



The 7th InTraders International Conference on International Trade Proceeding Book

7. InTraders Uluslararası Ticaret Kongresi Tam Metin Kitabı

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PhD. Lect.	Safiye Süreyya Bengül	Kütahya Dumlupınar University
PhD. Lect.	Vildan Saba Aktop	Afyon Kocatepe University
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Dr.Resch.Asst.	İnanç Kabasakal	Ege University
Dr.Resch.Asst.	Nilay Bıçakcıoğlu	Dokuz Eylül University

Statement of Responsibility

The legal and scientific responsibility of the manuscripts belongs to the authors.

The 7th InTraders International Conference on International Trade provides Republic of Turkey, Council of Higher Education "International Conference" criteria. The 7th InTraders International Conference on International Trade was held on 25-26 May 2022, at International Balkan University, Skopje, North Macedonia

InTraders declare that researchers from Romania, North Macedonia, Kosovo, Azerbaijan, Pakistan, Slovakia, India, Indonesia, Egypt and Turkey

The 83 % of studies is presented by foreign authors out of Turkey.

Appreciation

I am gratified to have the honor to put forward the vote of thanks to all the Congressional Coordinators, Congressional Committees, and Authors who provided intensive work performance for the Conference.

Special thanks to whom joined the opening ceremony and keynote speech participants.

OPENING CEREMONY

Prof. Dr. Shener BILALLI, Vice-Rector, International Balkan University, North Macedonia

Prof. Dr. Shyqeri Kabashi, Rector, College Biznesi, Kosovo

Kursat Capraz, InTraders Academic Platform, University of Sakarya, Turkey

KEYNOTE SPEAKERS

Prof. Dr. Berna Balci Izgi, Gaziantep University, Turkey

Prof. Dr. Adriana Burlea-Schiopoiu, University of Craiova, Romania

Asst. Prof. Dr. Liza Alili Sulejmani, International Balkan University, North Macedonia

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Thank you for your great work, dear friends. Last but not least, my little motivators, Emre and Yunus ÇAPRAZ, are great....

In the upcoming Spring 8th Conference, The 8th InTraders International Conference On Social Sciences and Education, 24-28 October 2022, İstanbul, Turkey. Topics; Social Sciences Titles: Sociology, Psychology, Communication Studies, Journalism, Public Relations, Advertising, Social Work, Philosophy, Economics, Business Administration,

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A beautiful congress with more than international congress criteria is waiting for all of you.

I wish to meet you all at these new international conferences...

Kürşat ÇAPRAZ

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7TH INTRADERS INTERNATIONAL CONFERENCE ON INTERNATIONAL TRADE, 25-26 May 2022, International Balkan University, North Macedonia			
25 May 2022			
09:00-10:00	REGISTRATION		
10:00-10:30	OPENING CEREMONY Prof. Dr. Mehmet Dursun Erdem, Rector, International Balkan University, North Macedonia Prof. Dr. Shyqeri Kabashi, Rector, College Biznesi, Kosovo Kursat Capraz, InTraders Academic Platform, University of Sakarya, Turkey		
10:30-11:00	KEYNOTE SPEAKERS Prof. Dr. Berna Balci Izgi, Gaziantep University, Turkey Prof. Dr. Adriana Burlea-Schiopoiu, University of Craiova, Romania Asst. Prof. Dr. Liza Alili Sulejmani, International Balkan University, North Macedonia		
COFFEE BREAK 11:00-11:30			
SESSION	AUTHOR	TITLE	AFFILIATION
Session 1 11:30-12:30	31-Luljeta SADIKU	The Effects of Money Supply on Inflation Rate for the case of North Macedonia	International Balkan University, North Macedonia
	5-Volkan HAN	Testing the Trade-Led Growth Hypothesis, Evidence from Selected Developing Countries	Nevsehir Hacı Bektas Veli University, Turkey
	32-Muhamet Racaj, Senat Saliu, Vlera Fejzulluhu	ROLE OF STATE PROSECUTOR IN CRIMINAL PROCEDURE FOR JUVENILE IN THE REPUBLIC OF KOSOVO	College “BIZNESI”, Republic of Kosovo, FON University, North Macedonia, College “BIZNESI”, Republic of Kosovo
	14-Andrijana Bojadzievska - Danevska	THE IMPORTANCE OF SCENARIO PLANNING FUNCTIONS IN THE CONTEMPORARY ENVIRONMENT	International Balkan University, North Macedonia
	12-Berna BALCI İZGİ	The Impact of Startup Costs & Advanced Education on Employment: OECD in (2012-2021) Period	Gaziantep University, Turkey
Session 2 12:30-13:30	13- Violeta Madzova, Liza Alili Sulejmani	Does Economic Freedom impacts the growth of developing economies? - Evidence from Western Balkans.	International Balkan University, North Macedonia
	15-Abil Baush	ROLE OF STATE PROSECUTOR IN CRIMINAL PROCEDURE FOR JUVENILE IN THE REPUBLIC OF KOSOVO	International Balkan University, North Macedonia

