration relationship among the series (Emirmahmutoglu and Kose, 2011).

Emirmahmutoglu and Kose (2011) causality test allows the lag length to differentiate for each cross-section and decreases the long-term information loss because it models the series with level values (Emirmahmutoglu and Kose, 2011; Toda and Yamamato, 1995). The test can be expressed with the following equation:

\[
AGING = \phi_1^{AGING} + \sum_{k=1}^{k+d_{max_i}} A_{11,ik} AGING_{it-k} + \sum_{k=1}^{k+d_{max_i}} A_{12,ik} UNEMP_{it-k} + \mu_{1,T}^{AGING}
\]

\[
UNEMP = \phi_1^{UNEMP} + \sum_{k=1}^{k+d_{max_i}} A_{21,ik} AGING_{it-k} + \sum_{k=1}^{k+d_{max_i}} A_{22,ik} UNEMP_{it-k} + \mu_{1,T}^{UNEMP} (1)
\]

In the above equation, \(k\) represents the lag length, \(d_{max}\) is the maximum integration level for each country. The rejection of \(H_0: \sum_{k=1}^{k} A_{12} = 0\) shows that unemployment is Granger cause of population aging. On the other side, the rejection of \(H_0: \sum_{k=1}^{k} A_{21} = 0\) indicates that population aging is Granger cause of unemployment. The country level probability values \((p_i)\) is aggregated considering Fisher (1932) and in turn panel level probability value of the causality analysis is obtained. Fisher (1932) test statistic obeys the chi-square distribution with 2N degree of freedom, but critical values for cross-section level causality analysis are derived from bootstrapping.

4. Empirical Analysis

Firstly, heterogeneity and cross-sectional dependency of the series has been checked in the econometric analysis. Applying Breusch and Pagan (1980) LM test, Pesaran’s (2004) LM CD test, and the LM adj. test of Pesaran et al. (2008), the existence of cross-sectional dependency has been inspected. The results of the cross-sectional dependence tests are shown in Table 2. The test results show that there is cross-sectional dependency among the series. So, to determine the stationarity of the series, a second-generation unit root test would be applied.
Table 2: Cross-sectional dependence tests’ results

<table>
<thead>
<tr>
<th>Test</th>
<th>Test Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM adj*</td>
<td>152.4</td>
<td>0.0000</td>
</tr>
<tr>
<td>LM CD*</td>
<td>24.2</td>
<td>0.0000</td>
</tr>
<tr>
<td>LM</td>
<td>1735</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

*two-sided test

Based on Pesaran and Yamagata’s (2008) homogeneity tests, the slope homogeneity of the panel has been tested. The results of the tests shown in Table 3 indicate that there is heterogeneity in the panel dataset, rejecting the null hypothesis that states the presence of homogeneity at 1% significance level. The results of both tests directed us to employ a causality test regarding cross-sectional dependency and heterogeneity.

Table 3: Homogeneity tests’ results

<table>
<thead>
<tr>
<th>Test</th>
<th>Test Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\hat{\Lambda}_{adj} )</td>
<td>14.735</td>
<td>0.000</td>
</tr>
<tr>
<td>(\hat{\Lambda} )</td>
<td>13.952</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Considering the cross-sectional dependency, the stationarity of both variables has been checked by applying Pesaran (2007) CIPS (Cross-sectionally augmented IPS (Im- Pesaran-Shin, 2003) unit root test. The test results are shown in Table 4. UNEMP has been found to be I(1) and AGING has been found to be I(2).

Table 4: Results of CIPS panel unit root test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Level</th>
<th>1. level</th>
<th>2. level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Constant</td>
<td>Constant + Trend</td>
<td>Constant</td>
</tr>
<tr>
<td>UNEMP</td>
<td>-1.722</td>
<td>-2.421</td>
<td>-3.595**</td>
</tr>
<tr>
<td>AGING</td>
<td>-2.019</td>
<td>-0.750</td>
<td>-0.697</td>
</tr>
</tbody>
</table>

*** indicated that it is significant at 1% significance level.

The causal relationship between population aging and unemployment has been analyzed by the test of Emirmahmutoglu and Kose (2011) considering the existence of cross-sectional dependence and heterogeneity. The results are displayed in Table 5. The test results reveal a significant unilateral causality from population aging to the unemployment in Estonia, France, Germany, Portugal, Romania, and Spain and a significant unilateral causality from unemployment to the population aging in Greece, Ireland, Italy, and Slovenia.

Table 5: Emirmahmutoglu and Kose (2011) causality test

<table>
<thead>
<tr>
<th>Countries</th>
<th>AGING ↔ UNEMPLOYMENT</th>
<th>UNEMPLOYMENT ↔ AGING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Test statistic</td>
<td>P value</td>
</tr>
<tr>
<td>Austria</td>
<td>1.993</td>
<td>0.574</td>
</tr>
<tr>
<td>Belgium</td>
<td>2.039</td>
<td>0.361</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>3.604</td>
<td>0.165</td>
</tr>
<tr>
<td>Croatia</td>
<td>0.445</td>
<td>0.931</td>
</tr>
<tr>
<td>Cyprus</td>
<td>2.333</td>
<td>0.311</td>
</tr>
</tbody>
</table>
5. Conclusion

The reciprocal interaction between unemployment and population aging in EU member states for the period of 1991-2019 period has been investigated by Emirmahmutoglu and Kose (2011) causality test. The causality analysis has uncovered a significant unilateral causality from population aging to the unemployment in Estonia, France, Germany, Portugal, Romania, and Spain, and it also has been revealed a significant unilateral causality from unemployment to the population aging in Greece, Ireland, Italy, and Slovenia.

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Üniversite Öğrencilerinde Yaşam Doyumu ve Kariyer Seçiminin
Demografik Değişkenler Açısından Değerlendirilmesi

Damla Arslan¹ Gamze Sart²

Özet

Buradan hareketle çalışmada, üniversite öğrencilerinin bazı demografik ve genel özellikleri açısından kariyer seçimi ve yaşam doyumu algılarının istatistiksel değerlendirmesi hedeflenmiştir. Grup farklılığı analizleri sonucunda, cinsiyet, yaş, sınıf, gelir ve kariyer seçiminin yönelliş faaliyetlerde bulunma açısından bazı boyutlarda farklılık elde edilmiştir, araştırmanın hipotezleri kısmen doğrulanmıştır.

Anahtar Kelimeler: Kariyer seçimi, yaşam doyumu, istatistik analiz

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Evaluation of Life Satisfaction and Career Choice of University Students in terms of Demographic Variables

Abstract
Career consists of all the activities required by the roles held in any period of human life. In today's rapidly changing world, there is a change in career choice as in many fields. With the emergence of different professions and job opportunities, the importance of making a choice as an individual who knows himself has been seen. Career choice, which is one of the most important decisions in the personal history of individuals, is a situation that will affect the individual throughout his/her life. Since it is an important decision in determining the lifestyle and roles, it will affect the whole life of the individual. While choosing a career, it is very important to be aware of personality traits. Choosing a career suitable for the personality will bring success, life satisfaction and happiness in business and private life. From this point of view, it was aimed to statistically evaluate the perceptions of career choice and life satisfaction of university students in terms of some demographic and general characteristics. As a result of group differences analysis, there were differences in some dimensions in terms of gender, age, class, income and career choice, and the hypotheses of the research were partially confirmed.

Keywords: Career choice, life satisfaction, statistical analysis

1. Giriş

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meslek hayatlarında oluşan problemler, kariyer tercihine yönelik olumlu ya da olumsuz bir bakış açısına sahip olması mutluluk, yaşam doyumu, iyi oluş gibi kavramlarla ilişkilidir (Creed vd., 2002:46).


2. Literatür

2.1. Kariyer Seçimi ile İlgili Çalışmalar


Tanhan ve Yılmaz (2017)’in çalışmasında lise son sınıf öğrencilerinin kariyer seçimlerinde aile ve sosyal medyanın etkilerinin incelenmesi üzerinde bir okul grup çalışması planlanmıştır. Çalışma 10 öğrencinin katılımı ile gerçekleştirilmiştir. Çalışma sonucunda, öğrencilerin öğreniminin etkisi yapan etkenlerin, nesnel olayların hâline gelmesi, öğrenimin etkisi, sosyal medya kullanımı ve anne-babaların mesleği.
seçilindir. Özellikle kariyer seçimi noktasından babanın kararlarının daha etkili olduğu görülmüştür.


2.2. Yaşam Doymu ile İlgili Çalışmalar


Tel ve Sarı (2016)’nin yaptığı çalışmada üniversite öğrencilerinde öz duyarlılık ve yaşam doyumu düzeyleri incelemiştir. Çalışmada bir devlet üniversitesinde okuyan 1082 öğrenci katılmıştır. Araştırma sonucunda yaşam doyumu, öz duyarlılık ölçeğinin olumlu alt boyutları (öz sevecenlik, bilinçlilik ve paylaşımın farkında olma) ile arasında pozitif, öz duyarlılığın olumsuz alt boyutları (öz yargılama, izolasyon ve aşırı özdeşleşme) ile arasında negatif yönde ilişki olduğu görülmüştür. Öz duyarlılık ölçeğinin bilinçlilik alt boyutunda, erkeklerin kadın katılmcılara göre daha yüksek bir ortalamaya sahip olduğu, aşırı özdeşleşme alt boyutunda ise kadınlara erkeklerle göre daha yüksek puan ortalaması aldığı görülmüştür.

Hawi ve Samaha (2016) tarafından yapılan çalışmada üniversite öğrencilerinde sosyal medya bağımlılığı, benlik saygı ve yaşam doyumu arasındaki ilişki incelemiştir. Çalışma sonucunda sosyal medya kullanımının bağımlılık yaratacak şekilde kullanılmasını benlik saygı ile negatif yönde bir ilişki nin olduğu görülmüştür. Ancak yaşam doyumu ile sosyal medya bağımlılığı arasında pozitif bir ilişki ortaya konulmuştur. Yaptılan yol analizinde ise, sosyal medya bağımlılığının yaşam doyumu üzerindeki etkisine benlik saygıının aracılık etkisi olmuştur.


Salvador-Ferrer (2017) tarafından yapılan çalışmada İspanyol üniversite öğrencilerinde minnettarlık ve yaşam doyumu arasındaki ilişkide cinsiyetin mediatör rolüne sonucu, minnettarlığın yaşam doyumu düzeyini yordadığı ve minnettarlık ile yaşam doyumu arasındaki ilişki cinsiyetin farklılıklığına sebep olduğu görülmüştür.


Tepeli Temiz ve Tan Cömert (2018) tarafından yapılan çalışmada 425 (302 kadın, 123 erkek) üniversite öğrencisi (lisans, yüksek lisans ve doktora) katılmıştır ve yaşam doyumu, bağlama stilleri ve psikolojik dayanıklılık değişkenleri arasındaki ilişkiler incelemiştir. Araştırma sonucuna göre güvensiz bağlanmanın kaygı ve kaçıma alt boyutları ile yaşam doyumu
arasında negatif bir ilişki görülmektedir. Öte yandan kaygılı ve kaçınmacı bağlama stillerinin psikolojik dayanıklılığın bir yordayıcı olmadığı görülmüştür. Psikolojik dayanıklılık ve yaşam doyumu arasında pozitif yönde bir ilişki saptanmıştır.

Sæther, Knapstad, Askeland ve Skogen (2019), Norveç’de kolej ve üniversite okuyan öğrenciler üzerinde yapılan çalışmada, alkol tüketiminin yaşam doyumu ve ruh sağlığı üzerindeki etkileri incelenmiştir. Norveçli öğrencilerin sağlığı ve iyi-oluşları üzerine yapılan araştırmadan elde edilen veriler bu çalışmada değerlendirilmiştir. Tehlikeli tüketici grubunda olan öğrencilerin yaşam doyumu düzeylerinin düşük, ruh sağlığında daır şikayetlerinin fazla olduğu ve daha fazla duygusal-sosyal yalnızlık yaşadıkları görülmüştür. Riskli tüketici grubunda olanlar yaşam doyumu düzeyinin daha az azalıncağı ve ruh sağlığına daır şikayetlerin arttığını ancak daha az sosyal yalnızlık yaşadıklarını belirtmiştir. Çekinir kalan grup ise, daha az yakın arkadaşlar ve daha fazla sosyal yalnızlık bildirmelerine rağmen, yaşam doyumu ve ruh sağlığına dair bir sorun belirtmemiştir.

3. İstatistiksel Analiz

3.1. Çalışmanın Amacı ve Önemi
Kariyer yolculuğunda genç yetişkinler kaçınılmaz olarak birtakım engellerle karşılaşırlar. Bireyler; akademik, meslekli, kişisel, sosyal veya ekonomik gibi pek çok nedenden kaynaklanabilen bu engellerin üstesinden gelebilmek için çeşitli yetkinlik ve stratejilere ihtiyaç duyarlar. Bu bağlamda, genç yetişkinlerin karşılaşılacakları problemlerle etkin bir şekilde baş edebilmeleri için, kariyer uyumu ve iyimserlik becerileri ile yaşam doyumu algılarının entegre bir biçimde yapılamasının önemlidir olduğu düşünülmüştür.

Literatürde, üniversite öğrencilerinin kariyer uyumu ve yaşam doyumu algıları üzerine sınırlı sayıda çalışmanın yapıldığı görülmektedir. Çalışmanın elde edilecek sonuçlarını; genç yetişkinlerin kariyer süreçlerini boyunca karşılaştıkları farklı durumlara ve değişen çevrelere daha kolay uyum sağlamalarında ve mesleki krizlere bazı etkileşim becerilerini geliştirir. Bu bağlamda, genç yetişkinlerin karşılaşılacak problemlerle etkin bir şekilde baş edebilme becerileri ise, kariyer uyum ve iyimserlik becerilerinin birincil amaçlarıdır.

3.2. Araştırmaın Örneklem
Araştırma evrenini, 2020-2021 eğitim-öğretim yılında İstanbul’da vakıf ve devlet üniversitelerinde eğitim gören 18 yaş üstü üniversite öğrencileri oluşturmaktadır. Türkiye Yüksek Öğretim Kurumu (YÖK) resmi sitesinde 2020-2021 eğitim-öğretim yılında İstanbul’da üniversite eğitimi alan öğrenci sayısı 554.869 kişi olarak açıklanmıştır (https://istatistik.yok.gov.tr/). Bu araştırma, belirli ana kütledecek örneklem sayışı Yazioğlu ve Erdoğan (2004) tarafından geliştirilen tabloda 0.05 örneklemeye hatası için p=0.50 ve q=0.50 için 384 kişi olarak bulunmuştur. Araştırmanın örneklemi, 2020-2021 eğitim-öğretim yılında İstanbul’da eğitim gören ve basit rastgele örneklemle yöntemi kullanılarak seçilen 627 öğrenciden oluşmaktadır. Araştırma örnekleminin evreni temsil etme oranının %0,11 olduğu görülmüştür.
3.3. Araştırmanın Hipotezleri

Araştırmanın ana hipotezi, cinsiyet, yaş, sınıf, gelir ve kariyer seçmine yönelik faaliyetlerde bulunma açısından kariyer uyumu ve kariyer iyimserliğinin anlamlı farklılık gösterdiği yönüyledir. Çalışma geliştirilen hipotez Tablo 1’de verilmiştir.

**Tablo 1: Araştırmanın hipotezi**

<table>
<thead>
<tr>
<th>Hipotezler</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H1</strong></td>
</tr>
<tr>
<td><strong>H2</strong></td>
</tr>
<tr>
<td><strong>H3</strong></td>
</tr>
<tr>
<td><strong>H4</strong></td>
</tr>
<tr>
<td><strong>H5</strong></td>
</tr>
</tbody>
</table>

3.4. Varsayımlar ve Kısıtlar


3.5. Veri Toplama Aracı

Yapılan çalışma, deneysel olmayan nicel bir araştırma tasarmına sahip olup çalışma metoduna göre tarama modelidir. Çalışma kullanılan anket, geniş bir literatür taramasının neticesinde geçersiz ve güvenilirliği daha önce yapılan araştırmaları onaylanmış olan ölçeklerden faydalanılmaktadır.


**Yaşam Doyumu Ölçeği:** Diener vd. (1985) tarafından geliştirilen “Yaşam Doyumu Ölçeği”nin (YDÖ) Türkiye koşullarında geçerlilik ve güvenilirlik çalışması son olarak Dağlı ve Baykal (2016) tarafından yapılmıştır. Özgün form İngilizce olup, bir faktör, beş madde ve 7’li likert tipi

3.6. İstatistik Bulgular ve Değerlendirme

3.6.1. Demografik ve Genel Bilgiler Yüzde Dağılım Bilgileri
Calışmanın ilk aşamasında ankete cevap verenlere yönelik genel bilgiler şöyleledir:

- Katılımcıların %75,1’i kadın, %24,9’u ise erkek.
- Katılımcıların %28,1’i 18-20 yaş aralığında, %65,2’si 21-23 yaş aralığında, %6,7’si ise 24 yaş ve üzeredir.
- Katılımcıların sınıf düzeyi dağılımı; %0,2’si preparat, %1,6’sı 1. sınıf, %26,6’sı 2. sınıf, %31,9’u 3. sınıf, %39,2’si 4. sınıf, %5,6’ı 5. sınıf ve üzeri şeklindedir.
- Katılımcıların %99’unun annesi hayatta, %1’inin ise annesi hayatta değildir.
- Katılımcıların %95,5’inin babası hayatta, %4,5’inin ise babası hayatta değildir.
- Katılımcıların %3,8’i tek çocukken, %37,2’si 1, %26,2’si 2, %17,7’si 3, %15,2’si 4 ve daha fazla kardeş sahiptir.
- Katılımcıların %4,6’sının annesi okuryazar değil, %2,9’unun okuryazar, %42,4’unun ilkokul, %12,1’inin ortaokul, %24,1’inin lise, %13,4’unün üniversite, %0,5’inin ise lisansüstü mezunudur.
- Katılımcıların %1,1’inin babası okuryazar değil, %1,8’inin okuryazar, %27,6’unun ilkokul, %15,9’unun ortaokul, %31,6’sının lise, %19,1’inin üniversite, %2,9’unun ise lisansüstü mezunudur.
- Katılımcıların %12,3’unün ailelerinin gelir düzeyi algısı düşük, %84,1’inin orta, %3,7’sinin yüksektir.
- Katılımcıların %54,1’i kariyer seçimine yönelik bilgilendirici panel, sempozyum, seminer vb. faaliyetlerde bulunmuşken, %45,9’unun bulunmamıştır.

3.6.2. Grup Farklılığı Analizleri
Grup farklılığı analizlerinde hangi öncülenin kullanılmasını uygun olacağını normal dağılım olup olmamasına göre değişeceğiz için boyturlara yönelik Kolmogorov-Smirnov ve Shapiro-Wilk testleri uygulanmıştır.
Yaşam doyumu ana boyutu puanlarının ortalaması 3,00±0,85’dir. Kariyer geleceğe ana boyutu puanlarının ortalaması 3,58±0,81’dir. Kariyer iyimserliği alt boyutunun puanlarının ortalaması 3,56±0,68’dir. Bilgi alt boyutunun puanlarının ortalaması 3,05±0,83’tür. Boyutların her iki normallik testi sonuçunda p<0,05 olduğunu normal dağılımı sağlamadığı belirlenmiştir. Grup farklılığı analizlerinde non-parametrik yöntemler kullanılarak.

### Tablo 3: Cinsiyet açısından Mann-Whitney U sınavı sonuçları

<table>
<thead>
<tr>
<th>Boyutlar</th>
<th>Cinsiyet</th>
<th>N</th>
<th>Ortalaşma Sıra</th>
<th>Ort.</th>
<th>Ss.</th>
<th>Mann-Whitney U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yaşam Doyumu Ölçeği</td>
<td>Kadın</td>
<td>471</td>
<td>327,85</td>
<td>3,07</td>
<td>0,85</td>
<td>30216,5</td>
<td>0,001*</td>
</tr>
<tr>
<td></td>
<td>Erkek</td>
<td>156</td>
<td>272,2</td>
<td>2,81</td>
<td>0,86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kariyer Uyumluğulu Boyutu</td>
<td>Kadın</td>
<td>471</td>
<td>310,88</td>
<td>3,74</td>
<td>0,64</td>
<td>35268,5</td>
<td>0,453</td>
</tr>
<tr>
<td></td>
<td>Erkek</td>
<td>156</td>
<td>323,42</td>
<td>3,75</td>
<td>0,66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kariyer İyimserliği Boyutu</td>
<td>Kadın</td>
<td>471</td>
<td>325,38</td>
<td>3,61</td>
<td>0,68</td>
<td>31380,0</td>
<td>0,006*</td>
</tr>
<tr>
<td></td>
<td>Erkek</td>
<td>156</td>
<td>279,65</td>
<td>3,44</td>
<td>0,69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilgi Boyutu</td>
<td>Kadın</td>
<td>471</td>
<td>307,55</td>
<td>3,02</td>
<td>0,83</td>
<td>33698,5</td>
<td>0,117</td>
</tr>
<tr>
<td></td>
<td>Erkek</td>
<td>156</td>
<td>333,48</td>
<td>3,13</td>
<td>0,76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kariyer Geleceğe Genel Skor</td>
<td>Kadın</td>
<td>471</td>
<td>318,01</td>
<td>3,60</td>
<td>0,59</td>
<td>34847,0</td>
<td>0,335</td>
</tr>
<tr>
<td></td>
<td>Erkek</td>
<td>156</td>
<td>301,88</td>
<td>3,54</td>
<td>0,57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*0.05 için anlamlı farklılık

Yaşam doyumu ve kariyer iyimserliği boyutu cinsiyet grupları arasında anlamlı bir farklılık göstermemektedir (p<0,05). Farkın kaynağı için ortalaşma sıra değerlerine bakıldığında, farkın ortalaşma değeri en yüksek olan kadınlardan kaynaklandığı görülmektedir. Kadın grubu bu boyutlara erkeklerle göre daha fazla önem vermektedir.

### Tablo 4: Yaş açısından Kruskal Wallis sınavı sonuçları

<table>
<thead>
<tr>
<th>Yaş</th>
<th>N</th>
<th>Ortalaşma Sıra</th>
<th>Ort.</th>
<th>Ss.</th>
<th>Ki-Kare Değeri</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yaşam Doyumu Ölçeği</td>
<td>18-20 yaş</td>
<td>176</td>
<td>316,97</td>
<td>3,02</td>
<td>0,82</td>
<td>2,468</td>
</tr>
<tr>
<td></td>
<td>21-23 yaş</td>
<td>409</td>
<td>317,06</td>
<td>3,02</td>
<td>0,87</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 yaş ve üzeri</td>
<td>42</td>
<td>271,7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kariyer Uyumluğulu Boyutu</td>
<td>18-20 yaş</td>
<td>176</td>
<td>300,05</td>
<td>3,71</td>
<td>0,58</td>
<td>3,406</td>
</tr>
<tr>
<td></td>
<td>21-23 yaş</td>
<td>409</td>
<td>323,26</td>
<td>3,76</td>
<td>0,66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 yaş ve üzeri</td>
<td>42</td>
<td>282,31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kariyer İyimserliği Boyutu</td>
<td>18-20 yaş</td>
<td>176</td>
<td>322,57</td>
<td>3,60</td>
<td>0,61</td>
<td>0,551</td>
</tr>
<tr>
<td></td>
<td>21-23 yaş</td>
<td>409</td>
<td>310,53</td>
<td>3,55</td>
<td>0,71</td>
<td></td>
</tr>
</tbody>
</table>
Bilgi boyutu yaş grupları arasında anlamlı bir farklık göstermektedir (p<0.05). Farkın kaynağı için ortalama sıra değerine bakıldığında, farkın ortalama değeri en yüksek olan 24 yaş ve üzeri grubundan kaynaklandığı görülmektedir. Bu yaş grubu bilgiye diğer gruplara göre daha fazla önem vermektedir.

**Tablo 5:** Sınıf açısından Kruskal Wallis sınavması sonuçları

<table>
<thead>
<tr>
<th>Smf</th>
<th>N</th>
<th>Ortalama Sıra</th>
<th>Ort.</th>
<th>Ss.</th>
<th>Ki-Kare Değer</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yaş</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 yaş ve üzeri</td>
<td>42</td>
<td>311,86</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilgi Boyutu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20 yaş</td>
<td>176</td>
<td>273,17</td>
<td>2.85</td>
<td>0.81</td>
<td>12,715</td>
<td>0,002*</td>
</tr>
<tr>
<td>21-23 yaş</td>
<td>409</td>
<td>329,93</td>
<td>3.13</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 yaş ve üzeri</td>
<td>42</td>
<td>329,98</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kariyer Geleceği Genel Skor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20 yaş</td>
<td>176</td>
<td>306,25</td>
<td>3.56</td>
<td>0.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-23 yaş</td>
<td>409</td>
<td>318,73</td>
<td>3.60</td>
<td>0.61</td>
<td>0,840</td>
<td>0,657</td>
</tr>
<tr>
<td>24 yaş ve üzeri</td>
<td>42</td>
<td>300,37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*0.05 için anlamlı farklılık

Bilgi boyutu yaş grupları arasında anlamlı bir farklık göstermektedir (p<0.05). Farkın kaynağı için ortalama sıra değerine bakıldığında, farkın ortalama değeri en yüksek olan 24 yaş ve üzeri grubundan kaynaklandığı görülmektedir. Bu yaş grubu bilgiye diğer gruplara göre daha fazla önem vermektedir.
Yaşam doyumu ölçeği ve bilgi boyutu sınıf grupları arasında anlamlı bir farklılık göstermektedir (p<0.05). Farkın kaynağı için ortalama sıra değerine bakıldığında, bilgi boyutundaki farkın ortalama değeri en yüksek olan 5. Sınıf ve üzeri, yaşam doyumu ölçeğindeki farkın ortalama değeri en yüksek olan hazırlık grubundan kaynaklandığı görülmektedir.

Tablo 6: Ailenin aylık gelirine yönelik algı açısından Kruskal Wallis sınama sonuçları

<table>
<thead>
<tr>
<th>Aile Gelir Düzeyi</th>
<th>Yaşam Doyumu Ölçeği</th>
<th>n</th>
<th>Ortalama Sıra</th>
<th>Ortalama</th>
<th>Ss.</th>
<th>Ki-Kare Değeri</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Düşük düzey gelir</td>
<td>77</td>
<td>206,58</td>
<td>2,49</td>
<td>0,93</td>
<td>33,656</td>
<td>0,000*</td>
<td></td>
</tr>
<tr>
<td>Orta düzey gelir</td>
<td>527</td>
<td>326,43</td>
<td>3,06</td>
<td>0,82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yüksek düzey gelir</td>
<td>23</td>
<td>388,70</td>
<td>3,39</td>
<td>0,94</td>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
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<tr>
<th>Kariyer Uyumluğu Boyutu</th>
<th>Düşük düzey gelir</th>
<th>77</th>
<th>278,79</th>
<th>3,57</th>
<th>0,69</th>
<th>3,699</th>
<th>0,157</th>
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<tbody>
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<td>Orta düzey gelir</td>
<td>527</td>
<td>317,95</td>
<td>3,76</td>
<td>0,63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yüksek düzey gelir</td>
<td>23</td>
<td>341,46</td>
<td>3,81</td>
<td>0,63</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Kariyer İyimserliği Boyutu</th>
<th>Düşük düzey gelir</th>
<th>77</th>
<th>271,72</th>
<th>3,44</th>
<th>0,70</th>
<th>6,732</th>
<th>0,035*</th>
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<td>317,67</td>
<td>3,58</td>
<td>0,68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yüksek düzey gelir</td>
<td>23</td>
<td>371,37</td>
<td>3,78</td>
<td>0,57</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bilgi Boyutu</th>
<th>Düşük düzey gelir</th>
<th>77</th>
<th>320,24</th>
<th>3,09</th>
<th>0,86</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Orta düzey gelir</td>
<td>527</td>
<td>311,49</td>
<td>3,04</td>
<td>0,80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yüksek düzey gelir</td>
<td>23</td>
<td>350,61</td>
<td>3,17</td>
<td>0,89</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Kariyer Geleceği Genel Skor</th>
<th>Düşük düzey gelir</th>
<th>77</th>
<th>271,13</th>
<th>3,46</th>
<th>0,62</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Orta düzey gelir</td>
<td>527</td>
<td>318,42</td>
<td>3,59</td>
<td>0,58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yüksek düzey gelir</td>
<td>23</td>
<td>356,26</td>
<td>3,72</td>
<td>0,56</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| *0.05 için anlamlı farklılık |

Kariyer iyimserliği boyları ve yaşam doyumu, duygusal zeka aile gelir düzeyi algısı grupları arasında anlamlı bir farklılık göstermektedir (p<0.05). Farkın kaynağı için ortalama sıra değerlerine bakıldığında, farklı ortalama sıra değerleri en yüksek olan yüksek düzey gelir grubundan kaynaklandığı görülmektedir. Yüksek gelir grubu bu boyutlara diğer gelir gruplarına göre daha fazla önem vermiştir.