	16-Besa Ramadani Mehmedi	The impact of social transfers on Inequality (GINI), Human development Index (HDI) and poverty – Case of North Macedonia	University of Tetovo, North Macedonia
	17-Kristina Velichkovska	THE COMPETITIVENESS POSITION OF THE REPUBLIC OF NORTH MACEDONIA: OPPORTUNITIES AND WEAKNESSES	International Balkan University, North Macedonia
	18-Fjolla Ejupi	Children Violence – Sexual abuse (Pedophilia)	South East European University, North Macedonia
Session 3 13:30-14:30	9-Tirana Ameti	Employee satisfaction and Work motivation	International Balkan University, North Macedonia
	19 Amir Imeri, Muhamet Gërvalla, Sara Sadiki	Economic impact of COVID-19 in North Macedonia	UBT – Higher Education Institution, Kosova- South-East European University, N. Macedonia
	20 Shkelqim Veseli, Imerlije Saliu Fetai	Government policies in the RNM, a stabilizing factor (destabilizing) towards civil society	South East European University, North Macedonia
	22- Imërlije Alili, Afrim Alili	THE NEXUS BETWEEN ECONOMIC AND SOCIAL FACTORS AND ENVIRONMENTAL PERFORMANCE – CASE OF THE REPUBLIC OF NORTH MACEDONIA	College “BIZNESI”, Republic of Kosovo
	23- Enver GËRGURI	CURRENT SECURITY SITUATION IN THE WESTERN BALKANS	College “BIZNESI”, Republic of Kosovo
	6-Blerta Kondri	Economic effects of Covid - 19 on Western Balkan countries.	University “Mother Teresa”, North Macedonia
Session 4 14:30-15:30	24-Arta Thaci	Causal relationship between FDI and economic growth: case of the Republic of North Macedonia	University of Tetovo, North Macedonia
	21-Madiha Asghar, Aisha Azhar, Sobia Hassan	Patient Satisfaction and Perceived Healthcare Services: An Implementation Perspective of National Health Vision 2016-2025	University of Management and Technology, Lahore, Pakistan, Lahore College for Women University, Lahore, Pakistan
	11- Yunus Emre Topcu	The Impact of the Covid-19 Pandemic on the Global Competitiveness of Developed and Developing Countries in the Automotive Industry	Bartın University, Turkey

	25-Namita Mishra, Leena Jeneffa	AN EMPIRICAL ANALYSIS ON IMPACT OF SELF EMPLOYMENT PROGRAMMES ON EMPLOYMENT GENERATION, LIVING STANDARDS AND SAVING HABITS OF SHG MEMBERS: A CASE STUDY ON MAA DAKHINAKALI SHG	Tecnia Institute of Advanced Studies, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, India
	26-Bobin Chandra	STUDY ON THE CHALLENGES FACED BY STARTUPS IN KERALA	VEL TECH RANGARAJAN Dr. SAGUNTHALAR & DINSTITUTE OF SCIENCE AND TECHNOLOGY CHENNAI, India
	27-RAHUL CHAUHAN	Effects of Digital Technology on Mental Health of Children	Parul Institute of Business Administration, India
Session 5 15:30-16:30	28-Dogaru Mirela, Mandricel Diana Andreea, Vatuiu Teodora	Theories of business impact factors	Titu Maiorescu" University of Bucharest, Romania
	29-Asena BOZTAŞ	WOMEN'S EMPLOYMENT IN THE WORLD AND IN TURKEY	Sakarya University of Applied Sciences, Turkey
	7- Nadia Elalfy	Social insurance in the digital age	Faculty of Law, Alexandria University, Egypt
	30-HATİCE SARIALTIN	A qualitative Research on Risk Management Strategies in Turkish Ports	Sakarya University of Applied Sciences, Turkey
	Talha FIRAT	The Philosophical Background of the Economic Program Implemented in Turkey	Düzce University, Turkey
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10:00-10:30	KEY SPEAKERS 3-Prof. Dr. Tulus Suryanto, Universitas Islam Negeri Raden Intan Lampung, Indonesia Assoc. Prof. Dr. Muhammad Fiaz, Lahore College for Women University, Lahore, Pakistan Assoc. Prof. Dr. Omar Khalid BHATTI, Istanbul Medipol University, Turkey		
Session 1 10:30-11:30	Rashmi Gujrati Hayri Uygun Uma Gulati	DRIFTS IN GREEN MARKETING IN DEVELOPING ECONOMIES: PERSPECTIVE OF CUSTOMER AND CORPORATES	CT University, Ludhiana, India Recep Tayyip Erdogan University, Rize Turkey Gitarattan International Business School, New Delhi India
	Maysam Shafiee Roodposhti, Asef Karimi, Somayeh Hadi Marandgani, Ziba Hashemi	Identification of Silk Road Development Strategies with the Combined Approach of SWOT and SRP	University of Tehran, Iran, Science & Art University, Iran
	33-Aliye Cokgezer	The effects of FDI on economic growth: evidence from Turkey	International Balkan University, North Macedonia