Tablo 7: Kariyer seçimine yönelik faaliyetlerde bulunma durumu açısından Kruskal Wallis sınama sonuçları

<table>
<thead>
<tr>
<th>Kariyer Faaliyetlerinde Bülüm Durumu</th>
<th>n</th>
<th>Ortalama Sıra</th>
<th>Ortalama</th>
<th>Ss.</th>
<th>Mann-Whitney U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yaşam Doyumu Ölçeği Evet</td>
<td>339</td>
<td>334,81</td>
<td>3,10</td>
<td>0,86</td>
<td>41762,5</td>
<td>0,002*</td>
</tr>
<tr>
<td>Hayır</td>
<td>288</td>
<td>289,51</td>
<td>2,90</td>
<td>0,85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kariyer Uyumluğu Boyutu Evet</td>
<td>339</td>
<td>345,51</td>
<td>3,83</td>
<td>0,66</td>
<td>38135,0</td>
<td>0,000*</td>
</tr>
<tr>
<td>Hayır</td>
<td>288</td>
<td>276,91</td>
<td>3,63</td>
<td>0,61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kariyer İyimserliği Boyutu Evet</td>
<td>339</td>
<td>339,28</td>
<td>3,66</td>
<td>0,67</td>
<td>40247,5</td>
<td>0,000*</td>
</tr>
<tr>
<td>Hayır</td>
<td>288</td>
<td>284,25</td>
<td>3,45</td>
<td>0,68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilgi Boyutu</td>
<td>Evet</td>
<td>339</td>
<td>353,83</td>
<td>3,23</td>
<td>0,78</td>
<td>35312,5</td>
</tr>
<tr>
<td>Hayır</td>
<td>288</td>
<td>267,11</td>
<td>2,84</td>
<td>0,80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kariyer Geleceği Genel Skor Evet</td>
<td>339</td>
<td>348,86</td>
<td>3,69</td>
<td>0,59</td>
<td>37000,0</td>
<td>0,000*</td>
</tr>
<tr>
<td>Hayır</td>
<td>288</td>
<td>272,97</td>
<td>3,46</td>
<td>0,56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*0.05 için anlamlı farklılık
Kariyer uyumluluğu, kariyer iyimserliği, bilgi boyutları ve yaşam doyumu ile kariyer geleceği genel skoru, kariyer faaliyetlerinde bulunma durumu grupları arasında anlamlı bir farklılık göstermektedir (p=0.05). Farkın kaynağı için ortalama sıra değerlerine bakıldığında, farkın ortalama sıra değeri en yüksek olan “evet” grubundan kaynaklandığı görülümlütedir. Kariyer faaliyetlerinde bulunan grup bu boyutlara daha fazla önem vermiştir.

3.6.3. Tartışma, Sonuç ve Öneriler


Çalışmaların üniversite öğrencileri üzerinde yaptığı göz önüne alınıldığında farklı değişikliklerin bu duruma aracılık ettiği düşünülmelidir. Kadınların hayata yönelik beklentileri üzerinde düşünmeleri ve bunun gerçekleşmesi konusunda farklılıkların yüksek olduğu şekilde yorumlanabilir. Ayrıca kadınların yaşam doyumu düzeyinin erkeklerin erkeğe göre daha yüksek olması durumunda iyi şeyler bekler, başarı, aile ve sosyal ilişkiler açısından daha memnun oldukları söylenebilir. Literatürde farklılaşmanın görüldüğü çalışmalarda durumun gruplar arasındaki farklılıklarla, bireysel özelliklerden ve yaşama atfedilen değer farkından kaynaklandığı düşünülmektedir.


Başka bir çalışmada, cinsiyet değişikleri ile sporcu öğrencilerin Kariyer Geleceği Ölçeği alt boyutlarından kariyer uyumluluğu alt boyutunda istatistiksel olarak anlamlı farklılık bulunmamışken, diğer alt boyutlar olan kariyer iyimserliği ve bilgi alt boyutlarında cinsiyete göre erkeklerin kadınlara anlamlı şekilde farklılaşması görülmüştür (Kılıç vd., 2020).


Yaşam doyumu düzeyinin yaş gruplarına açısından anlamlı düzeyde farklılaşması görülmüştür. Literatür incelendiğinde yaşam doyumu yaş gruplarına göre anlamlı düzeyde
farklılaştığını (Özgür vd., 2010), ve farklılaşma ortaya koymadığı gösteren çalışma da mevcuttur (Vara, 1999).

Yaş ile beraber yaşama karşılaşılan zorluklar ve başa çıkılması gereken iş, aile, sosyal ilişkiler gibi değişkenlerin de daha karmaşık bir yapı haline gelmesiyle yaşam doyumu düzeyinde düşüş meydana geleceğini öne sürmektedir. Ancak zorluklarla birlikte olumlu gelişmelerin de yaşantı olmasının durumun dengelemesini sağlayarak yaş değişkeninin bu konuda bir farklılık yaratmadığını söylemekteyiz.


Sınıf düzeyi yükseldikçe alınan mesleksi eğitimin bilgi yoğunluğunun üniversite sonlarına doğru artması, üniversite eğitiminin tamamlayabilmek, gelecekte bir meslek insanı olarak gerekli olan yetkinliklerin artması ve iş yaşamında dair belirsizlikler yaşam doyumu düzeyine etkileyen kriterler olabilir. Literatürde yaşam doyumu ve sınıf düzeyi arasında farklılaşma ortaya konulmamalı olarak değerlendirilmiş sebebi olarak, öğrencilere geleceğe yönelik bakış açılarından farklılık, gelir düzeyleri ve yaşam atfedilen değer gibi değişkenlerin etkili olduğu düşününebilir.


Yaşam doyumu puanları ve ailenin gelir düzeyine yönelik öğrencilere ait kişi incelenmiştir. Buna göre yüksek düzey gelir algısına sahip olan öğrencilere yaşam doyumu düzeylerinin diğer


Kariyer geleceği ölçeğinin alt boyutlarından kariyer iyimserliği puanlarının öğrencilerin gelir düzeyine yönelik algısı açısından manidar düzeyde farklılaşmıştır. Çalışmanın aksine literatürde yapılan bazı çalışmalarda gelir düzeyi ve Kariyer Geleceği Ölçeği açısından anlamlı bir farklılık ortaya koymamıştır (Kılıç vd. 2020; Temel ve Nas, 2018).

Aile gelir düzeyi açısından sorun yaşamayan bireylerin maddi zorluklar yaşamadan bir kariyer seçimi süreci erleştirdiği düşünülmektedir. Bu durum maddi açıdan bir kaygıyı duydukları farklı düzeyde kariyerden farklılaşmayı göstermektedir. Literatürde yapılan diğer çalışmalarda farklılaşmanın sebebi olarak araştırma grupları yarayan alan bireylerin düşük düzey gelir durumunu farklı kaynaklar kullanarak (burs vb.)(tolere edebildiği ve kendine deneyim sağlayabileceğini alanlar açabildiği şeklinde yorumlanabilir.

Yaşam doyumu düzeyi puanı ile öğrencilerin kariyer faaliyetlerinde bulunmu durumunu incelenmiştir. Buna göre kariyer faaliyetlerinden bulunan öğrencilerin yaşam doyumu düzeylerinin değerlerine göre manidar şekilde farklılaştırıldığını saptanmıştır. Ancak literatürde bu değişkenle ilişkin yapılmış bir çalışmayıрастırmamıştır.

Farkın kaynağı olarak gecekte uzun yıllar geçireceği mesleğe yönelik bilgi sahibi olan bireylerin; gecekte yönelik kaygı seviyelerinin azalacağı, daha iyimser ve umutlu bir bakış açısına sahip olacakları ve bu sayede kariyerler dair bir problem durumu olmayacaktır. Ayrıca çalışmadan doyumu sağlayacak olanlar alanlar açıktır. diğer çalışmalarda ise, öğrenme süreçlerinde zamanın önemini vurgulayan beklentiler ve bu noktada yıklama sebep olmuştur olabilir.

Kariyer geleceği ölçeğinin tüm alt boyut puanları ve genel puan açısından öğrencilerin kariyer faaliyetlerinde bulunmasına göre anlamlı düzeyde farklılaştırıldığını saptanmıştır. Literatür taraması kariyer faaliyetlerinde bulunma değişkeninin araştırılmadığı görülmüştü.

Panel, sempozyum, seminer gibi faaliyetler üniversite sürecinde olana öğrenciler için okudukları bölümün geleceği, istihdam alanları, uzmanlaşma alanları, üst eğitim kademesine devam etme gibi konularda bilgilendirici olmaktadır. Bu sayede öğrenciler kariyer seçimi yaparken edinilen bilgiler işliğinde daha doğru kararlar alabilirler. Bu durum kariyer süreçlerinde karşılaşılabilecek olsa zorlukları (geçişler, uyum vb.) öncesinde tahmin etme ve bu göre pozisyon alma konusunda yardımcı olacaktır. Bu açıdan değerlendirildiğinde çalışmadan ortaya çıkan sonuç beklenirdik bir durumdur.

Araştırmamızda kariyer faaliyetlerinde (bilgilendirici panel, sempozyum, seminerlere katılma) bulunma ile kariyer geleceği arasında pozitif yönde anlamlı ilişkiler görülmüştür. Kariyer planlamasının ülkemiz şartlarında genellikle üniversite eğitim düzeyinde yapılmaya başladığı


Maddi sorunlar yaşamayan öğrenciler belirlenerek kariyer seçimleri konusunda karşılaştığı güçlükler giderilmeye çalışılmalı ve diğer öğrencilerle eşit şartlar altında yeni bir geleceğe hazırlanmaları sağlanmalıdır.


Kaynakça


Cinsiyet Eşitsizliğinin Kadın İstihdamına Etkisi: BRICS-T Ülkeleri Örneği

Funda H. Sezgin

Özet


Anahtar Kelimeler: Cinsiyet eşitsizliği, kadın istihdamı, panel eşbütünleşme

The Effect of Gender Inequality on Female Employment: A Case of BRICS-T Countries

Abstract

Increasing the participation and employment of women in the workforce and their active participation in the social and economic development process are very important factors for the development of that society. The fact that there is gender inequality in a country and therefore the inability of women to take their place in social life affects the development of the country, and the level of development of a country also affects gender inequality. First of all, the problem of gender inequality must be eliminated in order to eliminate the discrimination that women are exposed to, to ensure that women and men have equal rights, have equal access to opportunities, and have a place in social life. The aim of this study is to determine the effect of gender inequality on women's employment for developing countries BRICS-T with the help of panel cointegration analysis. As a result of the analysis, the existence of a cointegration relationship between the variables for the country group was determined. The series move together in the long run. The long-term coefficients of the model were estimated by FMOLS by taking the first-order differences of the variables. Throughout the panel, it was determined that when gender inequality increases by 1%, the female employment rate variable will decrease by 34.1%.

Keywords: Gender inequality, female employment, panel cointegration

1. Giriş


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Kadınların işgücüne katılım oranında artışlar gözlenmesine rağmen, erkeklere göre halen daha düşük düzeyde kalması nedeniyle bununla birlikteAIR literatür bulunmaktadır. İşgücüne katılımında gözlenen toplumsal cinsiyet eşitsizliklerine çözüm üretilmesi açısından çansenin izleneceği, toplumsal cinsiyet eşitsizliğinin kaynaklarını arastırmak için, yarım zamanlı çalışma oranının bulunmaması, aile sorumluluklarının eşitsiz paylaşımı, özellikle ev işleri ve bakım, çocukları veya hasta, yaşlı veya bakım ihtiyacı olan aile üyelerinin bakımının üstlenilmesi, toplumsal cinsiyet rollerinin ve diğer cinsiyete dayalı tutumların stereotipleri, kadınların aile işletmelerinde ücretlisiz işe daha fazla sayılmalara neden olmasına, hamilelik sonrası işgücü piyasasında yeniden girmelerin eksişilmiş durumda bulunması ve benzeri meseleler vurgulanmaktadır.

Mesleki ayrımcılık (erkeklerin çoğunlukla yüksek statüdeki mesleklerde yoğunlaşması), kadınların genellikle daha düşük ücretlerle çalışması, meslek türü ve yarı zamanlı çalışanlar için daha düşük ücret gibi bir dizi faktör istihdamda gözlenen toplumsal cinsiyet eşitsizliği görümleridir (Tzannatos, 1999:555). İşe alma süreçlerinde, ücretlendirme, yükselme, işte süreklilik, terfi etme veya iş değişikliklerinde ayrımcılık; uzun çalışma saatleri, cinsel taciz, iş güvenliği, sosyal güvenlikta eşitsizlik, olumsuz çalışma koşulları ve ücretli ve ücretlendirilmeyen karşılıksız çalışma biçimlerinde kadınların yoğunlaşması, bu türden iş ve faaliyetlerindeki ölçüm ve değerlendirmeleri dünyada bir çok ülkede devam etmektedir. Ayrıca, kayıtlı olmayan istihdam; birçok insanın, özellikle kadınların açısından temel geçici kaynağındır ve kayıtlı istihdam yerine, bu tür geçici istihdamda çalışanlar resmi çalışma düzenlemeleri tarafından kapsanmadığı, koruma, hak ve temsiden yoksundurlar. Kadınlardan, geçici, güvenceden yoksun, kayıt dışı istihdam türlerinde çalışmak durumunda kalımları ve bu tür kayıt dışı istihdamdan elde edilen ortalama kazancın düşük olması, istihdamda gözlenen eşitsizliklerin oluşumu için çok farklı bir durum gibi göstermektedir (Toksöz & Memiş, 2018:116).


Bu çalışmanın amacı, gelişmekte olan ülkeler grubu BRICS ve Türkiye için cinsiyet eşitsizliği endeksi ve kadın istihdam oranı ilişkisini panel regresyon yardımıyla belirlemektir.

2. Kavramsal Çerçeve


Son yıllarda kadınların işgücüne katılma oranının artmış olmasına rağmen kadınların üst düzey yöneticisi pozisyonlarında yer alamadığı görülmektedir. Kadınlarnın yönetim pozisyonlarında yer


3. Ekonometrik Analiz


3.1. Verilerin Tanıtılması

Çalışmada BRICS-T ülkeleri (Brezilya, Rusya, Hindistan, Çin, Güney Afrika ve Türkiye) için Cinsiyet eşitsizliği endeksi (CEE) ve kadınların istihdam oranı (KIO) 2010-2020 dönemi için ele alınmıştır.

3.1. Yatay Kesit Bağımlılığı ve Homojenlik Testleri

düzeltilmiş delta tilde testleri kullanılarak eşbütünleşme katsaylarının homojenliği test edilmiş, test sonuçları Tablo 1'de sunulmuştur. Test sonuçlarının olasılık değerleri % 5'den küçük olduğu için sıfır hipotez (eğim katsayıları homojendir) reddedilmiş ve eşbütünleşme katsaylarının heterojen olduğu belirlenmiştir.

**Tablo 1:** Yatay kesit bağımlılığı ve homojenlik test sonuçları

<table>
<thead>
<tr>
<th>Test</th>
<th>Test istatistiği</th>
<th>p-değeri</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM (Breuscht and Pagan (1980))</td>
<td>51.473</td>
<td>0.000</td>
</tr>
<tr>
<td>LM adj (Pesaran vd. (2008))</td>
<td>48.225</td>
<td>0.000</td>
</tr>
<tr>
<td>LM CD (Pesaran (2004))</td>
<td>46.908</td>
<td>0.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Homojenlik testi (H₀: Eğim katsayıları homojendir)</th>
<th>Test</th>
<th>Test istatistiği</th>
<th>p-değeri</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta_tilde</td>
<td>22.554</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Delta_tilde_adj</td>
<td>25.658</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

3.3. Birinci ve İkinci Nesil Birim Kök Test Sonuçları


**Tablo 2:** Birinci nesil panel birim kök testi sonuçları

<table>
<thead>
<tr>
<th>Değişkenler</th>
<th>Maddala&amp;Wu Test</th>
<th>Im, Pesaran &amp; Shin Test</th>
<th>Choi Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Düzey</td>
<td>1. mertebe fark</td>
<td>Düzey</td>
<td>1. mertebe fark</td>
</tr>
<tr>
<td>Trend+sabit</td>
<td>Sabit</td>
<td>Trend+sabit</td>
<td>Sabit</td>
</tr>
<tr>
<td>CEE</td>
<td>-0.781 (0.125)</td>
<td>-8.452 (0.000)*</td>
<td>-0.992 (0.103)</td>
</tr>
<tr>
<td>KIO</td>
<td>-1.317 (0.138)</td>
<td>-9.808 (0.000)*</td>
<td>-1.416 (0.126)</td>
</tr>
</tbody>
</table>

*0.05 için durağan değişken, Olasılık (p) değerleri tablo içinde verilmiştir. Testlerin sıfır hipotezi birim kök vardır şeklinde. Optimal geçiş uzunluğu Schwarz bilgi kriteri kullanılarak belirlenmiştir.


**Tablo 3:** İkinci nesil panel CADF birim kök testi sonuçları

<table>
<thead>
<tr>
<th>Değişkenler</th>
<th>Düzey</th>
<th>1.mertebe fark</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sabit</td>
<td>Sabit + Trend</td>
</tr>
<tr>
<td>CEE</td>
<td>-1.014</td>
<td>-1.165</td>
</tr>
<tr>
<td>KIO</td>
<td>-1.241</td>
<td>-1.309</td>
</tr>
</tbody>
</table>

* %5 için H₀ red, durağan değişken
CADF testlerinde, maksimum geçikme uzunluğu 1 olarak alınmış ve optimal geçikme uzunluğu Schwarz bilgi kriterine göre belirlenmiştir. Sıfır hipotezinin % 1 ve % 5 anlamlılık düzeyinde reddedildiğini görülmektedir. Birim kök test sonuçları, serilerin düzeyde durağan olmadığını diğer bir ifadeyle birim kök içerdiklerini, değişkenlerin I(1) düzeyinde durağan olduğunu göstermektedir.

3.4. Panel Eşbütünleşme Testi


3.5. Uzun Dönem Eşbütünleşme Katsaylarının FMOLS (Full Modified OLS) Tahmini


<table>
<thead>
<tr>
<th>Ülkeler</th>
<th>FLnCEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brezilya</td>
<td>0.256*</td>
</tr>
<tr>
<td>Rusya</td>
<td>0.268*</td>
</tr>
<tr>
<td>Hindistan</td>
<td>0.421*</td>
</tr>
<tr>
<td>Çin</td>
<td>0.413*</td>
</tr>
<tr>
<td>Güney Afrika</td>
<td>0.297*</td>
</tr>
</tbody>
</table>
CEE değişkeni KIO üzerinde negatif yönde istatistik anlamlıdır. CEE’nin KIO’yu düşürmede en etkili olduğu ülkeler, Brezilya, Rusya ve Güney Afrika olmuştur. Hindistan, Çin ve Türkiye için CEE artışına KIO değişkeninin düşürdüğü daha yüksek değere sahiptir. Panel genelinde CEE %1 artışında KIO değişkeni %34.1 oranında düşmektedir.

4. Sonuç


Bu çalışmanın amacı, gelişmekte olan ülkeler BRICS-T için cinsiyet eşitsizliğinin kadın istihdam oranına etkisi analizi yardımıyla belirlenmesidir. Ülke grubu için seriler arasındaki eşbütünleşme ilişkisinin varlığı belirlenmiştir. Seriler uzun dönemde birlikte hareket etmektedir. Modelin uzun dönem katsayıları değişkenlerin birinci mertebe farkları alınarak FMOLS ile tahmin edilmiştir. Panel genelinde, CEE %1 artışında KIO değişkeninin %34.1 oranında düşeceğini belirtmektedir.


Kadınların işgücüne katılım göstergeleri ve ülke istihdamına katkı sağlama gibi ülke ekonomisinin açısından, ülke kalkınması açısından, ülkenin gelişmişlik seviyesinin açıdan çok büyük önem arz etmektedir. Kadınların istihdamı aile içi şiddet gibi toplumsal sorunları çözver, ülkelerin ekonomik potansiyellerine ulaşmasını sağlar, ekonomide denge oluşmasını sağlar, sürdürülebilir büyüme hizmet eder.

Toplumların, ekonominin kalkınması için özellikle Türkiye gibi gelişmekte olan ülkelerde kadınların işgücüne katılması önemlidir. Kadınlara çalışma hayatında kolyak sağlayacak uygulamalar getirilmeli, iş hayatındaki ücret eşitsizliği, cam tavan gibi kadınların işgücüne katılım tercihinde motivasyon kırıcı ve saygısız etki gösteren etkenlerin ortadan kalkması için gerekli uygulamalar yapılmalı, kadın girişimciler desteklenmeli, çocuklu kadınlar için esnek çalışma saatleri getirilmeli, çalışma koşullarının iyileştirilmesini amaçlayan çalışmalar yapılmalı, kadınların işgücü piyasasında çalışma hayatında daha etkin rol oynamalarını sağlamak politik atımlar yapılmalıdır.

Literatürde, cinsiyetle işsizliğin farklılaşmasında ülkelerin gelişmişlik düzeyi başa olmak üzere ulusal düzeyde sosyo-ekonomi-politik faktörler, sektöre ve bireysel tercih ve özelliklere

Bir ülkenin kalkınmasında ve ekonomik olarak büyumesinde önemli bir etkiye sahip olan istihdam, uygulanan politikalarla arttırılabilmektedir. Ülkeler uyguladıkları istihdam politikalarıyla işgücü pıyasasının ihtiyaçlarını karşılayarak makroekonomik dengelerini sağlamak amacıyla çalışırlar. İşsizliğin giderilmesine yönelik politikaların önemli bir ayağını da işgücü pıyasasının değişen koşullarına uygun olarak yürütülen aktif istihdam politikası oluşturmaktadır. Aktif istihdam politikasının araçlarıyla işgücü pıyasasının talep etmiş olduğu işgücü hazırlıklarını hazırlayarak makroekonomik dengelerini sağlamak amacıyla çalışmaktadır. İşsizlik sorunu karşılamak için benimsenen politikalar ülkelerde farklılık göstere de; uygulanan politikalar ile genellikle yeni iş olanaklarının oluşturulması, işgücü niteliğinin zenginleşmesi ve emek pıyasasının düzenlenmesine yönelik politikaların yürütüldüğü şeklinde çeşitli alternatif çözüm yolları uygulanmaya çalışılmıştır.

Kaynakça


Pandemi Sürecinde Türkiye’de Sektörlerin Etkinlik Analizi

Funda H. Sezgin

Özet

Anahtar Kelimeler: Sektörler, etkinlik, Veri zarflama analizi

Efficiency Analysis of Sectors in Turkey During the Pandemic Process

Abstract
Today, industries have to work in an intensely competitive environment in order to ensure their continuity and be successful in their activities. The intense competitive environment has brought concepts such as efficiency, performance and productivity to the fore. Intense competition required the sectors to use their resources in the most efficient way. For this reason, sectors must evaluate their performance within the sector in which they compete and be at the efficiency limit. Changes in technical efficiency and technology are also the main elements of achieving high economic performance levels at the firm or sector level and thus having a high competitive power. Since the first case was detected in Turkey, besides the health field, there have been effects in many economic, social, sociological and psychological fields. Therefore, it is clear that the Turkish economy is exposed to the effects of the pandemic in many other countries. This situation has caused employment at the sectoral level to become more fragile. The aim of this study is to determine the productivity status of the main sectors in the pandemic process with the help of data envelopment analysis (DEA).

Keywords: Sectors, efficiency, data envelopment analysis

1. Giriş
Ekonomilerin benzer üretim ya da ticaret faaliyetlerine göre daha küçük birimlere ayrılması, analiz edilmelerini kolaylaştırırken, aynı zamanda uluslararası ekonomilerle karşılaştırılmalarını sağlamaktadır. Bir ekonomi içindeki küçük birimlern her biri farklı sektörleri ifade etmektedir. Sektörlerin girişimciler, uzmanlar ve analistler tarafından detaylı, şeffaf ve doğru bir şekilde analiz edilmesi, yatırımcı karari vermede de avantaj sağlayacaktır. Mevcut bir sektörde ait geçmiş ve güncel veriler sektörün geleceği için referans niteliğindedir ve araştırmacılar bu verileri mutlaka göz önünde bulundurmalıdır. Bir sektörün büyümesi ve karlılığının artması ile içinde bulunduğu ekonominin büyümesi arasında birbirleriyle çift taraflı etkileyen pozitif bir ilişki olduğu düşünülebilir. Tarihîsel süreç içerisinde bir ekonomide meydana gelen sektörel yapı değişimleri, istihdamın sektörler arasındaki dağılımı, göç, kentleşme, gelir dağılımı, ihracat

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Ekonomik gelişmeyle tarım, sanayi ve hizmetler sektörleri arasında yaşanan bu değişim transformasyon döneminde de bir yapısal dönüşüm yaşanmaktadır. Sanayi sektöründe imalat sanayi tüketim malları sanayi ağralığına, sanayi sektöründe ise tüketim malları, ara ve yatırım mallarının payı artmaya başlamıştır (Hirschman, 2001:89).


ağırlıklı olarak küçük ve orta boy olup, özellikle öncelikli olarak iç pazar hizmet veren sektörlerde faaliyet gösteren işletmelerdir. Yurt dışı siparişler çok önceden alındığı için dış pazarla çalışan işletmelerin bir süre daha durumu idare edebildiğini söylemek mümkündür.

Bu çalışmanın amacı, pandemi dönemi 2020 yılı için Türkiye’deki sektörlerin etkinliğini VZA yardımcıyla belirlemektir.

2. Yöntem

2.1. CCR Modelleri

CCR modeli Charnes, Cooper ve Rhodes tarafından 1978 yılında oluşturulmuştur. Bu model ölçekte göre sabit getiri varsayımına dayananak, karar birimlerinin toplam etkinliğini, teknik etkinliğini ve ölçek etkinliğini tek bir değerde toplayıp ortaya bir sonuç koymayı amaçlamaktadır.

VZA’dan n adet karar verme biriminin her birisine ait m adet girdi ve p adet çıktı varsa, j’inci karar verme biriminin i’inci girdi miktarı X_{ij} ≥ 0 ve j’inci karar verme birimi tarafinden üretilen r’inci çıktı miktarı Y_{rj} ≥ 0 olmak üzere, girdi yönelimli kesirli VZA modelidir (Zhu, 2003:89).

VZA’nın n tane karar verme birimi (KVB) varsa, n tane model oluşturulur ve her bir KVB’nin görece etkinliğinin ölçülebilmesi için n' tane en iyileme modelinin çözülmesi gereker. Modellerin amaç fonksiyonu, k karar verme birimi için toplam ağırlıklandırılmış çıktıların, toplam ağırlıklandırılmış girdilerin enbüyümkesisidir. Modeldeki kısıtlar, her bir KVB için çıktının girdiyi oranının 1'i geçmemesi gerektiğini ve en iyi amaç fonksiyonu değerinin en fazla 1 olacağını gösterir. Kesirli modelin DP çözüm yöntemleri ile çözülebilmesi için Charnes ve Cooper 1962’de \( \sum_{i=1}^{m} v_i X_{ik} = 1 \) dönüşümünü yapmışlar ve modelin yeni halı tabloda Girdi yönelimli CCR modelinin doğrusal model denklem kısında verilmiştir. Girdi yönelimli CCR modeli denilen bu model; ölçekte göre sabit getiri varsayım altında, görece toplam etkinliği ölçmekte ve kesirli modelle aynı en iyi çözümü vermektedir (Estelle vd., 2010:1088; Amirteimoori vd., 2013:275).