	34-Hakan Murat ARSLAN	Determining the Most Appropriate Laptop Model for Undergraduate Students with Multi Criteria Decision Making Methods	Düzce University, Turkey
	35-Dogaru Mirela, Mandricel Diana Andreea, Vatuia Teodora	USE OF BUSINESS INTELLIGENCE IN A COMPETITIVE STRATEGY DEVELOPMENT OF COMPANIES	Titu Maiorescu" University of Bucharest, Romania
Session 2 11:30-12:30	8- Javadxhan Gasimov	NAKHCHIVAN CORRIDOR: NATIONAL ECONOMIC EFFICIENCY AND GLOBAL PERSPECTIVES	Nakhchivan State University, Azerbaijan
	36-Pınar KOÇ Muhammed TÜMAY	Are Energy Price Shocks Temporary? An Analysis Based on Fourier ADF and Fractional Fourier Unit Root Tests	Gumushane University, Gumushane, Turkey
	37-Dogaru Mirela, Mandricel Diana Andreea, Vatuia Teodora	The Romanian service sectors. The evolution of the service sector in Romania	Titu Maiorescu" University of Bucharest, Romania
	10-Hina Zahoor, Nasir Mustafa	The association between healthcare staff personal branding and patients' perceived service quality: An evidence based research of the healthcare sector in Pakistan	Istanbul Gelisim University, Turkey
Session 3 12:30-13:30	38-Oltjon Bejaj	THE EFFECTS OF ECONOMIC FREEDOM ON THE ECONOMIC GROWTH: evidence from developing economies of Southern and Central Europe region	International Balkan University, North Macedonia
	39-Anila Bejaj, International Balkan University	IMPACT OF FDI AND TRADE OPENNESS ON THE ECONOMIC GROWTH: evidence from developing countries of Europe and Central Asia	International Balkan University, North Macedonia
	40-Hakan Murat ARSLAN	Determination of the Most Appropriate Wooden Door Type with Multi Criteria Decision Making Methods in the Furniture Manufacturing Industry	Düzce University, Turkey
	Asena BOZTAŞ	WOMEN IN MIGRATION AND MIGRANT POLICIES: SYRIAN MIGRANT WOMEN IN TURKEY AND THE WORLD	Sakarya University of Applied Sciences, Turkey

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**Determinants of female employment for OECD (2012-2021):
A comparison of random effects 2 stage least squares estimators**

Berna BALCI İZGİ*

Abstract

Increasing female employment is important in terms of ensuring sustainability in economic development. This is a multifaceted issue, and there are many social and economic aspects that pose an obstacle. The global dominance of a “single market” concept or a global village whatsoever greatly limits the decision-making power of states on their own. New technologies change the nature of the workforce, and geopolitical risks increase migration. As a result, an increasingly mobile workforce emerges around the world. Therefore, the division of labor and specialization has become more important than ever before for both men and women.

In a dynamic economy, establishing and operating a new business is seen as areas that need to be protected and supported for countries. For a new business start-up, fast and easy growth can happen in one side, but a collapse and quick exit also can happen on the other side. Social media and digital marketing, artificial intelligence are some tools easens the process for firms. New businesses often bring new ideas, technologies, and products to society. Successful new business processes are an important activity that fosters learning and serves economic growth by creating new jobs. An entrepreneur is a person who calculates in advance the results that may arise at the end of the activity he started and does not hesitate to take the risk that will arise as a result. Company start-up costs affect overall employment patterns through the birth and even death of new firms.