Dualite kuramı gereği doğrusal model max olduğu için bunun dualı min olur ve doğrusal modellin en iyi değeri ile dual modellin en iyi değeri birbirine eşittir (Majumdar & Asgari, 2017:136)

Tablo 1’dede yer alan denklemlerde;

- \( E_k \): k’inci KVB’nin etkinlik değeri,
- \( u_i \): k’inci KVB tarafından r’inci çıktıya verilen ağırlık,
- \( v_i \): k’inci KVB tarafından i’inci girdiyi verilen ağırlık,
- \( Y_{rj} \): k’inci KVB tarafından üretilen r’inci çıktı,
- \( X_{ik} \): k’inci KVB tarafından üretilen r’inci çıktı,
- \( v_i \): j’inci KVB tarafından üretilen i’inci girdi,
- \( Y_{ij} \): j’inci KVB tarafından üretilen r’inci çıktı,
- \( X_{ij} \): j’inci KVB tarafından üretilen i’inci girdi,
- \( \alpha \): yeterince küçük pozitif bir sayı (örneğin 0,00001),
- \( \beta \): Büzülme katsayısı (Çıkı miktarında bir değişiklik yapmadan girdi miktarının ne kadar azaltılabiliceğini gösterir.),
- \( \varepsilon \): yeterince küçük pozitif bir sayı (örneğin 0,00001),
- $\lambda_j$: j’inciden KVB’nin aldığı yoğunluk değeri,
- $S_i^{-}$: k’inci KVB’nin i’inci girdisine ait artı değişik (Girdi fazlası),
- $S_r^{+}$: k’inci KVB’nin r’inci çıktına ait artı

Tablo 1: CCR modeli kesirli, doğrusal ve dual formülleri

<table>
<thead>
<tr>
<th>Girdiye Yönelik CCR Modeli</th>
<th>Çıkıyı Yönelik CCR Modeli</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kesirli Model</td>
<td>Kestirli Model</td>
</tr>
<tr>
<td>$E_k = \max \frac{\sum_{r=1}^p u_r Y_{rk}}{\sum_{i=1}^m v_i X_{ik}}$</td>
<td>$E_k = \min \frac{\sum_{i=1}^m v_i X_{ik}}{\sum_{r=1}^p u_r Y_{rk}}$</td>
</tr>
<tr>
<td>$\sum_{i=1}^m v_i X_{ik} \geq 1$</td>
<td>$\sum_{r=1}^p u_r Y_{rk} \geq 1 $</td>
</tr>
<tr>
<td>$u_r \geq \varepsilon$, $v_i \geq \varepsilon$</td>
<td>$u_r \geq \varepsilon$, $v_i \geq \varepsilon$</td>
</tr>
<tr>
<td>Doğrusal Model</td>
<td>Doğrusal Model</td>
</tr>
<tr>
<td>$E_k = \max \sum_{r=1}^p u_r Y_{rk}$</td>
<td>$E_k = \min \sum_{i=1}^m v_i X_{ik}$</td>
</tr>
<tr>
<td>$\sum_{r=1}^p u_r Y_{rk} - \sum_{i=1}^m v_i X_{ik} \leq 0$</td>
<td>$\sum_{i=1}^m v_i X_{ik} - \sum_{r=1}^p u_r Y_{rk} \geq 0$</td>
</tr>
<tr>
<td>$\sum_{i=1}^m v_i X_{ik} = 1$</td>
<td>$\sum_{r=1}^p u_r Y_{rk} = 1$</td>
</tr>
<tr>
<td>$u_r \geq \varepsilon$, $v_i \geq \varepsilon$</td>
<td>$u_r \geq \varepsilon$, $v_i \geq \varepsilon$</td>
</tr>
<tr>
<td>Dual Model</td>
<td>Dual Model</td>
</tr>
<tr>
<td>$E_k = \min \alpha - \varepsilon \sum_{i=1}^m X_{ik} + \varepsilon \sum_{r=1}^p Y_{rk}$</td>
<td>$E_k = \max \beta + \varepsilon \sum_{i=1}^m X_{ik} + \varepsilon \sum_{r=1}^p Y_{rk}$</td>
</tr>
<tr>
<td>$\sum_{i=1}^m X_{ik} \lambda_j + S_i^{-} = 0$</td>
<td>$\sum_{i=1}^m Y_{rk} \lambda_j + S_r^{+} = 0$</td>
</tr>
<tr>
<td>$\sum_{j=1}^n Y_{rk} \lambda_j - S_r^{+} - Y_{rk} = 0$</td>
<td>$\sum_{j=1}^n Y_{rk} \lambda_j - S_r^{+} - \beta Y_{rk} = 0$</td>
</tr>
<tr>
<td>$\lambda_j \geq 0, S_i^{-} \geq 0, S_r^{+} \geq 0$</td>
<td>$\lambda_j \geq 0, S_i^{-} \geq 0, S_r^{+} \geq 0$</td>
</tr>
</tbody>
</table>

Yen & Othman (2011) çalışmasında belirtiliği üzere, model çözümünde; Ek = 1 olduğuunda etkinliği ölçulen KVB’nin etkin olduğu söylenebilir. Aksi takdirde ilgili KVB etkin değildir. Etkin olmayan bir KVB için örnek alabileceği referans kümesi ise aşağıdaki şekilde hesaplanmaktadır:

\[
X_{ik} = \sum_{j=1}^n X_{ij} \lambda_j \\
Y_{rk} = \sum_{j=1}^n Y_{rj} \lambda_j
\]

Veya;

\[
X_{ik} = \alpha X_k - S_i^{-} \\
Y_{rk} = Y_k + S_r^{+}
\]

Görece etkin olmayan KVB’lerin girdi ve çıktılarına ilişkin potansiyel iyileştirmeler (PI) yüzde olarak aşağıdaki formülle hesaplanabilir.

\[
PI(\%) = \frac{Hedef-Gerektiren}{Gerektiren} \times 100
\]

Görece etkin olmayan KVB’nin etkin hale gelebilmesi için, PI yüzdesi negatif çıkan değişken değeri PI oranında azaltılmalıdır, pozitif çıkan değişken değeri PI oranında artırılmalıdır. Eğer PI değeri sıfırsa, herhangi bir iyileştirme yapmaya gerek yoktur (Banker vd., 1984:1080).

2.2. BCC Modelleri

CCR modelleri öncelikle sabit getirisi varsayımlarda yani bütün KVB’lerin optimal ölçükle faaliyet gösterdikleri varsayımla dayanarak, görece toplam etkinliklerin hesaplanmasında kullanılmaktadır. Ölçeğe göre değişen getirisi durumuna sahip sistemlerin etkinliklerini belirleyebilmek için, 1984 yılında Banker, Charnes ve Cooper kendi isimlerinin baş harfleri ile anılan BCC modeli geliştirilmiştir.

Kısıtlarda CCR modelinden farklı olarak \( \sum_{j=1}^{m} \lambda_j = 1 \) dışbükleyicik kısıtı olduğu görülmektedir. Bu kısıt, etkinlik sınırinin en iyi çözülemesinin çoklu doğrusal kombinasyonlarından oluşması ve göreceli etkinliğin daha esnek bir tanımlamaya kavuştması olarak açıklanmaktadır (Varabyova & Schreyögg, 2013:74).

Berger & Humphrey (1997) belirttiği üzere; denklemlerde CCR modellerinden farklı olarak; \( \mu_0 \): ölçükle göre getirinin yönüyle ilgili değişken olarak ilgili değişkenin pozitif değer alması KVB’nin ölçükle göre azalan getiri, negatif değer alması ölçükle göre artan getiri ve sıfır değerini alması ölçükle göre sabit getirili olduğunu göstermektedir.

Buna göre; bir KVB için hesaplanan \( \lambda_j \) ’lerin (ağırlıkların) toplamı birer büyük ise KVB ölçükle göre azalan getiri; birden küçük ise asırtan getiri ve bire eşit ise sabit getirili göre faaliyeti gösteriyor anlamına gelmektedir (Jia & Yuan, 2017:4).

Çıktı yönelikli BCC modelliyle hesaplanan etkinlik teknik etkinlik değişkeninden farklı olabilir. Çünkü ölçükle göre değişen getirisi varsayımlında herhangi bir KVB’nin girdiye göre ölçekte getirisi artan olarak analiz edilirken, çıktıya göre azalan özelliklere sahip olanlar olmalıdır (Tahir & Memon, 2012:41).

Tablo 2: BCC nmodeli esirli, doğrusal ve dual formülleri

<table>
<thead>
<tr>
<th>Girdiye Yönelik CCR Modeli</th>
<th>Çıktıya Yönelik CCR Modeli</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kesirli Model</td>
<td>Kesirli Model</td>
</tr>
<tr>
<td>( E_k = \max \sum_{r=1}^{p} u_r Y_{rk} - \mu_0 ) [ \sum_{i=1}^{n} v_i X_{ik} ] [ \sum_{i=1}^{n} v_i X_{ik} ] [ \mu_0 \geq \varepsilon, v_i \geq \varepsilon, \mu_0 : \text{serbest} ]</td>
<td>( E_k = \min \sum_{r=1}^{m} v_i X_{ik} - \mu_0 ) [ \sum_{r=1}^{m} u_r Y_{rk} ] [ \sum_{r=1}^{m} u_r Y_{rk} ] [ \sum_{r=1}^{m} u_r Y_{rk} ] [ \mu_0 \geq \varepsilon, v_i \geq \varepsilon, \mu_0 : \text{serbest} ]</td>
</tr>
<tr>
<td>Doğrusal Model</td>
<td>Doğrusal Model</td>
</tr>
<tr>
<td>( E_k = \max (\sum_{r=1}^{m} u_r Y_{rk}) - \mu_0 ) [ \sum_{i=1}^{n} v_i X_{ik} - \mu_0 ] [ \sum_{i=1}^{n} v_i X_{ik} - \mu_0 ] [ \mu_0 \leq 0 ] [ \mu_0 \geq 0 ] [ \mu_0 : \text{serbest} ]</td>
<td>( E_k = \min (\sum_{r=1}^{m} v_i X_{ik}) - \mu_0 ) [ \sum_{r=1}^{m} u_r Y_{rk} ] [ \sum_{r=1}^{m} u_r Y_{rk} ] [ \sum_{r=1}^{m} u_r Y_{rk} ] [ \mu_0 \leq 0 ] [ \mu_0 \geq 0 ] [ \mu_0 : \text{serbest} ]</td>
</tr>
<tr>
<td>Dual Model</td>
<td>Dual Model</td>
</tr>
<tr>
<td>( E_k = \min aX_{ij} - \varepsilon \sum_{i=1}^{m} S_i^- - \varepsilon \sum_{r=1}^{p} S_r^+ ) [ \sum_{j=1}^{n} X_{ij} \lambda_j + S_i^- - aX_{ij} = 0 ] [ \sum_{j=1}^{n} Y_{ij} \lambda_j - S_r^+ - Y_{rk} = 0 ] [ \sum_{j=1}^{n} \lambda_j = 1 ] [ \lambda_j \geq 0, S_i^- \geq 0, S_r^+ \geq 0 ]</td>
<td>( E_k = \max \beta + \varepsilon \sum_{i=1}^{m} S_i^- + \varepsilon \sum_{r=1}^{p} S_r^+ ) [ \sum_{j=1}^{n} X_{ij} \lambda_j + S_i^- - X_{ij} = 0 ] [ \sum_{j=1}^{n} Y_{ij} \lambda_j - S_r^+ - \beta Y_{rk} = 0 ] [ \sum_{j=1}^{n} \lambda_j = 1 ] [ \lambda_j \geq 0, S_i^- \geq 0, S_r^+ \geq 0 ]</td>
</tr>
</tbody>
</table>

Model çözümdünde; \( E_k = 1 \) olduğunda etkinliği ölçülen KVB’nin etkin olduğu söylenebilir. Aksi takdirde ilgili KVB etkin değildir. Etkin olmayan bir KVB için örnek alabileceği referans kümesi ise aşağıdaki şekilde hesaplanmaktadır.

\[ X_{ik} = \sum_{j=1}^{n} X_{ij} \lambda_j \]
\[ Y_{rk} = \sum_{j=1}^{n} Y_{rj} \lambda_j \]

Veya;

\[ X_{ik} = X_k - S_i \]

\[ Y_{rk} = \beta Y_k + S_r \]

CCR modelleri ile toplam etkinlik hesaplanırken, BCC modelleri ile teknik etkinlik hesaplanmaktadır. Teknik olarak etkin olan bir karar verme biriminin ölçekteki kaynaklanan bir etkinsizliği varsa, toplamda da etkin olamayacaktır. Buna göre CCR modeline etkin olarak belirlenen bir karar verme birimi BCC modeline göre de etkin olarak belirlenmektedir, fakat tem tersi bir genellemeye her zaman için doğru değildir yani her BCC etkin karar birimi CCR etkin olarak kabul edilemez. Bu noktadan hareketle, CCR modellinden elde edilen etkinlik değerinin BCC modellinden elde edilen etkinlik değerine oranını, “ölçek etkinliği” olarak adlandırılmaktadır (Banker vd., 1984:1083).

Ölçek Etkinlik = \[ \frac{\text{Toplam Etkinlik}(ccr)}{\text{Teknik Etkinlik}(bcc)} \]

Görece toplam etkinlik değeri; BBC ile hesaplanan görece teknik etkinlik değeri ile görece ölçek etkinliğinin çarpımına eşit olduğundan, bir KVB’nin ölçek etkinlik değeri yukarıdaki formülle hesaplanabilir. Ölçek etkinlik ve teknik etkinlik değerlerinin bilinmesi, toplam etkin olmayan bir KVB’nin etkinsizliğinin nedeninin teknik etkinsizlikten mi, yoksa ölçek etkinsizlikten mi, ya da her ikisinden de mi kaynaklandığının belirlenmesini de sağlamaktadır.

3. Bulgular

Analizde, 2 adet girdi(m) değişkeni ve 2 adet çıktı(n) değişkeni kullanılmaktadır. Girdi değişkenleri: çalışan sayısı ve iş yeri sayısı, çıktı değişkenleri: net kar ve net satış miktarlarıdır. Girdi ve çıktı veri sayısını ile analize dahil edilecek karar verme birimi sayısını birbiri ile ilişkilendirilmektedir. Veri zarfı ana analiz uygulanan çalışmalararda çeşitli kısıtlar kullanılmaktadır. “m; girdi veri sayısı, n; çıktı veri sayısı, s; karar verme birimi sayısını” göstermek üzere; bu çalışmada “s>3(m+n)” kısıti kabul edilmiştir. “m:2, n:2, s:17” olmak üzere 17>3(2+2)” olarak kabul edilen kısıt sağlanmaktadır. Çalışma kapsamında analiz edilecek olan sektörler ve kodları Tablo 3’de verilmiştir.

Tablo 3: Analizde ele alınan sektörler

<table>
<thead>
<tr>
<th>Kod</th>
<th>Sektör Tanımı</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>Tarım, Ormancılık ve Balıkçılık</td>
</tr>
<tr>
<td>S2</td>
<td>Madencilik ve Taşocaçılığı</td>
</tr>
<tr>
<td>S3</td>
<td>İmalat</td>
</tr>
<tr>
<td>S4</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
</tr>
<tr>
<td>S5</td>
<td>Su Temini, Kanalizasyon, Atık Yönetimi ve Dağıtımı</td>
</tr>
<tr>
<td>S6</td>
<td>İnşaat</td>
</tr>
<tr>
<td>S7</td>
<td>Ticaret</td>
</tr>
<tr>
<td>S8</td>
<td>Ulaştırma ve Depolama</td>
</tr>
<tr>
<td>S9</td>
<td>Konaklama ve Yiyecek Hizmeti Faaliyetleri</td>
</tr>
<tr>
<td>S10</td>
<td>Bilgi ve İletişimi</td>
</tr>
<tr>
<td>S11</td>
<td>Gayrimenkul Faaliyetleri</td>
</tr>
<tr>
<td>S12</td>
<td>Mesleki, Bilimsel ve Teknik Faaliyetler</td>
</tr>
<tr>
<td>S13</td>
<td>İdari ve Destek Hizmet Faaliyetleri</td>
</tr>
<tr>
<td>S14</td>
<td>Eğitim</td>
</tr>
<tr>
<td>S15</td>
<td>İnsan Sağlığı ve Sosyal Hizmet Faaliyetleri</td>
</tr>
<tr>
<td>S16</td>
<td>Kültür, Sanat, Eğlence, Dinlence ve Spor</td>
</tr>
<tr>
<td>S17</td>
<td>Diğer Hizmet Faaliyetleri</td>
</tr>
</tbody>
</table>
Girdi/Çıktı değişkenleri ve kodları Tablo 4’de verilmiştir.

**Tablo 4:** Girdi/çıkta değişkenleri

<table>
<thead>
<tr>
<th>Girdi Değişkenleri</th>
<th>Çıktı Değişkenleri</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Çalışan Sayısı</td>
<td>C Net Kar</td>
</tr>
<tr>
<td>B İş Yeri Sayısı</td>
<td>D Net Satışlar</td>
</tr>
</tbody>
</table>

EMS paket programı yardımıyla CCR ve BCC modellerinin çözümü sonucu elde edilen etkinlik değerleri Tablo 5’de ve Tablo 6’da verilmiştir.

**Tablo 5:** CCR yöntemine göre etkinlik analizi sonuçları

<table>
<thead>
<tr>
<th>Karar Birimi</th>
<th>CCR Etkinlik Değerleri</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2018</td>
</tr>
<tr>
<td>S1 Tarım, Ormancılık ve Balıkçılık</td>
<td>13,89%</td>
</tr>
<tr>
<td>S2 Madencilik ve Taşocakçılığı</td>
<td>100%</td>
</tr>
<tr>
<td>S3 İmalat</td>
<td>75,89%</td>
</tr>
<tr>
<td>S4 Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>100%</td>
</tr>
<tr>
<td>S5 Su Temini, Kanalizasyon, Atık Yönetimi ve Dağıtımı</td>
<td>28,22%</td>
</tr>
<tr>
<td>S6 İnşaat</td>
<td>35,53%</td>
</tr>
<tr>
<td>S7 Ticaret</td>
<td>73,7%</td>
</tr>
<tr>
<td>S8 Ulaştırma ve Depolama</td>
<td>32,48%</td>
</tr>
<tr>
<td>S9 Konaklama ve Yiyecek Hizmeti Faaliyetleri</td>
<td>3,24%</td>
</tr>
<tr>
<td>S10 Bilgi ve İletişimi</td>
<td>82,1%</td>
</tr>
<tr>
<td>S11 Gayrimenkul Faaliyetleri</td>
<td>6,02%</td>
</tr>
<tr>
<td>S12 Mesleki, Bilimsel ve Teknik Faaliyetler</td>
<td>83,73%</td>
</tr>
<tr>
<td>S13 İdari ve Destek Hizmet Faaliyetleri</td>
<td>6,38%</td>
</tr>
<tr>
<td>S14 Eğitim</td>
<td>4,81%</td>
</tr>
<tr>
<td>S15 İnsan Sağlığı ve Sosyal Hizmet Faaliyetleri</td>
<td>10,3%</td>
</tr>
<tr>
<td>S16 Kültür, Sanat, Eğlence, Dinlence ve Spor</td>
<td>3,14%</td>
</tr>
<tr>
<td>S17 Diğer Hizmet Faaliyetleri</td>
<td>1,09%</td>
</tr>
</tbody>
</table>


**Tablo 6:** BCC yöntemine göre etkinlik analizi sonuçları

<table>
<thead>
<tr>
<th>Karar Birimi</th>
<th>BCC Etkinlik Değeri</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2018</td>
</tr>
<tr>
<td>S1 Tarım, Ormancılık ve Balıkçılık</td>
<td>30,06%</td>
</tr>
<tr>
<td>S2 Madencilik ve Taşocakçılığı</td>
<td>100%</td>
</tr>
<tr>
<td>S3 İmalat</td>
<td>100%</td>
</tr>
<tr>
<td>S4 Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>100%</td>
</tr>
<tr>
<td>S5 Su Temini, Kanalizasyon, Atık Yönetimi ve Dağıtımı</td>
<td>100%</td>
</tr>
<tr>
<td>S6 İnşaat</td>
<td>45,09%</td>
</tr>
</tbody>
</table>
Tablo 7: CCR ve BCC modelleri özet sonuç tablosu

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Etkin Olan Sektör Sayısı</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Etkin Olmayan Sektör Sayısı</td>
<td>15</td>
<td>14</td>
<td>16</td>
<td>11</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>En Yüksek Etkinlik</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>En Düşük Etkinlik</td>
<td>0,75%</td>
<td>1,09%</td>
<td>1,53%</td>
<td>0,75%</td>
<td>1,09%</td>
<td>1,53%</td>
</tr>
<tr>
<td>Ortalama Etkinlik</td>
<td>30,70%</td>
<td>24,60%</td>
<td>13,47%</td>
<td>24,19%</td>
<td>18,90%</td>
<td>25,28%</td>
</tr>
<tr>
<td>Etkin Olan Sektörler</td>
<td>Madencilik ve Taşocularlığı</td>
<td>Madencilik ve Taşocularlığı</td>
<td>Madencilik ve Taşocularlığı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
</tr>
<tr>
<td></td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Ticaret</td>
<td>Ticaret</td>
<td>Ticaret</td>
</tr>
<tr>
<td></td>
<td>Madencilik ve Taşocularlığı</td>
<td>Madencilik ve Taşocularlığı</td>
<td>Madencilik ve Taşocularlığı</td>
<td>İmalat</td>
<td>İmalat</td>
<td>İmalat</td>
</tr>
<tr>
<td></td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Su Temini, Kanalizasyon, Atık Yönetimi ve Dağıtımı</td>
<td>Su Temini, Kanalizasyon, Atık Yönetimi ve Dağıtımı</td>
<td>Su Temini, Kanalizasyon, Atık Yönetimi ve Dağıtımı</td>
</tr>
<tr>
<td></td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Su Temini, Kanalizasyon, Atık Yönetimi ve Dağıtımı</td>
<td>Su Temini, Kanalizasyon, Atık Yönetimi ve Dağıtımı</td>
<td>Su Temini, Kanalizasyon, Atık Yönetimi ve Dağıtımı</td>
</tr>
<tr>
<td></td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı</td>
<td>Ticaret</td>
<td>Ticaret</td>
<td>Ticaret</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BCC yöntemi: 2018 yılında 6 sektör; Madencilik ve Taşocakçılığı sektörü, İmalat sektörü, Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı sektörü, Su Temini, Kanalizasyo, Atık Yönetimi ve Dağıtımı sektörü, Ticaret ve parekende sektörü, 2019 yılında 5 sektör; Madencilik ve Taşocakçılığı sektörü, İmalat sektörü, Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı sektörü, Su Temini, Kanalizasyo, Atık Yönetimi ve Dağıtımı sektörü ve Ticaret ve parekende sektörü, 2020 yılında 4 sektör; İmalat sektörü, Elektrik, Gaz, Buhar ve İklimlendirme Üretimi ve Dağıtımı sektörü, Su Temini, Kanalizasyo, Atık Yönetimi ve Dağıtımı sektörü ve Ticaret ve parekende sektörü etkin çıkmıştır.

4. Sonuç
Pandeminin etkileri, ekonomiyi ve toplumu birçok kanaldan etkileyen özellikle olduğundan, ekonomide uzun dönemde farklı etkiler ortaya çıkacaktır. Mevcut veriler işığında sürecin ilk etkilerinin ortaya konulması da sürecin sonraki adımlarında kullanılacak politikaların ve stratejilerin oluşumunda önemli bir şekilde rol olacaktır. İlk vakayı tespit eden bu süreç, ilerleyen süreçte iş ve çalışma koşullarını derinden etkileyen kısıtlama tedbirleri, daha gecikmeli bir etki ile pıçanın arz cephelerini etki altına almıştır. Bu olumsuz gelişmeler, ekonomide ve sektörel düzeylerde pazar dengesizliklerine ve ekonominin üretici sektörlerinin bu dengesizliklerin etkisi altında kalmasına neden olmuştur.


Kaynakça


The Effect of Digital Literacy on Financial Literacy: A Case of University Students

Abstract

Rapid advances in information and communication technologies, liberalization of financial markets and increased competition have diversified and complicated financial products and services. The concept of digitalization has become an important component of financial literacy with the digitization of financial products and services. However, the rapid progress of the developing technology necessitated the need for technology-based digital methods rather than traditional methods. Financial literacy aims to be able to manage one’s money, to make medium and long-term plans, to perceive the risks and benefits in money management, to recognize financial tools, to learn where and how to obtain the right information about financial tools and services, and to use financial tools efficiently and effectively. It is very important to develop digital literacy skills for individuals to use financial tools and to benefit from financial services, as well as having skills such as increasing internet use and accessing information by using different technologies. The aim of this study is to reveal the effect of digital literacy on financial literacy for 650 students at a foundation university in Istanbul. As a result of the correlation analysis, digital literacy and financial literacy were found to be positively and significantly correlated with 50.6%. As a result of the regression analysis, the perception of digital literacy 1 br. as financial literacy increases, 0.514 unit is increasing. A positive effect of digital literacy on financial literacy behavior was determined.

Keywords: Digital literacy, financial literacy, regression analysis

1. Giriş

Finansal ürün ve hizmetlerin dijitalleşmesi sonucunda, bu sürece uyum sağlama konusunun finansal okuryazarlığın önemli bir unsuru olmuştur. Bununla birlikte, gelişen teknolojinin hızla ilerlemesi gerçekleştirilen işlemlerin geleneksel yöntemlerden daha çok teknoloji tabanlı dijital yöntemlere ihtiyaç duyulmasını gerektirmiştir (Gee & Hayes, 2011:67). Bu noktada, işlemlerin...
dijital kanallar ve araçlar ile gerçekleştirilmesi, kullanıcılara zaman ve maliyet tasarrufu sağlamaktadır. Ayrıca dijital araçlar kanalı ile işlevlerin daha kısa süre, daha zahmetlisiz bir şekilde gerçekleştirilmesi dijitalleşmenin olumlu yönleri olarak görülmektedir (Jones & Hafner, 2012:44). Bir çok olumsuz yönleri de bulunmasına rağmen dijitalleşme, toplumların vazgeçilmez bir iletişim aracı olarak yaşamın birçok alanında yerini almıştır.


Finansal okuryazarlığın etkileşimde olduğu en önemli unsurlar, bilgi edinme gerekse finansal işlem gerçekleştirilme noktasında dijitalleşme önemle yerini almıştır. Buradan hareketle, çalışmanın amacı İstanbul da eğitim veren bir vakıf üniversitesindeki 650 öğrenci için dijital okuryazarlığın finansal okuryazarlığa olan etkisini ortaya koymaktır.

2. Kavramsal Çerçeve

2.1. Finansal Okuryazarlık


Finansal okuryazarlık, bireyin parasını yönetebilmesini, ileri tarihli plan yapabilmesini, parının yönetimindeki riskleri algılayabilmesini, finansal araçları tanımasını, finansal araç ve hizmetlere ilişkin doğru bilgiyi nereden ve nasıl edeceğini öğrenmesini, finansal araçları verimli ve etkin olarak kullanabilmelerini hedeflemektedir (Allgood & Walstad, 2016:679).


2.2. Dijital Okuryazarlık


edilmiş şu üç ilkeye dayanmaktadır: (1) çeşitli donanım aygıtlarına ve yazılım uygulamalarına erişim ve bunları kullanma bilgi ve becerisi, (2) dijital içerik ve uygulamalar anlamak ve eleştirel bir şekilde analiz etmek için yetenek, (3) dijital teknoloji ile yaratma becerisi.

Dijital okuryazarlığın konusunda Wan Ng (2012) tarafından bir model geliştirilmiştir. Bu modele göre, dijital okuryazarlık üç boyutun (teknik, bilisel ve sosyal-duygusal) birleşimidir. Günümüz faaliyetlerde bilgisayar iletişim teknolojilerini kullanmak teknik ve operasyonel becerilerle sahib olma; teknik boyut, araştırmalarda eleştirel düşünceyi değerlendirmeye ve dijital bilgiyi elde etme döngüsünü değerlendirmeye, bilişsel ve iletişim, sosyal-duygusal ve öğrenmede interneti sorumlu bir şekilde (güvenlik ve mahremiyeti koruma) kullanma; sosyal-duygusal beceri."}


3. İstatistiksel Analiz

3.1. Çalışmanın Amacı ve Önemi

Günümüzde teknolojinin gelişmesiyle, finansal piyasalarda yatırım yapılabilcek finansal araç sayışı ve çeşitli artmış, ayrıntılı nitelikleri daha karmaşık hale gelmiştir. Bu gelişmeler nedeniyle, yetersiz düzeyde finansal bilgi, ekonomik faaliyetlerin verimi ve karlı oluş keşetşirilmiş için uygun değildir. Bu nedenle, günümüzde finansal okuryazarlık sadece sınırlı ve kültürel olarak nesillerden nesillere aktarılan geleneksel bilgilerle rek olarak, günümüz koşullarına ait daha karmaşık, daha yani ve geleneksel olarak olmayan bilgilerde kullanılarak finansal işlemlerin gerçekleştirilmesi ifade etmektedir. Finansal okuryazarlığın günümüzde ayrıntılı olarak olduğu önemli gelişme teknoloji ve beraberinde getirilmiş olduğu dijitalleşmedi. Dijital okuryazar bireylerin finansal bilgi edinme, gerekse finansal işlem
gerçekleştirme noktasında daha başarılı oldukları bir çok çalışma ile ortaya konulmuştur. Buradan hareketle, çalışmanın amacı İstanbul’da eğitim veren bir vakıf üniversitesinin farklı fakültelerde okuyan öğrencilerinin dijital okuryazarlık becerilerinin finansal okuryazarlığa etkisinin belirlenmesidir.

3.2. Araştırmannın Hipotezleri ve Model

Araştırmannın ana hipotezi dijital okuryazarlık ve finansal okuryazarlığın istatistik anlamlı ilişkili olduğunu yönüledir. Ayrıca, alt hipotez olarak, dijital okuryazarlık alt boyutları olan tutum, teknik, bilisimsel ve sosyal finansal okuryazarlık üzerinde etkili olduğu görüşü sinnanacaktır. Geliştirilen hipotezler Tablo 1’dede yer almaktadır.

Tablo 1. Araştırmannın Hipotezleri

<table>
<thead>
<tr>
<th>Hipotezler</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H₁</td>
<td>Dijital Okuryazarlık (DOKY) ile Finansal Okuryazarlık (FOKY) istatistik anlamli ilişkilidir.</td>
</tr>
<tr>
<td>H₁ₐ</td>
<td>Tutum, Teknik, Bilişsel ve Sosyal alt boyutlar ile Finansal Okuryazarlık (FOKY) istatistik anlamli ilişkilidir.</td>
</tr>
</tbody>
</table>

Şekil 1. Araştırmannın Modeli

3.3. Araştırmannın Evreni ve Örneklem


3.4. Veri Toplama Aracı

Yapılan çalışma, deneysel olmayan nicel bir araştırma tasarımına sahip olup ilişkisel tarama modelidir. Çalışmada kullanılan anket, geniş bir literatür taramasının neticesinde geçerlilik ve güvenilirliği daha önce yapılan araştırmalarda onaylanmış olan ölçeklerden faydalanılarak hazırlanmıştır. Bu ölçekler aşağıdaki gibi açıklanmak mümkündür:
Dijital Okuryazarlık Ölçeği: Dijital Okuryazarlık Ölçeği, Ng (2012) tarafından geliştirilmiş 17 maddeden ve 4 faktörden (tutum, teknik, bilişsel ve sosyal) oluşan bir ölçektir. Ölçeğin orijinali Avustralya'da bulunan bir üniversitede öğrenim gören, yaşları 18-30 arasında değişen öğretmen adayları üzerinde uygulanmıştır. Ölçeğin Türkçe geçerlik ve güvenirlik çalışması Hamutoğlu vd. (2017) tarafından yapılmıştır. Tutum alt boyutu 7, Teknik alt boyutu 6, Bilişsel alt boyutu 2, Sosyal alt boyutu 2 maddeden oluşmaktadır. İc tutarlılık katsayısı ölçegin tümü için .93 olarak elde edilmiştir. Özellik, Kesinlikle Katılıyorum (5), Kesinlikle Katılmıyorum (1) şeklinde 5'li Likert tipi bir derecelendirme kullanılmıştır.


3.5. İstatistik Bulgular ve Değerlendirme

3.5.1. Anketin Güvenirliği

Anket çalışmasından elde edilen veriler için güvenirlik testi olarak Cronbach Alpha, İkiye Bölme (split), Paralel, Mutlak Kesin Paralel (strict) testleri uygulanmıştır. Bu değerlerin %70 değerinin geçmesi esas alınmaktadır (Sart vd., 2018; Sart 2020). Bu durumda anketin iç tutarlılık gösterdiğini ve sonuçlara güvenilebileceği anlaşılır. Bu çalışmada yapılan anketin güvenirlik analizi sonuçları; Cronbach-Alpha = 0.921, Paralel = 0.922, Split = 0.920-0.922 ve Strict = 0.921 olarak belirlenmiştir.

3.5.2. Demografik ve Genel Bilgiler Yüzde Dağılım Bilgileri

Çalışmanın ilk aşamasında ankette cevap verenlere yönelik genel genel bilgiler aşağıdaki verilmiştir:

- Katılımcıların %65,3’ü kadın, %34,7’si ise erkekler.
- Katılımcılar %30,8’i 18-20 yaş aralığında, %61,7’si 21-23 yaş aralığında, %7,5’i ise 24 yaş ve üzerindedir.
- Katılımcıların sınıf düzeyi dağılımı; %9,3’ü 1. sınıf, %17,1’i 2. sınıf, %31,8’i 3. sınıf, %34,8’i 4. sınıf ve %7’i ise 5. sınıf ve üzeri şeklindedir.
- Katılımcıların %10,1’inin ailelerinin gelir düzeyi algısı düşük, %63,9’unun orta, %26,0’unun yüksektir.
- Katılımcıların %52,5’i finansal yönetimle ilgili ders almış, %47,5’i benzer bir ders almamıştır.
- Öğrencilerin %8,2’i günde 1-3 saat internette vakit geçmiş, 11,5’i 4-6 saat geçirmekte ve %80,3’ü 6 ve üzeri saat internet kullanmaktadır.

3.5.3. Açıklayıcı Faktör Analizi Sonuçları

Ölçeklere ilişkin açıklayıcı faktör analizini yapmadan önce, veri setinin faktör analizine uygun olup olmadığı test edilmiştir. Veri setinin, açıklayıcı faktör analizine uygun olduğunu gerçekleştirdiğimiz testler ile onaylanmasını sonrasında, faktör yapısının ortaya konulması için faktör tutma metodu olarak varimax döndürme metodu ve temel bileşenler analizi yönteminden yararlanmıştır.
Tablo 2: Faktör analizi sonuçları ve cevap ortalamaları

<table>
<thead>
<tr>
<th>Dijital okuryazarlık Ölçüğü</th>
<th>Varyansı Açıklama Yüzdesi</th>
<th>Cronbach-Alpha (CA)</th>
<th>Cevap Ortalaması</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutum</td>
<td>%20.44</td>
<td>0.919</td>
<td>4.02</td>
</tr>
<tr>
<td>Teknik</td>
<td>%17.92</td>
<td>0.910</td>
<td>4.05</td>
</tr>
<tr>
<td>Bilişsel</td>
<td>%15.56</td>
<td>0.909</td>
<td>4.11</td>
</tr>
<tr>
<td>Sosyal</td>
<td>%12.37</td>
<td>0.911</td>
<td>4.03</td>
</tr>
</tbody>
</table>

KMO= 0.915; Bartlett $\chi^2=5733.49$ ve $p= 0.000$; Varyans Açıklama Yüzdesi: %66.29

<table>
<thead>
<tr>
<th>Finansal Okuryazarlık Ölçüğü</th>
<th>Varyansı Açıklama Yüzdesi</th>
<th>Cronbach-Alpha (CA)</th>
<th>Cevap Ortalaması</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harcama</td>
<td>%22.15</td>
<td>0.920</td>
<td>4.07</td>
</tr>
<tr>
<td>Tutum</td>
<td>%19.06</td>
<td>0.918</td>
<td>3.93</td>
</tr>
<tr>
<td>Algı</td>
<td>%17.41</td>
<td>0.916</td>
<td>4.02</td>
</tr>
<tr>
<td>İlgı</td>
<td>%13.67</td>
<td>0.912</td>
<td>3.67</td>
</tr>
</tbody>
</table>

KMO= 0.911; Bartlett $\chi^2=6202.74$ ve $p= 0.000$; Varyans Açıklama Yüzdesi: %72.29

Faktör yapısında, dijital okuryazarlık için 4 faktör, finansal okuryazarlık için 4 faktör ve örgütsel özdeşleşme için 1 faktör öz değerleri 1’den yüksektir olarak elde edilmiştir. Dijital okuryazarlık ölçeği Kaiser-Meyer-Olkin (KMO) örneklem yeterliği, iyi düzeyi ifade eden 0.70 değerinin üzerinde 0.915, finansal okuryazarlık ölçüğü 0.911 olarak elde edilmiştir. Analizi yapılacak olan değişkenlerin tutarlılığını ölçmek için yapılan Bartlett küresellik testinin sonucu dijital okuryazarlık ölçüğü için istatistik anlamalı ($\chi^2= 5733.49$ ve $p= 0.000$), finansal okuryazarlık ölçüğü için ($\chi^2= 6202.74$ ve $p= 0.001$) olarak elde edilmiştir. Anti-imaj korelasyon matrisi sonuçlarına göre, ifadelerin çapraz ilişki katsayılarını kritik düzey olan 0.5’ in üzerinde dijital okuryazarlık ölçüğü için (0.61-0.88) arasında, finansal okuryazarlık ölçüğü için (0.65-0.90) arasında elde edilmiştir. Her iki ölçük için extraction (çıkarım) sütununda 0.20’nin altında soru yoktur, böylece soru çıkarılmaya gidilmemiştir.

3.5.4. Korelasyon Analizi Sonuçları

Faktör analizi ile belirlenen iki ana boyutunun korelasyon analizi sonuçları Tablo 3’de verilmiştir.

Tablo 3: Korelasyon analizi sonuçları

<table>
<thead>
<tr>
<th>Dijital Okuryazarlık</th>
<th>Finansal Okuryazarlık</th>
</tr>
</thead>
<tbody>
<tr>
<td>r</td>
<td>0.506</td>
</tr>
<tr>
<td>p</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

*0.05 için anlamlı ilişki

Dijital okuryazarlık ile finansal okuryazarlık %50.6 pozitif yönde anlamlı ilişkili çıkmıştır. Dijital okuryazarlık arttıkça finansal okuryazarlık düzeyi artacaktır. Dijital okuryazarlığın finansal okuryazarlık davranışında üzerinde olumlu etkisi belirlenmiştir.
3.5.5. Regresyon Analizi Sonuçları

Çalışmada, bağımsız değişken dijital okuryazarlık ve bağımlı değişken finansal okuryazarlık alınarak regresyon analizi uygulanmıştır. Varsayımların sağlanması amacıyla Newey-West algoritması kullanılmıştır. Regresyon analizleri sonuçları Tablo 4’de verilmiştir.

Tablo 4: Regresyon analizi tahmin sonuçları

<table>
<thead>
<tr>
<th>MODEL 1</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bağımlı Değişken:</strong></td>
<td>FOKY</td>
<td>Katsayı</td>
<td>St. hata</td>
</tr>
<tr>
<td>Sabit</td>
<td>1.953</td>
<td>0.332</td>
<td>5.882</td>
</tr>
<tr>
<td>DOKY</td>
<td>0.514</td>
<td>0.078</td>
<td>6.589</td>
</tr>
<tr>
<td><strong>R^2 = 0.518</strong></td>
<td>F_{hesap} =19.48 F_{anlamlılık} =0.000</td>
<td>Harvey test (p) = 0.106 LM test (p)= 0.125</td>
<td>Jarque-Bera (p)=0.161</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODEL 2</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bağımlı Değişken:</strong></td>
<td>FOKY</td>
<td>Katsayı</td>
<td>St. hata</td>
</tr>
<tr>
<td>Sabit</td>
<td>2.159</td>
<td>0.319</td>
<td>6.768</td>
</tr>
<tr>
<td>Tutum</td>
<td>0.492</td>
<td>0.068</td>
<td>7.235</td>
</tr>
<tr>
<td>Teknik</td>
<td>0.397</td>
<td>0.051</td>
<td>7.784</td>
</tr>
<tr>
<td>Bilişsel</td>
<td>0.508</td>
<td>0.089</td>
<td>5.707</td>
</tr>
<tr>
<td>Sosyal</td>
<td>0.476</td>
<td>0.074</td>
<td>6.432</td>
</tr>
<tr>
<td><strong>R^2 = 0.566</strong></td>
<td>F_{hesap} =22.90 F_{anlamlılık} =0.000</td>
<td>Harvey test (p) = 0.113 LM test (p)= 0.134</td>
<td>Jarque-Bera (p)=0.316</td>
</tr>
</tbody>
</table>

*0.05 için istatistik anlamlı değişken

Tablo 4 incelendiğinde, bağımsız değişkenlerin bağımlı değişken üzerinde anlamlı pozitif yönde etkisini olduğu görülükmektedir. Model sonuçlarında göreceği üzere; DOKY algısı 1 br. artışça FOKY boyutu 0.514 br. artmaktadır. Diğer yandan model 2’ye yönelik alt boyutlar için bakıldığında; tutum alt boyutu 1 br. artışça FOKY boyutu 0.492 br. artmaktadır. Teknik alt boyutu 1 br. artışça FOKY boyutu 0.397 br. artmaktadır. Bilişsel alt boyutu 1 br. artışça FOKY boyutu 0.508 br. artmaktadır. Sosyal alt boyutu 1 br. artışça FOKY boyutu 0.476 br. artmaktadır. Alt boyutlarda finansal okuryazarlık üzerinde en etkili bilişsel sonrasında tutum olarak belirlenmiştir. Böylece, H₁ ve H₁a hipotezleri doğrulanmıştır.

4. Sonuç


Bu çalışmanın amacı, İstanbul’da eğitim veren bir vakıf üniversitesindeki 650 öğrenci için dijital okuryazarlığın finansal okuryazarlığa olan etkisini ortaya koymaktır. Korelasyon analizi sonucunda, dijital okuryazarlık ile finansal okuyazarlık %50.6 pozitif yönde anlamlı ilişkili çıkmıştır. Regresyon analizi sonucunda, DOKY algısı 1 br. artışça FOKY boyutu 0.514 br.
artış göstermektedir. Alt boyutlar için bakıldığında; tutum alt boyutu 1 br. arttırıkça FOKY boyutu 0.492 br. artmakta, teknik alt boyutu 1 br. arttırıkça FOKY boyutu 0.397 br. artmakta, bilişsel alt boyutu 1 br. arttırıkça FOKY boyutu 0.508 br. artmakta ve sosyal alt boyutu 1 br. arttırıkça FOKY boyutu 0.476 br. artış göstermektedir. Alt boyutlarda finansal okuryazarlık üzerinde etkili bilişsel sonrasında tutum olarak belirlenmiştir.

Öğrencilerin finansal işlemlerinde dijital kanalları tercih etmesi beraberinde finansal bilgiye daha kolay ulaşmalarının ve finansal bilgilerini artırmalarını getirecektir. Ayrıca, dijital kullanımın sağladığı zaman tasarrufu ve daha fazla finansal ürün daha maliyetsiz ulaşabilme avantajı, finansal davranışlarında dijitalleşmeye yönelik olarak değerimsine katkı sağlayacaktır. Dijital okuryazarlık düzeyleri, dijital araçların kullanımına ilişkin bilgi ve bilinç düziye arttırıkça bu problemlerin azalacağı düşünülmüştür. Dijital okuryazarlık becerileri derslerin içeriğine entegre edilmeli, ebeveynlerin de dijital okuryazarlık becerilerine sahip olmaları gerekmektedir. Uzaktan eğitim ve e-öğrenme uygulamaları sosyal media ortamlarına uygun olarak tasarlanmalıdır. Öğrencilerin eğitim amacıyla kullanılmasını için daha dikkat çekici hale getirilebilir. Çalışma sonucunda öneriler;

- Eğitim kurumlarına temel finans bilgisi içeren derslerin konulması yoluyla altyapı hazırlanması,
- Üniversitelerde fakülte ve bölümler arası yapılmış birinci sınıf müfredatına finansal okuryazarlık adı altında ders konulması,
- Bu dersleri verebilecek öğretim elemanı sayısı artırmak amacıyla bu konuda tez ve bilimsel çalışma yapan öğretim elemanı bu konuda tez ve destekler sağlanması ve öğretim üyesi söz konusu olmak üzere bu konuda özel programlar açılmalıdır,
- Aile ve Sosyal Politikalar Bakanlığı ile üniversitelerin işbirliği yaparak bu konuda ortak ve fikir paylaşılarak, bu konuda ortak projeler yürütmesi,
- TÜBİTAK gibi kurumların bu konuda özel ve özel programlar açması, olarak sıralanabilir.

Bu çalışmaların yapılması halinde, orta vadede Türkiye’de hem finansal okuryazarlık düzeyi yükselmeye başlayacak hem de daha sağlıklı bir tasarruf bilinci gelişmeye başlayacaktır. Daha uzun vadede bunun Türkiye ekonomisi üzerinde birçok olumlu etkisi görülecektir.

Kaynakça


Makroekonomik Şokların Döviz Kuru Geçişkenliğine Etkilerinin İncelenmesi

Havva Nesrin Tiryaki

Özet


Anahtar Kelimeler: Döviz kuru geçişkenliği, enflasyon, para politikası, fiyat düzeyi

Investigation of the Effects of Macroeconomic Shocks on Exchange Rate Pass-through

Abstract

Exchange rate fluctuations in an economy can have large effects on output and prices. The size of this effect is important for monetary authorities when determining monetary policy. Macroeconomic shocks that affect exchange rate fluctuations play a key role in determining the degree of exchange rate pass-through. In this study, the effects of shocks in the estimation of exchange rate pass-through are examined. In the study, the theoretical foundations of the effects of exchange rate fluctuations on inflation were discussed, studies that took into account the effects of shocks in the literature were examined, and a wide literature review was made by distinguishing between shocks that triggered foreign exchange movements. Preliminary studies in the literature ignore the effects of shocks on the exchange rate and consider fluctuations in exchange rates as shocks. However, some recent studies show that these shocks may have differential effects on exchange rate pass-through.

Keywords: Exchange rate pass-through, inflation, monetary policy, general price level

1. Giriş


Bununla birlikte, toplam fiyatlarla geçiş tahmin etmek kolay değildir. Geçişkenlik yalnızca ülkeler arasında önemli ölçüde değişiklik göstermez, aynı zamanda belirli bir ülke içinde zaman içinde de değişir.

Döviz kuru geçişkenliği (ERPT), nominal döviz kurundaki değişikliklerin özellikle ithalat fiyatlarını etkileyerek diğer yurt içi fiyatları etkileme derecesine karşılık gelir. Genel olarak literatürde ERPT tanımlar, döviz kuru değişikliklerinin tüketici veya üretici fiyatlar üzerindeki etkilerini ele alacak şekilde genişletilmişdir. Döviz kurundaki değişimin ithalat fiyat endekсинde...
Döviz kuru değişimlerinin tüketici fiyatlarına geçiş, enerji ve diğer emtia fiyatları yoluyla doğrudan olabildiği gibi ithalat fiyatları, üretilmiş üretim ve kâr marjları yoluyla dolaylı etkilere kadar çeşitli kanallardan geçer.


Örneğin, para politikası değişiklikleriyle ilişkilili döviz kuru değişkenliği, diğer tür şoklara ilişkin oladan daha yüksekse, bir merkez bankasının enflasyonu ve çıktıyı stabilizasyonu için gerekli eylemlerinin döviz kuru kanalını hafife alma ve para politikasına göre aşırı sıkı veya gevşek bir para politikası duruşunu sürdürme riski vardır. Bu, aktiviteden gerekli dalgalanmaları yol açabilir ve zaman içinde enflasyon beklentilerini zorlaştırabilir.

Ayrıca, döviz hareketlerini tetikleyen bu şoklar ülke özellikleriyle etkileşime girerek, tüketici fiyatlarıyla birlikte etkilerini artırarak, şokların bilgilerine ve ülke özelliklerine dayalı olarak alternatif para politikası tepkileri önererek.


Comunale ve Kunovac (2017) Euro bölgesinde döviz kuru şokundan sonra genel fiyat düzeyine geçişin bir yılda yaklaşık %14 ve iki yıllık bir zaman diliminde %20 olduğu göstermektedir. Ticareti yapılan mallar için ortalama tahminin sırasıyla %18 ve %26'dır. Bununla birlikte, sondaki fiyat endeksleri ticareti konu malların daha küçük bir bölümünü içermektedir.

3. Genel Değerlendirme ve Sonuç


Genel olarak, farklı yerel ve küresel şokların çok farklı geçişkenliklerle ilişkili olduğunu ve ülke özelliklerinin önemli bir rolü olduğunu vurgulamaktadır. Bu şokların doğru değerlendirilmemesi merkez bankalarının gereken daha fazla politika sıkılaştırmasını ve faaliyetlerde gerekli dalgınlanmaların yapılmasını gerektirdiği anlaşılmaktadır. Bu yüzden ilerleyen çalışmalarında döviz kuru geçişkenliğinin belirlenmesinde ülkelere özgü özellikleri de içeren şokların dahil edilmesi politika yapıcılar için daha yararlı olabilir.

Kaynakça


Entity Transformation Projects: The Military Technology Strategy (MTS)

Antoine Trad

Abstract

It is not a secret that conflicts, wars and military investments are the backbone for major global economies’ evolution, stagnation or failure. Military organizations are the ones who drive major technological transformation and innovation trends. The most known case is the internet, where USA’s Defense Advanced Research Projects Agency (DARPA), developed technologies for interlinking packet networks to support communication protocols that was called the Internet project; and today this concept is known as the Internet. Military technology transformation and innovation projects are based on major financing capabilities, ideology and also on the factor of demography. Countries, Military environments and organizations (or simply Entities) are increasingly using complex technologies to gain geopolitical and hence economical advantage. Transformed Entities, have to face new challenges and geopolitical Risks (gRisk), when implementing their infrastructure, organizational concept and Information and Communication System (ICS). One of the most important gRisks is related to finding the right balance between, Military Technology (MT), military strategy, financial capabilities, geopolitical knowledge, combative status and the evolution of demography. Therefore, the stability of an Entity, depends a holistic strategy, like the one proposed in this article, the MT Strategy (MTS) to support the Entity’s transformation projects. The MTS includes a methodology and a concept to manage the Entity’s geological stability and tries to detect the main gRisk, which is that an Entity may lose the sense of reality, by thinking that only MT and financial investments will solve all types of military conflicts.

Keywords: Transformation projects, military technology, strategy, enterprise architecture, geopolitics and holism

1. Introduction

MTS and related tactics are the basis of managing modern warfare, in which technology strategy includes the design, planning, coordination, preparing and directing military activities to meet the Entity’s main geopolitical, economic and military objectives. Tactical scenarios implement a specific strategy based on short-term and long-term decisions which are made by the Entity’s troops activities and its usage of MT and weapons in confrontations. The known military specialist, Carl von Clausewitz defines tactics as: Tactics is the art of using troops in battle; strategy is the art of using battles to win the war. Winning a war open new markets and business opportunities… Strategy, technology and tactics, however, have been used differently in different periods of history. Actually, the main change in the usage of these terms in the process of evolution of technology, is the notion of scope and the modern nature of warfare, as well as the Entity’s geopolitical context that is related to the conflict and the development of technologies. Strategy means, the art of the general (from the Greek term strategos), which originally meant just planning of a military campaign. Therefore, until the 17th and 18th centuries, a defined strategy, included various military issues, like, finance, building fortifications, maneuver and supply. In the 19th and 20th centuries, nations have witnessed the rise of mass ideologies, vast conscript armies, global alliances and ultra-rapid technological change, which made MTS become practically similar to a grand military strategy, that is based on planning and the optimal usage of the Entity’s main pools of resources that includes: human, military, technological, economic and political resources. The actual change in the scope and meaning of MTS and tactics is due to the vast changes and evolution of technologies. Tactics are very complex activities that are used to be distinguished from static strategies because the two are interdependent; and in the 20th century, tactics have been redefined as a dynamic operational strategy. MTS includes limited tactical possibilities; which depend on the size, training and the morale status of armed forces, type and volume of weapons used (and

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available), terrain, weather, demography, technological capacities, quality and location of enemy armed forces… Tactics are very dependent on strategic considerations (Cheyney, 2021); where today, technological capacities are probably the most important ones. Entity’s technology or ICS capacities, enables the processing and coordination of its various organizations, which have a large set of applications and resources. These applications are used in order to serve people, leaders and executive management, who are supported by an adapted Decision Making System (DMS). The DMS and MT’s evolutions have enabled the transformation of Entity’s monolithic legacy systems. Such transformed systems need, an optimal MTS that includes the following factors and areas, like: 1) The design of the needed MT; 2) Manage and control the needed financial capabilities; 3) Build geopolitical knowledge; 4) Enhance combative moral and status; and 5) Ensure the evolution of demography. These factors and areas are interrelated and their disbalance may create major setbacks and even major defeats, like in the cases of the unfortunate Western armies, losing ground in the Middle East Area (MEA) and other parts of the world. The loss of the sense of reality, by relying only on MT and financial conflicts will offer easy victories to the Entities’ enemies, who in general have a healthier demography and a clear ideology. The human factor and their sustainable demography, stay the Entities’ (and its military’s armed forces), from the major asset and the used technology is just an auxiliary factor. Entity’s defense capability evolution process operates in parallel with many other filed like, management, security, policy, regulatory and governance frameworks. MTS’ central domains are Enterprise Architecture (EA) and DMS, which were introduced in Defense strategies, to support their ICS. Many Entities embraced EA to support their defense and government strategies. The MTS comprises a set of templates and diagrammatic forms, to support optimal design operations. USA’s Department of Defense (DoD) Architecture Framework (DoDAF) uses an EA based approach (DoDAF 2010). However, the MTS differs greatly from DoDAF’s objectives because of its holistic approach and its human factor approach (Hue, 2014). This article’s Research and Development Project (RDP) will offer a resultant set of recommendation to support the MTS.

2. The Research and Development Project

This article’s Research Question (RQ) is: “Can an MTS, support an Entity transformation project by innovating its MT capacities?” The main MTS gaps are related to the Entities’ capacities to support humainly and financially: complex military operations, defined sets of MTS requirements and also the Entity’s security requirements.

2.1. The Research’s Literature Review

The author’s RDP and framework are very mature in the domains of Transformation Projects (simply a Project) risk management and strategy design. The Research’s Literature Review’s (RLR) result is that a small number of relevant scholar resources exist on this articl’s RQ and its related subjects, with the only exception of The Open Group Architecture Framework (TOGAF) that relates to various EA based strategies, concepts, technology areas and interfaces to existing standard frameworks. The RLR confirmed that there is a relevant and important gap, between existing concepts and the MTS. In this domain knowledge and methodology gaps exist, mainly because of the lack of a holistic approach, where there is practically no insight on a holistic approach to design an MTS for Projects. In this article the following resources are used: 1) Various articles related to Entity security risk management; 2) The author’s general works and framework, the Transformation Research Architecture Development framework (TRADf); 3) An initial set of factors; 4) A large set of MTS related literature, standards and frameworks; and 5) Uses an empirical engineering method, which far more than just literature scanning and concrete engineering projects.

2.2. Empirical Engineering Methods
The RDP uses an empirical engineering method, which is optimal for various types of engineering projects like the MTS one (Easterbrook, Singer, Storey, & Damian, 2008). The main goal is to deliver a holistic approach for an interactive mixed method that is based on factors and Heuristics Decision Tree (HDT).

2.3. Critical Success Area

Critical Success Area (CSA) is a set of Critical Success Factors (CSF), where a CSF is a set of KPIs. A KPI corresponds to a single Project or MTS requirement. For a MTS requirement, an analyst identifies an initial set of CSFs. CSFs are the most important relation between an MTS construct, organizational predisposition and the DMS (Trad, & Kalpić, 2020b). Therefore, CSFs reflect control areas that must meet strategic goals and defined constraints. Measurements are used to evaluate gRisks in each CSA, where CSFs can be internal or external. For a given military problem type, the MTS analyst, must identify the initial set of CSFs to be used for the DMS and its HDT. Hence the CSFs are the most important mapping/relational between the MTS, MT status, organizational predisposition and DMS; that can be subject for attacks or global crime schemes (Peterson, 2011). The proposed MTS delivers a set of recommendations and solutions for the Entity’s global transformation process.