In this study, the factors affecting the female employment status of 20 founder OECD countries examined for (2012-2021) period with the instrument variables method. Four different estimation results were found close to each other. It has been determined that higher education has a significant effect on the variables discussed. Startup costs have a negative effect on female employment while a set of education variables have a positive effect.

Keywords: Female employment, startup costs, higher education, EC2SLS and GS2SLS

JEL: J21, C13

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Introduction

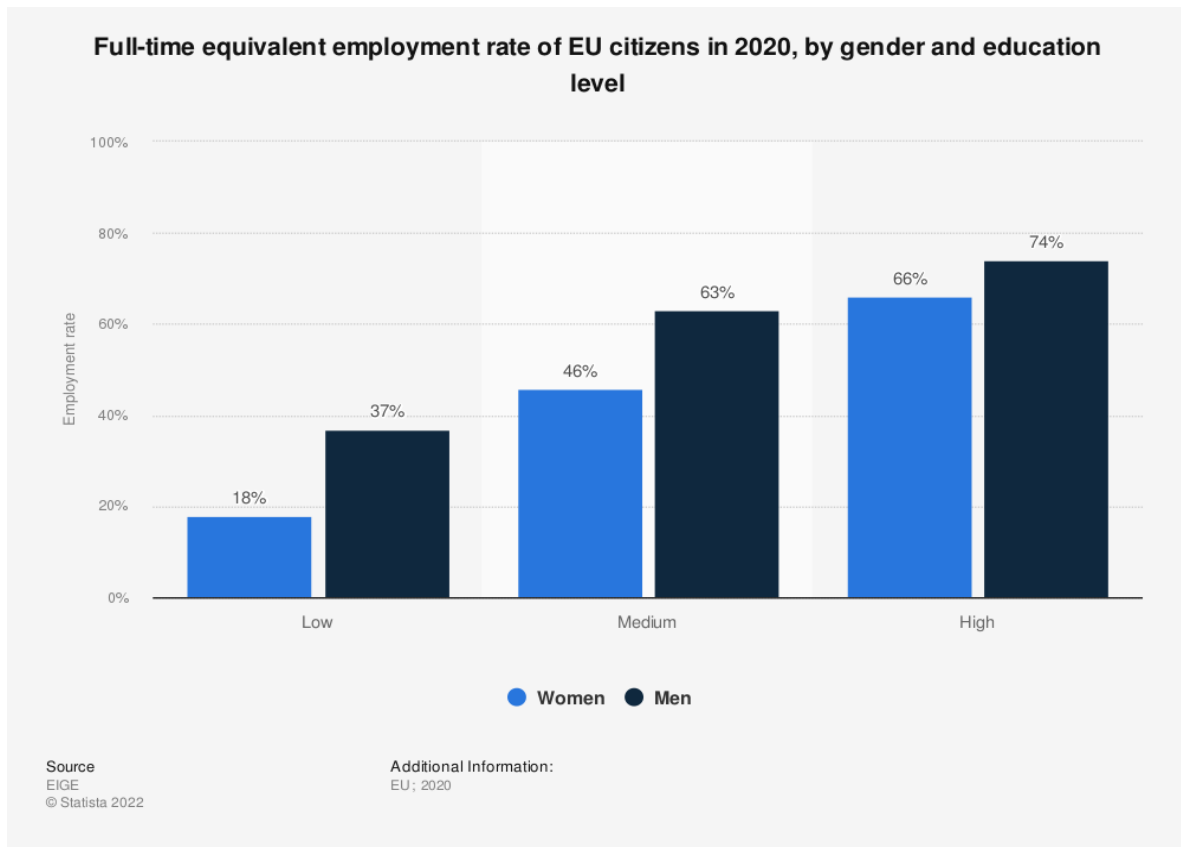
Factors affecting female employment have been the subject of many studies. Many variables such as working style, startup costs, education level, etc. are effective in this regard. Considering the changing dynamics of the labor market, it can be said that higher education has a crucial impact on female employment. Since the economic growth targets of the countries and the importance of the female workforce to achieve these targets are evident, domestic jobs will shift to the market with the increase in female employment included in the growth calculation.