2.4. Selecting the Entity’s MTS CSFs

Selecting the Entity’s MTS CSFs is based on the following facts and resources: 1) ICS; 2) Actors and boundaries; 3) Used and connected components; 4) Technical and military functional requirements; 5) Established national defense strategies, objectives and goals; 5) Applied defense and security policies; 6) Sustainability, robustness, proactivity and competition; 7) Geopolitical, national/societal and geoeconomical statuses; and their correlation; 8) Behavioral sciences, propaganda and parapsychology mirage, which can alienate the main objectives; and 9) The Entity’s Organized Domain Global Predators’ Pattern (EODGPP) for destabilizations and attacks, where the targeted domains, can be national destabilizations & civil-wars, national security, finance, logistics, geopolitics or other; it can be even used for a combination of these fields. Determination and the evaluation of major gRisks, is affected by many CSFs and their relation/correlation is therefore essential. Entities must defend their organizations, ICS, assets, and resources; so that an external actor or aggressor using a EODGPP based scheme can be detected and deterred to access to Entity’s internals. The Entity must be capable of defending its internal territory, organizations, resources, systems and national objectives, and must build an MTS to identify and block any external incursion or supplanted EODGPP attempts aimed to damage the Entity. Therefore, the main objective is to block and to have an optimal information, security and technology services that identifies probable aggressors (or other types of attack patterns) attempts. Besides classical attacks the MTS must be aware of other types of organized asymmetric attacks like: 1) Cyberwarfare; 2) Cyberterrorism; 3) Cyberhooliganism; 4) Cyberfinance attacks; 5) Terrorism groups acting like armies; 6) Destabilization propaganda; 7) Information and spying service; and others. Just analyzing data and historical events is a partial, limited and offers static solutions, there is a need for a dynamic proactive qualitative heuristics’ method like the author’s HDT algorithm. There is also a need to control the activities and behavior of terrorist groups, which can be an important part of the Entity’s internals; and to proactively detect any probable violations, like in the case of France. Possible internal or external attacks can be modelled by using: MTS, spying and information services, skilled special forces, responsibilities & awareness and defined ethics.

2.5. The Architecture Development Method and Defense Strategy

As already mentioned, major Entities are using technologies and methodologies as the kernel of their Defense Strategy (DS), like the case of EA in the form of DoDAF (DoDAF, 2010) The
MTS focuses on the design of DS for an Entity. In the actual age of distributed fast changes, geopolitical instability, intelligence, complexity, knowledge, economy and technology (Gardner, 1999), MTS becomes the most important objective, in order to offer a concept that includes the HDT that supports a wide class of DS problem types, and that is a major benefit (Markides, 2011). The MTS synchronizes with the Architecture Development Method (ADM) to deliver juts-in-time solutions. The MTS defines DS capabilities to protect the Entity from attacks by: 1) Localizing gaps in the infrastructures and ICS; 2) Review of detection and real-time DS solutions; 3) Block cumulative attacks; 4) Defining an MTS and DS to locate potential weaknesses; 5) Build a robust MTS; 6) Integrate DS in in all Project requirements; 6) Block EODGPP attacks; and 8) Apply qualification procedures in the ADM (Clark, 2002). TOGAF’s ADM is the most used EA delivery process and this article presents which DS artifacts are relevant to ADM’s phases, this makes DS an integrated part of the EA. This enables, security framework like SABSA to interface TOGAF, to provide common EA models to improve information exchange between Project experts.

3. MTS’ Fundaments

Today the world is witnessing unprecedented technological change and witnessing new adversaries with different alliances, have emerged, alongside traditional threats; these facts might change the world-wide order; mainly due to substantial and rapidly modernizing militaries and their MTS. The unfortunate evolution of terrorist groups and non-state militias who have access to sophisticated technologies and weapons. Research and Development (R&D) has become a major CSF in the global MTS competition. New R&D and MTS domains are emerging from the intersection of various scientific domains. New technologies are developing and are adopted faster than before. Weaker adversaries like terrorist groups have become capable of developing an MTS to gain military and geopolitical advantage. Entity’s MTS needs to confront these new facts and prepare the right tactics and above all, courage. MTS needs to set long term objectives, building future capabilities, taking risks, improving scientific and technological literacy, collaborating effectively and managing huge volumes of data. The MTS needs to mitigate gRisks by applying R&D that supports military capabilities and continuing to maintain critical economic capabilities that are crucial for Entity’s national security (MOD, 2020).

3.1 MTS Principles of Warfare

Entity’s military leaders and specialists throughout history have formulated the most important strategic and tactical concepts of warfare, like for example: 1) Napoleon I, developed 115 principles; and 2) The Confederate general Nathan Bedford Forrest had only one: Get there first with the most men. The common principles are: objective, offensive, surprise, security, unity of command, economy of force, mass and maneuver. Military forces, must have a well-defined objective that must be followed despite possible difficulties. Only offensive operations, in which exploiting the initiative will use objectives. Offensives increase the possibility of surprise and security (protection against surprise activities). MTS control of command and cooperation, is crucial to follow the objectives, the capacity to use Entity’s forces effectively and to optimization critical phases. Maneuver consists of manners on how troops can be deployed and moved to support offensive, mass and surprise activities; a known case, that illustrates these principles was used in World War II (WWII), when the Allied forces launched an offensive on Europe, by using a combined command and they have effectively massed their forces in England, and have deceived Germans regarding the point of invasion and have set a maneuver called Operation Overlord in action respecting the principle of mass (Cheyney, 2021).

3.2 MTS Manoeuvres
Classification of actual military types of maneuvers and their variations are a part of the MTS. New technology and weapons have not drastically changed classical types of offensive maneuvering, like: penetration, envelopment, defensive-offensive maneuvers and turning movements. The penetration, is one of the oldest maneuver type and is a main attack that attempts to penetrate enemy lines, while secondary attacks on other enemy lines prevent the freeing of enemy’s reserves. Defensive-offensive maneuvers include attack from a defensive position after the attacking enemy has been slowed down. Turning maneuvers are indirect approaches that attempt to swing wide around an enemy's flank to threaten its supply and communication lines (Cheyney, 2021).

3.3 The Historical and Theoretical Development of MTS

The historical roots of strategy and tactics date back to the origins of human warfare and the development of large-scale empires. Dense tactical infantry formation of overlapping shields called the phalanx, for example, existed in an early form in ancient Sumer (3000 BCE). The development of strategy and tactics is related to the growth, spread and clash of civilizations. Technological evolution is the base for modern state power, ideology and nationalism. The Mediterranean area is the origin of modern military strategy and tactics; like in the cases of Philip II (382 BCE) and Alexander the Great (356 BCE) and Hannibal (247 BCE) of Carthage, who established the first strides of military strategy. Philip combined infantry, cavalry and primitive artillery into a trained, organized and maneuverable army supported by engineers and a rudimentary signaling system. The Middle Ages saw the decline of military strategy, with the exception of the Mongol conqueror Genghis Khan. Medieval tactics was based on defensive fortifications and armored cavalry.

3.4 The Emergence of Modern Warfare

The emergence of modern warfare is related to the following historical facts (Cheyney, 2021):

- King of Sweden, Gustav II Adolf, is considered as the father of modern tactics because he transformed military maneuvering tactics. He headed a disciplined national army and the transformation resulted in small, mobile units armed with maneuverable firepower.
- Frederick II of Prussia, transformed his armed forces by mastering initiative and mass, using small units; he faced mighty coalitions using a strategy of flexible interior lines that can reassemble in a superior armed force to strike the enemy.
- Napoleon I is considered to be the inventor of modern warfare; the French Revolution created mass organized army with flexible divisions. Napoleon designed and planned his military campaigns and optimally maneuvered his armies to the selected battle field. His tactics and strategy were based on initial provocations and massive bombardments, which were followed by massive armed forces attacks on the enemy’s flanks.
- The 19th century brought major theory and MTS transformations. Napoleon’s inventions in the fields of strategy and tactics were adopted by theorists of war, like the Prussian general Carl von Clausewitz and the French general Antoine Jomini. Clausewitz's emphasis on the close relationship between warfare and Entity’s policy and the importance of the factor of mass, economy of force and the elimination of adversary armed forces. Whereas Jomini, emphasized conquering adversary territory using planned, fast and precise geometric maneuvers. Jomini's MTS and DS theories influenced French armies in North America, Clausewitz's approach was influential on the Prussian military strategists of the 19th century, like Helmuth von Moltke, who was the master mind of the victory in the Franco-Prussian War of 1870; and on Alfred von Schlieffen, known for his Schlieffen plan, which was used in the war against Russia and the weakening of France, during World War I (WWI).
The 19th century was an age of major technological transformations that heavily changed the scope of tactics and strategy; and hence the MTS. This was noticed in the first total war, USA’s Civil War, in which railroads and steamships increased their volume, reach and speed of mobilization and of conscription; and that needed major technological artifacts and infrastructure. MTS became warfare’s major support and the evolution of firepower needed new tactical transformations, like: heavy artillery that had to be installed behind frontlines, massed brigades became ineffective, horse-based cavalry became limited to reconnaissance and infantry began to use trenches, hand grenades and land mines. Telegraph communications linked various distant armed units and made global scale MTS and tactics possible. In USA’s Civil War, the North used global and systemic strategy by: blockading divisions of the Confederacy, destruction of the Confederate armies and supplies… The North was backed by much superior financial, industrial, technological and human power, which were the key CSFs in its victory against the South. The automation of guns, which were transformed in *machine guns* at the end of the 19th century made a decisive effect in WWI.

WWI and WWII, which have seen the birth of trench tactics to Nuclear Strategy, where WWI saw the emergence of immense, rapid, national mobilizations and classical offensive maneuvers, but after various attempts to destroy their enemies and after the *Battle of the Marne*, static trench warfare ruled over all WWI battlefields. Total war needed, the total national involvement in war efforts, which crippled them. In this phase, two key technological developments modelled MTS’ visions of the 1920s and 1930s; the use of air force, that was advocated by the theorists like, Giulio Douhet, Billy Mitchell, Henry Arnold and Hugh Trenchard. Their vision was based on the fact that air force alone, can make a decisive victory, by: 1) Striking the enemy forces; and 2) Strategic bombardment, with massive attacks on cities, industries, lines of communication and supply chains. This MTS was used by the Allied forces during WWII. Another major evolution was the development of motorized armored vehicles, like tanks which became the cavalry of modern warfare and was advocated by: B. H. Liddell Hart, Charles de Gaulle and J. F. C. Fuller. Germanic Nazis were the first to use the tactical offensive combination of air force and tank power in warfare, which was labelled: *blitzkriegs*.

4. MTS’s Integration

4.1 Designing the MTS

*Entity’s* internals, like boundaries, organizations, applications, ICS, assets & resources and processes; are designed, developed and implemented with an important level of security. Depending on the eco-system and geopolitical context of the *Entity*, major domains (or CSAs) can be divided into subdomains (or CSFs). An important *Entity* domain is global communication management and national territory that can be divided into the following DS sub-domains: 1) Fixed national area and communication network; 2) External passages and communication interfaces; 3) Autonomous devices like drones and tanks; 4) Mobile or ad hoc networks; and 5) Sophisticated spying services. Creating the classification domains (or CSAs) is to reduce complexity in defining EA main MTS and DS objectives, like, security breaches, risks, threats and other.

4.2 Cyberwarfare, Cybersecurity Constraints and Characteristics

The main Cyberwarfare, Cybersecurity constraints and characteristics are:
Information security, includes the protection of Entity’s information against unauthorized disclosure, modification or deletion, whether these operations are accidental or intentional.


### 4.3 The Applied Holistic Mathematical Model for MTS

The Applied Holistic Mathematical Model for MTS (AHMM4MTS) nomenclature is showed in Figure 1, in a simplified form to be understandable on the cost of a holistic formulation vision (Trad, & Kalpić, 2020a). The MTS uses the AHMM4MTS that is formalized as shown in Figure 1, and AHMM4MTS’ main artefacts are:

- Basic DS actions = support sovereignty, integrity and secrecy in the face of Cyberwarfare, attacks, incursions and failures with the goal of protecting Entity’s assets and territory.
- MTS = A set of basic DS actions to counter Cyberwarfare, attacks and major failures.
- National territory and Cyberspace = Includes the territory, ICS and its networks.
- National Security and Cybersecurity = security of national territory, Cyberspace + the defined goals of protecting assets.
- Organizational Security and Cybersecurity = includes national territory + Cyberspace + Cybertechnology + Cybersecurity.
- *Entity* (or national) Security and Cybersecurity = ∑ Organizational Security and Cybersecurity.

![Figure 1: The AHMM4MTS nomenclature](image)

### 4.4 The Role of Defence Strategy

USA’s DoD constant technology priorities jeopardizes its capacity to win a long-term technology competition, it needs a systematic and holistic approach, an MTS in order to prioritize technology change and investments. Today’s ICS’ evolution is the leading trend and the highest DoD’s priority is MTS for digital technologies developed by the private sector. The
DoD must invest in major MTs, such as hypersonics or directed energy weapons, which have real operational values. Technology is the artifact needed to achieve military superiority, but alone it cannot give a decisive advantage and is an enabler for gaining superiority. Combined with the right organization, training and concepts for war activities, technological advantages can make combats asymmetric, but the human factor is the decisive CSF. By using advanced MT like, GPS and precision-guided weapons, the USA defeated Iraq’s army during the Persian Gulf War. But afterwards the USA was fatigued and chased out, which confirms that technology must be accompanied by the human, demography and ideology CSFs. Today Entities invest in long-range ballistic and cruise missiles, integrated in air defenses, counter-space weapons to blind military spy satellites and Cyberweapons to disable logistics. The USA must transform its MTS and DS to face military aggressions. MTS and DS should include new technologies, like Artificial Intelligence (AI) to make MT more autonomous; for that MTS must adopt today’s technology landscape. Military technology is driven by the private sector because the military does not have the resources to support avantgarde technologies; the USA has a 700 billion USD defense budget. The MTS must support long-term MT competition. Actual DoD’s MTS priorities might jeopardize national stability; and it needs a coherent long-term approach. The MTS is not person-driven approach, but a framework for identifying military priorities. The current person-driven approach MUST be replaced by a strategic process for setting military priorities. The dominant technology is the ICS, which is leading to exponential growth in digital capabilities (networks, data, and computing power). The MTS must incorporate this trend to outcompete adversaries (Scharre, & Riikonen, 2020).

### 4.5 N-tiered Approach

The MTS focuses on digital and information technologies, which are mature in the commercial sector, can be used for military objectives. MTS’ capabilities is seeing important changes in the fields of: Cyber, electronic warfare, sensors, data, networks, cloud computing, AI, autonomy/robotics, genomics, biotech and synthetic biology.

### 4.6 Major Military Technologies

![Figure 3: The R&D trends.](image)

The MTS recommends to invest in major MTs, such as directed energy weapons or hypersonic missiles, when there is clear military operational value. Non-digital technologies such as materials, optics, energy and power are improving, but not as fast as ICS, and they are less likely to offer transformative changes in warfare.
The MTS recommends also to invest in paradigm-shifting wild card technologies that have a low-likelihood of reaching operationally relevant maturity, like quantum technologies (quantum computing, communications and sensing), brain-computer interfaces, AI and nanotechnology; supporting these areas can be important changes in these areas. The MTS supports N-tiered investment strategy for critical technologies. As shown in Figure 3, the current global R&D trends in ICS and the rationale for this MTS. USA’ R&D ecosystem has shifted dramatically over the past several decades and the DoD is not the dominant player in R&D’s landscape. In the 1960s, the USA funded two-thirds of the R&D and the DoD alone funded about half of national R&D. As shown in Figures 3 and 4, today, the DoD contributes with one-tenth of USA’s R&D and its overall share has declined to less than one quarter, where the private sector has filled the rest. DoD’s drive on global technology development has vanished due to the shrinking share of R&D spending. In the current phase of fierce competition for MT lead, the most important CSF is the Entity’s capacity to combine national public spending, demography and ideology; that explains USA’s decline and China’s fulgurant dominance.

4.7 ICS’ Revolution and Dominance

The most important CSF and trend in the global ICS’ ecosystem is the information dominance and revolution. ICS has an exponential growth in various areas, like: data, networks, AI and processing power... There are about 22 billion connected devices today, with an annual growth of 10 percent. Internet of Things (IoT) devices include, smart meters, medical devices and
industrial applications, are growing fast. These IoT devices generate data that is managed across the network that trafficked 250+ exabytes per month in 2020. Internet Protocol (IP) traffic is growing fast, at a rate of 26 percent per year and is expected to increase to nearly 400 exabytes per month by 2022. As shown in Figure 5, ICS processing power for AI Projects has increased 300,000-fold from 2012 to 2018, which is doubling every few months. This growth in ICS contrasts with its growth in physical attributes (speed, range, scalability, payload, endurance). The most important changes in military competition will come partially from evolution of MT capabilities; and the MTS has to include the abilities to sense the environment, process and transmit information and make just-in-time decisions. Military technology include mainly: Helicopters, planes, tanks, submarines and missiles and the role of AI will make a difference.

4.8 Avantgarde Technologies

The MTS promote a systematic approach for determining which MT will support military dominance. Investments are financially driven by business managers and that endangers military lead. The MTS and DS have to prioritize CSAs to enable a systematic and holistic approach and should adopt an N-tiered strategy. ICS and other CSFs will dramatically transform military competition, because of: Cyber, electronic warfare and other. Public investments in MT is a crucial CSF. Some ICS areas lack commercial interest and the Entity needs to invest in them, like high-energy lasers, hypersonic missiles…

4.9 Major Military Technologies

There are major MTs that do not have financial benefits and such cases the MTS proposes, to invest and develop them, because non tangible CSF can be the most crucial ones. MTS intangible values include: high-energy lasers, hypersonic missiles, stealth, armor and above all the human CSF. The progress of specific MTs is slow compared to ICS’ evolution, like materials, optics, energy and power, which present important technological growth rates. The MTS must consider MTs which will not bring financial benefits, but rather intangible transformative benefits to military activities; the intangible effects will be felt on the longer-term.

4.10 MTS’ Technology Strategy

As already mentioned, investments alone in right is not recommended, an Entity must enforce its MT’s capabilities along with other intangible CSFs. MT is a crucial CSF for economic competitiveness and financial benefits, which is supported by political and military capacities; but also, by mammothlike companies like Google and others.
The MTS must support a national technology concept that manages the Entity’s government, private sector and allies, in order to be ready for competition. Between the years 1998 and 2018, China’s national R&D spending had an average of 15 percent annually and it is closing the gap with the USA. USA’s R&D spending was 13 times that of China’s in 1998 and China surpassed the USA in 2020. Allen Institute for Artificial Intelligence, confirms that China overtook the USA in the most-cited 50 percent of AI research papers in 2019 and will surpass the USA in the most-cited 1 percent of AI research papers by 2025. The MTS must encourage the public sector and its important priorities are: increasing R&D spending; improving human capital through science; technology, engineering and mathematics education; and accepting high-qualified immigration. There is also a need to: improve data, processing resources; integrating existing standards; enforce policy and regulatory ecosystem. Partnerships and alliances are needed for a global technology ecosystem that becomes mature and in the same time stays competitive, open and secure. A global technology ecosystem dominated by China would be a major change and an important challenge for the West.

5. Cyberwarfare

Since WWII, the primary MTS and tactical advances is the emergence of amphibious warfare. The principal significance of that phase that was supported by massive coalitions dedicated to build a major offensive against Germanic Nazis. The development of nuclear warfare, which continued after WWII, introduced a new MTS based on nuclear strategy and tactics; that introduced immense destructive possibilities, meant also that warfare had limited MTS goals. The use of conventional tactics with technologically very advanced arms, would predominate in limited wars that followed WWII. That resulted in the need to keep wars limited and that has produced an MTS pattern based on: small, mobile special forces, armed with light but sophisticated weapons and trained in guerrilla tactics, that can be rapidly used and rapidly withdrawn from hostile regions (Cheyney, 2021).

5.1. Cyberattacks and Protection

The possible types of Cyberattacks are: 1) Denial-of-Service (DoS) and Distributed Denial-of-Service (DDoS) attacks; 2) Man-in-the-Middle (MitM) attacks are simple types of digital attacks; 3) Phishing and spear-phishing, are attacks in which Cybercriminals target the ICS by email attachments; 4) Drive-by attack or Drive by download attacks; 5) Password attack, password cracking or dictionary attacks are attacks by Cyberhackers; 6) Structured Language Query (SQL) injection attack; 7) Cross-Site-Scripting (XSS) attacks are injections, in which malicious scripts are injected in trusted websites; and 8) Eavesdropping attack, also known as a sniffing or snooping attacks. The most common motivations for Cyberattacks are: geopolitical changes, financial greediness, lack of ethics, immoral education and other. Financial greediness can drive to major criminal acts, like, the gigantic financial irregularities, which are related to fraud and money laundering that damage many Entities, and this case it is related to major global financial institutions, like the Union des Banques Suisse (UBS) (Stupples, Sazonov, & Woolley, 2019), in which 32 trillion US dollars are hidden.. Under the cover of bank secrecy… An Entity’s MTS may counter these types of threats: 1) Cybercrime, which includes a single Cyberattacker or groups, attacking Entities for financial gains or to cause damage; 2) Cyberattack, often involves politically motivated information gathering for various ideological purposes; and 3) Cyberterrorism, it is used to undermine the ICS and to cause panic; it originates from various anonymous groups. The MTS proposed actions and predispositions used to support the Entity’s global stability, security and to reduce gRisks of possible Cyberattacks and to offer possible protections. A Cybersecurity attack is possible when the attacker gains the right to attack. These rights must be hardened in order to avoid the following scenarios: 1) Systemic password management; 2) Using screen lock and face recognition when mowing
away; 3) Block the used of email attached files from anonymous email address; 4) Not using anti-virus software, 5) Sharing personal info (and client or server nodes); 6) Not reporting security loops to company; 7) Not using proper paper Documents; 8) Non-secured digital Data (while at rest and in motion); 9) Unsecured way of Information handling; and 10) Providing of information over phone (Trad, 2021a).

5.2. Financial Cybercrime Schemes

The integration of Finance for Technologies (FinTech) and ICS is crucial for an Entity and its financial controls critical system(s). Today such FinTech standards and fields are robust, resilient and can be applied as automated synchronized (block) chains; to enable the traditional financial environments to become a part of a networked financial world. FinTech platforms can be applied to support an MTS and gRisks mitigation, in order to avoid locked-in situations. EODGPP locked-in scenarios, when building the financial structure of the future transformed Entity, must be blocked. The Project team and MTS must be cautious of eventual financial locked-in situation(s), which is a major stability and MTS problem. Even though some countries like Switzerland offer attractive financial and tax package(s), this country applies a coordinated legal and financial locked-in trap; it is sealed and represents an unwritten concept that can at any moment sweep out the financial resources from an Entity and even powerful countries like the USA, UK and France; and can ruin many like Lebanon, who saw its richness dilapidated by Swiss banks. This locked-in Swiss EODGPP model, combines: 1) Specific culture and mentality; 2) The power of Swiss law; 3) Too Big to Fail state banks; 4) Banking secrecy that protects financial crimes; 5) Ultraliberal economy; 6) rejection of local and global standards; and laws; 7) Isolationism and racism; and 8) A finance supportive political environment for collective plundering. Swiss banks and other Swiss financial institutions are under no supervision what so ever; and are free to hit and run. That indirectly makes this Entity the financial and malware industry’s super protector that sets up fortifications against any possible legal intrusion; even when these institutions are executing massive irregular, criminal and illegal activities. The author refers to this phenomenon as an instance of the Black Swan phenomena or simply the directed Swiss Black Swan, which Entity’s (and countries) should try to avoid and penalize. It is probably wiser to pay more taxes and social services then to face such phenomena and traps (International Monetary Fund, 2009; Taleb, 2012). The major problem with combating such a EODGPP based system that is has a hermetically closed environment, characterized by the following: 1) Police and information services, block any attempt to pursue financial criminal acts; 2) The legal system, ignores any attempt to investigate financial criminal acts; 3) Legal support too expensive, to discourage any action of law enforcing; 4) Psychological harassment, to discredit investigators; 5) Intolerance and discrimination, to block any foreign request; 6) A powerful global network, to embed and hide various dubious operations; 7) Financial guerrilla-like and hit and run tactics, to confiscate wealth; and 8) Occurrence of financial locked-in situations and corrupt politicians. Financial havens target to become leaders in FinTech, which is not very assuring; because FinTech should combat state criminality and enforce global security and international law. It is recommended to avoid any form of financial and technological collaboration with EODGPP oriented Entities.

5.3. Secure Development and Operations

The Development and Operations (DevOps) processes must continuously update the Entity’s infrastructure patches, software applications, operating system… The Entity should benefit from the latest methodologies that support applications’ changes and which can be opportunities for Cyberattacks, that makes security a critical CFS. To enforce MTS against Cyberattacks, Secure DevOps (SecDevOps) can be integrated with the ADM. SecDevOps integrates security in the Project, by using sets of best practices designed to support Entities’
implementation processes. Applications’ implementation is coordinated by SecDevOps process managed by agile methodologies. The MTS uses agile methodologies to identify patterns for managing requirements (Mees, 2017; Trad, 2021a).

5.4. The Legal Constraints

The MTS supports the Entity’s legal integration and constraints and in order to achieve this legal support, CSFs are selected and asserted, to monitor the used artefacts. These CSFs manage the differences in Cybertechnologies’ local and international laws. An Entity must have the capacity to proactively recognize erroneous Cybertransactions and Cyberattacks, in a systemic manner (Daellenbach & McNickle, 2005).

6. Biowarfare

Biowarfare can be defined as an intentional application of biological artefacts, like, bacteria, viruses, fungi and toxins, as military weapons in warfare activities. The organized application of microorganisms, like toxins, is an ancient military discipline that is today reinvented.

6.1. Biotech as a Major Military Technology

The Chinese People’s Liberation Army (PLA) is conducting R&D on gene editing, human performance enhancement, viruses and other, which is a new type of warfare and advances in biotechnology and genetic engineering have various applications in medicine and in alarming implications in MTs. China’s MTS has highlighted biology as a major priority and the PLA is a forefront of expanding and exploiting this MT knowledge. PLA’s key interests are reflected in strategic writings and R&D that presents advances in biology are contributing to changing the form and nature of warfare, that is formulated as follows:

- In the 2010’s, War for Biological Dominance publication, Guo Jiwei, a professor with the Third Military Medical University, emphasizes the impact of biology on future warfare.
- In 2015, then-president of the Academy of Military Medical Sciences, He Fuchu argued that biotechnology will become the new strategic commanding heights of national defense, from biomaterials to brain control weapons. Maj. Gen. He, has since become the vice president of the Academy of Military Sciences, which leads China’s military science enterprise…
- Biology is among seven new domains of warfare discussed in a 2017 book by Zhang Shibo, a retired general and former president of the National Defense University, who concludes: Modern biotechnology development is gradually showing strong signs characteristic of an offensive capability, including the possibility that specific ethnic genetic attacks could be employed.
- The 2017’s edition of Science of Military Strategy, a textbook published by the PLA’s National Defense University, which is authoritative, debuted a section about biology as a domain of military struggle, similarly mentioning the potential for new kinds of biological warfare to include specific ethnic genetic attacks.
- Following these lines of MTS approaches, the PLA is pursuing military applications for biology and looking into promising intersections with other disciplines, including brain science, supercomputing and AI. Since 2016, the Central Military Commission has funded projects on military brain science, advanced biomimetic systems, biological and biomimetic materials, human performance enhancement, and new concept biotechnology.
6.2. The Role of AI

The intersection of MT, biotechnology, finance and AI can be a strategic Synergy. The complexity and the huge human genome characteristics, need immense big data infrastructure, that in turn needs AI and machine learning to analyze these characteristics. In 2016, the strategic value of genetic information, influenced the Chinese government to create the National Genebank, which is the largest genetic information database; its goal is to develop and utilize China’s valuable genetic resources, safeguard national security in bioinformatics, and enhance China’s capability to seize the strategic commanding heights in domains related to biotechnology and probably biowarfare (Kania, & Vorndick, 2019).

7. MTS’ Advanced Topics

Nuclear modernization has become one of the least priorities and the actual priorities are: Hypersonics; Directed energy; Command, control, and communications; Space offense and defence, Cybersecurity; AI and machine learning; Missile defence; Quantum science and computing; Microelectronics; Autonomy (which replaced nuclear weapons). But MTS’ modernization priorities are: AI and machine learning; Biotechnology; Autonomy; Cyber; Directed energy; Fully networked command; Microelectronics; Quantum; Hypersonics; 5G; and Space technologies. AI and autonomy are probably the number one priority for any MTS (Kania, & Vorndick, 2019).

7.1 Capacity building – Skill & Competence Development

The ADM supports the MTS to create best practices and Entity-specific security capabilities, which supports EA and security experts to avoid missing critical gRisks, and this article offers recommendations on the needed skills to carry out DS activities. The DS is treated as a separate domain within the EA, which fully integrates it. DS is the enforcement of the Entity’s security policies which includes the following skills and characteristics (The Open Group, 2011b): 1) Security methodology; 2) Management of viewpoints; 3) To design non-normative flows through the ICS; 4) To design single-purpose components; and 5) To develop EA, DS and ICS models.

7.2. Guidance on Security for the Architecture Domains

MTS’ Security (MTSS) requirements are pervasive in all EA domains and to all ADM phases. The MTSS focuses mainly on the infrastructure that is not visible to other functions; it also focuses on the protection of the ICS and Entity’s assets. DS manages single-purpose components and measures the quality of the ICS and the common artifacts are: 1) AI rules for handling of data/information assets; 2) Defined MTSS policies, 3) Codified data/information assets’ ownership and custody; 4) gRisk analysis documentation; and 5) Data classification policy documentation. The MTSS has its own unique building blocks, collaborations and interfaces; these blocks must interface with the Entity’s ICS in an optimal manner, in order to support MTSS’ policies and to avoid interfering with ICS operations. MTSS is effective to design and implement controls in the Target Architecture in the initial development cycle to support reengineering development and deployment. The MTSS manages the normal flow of application’s fallout, abnormal flows, failure modes and the possibilities in which the ICS and applications can be interrupted or attacked. All Entities have security concerns and they should dedicate an MTSS to support the Project. In all ADM phases, recommendations are given on MTSS’ management (The Open Group, 2011b).

7.3. Security Monitoring and Logs

The MTSS is not dedicated to any specific MT environment and it offers to support: 1) Performance and availability; 2) Reliability and recovery; 3) Attack’s tracing; and 4)
Cybersecurity fundamentals. The ICS is controlled and monitored in real-time, using the Entity’s Unified Logging Subsystem (EULS) and is integrated in order to support the MTSS. EULS’ exist and are powerful monitoring subsystems that support the presentation, sorting and tuning of stored logs. EULSs can be designed to analyses, collect and store security related data from various ICS sources to support the central logging system. An ICS continuously needs to manage massive central logging system that persists: event logs, sorts security logs for security purposes and system performances.

8. Proof of Concept

8.1. The Implementation Environment

MTS’ PoC was implemented using TRADf which was developed exclusively by the author and uses microartefacts on the basis of the fine-grained granularity approach of the “1:1” mapping design and concept; and was developed using the following resources and tools: 1) Microsoft Visual Studio .NET/C#, system scripting and C/C++; and 2) Java Enterprise Edition development environments (Trad, 2021a).

8.2. The Literature Review’s Outcome

The RLR and phase 1’s outcomes support the PoC, by using of the author’s archive of an important set of references and links that are analysed using a specific interface; where each link can then be reviewed, archived, weighted parsed into an Excel file. After selecting the sets of CSA/CSFs, tags are linked to various microartefacts scenarios. A CSF is implemented as an item, in an Excel file; where all its details are defined; these actions conclude phase 1. In this PoC (or it phase 2), the HDT is used to deliver solutions to concrete MTS problems. The HDT process is an iterative rule of thumb and a guide to implement MTS problem solving using a goal function and constraints. The MTS uses the AHMM4MTS instance to manage microartefacts mechanics’, which in turn uses the internal initial sets of CSFs’ that are used in phases 1 and 2.

8.3 The MTS-S’ CSFs Phase 1

Table 1: The ACS’s CSFs that have an average of 9.0.

<table>
<thead>
<tr>
<th>Critical Success Factors</th>
<th>KPIs</th>
<th>Weightings</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Research and Development Project</td>
<td>ROBUST</td>
<td>From 1 to 10. <strong>10 Selected</strong></td>
</tr>
<tr>
<td>MTS Fundaments</td>
<td>ROBUST</td>
<td>From 1 to 10. <strong>10 Selected</strong></td>
</tr>
<tr>
<td>MTS Integration</td>
<td>POSSIBLE</td>
<td>From 1 to 10. <strong>09 Selected</strong></td>
</tr>
<tr>
<td>MTS Advanced Topics</td>
<td>ROBUST</td>
<td>From 1 to 10. <strong>10 Selected</strong></td>
</tr>
<tr>
<td>Cyberwarfare</td>
<td>COMPLEX</td>
<td>From 1 to 10. <strong>07 Selected</strong></td>
</tr>
<tr>
<td>Biowarfare</td>
<td>COMPLEX</td>
<td>From 1 to 10. <strong>07 Selected</strong></td>
</tr>
</tbody>
</table>

All other CSAs’ CSFs values are defined by the MTS expert. Based on the RLR and the related evaluation processes (phase 1) the most important CSFs are used and processed by the internal HDT and the results are presented in Table 1 (Trad & Kalpić, 2020a). As shown in Table 1, this fact keeps all CSAs that helps to make this work’s conclusion. If the automated evaluation of RLR outcomes is successful, then this ends phase 1 and afterwards phase 2 starts to complete
the PoC. As shown in Table 1, the results justify (an average of 8.2, rounded) the usage of the MTS and how it can be used with the PoC’s final phase (or phase 2); where the described process is applied to the CSAs. A MTS problem is selected and an HDT process is launched to find a set of solutions.

8.4. Linking the Applied Case Study – Integration and Unification

Phase 2 starts with the selection of the Case Studies (CS) from the following list of possible cases:

- Cyber, Internet related technologies ... CS_IoT.
- Economy, growth or the CS_EcoSys.
- Conflict, political, religious, ethnical and other or the CS_EthnoPol.
- Geopolitics, basics, analysis and transformation or the CS_GeoPol.
- Finance, governance, law and technology category or the CS_FinTech.
- (In)dependence, external resources, man power, agriculture... CS_InpFact

8.5. The Architecture Method’s Phases’ Integration, Setup and Selecting Factors

The phase 2 implementation setup looks as follows:

- Sub-phase A or the Architecture Vision phase’s goals, establishes a data architecture.
- Sub-phase B or the Business Architecture phase shows how the MTS target architecture.
- Sub-phase C or the Gap Analysis phase uses the Application Communication Diagram.
- Sub-phase D or the Target Technology Architecture and Gap Analysis phase shows the end MTS’s concept implementation; where here is limited.
- Sub-phases E and F, or the Implementation and Migration Planning; where the transition architecture, proposing possible intermediate situation and evaluates MTS’s integration status.

8.6. Experiment’s Processing on a Concrete Tree Node

In phase 2, the HDT is used, to find a combination of HDT’s action, used to solve an MTS problem related to this chapter’s RQ. A specifically selected CSF is linked to a MTS problem type and a related set of actions; where the processing starts in the root node. Each MTS problem, like this case the PRB_MTS_EODGPP MTS problem, has the following set of actions: 1) ACT_MTS_Define_ProblemType; 2) ACT_MTS_Verify_ProblemType; 3) ACT_MTS_Match_ProblemType 4) ACT_MTS_Validate_ProblemType... For this MTS related PoC, the author has selected the CSF_MTS_ESTIMATION as the active CSF, taken from the previously defined Tables or the MTS’s CSAs. In this PoC the goal is to find solutions related to this selected CSF’s related MTS problems. Such MTS problems can be only researched with the HDT based mixed-model that is very similar to the (re)scheduling of Project’s activities. Solving the given MTS problem is done by a set of actions and delivers solutions.

8.7. Selected Node Solution in Phase 2

The frameworks scripts make up the processing logic of the MTS problems and is supported by a set of actions. Where these actions are processed in the DMS background to support microartefacts that are called by the HDT’s engine actions, which deliver the solution and the flow of steps. This RDP, the AHMM4MTS and its related CSAs/CSFs were selected as demonstrated previously, and interact.

8.8. Experiment’s Processing on a Concrete Tree Node
The HDT is applied to a specific CSF that is mapped to a specific MTS problem and a set of linked actions, to deliver results in the form of solutions. The selected MTS problem is related to the detection of EODGPP activities. The hyper HDT approach is used, to find a combination of HDT’s action, used to solve an MTS problem related to this chapter’s RQ. A specifically selected CSF is linked to a MTS problem type and a related set of MTS actions; where the processing starts in HDT’s root node. Each MTS problem, like in this case, the selected MTS problem, has the following set of actions: MTS_Init, MTS_Eval and others …

8.9. Selected Node Solution in Phase 2

The scripts make up the processing logic of the defined MTS problems and are supported by a set of actions. Where these actions are processed in the background by the use of microartefacts that are called by HDT’s actions, which deliver the solutions.

9. Conclusion

Because of very high score, 9.0, Table 1 shows that MTS’ implementation is not a very risky transformation process and that an inhouse only methodology and framework, like TRADf, can be built. In this article, the author proposes the following set of managerial recommendations:

- The MTS supports a DS in order to ensure an efficient global defense concept.
- Public MT should replace private sectors’ investments.
- Cybersecurity should fit in the Entity’s MTS.
- ADM’s integration in the MTS enables the automation of all its activities.
- Conflicts, wars and military investments are the backbone of major economies.
- Military organizations are the ones who drive major technological transformation trends.
- MTS has to find the right balance between military: technology, strategy, investments, geopolitical knowledge, combative status and the evolution of demography
- MTS and tactics are the basis of managing modern warfare.
- Humans and their sustainable demography are Entities’ main CSF.
- Entities are using technologies and methodologies as the kernel of their DS.
- Modern biotechnology is showing offensive capabilities…
- Applications’ development and operations are coordinated by using the SecDevOps.
- FinTech would make financial operations more embedded and abstract.
- Avoid any form of collaboration with doubtful financial EODGPP oriented organizations.
- Cyberattacks and Cyberwarfare are advancing quickly especially the domains of Biotech and Cybertechnologies.

TRADf englobes TOGAF and indirectly SABSA and other standard methodologies and artifacts, which facilitates the transformation process.

References


Entity Transformation Projects: Security Management Concept (SMC)

Antoine Trad

Abstract

Business environments and organizations (or simply Entities) are increasingly using Cybertechnologies to become Cyberbusinesses (or qualified Cyberentities). The transformed Cyberentity, has to face new challenges, dangers and security risks, when implementing its infrastructure and Information and Communication System (ICS). One of the most important security risks, is the security of an Entity in an unsafe and unstable ecosystem that is mainly based on the global Internet network-based world wide web and its various services. Therefore, the security of a Cyberentity should have a holistic concept like the one proposed in this article, the Security Management Concept (SMC) for Entity transformation projects (or simply Projects). The SMC includes a methodology and a concept to manage security for a Cyberentity, which is known as Cybersecurity. Cybersecurity is employed in the Entity’s architecture processes. Cyberentity’s transformation has many tangible business advantages and unfortunately has also many risks and pitfalls. Cyberentity’s main risk is data, assets and resources platform security, but there is a whole set of other types of ICS and functional domain risks. Cyberentities are more or less sensitive on Cyberattacks, depending on the size of the Entity, volume of transactions, data management and the applied agility. In order to identify classified Cyberentity security breaches like data leaking, the proposed SMC proposes a systematic and holistic approach to ICS’ resources protection that includes Cybersecurity proactive mechanisms. Cybersecurity is essential for ensuring Cyberentity’s sensitive information, assets and resources protection from a probable use of personal information that can be leaked and which can be used by hackers.

Keywords: Transformation projects, cyberspace, security management concept.

1. Introduction

Cyberentity’s ICS enables the processing large groups of applications and their related data storages with optimal performance and sometimes in hyper-time, in order to serve clients and executive management, who are supported by a Decision Making System (DMS). The DMS and Cybertechnology evolutions have enabled to the transformation of legacy mainframe systems where most of the Entity’s transactions and data storages are found. Such a distributed n-tiered architecture needs an optimal SMC that includes a Cybersecurity integration pattern, which is be crucial for: 1) Achieving and maintaining sustainability; 2) Competitiveness; 3) Providing the flow of transactions related to money; 4) Achieving profitability; and 5) Ensuring Cyberbusiness robustness (Vulić, Prodanović, & Tot, 2019).

2. The Research and Development Project

This article’s Research Question (RQ) is: “Can an SMC, support an Entity’s transformation project and minimize security risks ?” The main security and Cybersecurity gaps are related to the facts on Entities’ capacities to support financially, the defined sets of functional and non-functional requirements and who will support national and Entity’s security requirements.

2.1. The Research’s Literature Review

This article is based on the author’s Research Development Project’s (RDP) maturity in the domains of Project’s risk management. The Research’s Literature Review (RLR) result is that a small number of relevant scholar resources exist on the RQ and its related subjects, with the exception of the Open Group Architecture Framework (TOGAF) that relates to various security concepts and frameworks; but there is a relevant and important gap, between existing concepts and the SMC. The knowledge and methodology gaps exist, mainly because of the lack of a holistic approach, where there is practically no insight on a holistic approach to design an SMC.

1 PhD, Institute of Business and Information Systems Transformation Management, France
for Projects’ support. In this article the following resources are used: 1) Various articles related to enterprise security risk management; 2) The author’s general works and framework, the Transformation Research Architecture Development framework (TRADF); 3) An initial set of factors; 4) A large set of SMC related literature, standards and frameworks; and 5) Uses empirical engineering methods, which far more than just literature scanning.

2.2. Empirical Engineering Methods

The RDP uses an empirical engineering method, which is optimal various types of engineering projects like SMC based Projects (Easterbrook, Singer, Storey, & Damian, 2008). The main goal is to deliver a holistic approach for an interactive mixed method based on factors and Heuristics Decision Tree (HDT).

2.3. Critical Success Area

Critical Success Area (CSA) is a set of Critical Success Factors (CSF) where a CSF is a set of KPIs. A KPI corresponds to a single Project or SMC requirement. For a SMC requirement, a security analyst identifies an initial set of CSFs. CSFs are the most important relation between an SMC construct, organizational predisposition and the DMS (Trad, & Kalpić, 2020b). Therefore, CSFs reflect control areas that must meet strategic goals and defined security constraints. Measurements are used to evaluate security security Risks (sRisk) in each CSA, where CSFs can be internal and/or external (Zhao, Hwang, & Low, 2013). For a given security problem type, the SMC analyst, must identify the initial set of CSFs to be used for the DMS and its HDT. Hence the CSFs are the most important mapping/relation between the SMC, financial status, organizational predisposition and DMS; that can a subject for Cyberattacks or global crime schemes (Peterson, 2011). The proposed SMC delivers a set of recommendations and solutions for the global Security Architecture (SA) that is a part of the SMC.

2.4. Selecting Entity Security CSFs

Selecting the Entity’s security CSFs is based on the following facts and resources: 1) ICS; 2) Actors and boundaries; 3) Used and connected components; 4) Technical and functional security requirements; 5) Well defined business and organizational strategies, objectives and goals; 5) Applied security policies; 6) Sustainability and competition; 7) Geopolitical and geoeconomical statuses; and their correlation; 8) Behavioral sciences and parapsychology mirage, which can alienate the main objectives; and 9) The Entity Organized Domain Global Predators’ Pattern (EODGPP) for Cyberattacks, where the targeted domains, can be security, finance, logistics, geopolitics or other; it can be even used for a combination of these fields. Determination and the evaluation of major sRisk is affected by many CSFs and their relation/correlation is therefore essential. Entities must defend their ICS, assets, resources, BPMs, data storages; so that an external actor using an EODGPP has to detected and deterred to access to its internals. Such an unauthorized access can be fatal and very difficult to prove. The Entity must be capable to defend its internal sub-systems and objectives, like data consistency, accuracy and reliability and must build an SMC to identify and block any EODGPP attempts to damage the Entity. Therefore, the main objective is to block and to have security controls that can be used to identify EODGPP (or other types of attack patterns) attempts, like unauthorized and even criminal activities. Besides classical Cybersecurity, the EODGPP must be aware of other types of organized asymmetric attacks like: 1) Cyberwarfare; 2) Cyberterrorism; 3) Cyberhooliganism; 4) Cyberfinance attacks; and others. Just analyzing data is a partial, limited and is a static solution, there is a need for a dynamic proactive qualitative heuristics’ method like the author’s HDT algorithm. There is also a need to control the activities and behavior of persons (and groups), which are an important part of the Entity’s internals and to proactively detect any probable violations. Possible violations can be modelled
to deliver controlled access to Entity’s internals through: political backup, spying services, assigned roles, responsibilities & credentials, and defined standards.

2.5. Standards
In this article, sections from previous author’s works are reused to improve the understanding of this complex subject related to Projects and security. The SMC interfaces various market risk frameworks like the Committee of Sponsoring Organizations of the Treadway Commission (COSO), which is shown in Figure 1.

![Figure 1: The COSO framework (Curtis, & Carey, 2012)](image)

Entities today, use various market business and technology standards, which include security Standards (sStandard), like, TOGAF/SABSA, ISO 27000, NIST, which contain major security requirements and constraints for maintaining sRisk at an acceptable level. The integration of sStandards can lead to the neglect security requirements arising from the specific characteristics of an Entity or its Business Process Management (BPM) aspects. An Entity needs an Entity transformation framework, like TRADf, that include sStandards module to manage sRisks. sRisks needs to be integrated using a methodological holistic approach for security in the context of a distributed ICS that communicates to other external systems.

2.6. The Architecture Development Method and Security
The SMC focuses on the design of security controls’ integration in the ICS. In the actual age of distributed intelligence, complexity, knowledge, economy and technology (Gardner, 1999), security becomes the most important objective. The SMC offers a concept that includes the HDT that supports a wide class of security problem types, and that is its major benefit (Markides, 2011). The SMC synchronizes with the Architecture Development Method (ADM). The SMC defines security capabilities to protect the Entity from attack by: 1) Localizing gaps in the infrastructures of partners; 2) Review of detection, and real-time security solutions; 3) Block cumulative attacks; 4) Defining a security strategy to locate potential weaknesses; 5) Build a robust defense; 6) Integrate security in transactions; 6) EODGPP attacks; and 8) Apply qualification procedures in the ADM (Clark, 2002).

2.7. The Cybersecurity Requirements
The optimal SA should fit in the Entity’s EA model that in turn is based on best practices. The resultant global SA is a mixture of technical solutions, business & organizational engineering
and global security concepts. TOGAF includes sub-frameworks in the form of interfaces, like the Sherwood Applied Business Security Architecture (SABSA) to handle global security requirements (Unwin, 2013).

2.8. Global Security Domains

Governance defines the interaction between various components and their Cyber or information technology security that understands the security of: 1) Data; 2) Technology resources; 3) Networks; 4) Web and Internet infrastructure; and 5) Applications, development and operations.

3. SMC’s Integration

3.1. Designing the SMC

*Entity’s* internals, like boundaries and ICS, resources and BPMs are designed, various application domains can be designed, developed and implemented. Depending on the context, eco-system and complexity of the *Entity*, major domains (or CSAs) can be divided into subdomains (or CSFs). An important *Entity* domain is the *Entity’s* global network management that can be divided into the following sub-domains: 1) Fixed network; 2) External interfaces; and 3) Mobile or ad hoc networks. Creating the classification domains (or CSAs) is to reduce complexity in defining Enterprise Architecture (EA) main security objectives, like, security requirements, sRisks, threats and controls. Other design security objectives can be: 1) Costs and finance; 2) Performance and speed; 3) Ease of use; 4) Open EA using services; 5) Backward compatibility; 6) Use of CSFs and KPIs as metrics to measure security; 7) Cyberspace is global and international; 8) EODGPP attacks; and 9) The Private sector owns almost all Cyberspace most infrastructure. Classifying CSAs can be complex because many domains overlap. Security requirements engineering is done by applying the following phases (Vulić, Prodanović, & Tot, 2019):

- Phase I - Preparation for defining security requirements.
- Phase II - Security vulnerability analysis.
- Phase III - Threats’ modelling.
- Phase IV - Determination of security requirements.
- Phase V - sRisks assessment.
- Phase VI - Categorization and prioritization.
- Phase VII - Preparation of documentation.

3.2. The Levels of Damage

Security related damages can be very important and USA’s Federal Bureau of Investigation (FBI) officials, estimated that such attacks caused 1.7 billion USDs in damage. And *Entities* are increasingly dependent on Cybertechnologies like: 1) Direct internet; 2) Communication (Email, IM, VoIP); 3) Commerce (business, banking, e-commerce and other); 4) Control and management systems (*Entity* public utilities and other); 5) Information and entertainment services; 6) Sensitive data stored on the cloud; 7) Indirectly by using Cybertransactions and BPM; 8) The right policy; and 9) Biz, Edu, Gov domains have replaced manual processes with BPM based ones. The scale of damage is probably much more important, because EODGPP misdeeds are never condemned and huge amounts of money and assets are hidden (Stupples, Sazonov, & Woolley, 2019).

3.3. Cybersecurity Constraints and Characteristics

The main Cybersecurity Constraints and Characteristics are:
• Information security, includes the protection of the Entity’s information against unauthorized disclosure, transfer, modification or deletion, whether these operations are accidental or intentional.

• According to H.R. 4246, *Cyber Security Information Act*, Cybersecurity is: *The vulnerability of any computing system, software program, or critical infrastructure to, or their ability to resist, intentional interference, compromise, or incapacitation through the misuse of, or by unauthorized means of, the Internet, public or private telecommunications systems or other similar conduct that violates Federal, State, or international law, that harms interstate commerce of the United States, or that threatens public health or safety…*

• According to S. 1901, *Cybersecurity Research and Education Act of 2002*, Cybersecurity is: *Information assurance, including scientific, technical, management, or any other relevant disciplines required to ensure computer and network security, including, but not limited to, a discipline related to the following functions: 1) Secure Entity’s ICS and its wide network administration and operations; 2) Support Entity’s security engineering by using the SMC; 3) Support Entity’s ICS Information assurance and products’ acquisition; 4) Apply cryptography; 5) Integrate threats and vulnerability assessment, including sRisks management; 6) SMC should use a holistic Cyberspace security approach; 7) Secure Development and Operations (DevOps) of ICS emergency support teams; 8) Cybersecurity training, education and management; 9) ICS and EA forensics; 10) Defensive ICS DevOps; and 11) The use of SMC to block SMC attempts.

• According to S. 1900, *Cyberterrorism Preparedness Act of 2002*, Cybersecurity is: *Information assurance, including information security, information technology disaster recovery and information privacy.*

3.4. The Applied Holistic Mathematical Model for Cybersecurity

The Applied Holistic Mathematical Model for SMC and Cybersecurity (AHMM4SMC) nomenclature is showed in a simplified form to be easily understandable on the cost of a holistic formulation vision (Trad, & Kalpić, 2020a). The SMC uses the AHMM4SMC that is formalized as shown in Figure 2.

![Figure 2: The AHMM4SMC nomenclature](image.png)

The AHMM4SMC main artefacts and characteristics are:
• Basic defense actions = support availability, integrity and secrecy of the ICS and its networks in the face of Cyberattacks, accidents and failures with the goal of protecting operations and Entity’s assets
• Security = A set of basic defense actions to counter Cyberattacks, accidents and major failures.
• Cyberspace = Includes the ICS and its networks.
• Cybersecurity = security of Cyberspace + the defined goals of protecting operations and assets.
• Organizational Cybersecurity = includes Cyberspace + Cybertechnology + Cybersecurity.
• Entity (or national) Cybersecurity = ∑ Organizational Cybersecurity.

AHMM’s Application and Instantiation for Security

\[
Domain = SMC
\]
\[
\text{AHMM}(\text{Domain}) = \bigcup ADMs + BMMs(\text{Domain})
\]

Figure 3: The AHMM4SMC nomenclature.

3.5. SMC’s and Cybersecurity’s Main Constructs

SMC’s main constructs and views are:

• From EA’s point of view, as shown in Figure 4, the most important artefacts are: 1) Cybertechnology; 2) Economics incentives; 3) Social Influences (like controls); and 4) Public policies.
• From the legal point of view.
• From the types of attacks point of view.

Figure 4: Integration of SABSA with TOGAF (Kasarkod, 2011)
The SMC is based on EA methodology, like TOGAF (where other can be used), and in turn the integration of SABSA’s SA controls with TOGAF’s ADM is standardized and has the following characteristics (Kasarkod, 2011):

- Risk management is the main CSF for the selection of SMC’s measures. SABSA’s approach to operational sRisk management is domain or business-driven rather than threat-driven, which is a pure technical approach. The business-driven approach considers the context of sRisk in reaching a successful transformation, whereas the technical threat-driven approach looks only to block or eliminate the possibility of losing significant event. This complementary positive SA view on sRisks is an essential basis for standardized the TOGAF-SABSA integration.

- EA’s requirements management phase, has a central role in the successful designing models for the Project. TOGAF follows a requirements-driven approach and SABSA a Business Attribute Profiling, which provides a powerful synergy of frameworks to capture Project, EA, SA and non-functional requirements.

- TOGAF’s ADM is the most used EA delivery process and this article presents which SA artifacts are relevant to ADM’s phases as shown in Figure 4, this makes SA an integrated part of the EA. This enables, SABSA to be interfaced with TOGAF, providing common EA models to improve information exchange between Project’s team experts.

- TRADf englobes TOGAF and indirectly SABSA and other standard methodologies and artifacts, which facilitates the transformation process.

3.6. Types of Attacks

The possible types of Cyberattacks are:

- Denial-of-Service (DoS) and Distributed Denial-of-Service (DDoS) attacks, are attacks where Cyberhackers block an ICS from serving legitimate requests by overloading the networks and servers with senseless and fake traffic.

- Man-in-the-Middle (MitM) attacks are simple types of digital attacks where a Cybercriminal intercepts communication between two routers in order to leak data.

- Phishing and spear-phishing, are attacks in which Cybercriminals target the ICS by email attachments or links that appear as legitimate messages. Phishing attacks are often used to get ICS users critical information, like credit card data and other personal information.

- Drive-by attack or Drive by download attacks, refer to malicious application that can be installed on the ICS without an official permission.

- Password attack, password cracking or dictionary attacks are attacks by Cyberhackers that are able to determine usernames and passwords.

- Structured Language Query (SQL) injection attack, is a type of Cyberattack used to control the ICS in order to illegally have access to data from a data sources or to bypass login procedures.

- Cross-Site-Scripting (XSS) attacks are injections, in which malicious scripts are injected in trusted websites. XSS attacks are launched by Cyberhackers by using a web application to send malicious code in the form of a browser side script, to a different ICS user. The ICS user browser cannot determine if the script should not be trusted.
malicious script can access cookies, session tokens or other critical sensitive information.

- Eavesdropping attack, also known as a sniffing or snooping attacks, is based on stealing information as it is transmitted over ICS’ network by using an external computer, smartphone, or another connected device.

3.7. Motivation for Attacks

The most common motivations for Cyberattacks are: financial greediness, ideological motives, lack of ethics, immoral education and other. Financial greediness can drive to major criminal acts, like, the gigantic financial irregularities, which are related to fraud and money laundering that damage many countries, and this case it is related to major global financial institutions, like the Union des Banques Suisse (UBS) (Stipples, Sazonov, & Woolley, 2019), in which 32 trillion US dollars are hidden. Under the cover of bank secrecy…

3.8. SMC’s Layers

The SMC manages and analyzes the following security layers:

- Network, platform and infrastructure security.
- Application, software and services security.
- Information and data security.
- Operational security.
- Cloud Security.
- Hacking WIFI possibilities and building the right security policies.
- Financial security barriers, against EODGPP schemes.
- EA security.

3.9. Protection Against Attacks

An Entity may counter these types of threats: 1) Cybercrime, which includes a single Cyberattacker or groups, attacking Entities for financial gains or to cause damage; 2) Cyberattack, often involves politically motivated information gathering for various ideological purposes; and 3) Cyberterrorism, it is used to undermine the ICS and to cause panic; it originates from various anonymous groups. The SMC proposed actions and predispositions used to support the Entity’s global security and to reduce sRisks of possible Cyberattacks and to offer possible protections, like in the following forms:

- Spread information and knowledge to all Entity’s organizations, units and personnel related to sRisks of Social Engineering Attacks (SEA) and common social engineering scams, like phishing emails… SEA is the most common type of Cybersecurity attack.
- An Entity has to build modules: to support the SMC, to limit information leaks, to control 3rd party sRisks and 4th party sRisks. There is a need for continuous control of sensitive leak points and credentials’ usage.
- Use EA models and the SMC to avoid important spending like uses local security tools, because there is a need for a holistic approach and in house modules.

A Cybersecurity attack is possible when the attacker gains the right to attack. These rights must be hardened in order to avoid the following scenarios: 1) Systemic password management; 2) Using screen lock and face recognition when mowing away; 3) Block the used of email attached files from anonymous email address; 4) Not using anti-virus software, 5) Sharing personal info (and client or server nodes); 6) Not reporting security loops to company; 7) Not using proper
paper Documents; 8) Non-secured digital Data (while at rest and in motion); 9) Unsecured way of Information handling; and 10) Providing of information over phone.

3.10 Types of Hackers and Attackers

Cyberattacks are increasing due to global connectivity and usage of complex distributed services, like Web services. The lack of SMC can be a serious threat and an open door for Cyberhackers’ activities. A Cyberhacker is a person who gains access to the ICS, usually by getting access to administrative part of the ICS to access controls. The Cyberhacker can be: White Hat, Grey Hat and Black Hat; and their descriptions are:

- **White Hat**: these experienced hackers have the license for hacking. This type of hacking is performed to protect the *Entity*, to build an SMC and Cybersecurity prone infrastructure.
- **Grey Hat**: they are commissioned by *Entities* to attack them, in order to verify their security capabilities. They are also used to hack other *Entities* that can be a competition threat.
- **Black Hat**: these are criminal Cyberhackers and perform unethical misdeeds by hacking *Entities* by accessing their various accounts or by blackmailing them.

The SMC contains controls to block Cyberhackers but it cannot totally block all their activities. Optimized and holistic SMC controls, ensure that complex passwords and firewalls management can improve security. Firewalls and antivirus systems are not enough to secure an *Entity*, because there a need for SA.

4. SMC’s Main Artefacts

4.1 Managing Passwords

The SMC ensures *Entity’s* passwords’ management that have a complex pattern and which cannot be hacked easily. An ICS actor should have different user names, security dongles and passwords for different systems. That can be enforced by voice, biometric or visual recognition mechanisms. In Identity Access Management (IAM), *Entities* have to manage ICS’ applications and devices authentic identities and access authorizations, in the cases of communicating in the background. IAM ensures the right users have a verified access to ICS’ resources. Another section of the IAM is that the right ICS node have appropriate access. In IAM, a node is anything that is not a person, like servers, mobile devices, applications and IoT devices. Nodes need a verified identity through the use of digital certificates and cryptographic keys. A node identity management program is crucial to ensure ever-increasing nodes interactions do not threaten security and business continuity. *Entities* have a responsibility to themselves and to their partners, to manage nodes identities, due to the interconnectivity of many services and the need for uninterrupted availability (Cobb, 2021).

4.2. Firewalls

A firewall is an important EA, SMC and Cybersecurity element, which is used to protect an *Entity’s* distributed network(s) from Cyberattacks in the form of malware and other types of dangers. There are many types of firewalls and they have different security capabilities; therefore, the SMC defines a firewall metamodel.

4.3. Secure Development and Operations

The DevOps process must continuously update the *Entity’s* infrastructure patches, software applications, operating system and other security patches. The *Entity* should benefit from the latest security loop(s). *Entity’s* software applications are frequently modified which can be
opportunities for Cyberattacks, that makes security a critical CFS for DevOps processes. To block such Cyberattacks, Secure DevOps (SecDevOps) or Rugged DevOps (which extends DevOps processes) can be integrated with the ADM. SecDevOps integrates security in the development and operations processes, by using sets of best practices designed to support Entities’ implementation processes. Applications development and operations are coordinated by a secure DevOps process managed by agile methodologies. SecDevOps manages developers, operations and security team members. The SMC uses agile SecDevOps procedures to identify patterns for managing transformation and development of requirements (Mees, 2017).

4.4. Antivirus, Viruses and Worms

Antivirus software applications are used to detect and remove threats known as viruses. The main recommendation is to keep Entity’s applications and modules updated for the Entity’s optimal defense strategy and concept. A Virus is a piece of software that is installed on the Entity’s ICS without an official approval and operates without official control. The SMC proposes various security controls to protect the ICS against Cyberattacks, like viruses, worms or trojan horses. Cyberattackers and Cybercriminals use ICS’ vulnerabilities to install pirate code like worms, in the Entity’s database(s), by using badly intentioned SQL instructions. Such misdeeds give Cybercriminals, access to profitable login credentials information.

4.5. Emails

Electronic mails (Email) can be dangerous, because they may contain attachments, when opened can launch applications or scripts that can modify the ICS. The main recommendation, is not to open email attachments from unknown, spam or anonymous expeditors. Email attachments could be infected with malware or any kind of spyware software. It also recommended not to use embedded hyperlinks in emails that are issued by anonymous senders or unknown web links. These are the common patterns in which malware is dispatched on ICS’ endpoints.

4.6. Wireless Fidelity

ICS’ mobile endpoints should block: 1) The connections to open Wireless Fidelity (WIFI) connections in public serviced sections; and 2) It should also block unauthorized smart devices like cellphones from connecting to the ICS. Connections to unprotected network endpoints makes ICS nodes vulnerable and Cyberattackers may use Man-in-the-Middle tactics and this the most popular types of WIFI Cyberattacks; where on open WIFI network endpoints, Cyberattackers can sniff network packets. In SMC and Cybersecurity, a Man-In-The-Middle, Monster-In-The-Middle, Machine-In-The-Middle, MitM or Person-In-The-Middle (PITM), in which Cyberattackers secretly listen and can alter the communications between endpoints.

4.7. Malware

The term Malware derives from MALicious软件, which is an application that infects and damages the ICS without authorized permissions; the SMC should use the following mechanisms to block: 1) Viruses by integrating Antivirus modules that also block Malicious intrusions; 2) Activate Network Threat Protection strategies; 3) Firewall installations; and 4) Trojan horses’ detection. Trojan horses are email Malwares which make multiple installations on the ICS in order to leak information and make substantial damages. These types of viruses are the most damaging ones.

4.8. Capacity building – Skill & Competence development

The ADM supports the SMC to create best practices and Entity-specific security capabilities. The SMC supports EA and security experts to avoid missing critical security pitfalls, and this
article offers recommendations on the needed skills to carry out SA activities. The SA is treated as a separate architecture domain within the EA, which fully integrates it. SA is the enforcement of the Entity’s security policies which includes the following SA skills and characteristics (The Open Group, 2011b): 1) Security methodology; 2) Management of discrete views and viewpoints; 3) To design non-normative flows through the ICS; 4) To design single-purpose components; and 5) To develop EA, SA and ICS models.

4.9. Guidance on Security for the Architecture Domains

Security requirements are pervasive in all EA domains and to all ADM phases. Security focuses mainly on the infrastructure that is not visible to the Entity’s business function. SMC focuses on the protection of the ICS and Entity’s assets. SA manages single-purpose components and measures the quality of the ICS. Common SA artifacts can include: 1) Business rules for handling of data/information assets; 2) Defined security policies, 3) Codified data/information assets’ ownership and custody; 4) sRisk analysis documentation; and 5) Data classification policy documentation. The Entity security view of the EA has its own unique building blocks, collaborations and interfaces. These security-unique blocks must interface with the Entity’s ICS in an optimal manner, in order to support its security policies and to avoid interfering with ICS operations. SA is effective to design and implement security-specific controls in the Target Architecture in the initial development cycle to support reengineering development and deployment. The SMC manages the normal flow of application’s fallout, abnormal flows, failure modes and the possibilities in which the ICS and applications can be interrupted or attacked. All Entities have security concerns and they should dedicate a security architect to support the Entity’s transformation process. In all ADM phases, recommendations are given on security-specific management. SA decisions are traceable to business and policy decisions and their sRisk management. The areas of concern for the SA are (The Open Group, 2011b):

- Authentication: The substantiation of the identity to the Entity.
- Authorization: The definition and enforcement of permitted capabilities for a person whose identity has been established.
- Audit: The ability to provide forensic data confirming that the ICS has been used in accordance with SA policies.
- Assurance: The ability to test the EA and its security attributes, which are required to support security policies.
- Availability: The Entity’s ability to function without services’ interruption despite malicious events.
- Asset Protection: The protection of information and assets from loss and resources from unauthorized and unintended use.
- Administration: The ability to add and change security policies and to add or change the persons related to the ICS.
- sRisk Management: The Entity’s attitude and tolerance for sRisks.

4.10. Security Monitoring and Logs

The SMC is not dedicated to any specific environment and it offers to support: 1) Performance and availability; 2) Reliability and recovery; 3) Attack’s tracing; and 4) Cybersecurity fundamentals. The ICS is controlled and monitored in real-time, using the Entity’s Unified Logging Subsystem (EULS) and is integrated in order to support the SMC. EULS’ exist and are powerful monitoring subsystems that support the presentation, sorting and tuning of stored logs. EULSs can be designed to analyses, collect and store security related data from various ICS sources to support the central logging system. An ICS continuously needs to manage
massive central logging system that persists: event logs, sorts security logs for security purposes and system performances.

5. The Legal Constraints
The SMC supports the Entity’s legal integration and constraints and in order to achieve this legal support, CSFs are selected and asserted, to monitor the used artefacts. These CSFs manage the differences in Cyberbusiness’ local and international laws. An Entity or Cyberbusiness environment must have the capacity to proactively recognize erroneous Cybertransactions and Cyberattacks, in a systemic manner (Daellenbach & McNickle, 2005).

5.1. Cybertransactions’ Security Violations
The European commission defines a legislation to govern Entity’s Cyberbusiness activities; and progress has been done in this direction. European commission’s member states have implemented and enforced Cyberlaws related to national practices. Cybertransactions outcomes have to be continually legally asserted, verified, traced and their periodic summaries are reported to the Entity’s executive management (Fu & Mittnight, 2015). Cyberbusinesses are orthogonal to global Cybersecurity requirements, where the Entity’s role defines the responsibility of its resources. Management of the Entity’s legal interests, resources and accesses, should be managed by EA, SA and security experts. Thus, the Cyberbusiness structure is an important consideration in the legal assertion and access management of Cybertransaction’s security. The regulation for the Cybertransaction’s security and law needs qualified time-stamps for robust electronic certification like those used in the European Union (European Union, 2014).

5.2. Cybertransaction law
Cybertransaction is influenced by the Uniform Law Commissioners who promulgated the Uniform Electronic Transactions Act in 1999. It is the first adaptable effort to prepare a Cyberlaw for Entity’s Cyberbusiness and electronic government activities. Many Entities have adopted Cyberbusiness and electronic government regulations. The Uniform Electronic Transactions Act represents the first effort in providing some standardized rules to govern Cybertransactions and Cyberlaws (The Uniform Law Commissioners, 2015). Facts show that international law on global security is inefficient and are in an agonizing state. Advanced states are hesitant to integrate international law that is based on the emergence of non-government norm-making initiatives. States insist on their traditional central legal system that marginalizes the inter-state governance of Cyberspace (Mačák, 2016).

5.3. Cyberbusiness Legislation Monitoring
The integration of the SMC is done with the use of TOGAF’s standardized legal environment. This legal environment supports data protection laws, contract law, procurement law, fraud law and many other legislation domains to counter EODGPP misdeeds, which are the most fatal types of crimes and Cybercrimes.

5.4. Financial Cybercrime Schemes
The integration of Finance for Technologies (FinTech) and ICS is crucial for an Entity and its financial controls critical system(s). Today such FinTech standards and fields are robust, resilient and can be applied as automated synchronized (block) chains; to enable the traditional financial environments to become a part of a networked financial world. FinTech platforms can be applied to support an SMC and sRisks mitigation, in order to avoid locked-in situations. EODGPP related locked-in, when building the financial structure of the future transformed Entity, the Project team and SMC must be cautious of eventual financial locked-in situation(s), which is a major security problem. Even though some countries like Switzerland offer attractive
financial and tax package(s), this country applies a coordinated legal and financial locked-in trap; it is sealed and represents an unwritten concept that can at any moment sweep out the financial resources from an Entity and even powerful countries like the USA, UK and France. This locked-in Swiss EODGPP model, combines: 1) Specific culture and mentality; 2) The power of Swiss law; 3) Too Big to Fail state banks; 4) Banking secrecy that protects financial crimes; 5) Ultraliberal economy; 6) rejection of local and global standards; and laws; 7) Isolationism and racism; and 8) A finance supportive political environment for collective plundering. Swiss banks and other Swiss financial institutions are under no supervision what so ever; and are free to hit and run. That indirectly makes this Entity the financial and malware industry’s super protector that sets up fortifications against any possible legal intrusion; even when these institutions are executing massive irregular, criminal and illegal activities. The author refers to this phenomenon as an instance of the Black Swan phenomena or simply the directed Swiss Black Swan, which Entity’s (and countries) should try to avoid and penalize. It is probably wisest to pay more taxes and social services then to face such phenomena and traps (International Monetary Fund, 2009; Taleb, 2012). The major problem with combating such a system is that some countries have a hermetically closed system characterized by the following attitudes: 1) Police and information services, block any attempt to pursue financial criminal acts; 2) The legal system, ignores any attempt to investigate financial criminal acts; 3) Legal support is too expensive, and is used to discourage any action of law enforcing; 4) Psychological harassment, to discredit investigators; 5) Intolerance and discrimination, to block any foreign request; 6) A powerful global network, to embed and hide various dubious operations; 7) Financial guerrilla-like and hit and run tactics, to confiscate wealth; and 8) Occurrence of financial locked-in situations. Some financial safe haven states target to become leaders in FinTech, which is not very assuring; because FinTech should combat state criminality and enforce global security and related international laws. It is recommended to avoid any form of financial and technological collaboration with EODGPP oriented Entities.

6. Proof of Concept

6.1. The Implementation Environment

The PoC is implemented using TRADF which was developed exclusively by the author and uses microartefacts on the basis of the fine-grained granularity approach of the “1:1” mapping design and concept; and was developed using the following resources and tools: 1) Microsoft Visual Studio .NET/C#, system scripting and C/C++; and 2) Java Enterprise Edition development environments.

6.2. The Literature Review’s Outcome

The RLR or phase 1 outcome supports the PoC for, by the use of an archive of an important set of references and links that are analysed using a specific interface; where each link can then be reviewed, archived, weighted parsed into an Excel file. After selecting the sets of CSA/CSFs, tags are linked to various microartefacts scenarios. A CSF is implemented as an item, in an Excel file; where all its details are defined; these actions conclude phase 1. In this PoC (or it phase 2), the HDT is used to deliver solutions to concrete security problems. The HDT process is an iterative rule of thumb and a guide to implement security problem solving using a goal function and constraints. The HDT process, includes tuning and getting results by trial and error; with a CSAs/CSFs based system. The SMC uses the AHMM4SMC instance to manage microartefacts mechanics’, which in turn uses the internal initial sets of CSFs’ that are used in phases 1 and 2.
6.3. The SMC-S’ CSFs Phase 1

All other CSAs’ CSFs values are defined by the SMC expert. Based on the RLR and the related evaluation processes (phase 1) the most important CSFs are used and processed by the internal HDT and the results are presented in Table 1 (Trad & Kalpić, 2020a). As shown in Table 1, this fact keeps all CSAs that helps to make this work’s conclusion. If the automated evaluation of RLR outcomes is successful, then this ends phase 1 and afterwards phase 2 starts to complete the PoC. As shown in Table 1, the results justify (an average of 9.0) the usage of the SMC and how it can be used with the PoC’s final phase (or phase 2); where the described process is applied to the CSAs. A security problem is selected and an HDT process is launched to find a set of solutions.

Table 1: The ACS’s CSFs that have an average of 9.0.

<table>
<thead>
<tr>
<th>Critical Success Factors</th>
<th>KPIs</th>
<th>Weightings</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Research and Development Project</td>
<td>ROBUST</td>
<td>From 1 to 10. <strong>10 Selected</strong></td>
</tr>
<tr>
<td>SMC’s Integration</td>
<td>POSSIBLE</td>
<td>From 1 to 10. <strong>09 Selected</strong></td>
</tr>
<tr>
<td>SMC’s Main Artefacts</td>
<td>POSSIBLE</td>
<td>From 1 to 10. <strong>09 Selected</strong></td>
</tr>
<tr>
<td>The Legal Constraints</td>
<td>DIFFICULT</td>
<td>From 1 to 10. <strong>08 Selected</strong></td>
</tr>
</tbody>
</table>

6.4. Linking the Applied Case Study – Integration and Unification

Phase 2 starts with the selection of the Case Studies (CS) from the following list of possible cases:

- Cyber, Internet related technologies … CS_IoT.
- Economy, Growth or the CS_EcoSys.
- Conflict, political, religious, ethical and other or the CS_EthnoPol.
- Geopolitics, basics, analysis and transformation or the CS_GeoPol.
- Finance, governance, law and technology category or the CS_FinTech.
- (In)dependence, external resources, man power, agriculture… CS_InpFact

6.5. The Architecture Method’s Phases’ Integration, Setup and Selecting Factors

The phase 2 implementation setup looks as follows:

- Sub-phase A or the Architecture Vision phase’s goals, establishes a data architecture.
- Sub-phase B or the Business Architecture phase shows how the SMC related target architecture.
- Sub-phase C or the Gap Analysis phase shows and uses the Application Communication Diagram, which shows the modelled target application landscape.
- Sub-phase D or the Target Technology Architecture and Gap Analysis phase shows the end SMC’s concept implementation; where here is limited.
- Sub-phases E and F, or the Implementation and Migration Planning; where the transition architecture, proposing possible intermediate situation and evaluates SMC’s integration status.

6.6. Experiment’s Processing on a Concrete Tree Node

In phase 2, the HDT is used, to find a combination of HDT’s action, used to solve a security problem related to this chapter’s RQ. A specifically selected CSF is linked to a security problem
type and a related set of actions; where the processing starts in the root node. Each security problem, like this case the PRB_SMC_EODGPP security problem, has the following set of actions:

- ACT_SMC_Define_ProblemType.
- ACT_SMC_Verify_ProblemType.
- ACT_SMC_Match_ProblemType.
- ACT_SMC.Validate_ProblemType.

For this SMC related PoC, the author has selected the CSF_SMC_Integration as the active CSF, taken from the previously defined Tables or the SMC’s CSAs. In this PoC the goal is to find solutions related to this selected CSF’s related security problems. Such security problems can be only researched with the HDT based mixed-model that is very similar to the (re)scheduling of Project’s activities. Solving the given security problem involves the determination of a set of actions and related solutions for a SMC request.

6.7. Selected Node Solution in Phase 2

The frameworks scripts make up the processing logic of the SMC defined security problems and is supported by a set of actions. Where these actions are processed in the DMS background to support microartefacts that are called by the HDT’s engine actions, which deliver the solution and the flow of steps. This RDP, the AHMM4SMC and its related CSAs/CSFs were selected as demonstrated previously, and interact.

6.8. Experiment’s Processing on a Concrete Tree Node

The HDT is applied to a specific CSF that is mapped to a specific security problem and a set of linked actions, to deliver results in the form of solutions. The selected security problem is related to the detection of EODGPP activities. The hyper HDT approach is used, to find a combination of HDT’s action, used to solve a security problem related to this chapter’s RQ. A specifically selected CSF is linked to a security problem type and a related set of SMC actions; where the processing starts in HDT’s root node. Each security problem, like in this case, the selected security problem, has the following set of actions: SMC_Init, SMC_Eval and others.

6.9. Selected Node Solution in Phase 2

The scripts make up the processing logic of the defined security problems and are supported by a set of actions. Where these actions are processed in the background by the use of microartefacts that are called by HDT’s actions, which deliver the solutions.

7. Conclusion

Because of very high score, 9.0, Table 1 shows that SMC’s implementation is not a very risky transformation process and that an inhouse only methodology and framework, like TRADf, can be built. In this article, the author proposes the following set of managerial recommendations:

- The SMC supports an SA in order to ensure an efficient global security concept. Important efforts can be applied to integrate underlying ICS to support a huge number of Cybertransactions.
- Cybertechnologies should replace traditional exchanges in order to improve productivity and to enforce in real-time security.
- Cybersecurity should fit in the Entity’s global EA framework.
- ADM’s integration in the SMC enables the automation of all its activities.
- Applications’ development and operations are coordinated by using the SecDevOps.
- Security constraints are controlled and monitored by the EULS.
• FinTech would make financial operations more embedded and abstract.
• Cyberbusinesses are orthogonal to global security requirements.
• Cybertransactions are influenced by local and international Cyberlaw; where both are limited.
• Avoid any form of financial collaboration with doubtful financial EODGPP oriented organizations.
• Cyberattacks and Cyberwarfare are advancing quickly especially the domains of Biotech and Cybertechnologies.

TRAD\textsuperscript{f} englobes TOGAF and indirectly SABSA and other standard methodologies and artifacts, which facilitates the transformation process.

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Üniversite Öğrencilerinde İnternet Bağımlılığının Sosyal Duygusal Yalnızlık Durumuna Etkisi

Nebiye Yaşar¹

Özet


Anahtar Kelimeler: İnternet bağımlılığı, sosyal duygusal yalnızlık, regresyon analizi

The Effect of Internet Addiction on Social Emotional Loneliness in University Students

Abstract

Problematic internet use is associated with high levels of emotional loneliness and poor romantic and friendship relationships. In addition to cognitive disorders such as low self-esteem, loneliness, which leads to emotional and social isolation, is considered an important reason behind internet addiction, especially for young people who are in a critical period in terms of self-identification and gaining meaning. Peer stress or the need for intimacy can cause individuals to turn to various tools and the advantages of the internet can become attractive. Studies have shown that internet addicted individuals experience alienation in their social relationships and feel a high level of emotional loneliness. Studies have shown that bad family relationships can cause feelings of loneliness, which in turn can increase the possibility of seeking emotional support online and eventually lead to internet addiction. Individuals with high levels of social and emotional loneliness are more likely to interact with strangers online. Therefore, it is accepted that there is a strong relationship between the feeling of loneliness and internet addiction. In this context, the main purpose of this study is to measure the effect of university students' internet addiction on their social and emotional loneliness. As a result of the correlation analysis, internet addiction increases, social and emotional loneliness increases by 71.3%. As a result of the regression analysis, internet addiction was found to be positively and significantly related to social emotional loneliness behavior. Internet addiction has the power to explain social emotional loneliness behavior R² = 73.8%. Internet addiction 1 unit social emotional loneliness behavior increased 0.736 unit increasing.

Keywords: Internet addiction, social emotional loneliness, regression analysis

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1. Giriş


Bu bilgilerden yola çıkarak çalışmanın amacı, üniversite öğrencileri ve internet bağımlılığının sosyal ve duygusal yalnızlık durumları üzerindeki etkisini ölçmektir.

2. Kavramsal Çerçeve

2.1. İnternet Bağımlılığı


Bağımlılık yapan davranış, zihinsel durumlarda aktif bir değişiklikle ifade edilen hoş bir özel duyguusal durum için sürekli bir arzu ile karakterize edilen sapkoneksi davranış biçimlerinden biridir (Arakelyan, 2014: 5; Arestova, Babanin ve Voiskounsky, 2000: 24; Bubnov ve Tereshchenko, 2016: 8). İnternet bağımlılığının oluşum süreci mecazi anlamba basittir: Bir netizen, zahmetli bir adrenalin duygu duyar ve bunlarla birlikte tüm hayatı ihtiyaçlarının yerini alan güçli bir beyin hormonu olan serotonini salgılardır. Bu nedenle internet, gündelik hayatın
zorunluluklarından ve gerçeklerinden kurtulma olanağı sağlaması gerekenleri ile bağımlılar için çok çeşitli gelişmeleri.


İnternet bağımlılığı için bireylerde, kendi kendine yönelirmeleri daha yaygın görürlürken, çoğu zaman bağımlı bireyler, internet bağımlılığı olmadıklarının farkına varmaya güçlü çıkartıcıları. İnsanlar başlangıçta depresyon, çift kutuplu (bipolar) bozukluk, anksiyete veya obsesif


2.2. Sosyal ve Duygusal Yalnızlık


3. İstatistiksel Analiz

3.1. Çalışmanın Amacı ve Önemi


3.2. Araştırmanın Hipotezleri ve Model

Araştırmanın ana hipotezi internet bağımlılığının sosyal ve duygusal yalnızlık durumları üzerinde etkisi olduğunu yönlüledir. Gelişirilen hipotezler Tablo 1 de yer almaktadır.

<table>
<thead>
<tr>
<th>Hipotezler</th>
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<tbody>
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<td><strong>H&lt;sub&gt;1&lt;/sub&gt;</strong></td>
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</table>

Şekil 1: Araştırmanın modeli

**3.3. Araştırmanın Evreni ve Örnekleme**


**3.4. Veri Toplama Araç**

Yapılan çalışma, deneySEL olmayan nicel bir araştırma taramasına sahip olup yapılmış metodunda göre tarama modelidir. Çalışmada kullanılan anket, geniş bir literatür taramasının neticesinde
geçerlilik ve güvenilirlüğü daha önce yapılan araştırmalarda onaylanmış olan ölçeklerden faydalanılarak hazırlanmıştır. Bu ölçekleri aşağıdaki gibi açıklamak mümkündür:


3.5. İstatistik Bulgular ve Değerlendirme

3.5.1. Anketin Güvenirliği

Anket çalışmasından elde edilen veriler için güvenilirlik testi olarak Cronbach Alpha, İkiye Bölmeye (split), Paralel, Mutlak Kesin Paralel (strict) testleri uygulanmıştır. Cronbach Alpha değerinin %70’ın üzerinde olması, anket çalışmasının başarılı olduğunu ifade etmektedir. Kimi araştırmacılar tarafından ise %75 değerinin geçilmesi esas alınmaktadır (Sart vd., 2018; Sart 2020). Bu çalışmada yapılan anket güvenilirlik analizi sonuçları; Cronbach-Alfa = 0.918, Paralel = 0.917, Split = 0.915-0.918 ve Strict = 0.917 olarak belirlemiştir.

3.5.2. Demografik ve Genel Bilgiler Yüze Dağılmış Bilgileri

Çalışmaya katılan 680 üniversite öğrencisinin %61.8’i kadın, %38.2’si ise erkektedir. Katılanların %5.5’i tek çocuk, %34.7’i iki kardeş, %31.3’ü üç kardeş ve %28.5’i ise dört ya da daha fazla kardeşe sahiptir. Öğrencilere %80’i çekirdek, %15.2’i geniş ve 4.8’i parçalanmış aileye sahiptir. Katılanların %68.5’inin annesi ilkökul veya ortaokul mezunu, %21’inin annesi lise mezunu ve %10.5’inin annesi ise üniversite veya üzeri bir kurumdan mezundur. Diğer yandan, %51.7’inin babası ilkökul veya ortaokul mezunu, %29.3’unun babası lise mezunu ve %19’unun babası ise üniversite veya üzeri bir kurumdan mezundur. Katılanların %9.7’inin ailelerinin ekonomik durumuna ilişkin algısı düşük, %85.1’inin orta ve %5.1’inin ise yüksektir. Smif düzeyi dağılımı; %17,8’i 1. smif, %26,7’si 2. smif, 21,2’si 3. Smif, %33,1’i 4. smif ve %1,2’si ise lisansüstü birimindedir.
3.5.3. Boyutlara Yönelik Tanımlayıcı İstatistik Bilgiler

Tablo 2: Boyutlara yönelik tanımlayıcı istatistik bilgiler ve normallik test sonuçları

<table>
<thead>
<tr>
<th>Boyutlar</th>
<th>Ortalama</th>
<th>St. Sapma</th>
<th>Asimetri</th>
<th>Basıklık</th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ist</td>
<td>p</td>
<td>ist</td>
<td>p</td>
<td></td>
<td></td>
</tr>
<tr>
<td>İnternet Bağımlılığı</td>
<td>2.714</td>
<td>0.023</td>
<td>2.765</td>
<td>0.127</td>
<td>4.967</td>
<td>0.288</td>
</tr>
<tr>
<td>Duygusal Sosyal Yalnızlık</td>
<td>2.687</td>
<td>0.076</td>
<td>2.862</td>
<td>0.245</td>
<td>4.215</td>
<td>0.116</td>
</tr>
</tbody>
</table>

Görüleceği üzere, her iki normallik test sonucunda p>0.05 olduğundan normal dağılımın sağlandığını belirten H₀ hipotezi kabul edilir. Korelasyon analizi için normal dağılım gerektiren Pearson ilişki analizi uygulanmıştır.

3.5.4. Korelasyon Analizi Sonuçları

Faktör analizi ile belirlenen 3 ana boyuta yönelik korelasyon analizi sonuçları Tablo 3’de verilmiştir.

Tablo 3: Korelasyon analizi sonuçları

<table>
<thead>
<tr>
<th></th>
<th>İnternet Bağımlılığı</th>
<th>Sosyal ve Duygusal Yalnızlık</th>
</tr>
</thead>
<tbody>
<tr>
<td>İst</td>
<td>1.000</td>
<td>.713*</td>
</tr>
<tr>
<td>p</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Sosyal ve Duygusal</td>
<td>r</td>
<td></td>
</tr>
<tr>
<td>Yalnızlık</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

*0.05 için anlamlı ilişki

Ele alınan boyutlar birbiriyle pozitif yönünde anlamlı ilişkili çıkmıştır. İnternet bağımlılığı arttıkça sosyal ve duygusal yalnızlık %71.3 artmaktadır.

3.5.5. Regresyon Analizi Sonuçları

Çalışmada, internet bağımlılığı ile arasında duygusal zekanın düzenleyici etkinin araştırılmasına yönelik regresyon analizi uygulanmıştır. Regresyon tahmin katsaylarının yorumlanabilir özellikleri olması için t testi H₁, F testi H₁ ve R² belirginlik katsayısı değerinin yüksek olması yanısıra; hata payı normal dağılım olmalı, otokorelasyon bulunmamalı, heteroskedasite olmamalı gibi varsayımın da sağlanması gerekmektedir. Ancak bu koşullar altında katsayılar güvenilir ve yorumlanabilir özellikleri olacaktır. Regresyon analizleri sonuçları Tablo 4’de verilmiştir.

Tablo 4: İnternet bağımlılığının sosyal ve duygusal yalnızlığına etkisi tahmin sonucu

<table>
<thead>
<tr>
<th>Bağımlı Değişken: SDY</th>
<th>Katsayı</th>
<th>St. hata</th>
<th>t istatistiği</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sabit</td>
<td>1.573</td>
<td>0.251</td>
<td>6.266</td>
<td>0.000*</td>
</tr>
<tr>
<td>İB</td>
<td>0.736</td>
<td>0.142</td>
<td>5.147</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

R² = 0.738  F₀₉₉ₙ = 34.78  Fₙ₉₉ₙ = 0.000  Harvey test (p) = 0.163  LM test (p) = 0.196  Jarque-Bera (p)=0.291

*0.05 için istatistik anlamlı değişken

Model sonuçlarında görüleceği üzere; internet bağımlılığı sosyal duygusal yalnızlık davranışı üzerinde pozitif yönde anlamlı ilişkili çıkmıştır (p<0.05). İnternet bağımlılığı sosyal duygusal yalnızlık davranışı R² =%73.8 açıkça gücüne sahiptir. İB algısı 1 br. arttıkça SDY boyutu 0.736 br. artmaktadır. Modelin varsayımını sağlanamamıştır çünkü normallik varsayımı Jarque-Bera testi ile sağlanmıştır ve p>0.05 olduğundan normal dağılımı belirtir H₀ hipotezi kabul edilmiştir. Otokorelasyon varsayımı için LM testi uygulanmıştır ve p>0.05 olduğundan otokorelasyon bulunmadığını belirtir H₀ hipotezi kabul edilmiştir. Heteroskedasite probleminin sağlanamaması Harvey testi uygulanmıştır ve p>0.05 olduğundan homoskedasiteyi belirtir H₀ hipotezi kabul edilmiştir. Böylece, H₁ hipotezi doğrulanmıştır.
4. Sonuç


Bu çalışmada, üniversite öğrencilerinin, internet bağmlılık düzeylerinin duygusal ve duygusal yalnız durumlarına etkisinin belirlenmesi amaçlanmıştır. Korealsyon analizi sonucunda internet bağımlılığı arttıkça sosyal ve duygusal yalnızlık %71.3 artmaktadır. Regresyon analizi sonucunda internet bağımlılığı sosyal duygusal yalnızlık davranış üzerine pozitif yönde anlamlı bir etkisi çıkmıştır. Internet bağımlılığı sosyal duygusal yalnızlık davranışını R2 = %73.8 açıklamaya hakkı sahibi. İB artışı 1 br. arttıktan SDY boyutu 0.736 br. artmaktadır. Model varsayımaları sağlanmıştır, yorumların olduğu tespit edilmiştir.


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gruptaki öğrencilere bireysel ödevler yerine grup proje ödevleri verilmesi, bu gruptaki öğrencilerin kendini daha iyi ifade edebilmelerine katkı sağlamak için rehberlik faaliyetlerinin daha çok desteklenmesi önerilmektedir.

Araştırımda yalnızlığın yordanmasında etkisi araştırılan internet bağımlılığı kavramı daha özelleştirilerek sosyal medya bağımlılığı, akıllı telefon bağımlılığı oyun bağımlılığı vb. farklı ölçekler üzerine de araştırma yapılması önerilmektedir. Araştırma İstanbul ili sınırlanmıştır, araştırmanın evren ve örneklem büyüklüğü artırılarak daha bütünel sonuçlara ulaşılabileceğini düşünülmektedir.

**Kaynakça**


Arshinova, V. V., & Bartsalkina, V. V. (2010). Prevention of gambling on the internet, addiction in the educational environment. Moscow: MGPPU.


Financial Literacy in Children

Selman Yılmaz1 Hamza Özçiftçi2

Abstract

Financial literacy is the sum total of financial knowledge, skills, attitudes and behaviors that individuals need to have in order to have information about basic financial concepts such as budgeting, savings, borrowing and investment and to interpret economic developments and make more effective financial decisions. It is pivotal to develop the knowledge level of individuals, who are an important actor of the system in the increasingly complex financial world, and to determine their attitudes and behaviors. In this sense, many studies go to great lengths on this area by making detailed plans for the future, while the importance of financial attitude and literacy is increasing day by day.

Children meticulously collect the building blocks of social and financial literacy before they even attend primary school. Preschoolers also develop time preferences when they realize that it is better to wait for something than to have it now. This study sets sights on casting around a methodical literature review on the extent to which the financial literacy of children and adolescents can be improved through financial education and how this can enhance their abilities as economic citizens. As a component of our definition of financial literacy, there are significant indications that school-based financial education programs can vastly improve the financial knowledge and attitudes of children and adolescents.

The available evidence strongly supports the idea that financial literacy education should be originated in primary school and repeated in secondary school and college. Financial literacy education must inevitably be a compulsory part of the school curriculum to ensure continuous learning. Moreover, few financial education programs where parents are involved in their children's education appear to be effective in increasing the financial literacy of these children and adolescents.

Keywords: Financial literacy, child, adolescent

1. Introduction

Generation Z is commonly defined as the generation born after 2000 and described as the technology generation (Caumont, 2014). Cruz (2016) states that generation Z sees the world through screens and is constantly engaged in online information exchange and chat with peers (Kitchen et al., 2015). They are frequently considered to be high-valued new conservatives who embrace traditional beliefs in terms of characteristics that describe this generation, value the importance of family, control themselves and are more responsible, while quickly adapting to high technology and multiple sources of information (Williams et al., 2011; Cruz, 2016). This unbaked younger generation faces a vastly different financial environment from their parents, and is evolving much faster. Generation Z faces much higher financial risks, a wide variety of increasingly complex financial products and greater supply. Actually, these new financial innovations are important factors in this unusual financial environment (Terry et al., 2017).

It is increasingly accepted that inadequate financial skills and irresponsible financial behaviour are the driving factors for the emergence of enormous debts, especially among young people who do not have sufficient knowledge and experience. For example, the proportion of adolescents under the age of twenty-six who are heavily in debt and requesting

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debt counselling is increasing every year in the Netherlands (Madern, 2014). Financial debt creates significant costs and loss of prosperity not only for borrowers themselves, but also for society as a whole. While not all types of debt are problematic, many debts, such as direct income losses and increased social security spending by banks, insurance companies or public service companies, can hurt society. Indebted households may face rising poverty and diseases, as well as indirect costs such as drug addiction and neglect of children’s education (Madern, 2014).

Given these circumstances, the importance of financial literacy is increasing both in academic research and in public perceptions (Gudmunson and Danes, 2011). Education systems around the world also recognize the importance of addressing financial literacy deficiencies and integrating related content into education curricula. A growing number of countries are developing and implementing national financial education strategies to improve the financial literacy of their populations, focusing especially on younger generations (Sherraden et al., 2011; OECD, 2014). Financial literacy is increasingly considered a necessary skill to demonstrate intelligent financial behavior in modern life, and as a significant contributor to societal and governmental economic and financial stability (Holden et al., 2009; OECD, 2014).

Financial literacy is a measurable level at which a person is confidently able to manage their personal finances by understanding basic financial concepts and evaluating the changing economic environment and living conditions to make both short-term solutions and long-term financial plans (Remund, 2010; Xu & Zia 2012). Sohn, Joo, Grable, Lee and Kim (2012) refer to the concept of financial literacy as possessing both the necessary knowledge and skills to be able to deal with daily financial difficulties and issues. One commonly accepted definition of financial literacy is used by the Organization for Economic Co-operation and Development (OECD, 2014) where knowledge and understanding of financial concepts is defined as the ability, motivation and confidence to make effective financial decisions, to improve the financial well-being of individuals and society and to ensure participation in economic life.

In general, financial literacy enables consumers to positively tackle financial tasks such as budgeting, saving and making sound investments (Loke, 2017; Chu, Wang, Xiao and Zhang, 2017). Conversely, financial ignorance often leads to selection of unsuitable financial products, poor debt management and decreased savings (Au Yong and Tan, 2017). Consumers with lower levels of financial literacy towards investments are less likely to participate in the stock market (Van Rooij, Lusardi and Alessie, 2011) and tend to make sub-par investment decisions (Chu et al., 2017). Lack of financial literacy affects both the personal finances of the population and the functioning of financial markets and public expenditures. Therefore, measuring both the level of financial literacy and its relative impacting factors has an impact on the financial decisions and financial well-being of young people, especially school-age children (Jorgensen and Savla, 2010; Sohn et al., 2012, etc).

2. Literature Review

In the literature review financial literacy education, effectiveness and benefits are evaluated in children and adolescents.

Roedder and Whitney (1986), Lundby (2013), De Clercq (2009), Leiser and others (1990), Otto and others (2006), all observe improvements in financial consumer skills as children grow older. From the age of three onwards, children begin to understand that money is used for payment, however at that age they have not yet formulated a system of rules and relationships that clearly bind different financial concepts together. Tangible progress can be observed from the age of six, when children begin to establish rules, make connections and distinguish between different types of money, and can also classify products according to
price ratings (Damay et al., 2015; Berti and Bombi, 1988; Roos et al., 2005; Sosin et al., 1997). As children grow older, they learn the benefits of saving, but often do not desire to save or otherwise use money. Between the ages of six and twelve, children begin to understand the value of saving and how saving is linked to future opportunities. Around the age of twelve, children then begin to engage in more complex savings and spending strategies (Webley et al., 1991; Otto et al., 2006; Sherraden et al., 2011; Friedline et al., 2011). According to Sonuga-Barke and Webley (1993), the development of savings behavior is influenced by the ability to understand the impact of today's expenditures on future opportunities. Research shows that older children save more than younger children (Mischel and Mischel, 1983; Furnham and Thomas, 1984; Tysoe, 1983).

Children can better understand financial concepts using real-life applications, for example by evaluating their allowances, and move towards financial literacy (Hagedorn et al., 2012; Harter and Harter, 2007; Schug and Hagedorn, 2005).

Britt (2016) believes that one of the earliest lessons in financial management is pocket money in early childhood. Children are given the choice to decide how and where to use their pocket money which aids development of financial skills. Through self-management of small amounts of money, children begin to better understand financial responsibility and develop confidence in making financial decisions (Jorgensen and Savla, 2010).

For instance, following the studies showing that five- or six-year-olds in U.S. metropolitan elementary schools understand economic concepts such as cost-benefit analysis and scarcity (Kourilsky 1977), more recent U.S. studies have found increased financial knowledge among fourth- and fifth-graders after participation in Oakland's Money Savvy Youth program (Go et al. 2012). In midwestern U.S. cities, fourth-graders' financial abilities are similarly improving after introduction of a financial education program that included access to a savings account (Sherraden et al., 2011). In some Wisconsin schools, financial education for third- and fifth graders increased students' financial knowledge not only in the short term, but also a year later, increasing the likelihood of savings (Batty, Collins and Odders-White 2015).

Coda Moscarola and Kalwij (2018) also see that financial education in Italy has a positive effect on the financial literacy of primary school children, having previously also found that a program that emphasizes the importance of saving reduces children's levels of impatience (Coda Moscarola and Miglieli, 2017). Conversely, when measuring the effectiveness of school-based financial education to improve financial literacy in middle school children through controlled field experiments, such programs are found to be less effective in improving quantitative financial literacy skills despite effectively improving qualitative financial knowledge and changing children's behavior (Avery, de Bassa Scheresberg and Guiso 2016).

Results of practical studies reviewing the teaching of economics to children reveal that children can understand facts and events related to economics and that this education has lasting effects (Webley, 2005). Davison & Kilgore (1971), found though an experimental study that second-year students who were given an economics education were more successful than the students in the control group by using appropriate materials and providing in-service teacher training. Another important study by Kourilsky (1977), identified a significant difference in the perception of economic concepts between children who received an economics education program aged five and under and children who did not. In the study conducted by Bayhan and others (2007) to determine how children perceive economic concepts, it was determined that there was a significant difference in the perception of certain concepts between the ages of six to eight and six to ten. This situation is important for children to show that there are levels according to age in the perception of concepts related to
economics. Akhan (2010) implemented a program developed using methods recommended by relevant literature, determined that students in the experimental group in which he applied the program were more successful and provided permanent learning than those in the control group. All these studies (the majority of which refer to school programs) show that economics teaching can be conducted with content methods and materials suitable for each age level.

According to researchers, inadequate financial skills obtained in childhood, youth and adulthood can lead to financial problems in later life (Varcoe et al., 2001). Household savings decisions are important and tend to be guided by general rules without financial knowledge (Bernheim 1998), however, this is developing through financial education in school or the workplace (Bernheim and Garrett 2003). Financial literacy also influences household behavior related to investments, wealth accumulation, retirement planning, stock market participation and other related issues (van Rooij, Lusardi and Alessie 2011, 2012; Lusardi and Mitchell 2011b; Sekita 2013). Lusardi and Mitchell (2011b) used data from the U.S. to investigate the role of financial literacy in retirement welfare planning and showed that the level of financial literacy among middle-aged participants was average. However, it was below average among women, minorities and those without a university degree. Lusardi and Mitchell also note that participants who are financially literate are better planners, are more likely to save more and invest in more complex assets such as stocks. Van Rooij, Lusardi and Alessie (2011) examined the link between financial literacy and stock market participation and stated that financial literacy, especially related to finance and the economy, has a positive effect on financial decisions, and those with high literacy levels are more likely to invest in stocks. Financially literate people also accumulate increased wealth through better savings plans, retirement planning and equity investments (Alessie, van Rooij and Lusardi 2011).

Alessie, van Rooij and Lusardi (2011) showed that the Dutch population is moving towards financial literacy, aiding retirement planning. Similarly, in Japan, although the overall level of financial literacy among women, low income groups, young people and less educated is not very high, those with greater financial literacy make better retirement savings plans and accumulate more wealth (Sekita 2011).

According to Montecone (2010), there is a positive relationship between financial literacy and wealth. Sekita (2013) shows that financial literacy increases wealth accumulation in Japan. The link between retirement planning and financial literacy, investment and savings is also evident in the U.S. (Al-Tamimi and Kalli 2009; Bernheim and Garrett in 2003; Behrman et al. in 2010; van Rooij, Lusardi and Alessie 2011, 2012). A positive relationship between financial literacy and savings, investment and wealth accumulation behavior proves that financially literate people are likely to accumulate more assets for later life, which reduces anxiety in old age.

As a result of analysis of the financial well-being of retirees in Cape Coast Metropolis to verify the suitability of financial literacy, retirement planning and family support in ensuring the financial well-being of pensioners, Adam et al. (2017) found that financial literacy, family support and retirement planning have a positive impact on pensioners’ financial well-being. Adam et al support encouragement of increased financial literacy and retirement planning. It has also been observed that low-income people discount the importance of financial literacy over retirement planning and financial behavior.

3. Conclusion

Significant research supports the notion that education in financial literacy should be commence in primary school and be consistently repeated in middle and high schools.
Financial literacy education should be a mandatory part of school curriculums to ensure continuous learning. The main feature of effective financial education programs in both primary and secondary education must ensure that students actively participate in the learning process and experience the impact of their decisions. Additionally, as the results of applied studies on economic teaching show, children can understand concepts related to economics if they are supported with appropriate content and materials suitable to their age level. "Financial Literacy Training" should be interested not only in acquiring new skills, but also in ensuring children understand their application, and based on this they should help students gain experiences to make them more confident and financially knowledgeable. Increasing the financial literacy of individuals improves their quality of life by financially empowering them to make sound financial decisions. Financially experienced people are then much more likely to be aware of the benefit of saving and plan for retirement.

The final aim of "Financial Literacy Education" should be definitely to ensure that in the future children will be individuals who can veritably read, understand and evaluate all kinds of financial information. This elementary training will be helpful to keep them out from economic manipulations and unrealistic rhetoric in every country. Educating the child in this field and disseminating these trainings actually ensures that the level of human capital in the field of economics at the macro level is built on solid foundations. With these beneficial trainings that will come on top of these foundations, the level of consciousness will accrete faster when children become an adult individual.

References


The Relationship between Economic Freedoms and Poverty: Causality Analysis for Turkey

Abstract
In this study, the relationship between economic freedoms and poverty in Turkey, for the years 1995 – 2019, has been examined. While the index value of the same name was taken into account for economic freedoms, human development index was used for poverty. Economic freedom data were obtained from The Heritage Foundation and poverty values were obtained from the United Nations Development Programme. In the study, Toda – Yamamoto Causality Test was used and it was concluded that there is no bidirectional causality between economic freedoms and poverty in Turkey.

Keywords: Economic freedoms, poverty, Toda – Yamamoto Causality test

1. Giriş
Ekonomik özgürlük kavramının literatürde birçok farklı tanımı mevcuttur. Bununla beraber en genel anlama ekonomik özgürlük: bireylerin tüketme, üretme, yatırım yapma ve çalışma gibi ekonomik faaliyetleri yerine getirmeye özgürlüğü ve bu özgürlüğünün devlet tarafından korunmasıdır (Miller & Kim, 2011, s. 19). Görüldüğü gibi ekonomik özgürlük, günlük hayatın ekonomik anlamda kimseye muhtaç olmaması, kendine yetebilmesini değil, serbest bir şekilde ekonomik faaliyeti yürütebilebilmesini ifade eder.

Ekonomik özgürlüğü ölçüp değerlendirilmek adına farklı kurumlar tarafından ekonomik özgürlük endeksi hesaplanmıştır. Bu çalışmada, daha geniş bir dönemde ait veri seti sunduğunun “The Heritage Foundation” tarafından oluşturulan “ekonomik özgürlük endeksi” (economic freedom index) değerleri dikkate alınmıştır.

The Heritage Foundation’a göre ekonomik özgürlük, bireyin emekini ve mülkiyetini kontrol etme hakkıdır. Bireylere isteği şekilde çalıştır, üretir, tüketir ve yatırım yaparlar. Ekonomik olarak özgürlüğün bir toplumda devlet, sermayenin ve malların serbest bir şekilde hareket etmesine izin vererek ekonomik özgürlüğü korumak ve sürdürmek için gerekli adımları atar. Bu çerçevede endeksin hesaplanmasında on iki alt başlık dikkate alınmıştır. Bunlar: mülkiyet hakları, hükümetin şeffaflığı, yargı etkinliği, vergi yükü, hükümet harcamaları, finansal sağlığı,
iş yapma özgürlüğü, emek özgürlüğü, parasal özgürlük, ticaret özgürlüğü, yatırım özgürlüğü ve finansal özgürlüğidir (www.heritage.org).


2. Literatür Taraması

Literatürde ekonomik özgürlük ile yoksulluk ilişkisini inceleyen çok sayıda çalışma bulunmaktadır söylenemese. En azından yoksulluk konusu, ekonomik büyüme kadar dikkate alınmamıştır. Söz konusu literatür aşağıda özetlenmiştir:


- Chodak ve Kowal (2011), çalışmadı ekonomik özgürlükler ile ekonomik büyümeye, kişi başına milli gelir ve insani gelişmişlik arasındaki ilişki incelemiştir. Elde edilen bulgulara göre,
ekonomik özgürlüklerdeki bir artışın kesin olarak kişi başı milli gelirde ya da insani gelişmede iyileşmeyi sağlamış olduğu söylemek mümkün değildir. Ancak ekonomik özgürlükler ile kişi başı milli gelir arasında önemli bir ilişki vardır ve ekonomik özgürlüklerin vatandaşların gelirleri üzerinde olumlu bir etkisi olduğu söylenebilir. Ayrıca ekonomik özgürlüklerin görece iyi olduğu ülkelerde daha yüksek ekonomik büyüme endeksleri görülmüştür.


Doran ve Stratmann (2019), çalışmadaki 151 ülkede 20 yıllık bir dönem için ekonomik özgürlükler ve yoksulluk oranları arasındaki ilişki ele almıştır. Ekonomik özgürlükler için The Heritage Foundation’dan alınan ekonomik özgürlük endeksi kullanılırken, yoksulluk oranları için Dünya Bankası’ndan alınan günde 1,90; 3,20 ve 5,50 doların altında bir gelirle çalışanların sayısı kullanılmıştır. Çalışmada göre ekonomik özgürlük endeksi daha düşük yoksulluk oranları ile ilişkilidir. Ekonomik özgürlük endeksinin alt bileşenlerinden olan hükümetin şeffaflığı ve ticari özgürlüğün de daha düşük yoksulluk oranlarıyla ilişkili olduğu görüşülmektedir.


3. Veri ve Yöntem


Ekonomik özgürlük endeksi “0” ile “100”, insani gelişme endeksi ise “0” ile “1” arasında değer alır. Ekonomik özgürlük endeksi değer 100’e yaklaştırıca ekonomik özgürlüğün arttığını ifade ederken, insani gelişme endeksi değeri de 1’e yaklaştırıca o ülkedeki sosyo-ekonomik gelişmişliğin arttığı yani yoksulluk düzeyinin azaldığını ifade etmektedir. Aşağıdaki tabloda görülebileceği gibi logaritmasa alınan değişkenlerden “lnhdi” insani gelişmişliği, “lnefi” ise ekonomik özgürlükleri temsil etmektedir.
Tablo 1: Veri seti

<table>
<thead>
<tr>
<th>Değişkenler</th>
<th>Değişkenlerin Kısaltması</th>
<th>Veri Kaynağı</th>
</tr>
</thead>
<tbody>
<tr>
<td>İnsan gelişmişlik endeksi</td>
<td>lnhdi</td>
<td>UNDP</td>
</tr>
<tr>
<td>Ekonomik özgürlük endeksi</td>
<td>Inefi</td>
<td>The Heritage Foundation</td>
</tr>
</tbody>
</table>

Ekonometrik analiz için EViews 10.0 paket programından faydalanılmıştır. Toda – Yamamoto nedensellik testi kullanılarak ekonomik özgürlükler ile insan gelişmişlik (yoksulluk) arasındaki nedensellik ilişkisi analiz edilmiştir.

4. Ampirik Analiz

Çalışmanın uygulama kısmında öncelikle serilerin durağanlığı test edilmiştir. Toda – Yamamoto nedensellik testinin uygulanabilmesi için birim kök testinin sonuçuna göre maksimum bütünleşme derecesi belirlenir (Yenilmez & Erdem, 2018, s. 16). Tablo 2’de ADF birim kök testi sonuçları yer almaktadır.

Tablo 2: Birim kök testi sonuçları

<table>
<thead>
<tr>
<th>Değişken</th>
<th>ADF Birim Kök Testi</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnhdi</td>
<td>-4.270 (0.015)**</td>
</tr>
<tr>
<td></td>
<td>-2.992 (0.155)</td>
</tr>
<tr>
<td>Inefi</td>
<td>-1.439 (0.546)</td>
</tr>
<tr>
<td></td>
<td>-4.808 (0.000)*****</td>
</tr>
</tbody>
</table>

Tabloda yer alan parantez içindeki değerler olasılık değerlerini göstermektedir. ** ve *** sırasıyla %5 ve %1 düzeyindeki istatistiksel anlamlılığı ifade eder. ADF birim kök testi sonuçlarına göre lnhdi’nin seviyede durağan olduğu, Inefi’nin ise birinci farklı durağan hale geldiği görülmüştür. Buradan maksimum bütünleşme derecesini gösteren d_max değerinin “1” olduğu sonucuna ulaşılmıştır.


Tablo 3: VAR modelinde optimum geçikme uzunluğu

<table>
<thead>
<tr>
<th>Lag</th>
<th>LogL</th>
<th>LR</th>
<th>FPE</th>
<th>AIC</th>
<th>SC</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>125.8245</td>
<td>122.4982*</td>
<td>1.03e-07*</td>
<td>-10.41952*</td>
<td>-10.12331*</td>
<td>-10.34503*</td>
</tr>
<tr>
<td>2</td>
<td>127.4301</td>
<td>2.512980</td>
<td>1.28e-07</td>
<td>-10.21131</td>
<td>-9.717616</td>
<td>-10.08715</td>
</tr>
</tbody>
</table>

Tablo 3’te görüleceği üzere bütün bilgi kriterlerine göre uygun geçikme uzunluğu “1”dir. Ancak “k” değerinin “1” olarak ele alınabilmesi için VAR modelinin istikrar koşulunu sağlaması gerekir. Bu çerçevede modelde otokorelasyon ve değişen varyans olması olması beklenir.
Tablo 4: Otokorelasyon ve değişen varyans testi sonuçları

<table>
<thead>
<tr>
<th>LM Otokorelasyon Testi</th>
<th>Gecikme Uzunluğu</th>
<th>LM Test İstatistiği</th>
<th>Olasılık Değeri</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.363</td>
<td>0.669</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>White Değişen Varyans Testi</th>
<th>Gecikme Uzunluğu</th>
<th>Test İstatistiği</th>
<th>Olasılık Değeri</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>26.499</td>
<td>0.328</td>
<td></td>
</tr>
</tbody>
</table>

Tablo 4'te yer alan bilgilere göre kurulan VAR modeli istikrarlı bir modeldir. Olasılık değerlerinin 0,05'ten büyük olması sebebiyle sıfır hipotezleri kabul edilir. Bu da modelde otokorelasyon ve değişen varyans olmadığı anlamına gelmektedir.

Belirtildiği üzere, Toda – Yamamoto nedensellik testinin uygulanabilmesi için uygun gecikme sayısına en yüksek entegre olma derecesine eklenir. Bu doğrultuda “k+d_{max}” 2 değeri alacaktır. Sız konusu durum göz önünde bulundurularak gerçekleştirilen nedensellik testinin sonuçları tablo 5'te yer almaktadır.

Tablo 5: Toda – Yamamoto nedensellik testi sonuçları

<table>
<thead>
<tr>
<th>Nedensellik Yönü</th>
<th>Test İstatistiği</th>
<th>Olasılık Değeri</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnfei =&gt; lnhdı</td>
<td>0.033</td>
<td>0.854</td>
</tr>
<tr>
<td>lnhdı =&gt; lnfei</td>
<td>0.078</td>
<td>0.779</td>
</tr>
</tbody>
</table>

Elde edilen sonuçlara göre ekonomik özgürlüklerden yoksullağa doğru bir nedensellik ilişkisi yoktur. 0,05’in üzerinde yer alan olasılık değerleri “nedensellik yoktur” şeklindeki sıfır hipotezini kabul ettiği ifade eder. Aynı şekilde yoksullukta ekonomik özgürlüğe doğru bir nedensellik ilişki de yoktur. Zira söz konusu olasılık değerine göre sıfır hipotezi kabul edilmektedir.

4. Sonuç


Çalışmanın sonuçlarına göre Türkiye’nin, yoksulluksa mücadele adıne ekonomik özgürlükleri artırmaya yönelik politikalara ağırlik vermek yerine eğitim ve sağlık harcamalarını arttırmamasının daha etkili olacağını yorumu yapılabilir ( Çağışkan, 2010, s. 9). Ek olarak dolaylı ve dolaysız vergilerle insani gelişmişlik arasında var olan nedensellik ilişkisi dikkate alındığında ikinci gelir dağılmının etkisi bir şekilde kullanılmaydı insani gelişmişliği olumlu yönde etkileyebilir (Şaşmaz & Emre, 2018).
Kaynakça


The Heritage Foundation, *Economic Data and Statistics on World Economy and Economic Freedom (heritage.org)*

UNDP, *Human Development Data Center | Human Development Reports (undp.org)*