According to Schumpeter's theory, entrepreneurship developed in Capitalist societies is not defined as the behavior of only certain classes today. Today, entrepreneurship is a way of working and a development process in which people gain the freedom of their individual wealth by moving away from the addiction culture. It satisfies the higher needs of individuals such as self-actualization and independence. Ensuring equal opportunity in the education system and giving importance to enriching the quality of the workforce has increased the number of entrepreneurs. Studies have revealed a clear idea of the existence of a strong relationship between education level and entrepreneurship. Successful entrepreneurship examples in developed countries create the quality of the workforce, the wealth of intellectual capital and the wealth of entrepreneurial culture.

The global economy witnesses a change and transformation of the working life due to the financial and economic crises experienced for various reasons. In this change and transformation, the working life, employment and unemployment levels of millions of employees are being restructured. The main reasons for this are; wars, migrations, epidemics, etc. Since the global financial crisis in 2008, there have been serious production declines and deindustrialization in many countries on the one hand, and new jobs and occupations have been created on the other. The form in which the cyclical changes with events such as significant employment decreases, the Syrian Civil War, the Coronavirus Pandemic, the Ukraine-Russia War, etc.

Today OECD, which attaches great importance to the issue of female employment, offers policy recommendations to reduce gender inequality in member countries under the name of "Gender Initiative". The factors that determine the formation and structure of employment are also changing. So, the aim of this study is to examine the factors that determine female employment.

The chart below shows full-time employment rates for EU citizens by education level in 2020. It is observed that as the level of education increases, female employment rates increase.



Source: Gender Equality Index 2020 - Digitalisation and the future of work, page 29

2.Literature

The issue of female employment has come a long way since Mincer's main article in 1962 discussing the labor force participation of married women. The literature summary of this study has been tried to be formed from a two-way perspective. Firstly, entrepreneurship and startup costs, and secondly, its impact on education and women's employment. Today's understanding of entrepreneurship appears to be focused on a multipolar system that includes many small firms and other individual networks. Individual entrepreneurship profiles are becoming more and more important everyday. In the new entrepreneurship approach, the multipolar system, which includes company networks, comes to the fore. Here are the leading names in entrepreneurship theory (Chell et al., 1991):

1. German School: Joseph A. Schumpeter, von Thünen (considered neo-classical).
2. Chicago School: Frank H. Knight, Schultz,
3. Austrian School: Mises. Hayek, Israel M. Kirzner, G. L. S. Shackle, and Ludwig M. Lachmann.
4. Drucker, Baumol, and Shapero

The main feature of the majority of these economists is that they separate from the "perfect competition market" approach of neo-classical economics and explain entrepreneurship within the framework of the approach called "market process" theory.

Kirzner's approach goes beyond Schumpeter's innovative approach and emphasizes the structure of Capitalism that provides the balance, not the disrupter. According to Kirzner, the difference that distinguishes an entrepreneur from others is that he sees profit opportunities

earlier. Baumol (1990), who initially followed a Schumpeterian line, argued that microeconomics excludes entrepreneurship and that entrepreneurship can only be understood with examples. Baumol's studies make an important contribution to the definition of which activity of entrepreneurship (Oğuz, 2005: 153).

The entrepreneurial process is a social construct. This social structure also affects the decisions to be taken after becoming an entrepreneur. The fact that the projects developed to seize an economic opportunity are subject to excessive and inefficient regulations in the realization of the project can end the initiative before it even starts. Many startups give up their projects and enter the wage-worker sector.

Due to bureaucratic processes that differ from country to country, starting a company is quick and cheap in some countries, while in others it is slower and more costly. Innovation, development, etc. in entrepreneurial activities in countries with intensive and long procedures opportunities for implementation of plans are decreasing (Griffiths, et al. 2009). Shaw et al. (2008) stated in his study that tax calculation and the tax payment process constitute a significant part of the tax compliance costs, and argued that the prolongation of this process increases the tax compliance cost.

Djankov et al. (2002) in his study of entry barriers in 75 countries, he found that the cost of legally starting an enterprise makes entry more difficult. Radulescu, et al. (2016) in their study for Bulgaria and Romania, concluded that bad laws, low regulations and ineffective management lead them to speed up bureaucracy in different ways for investors. Examples of these different ways are bribery. Klapper et al. (2006) concluded that the high number of bureaucratic regulations reduces the rate of starting a new business. Audretsch et al. (2002) concluded that heavy regulations on hiring and firing in the labor market affect the entrepreneur negatively by making them weak. If bureaucracies are implemented without creating any burden on the establishment and activation of enterprises, they will not constitute an obstacle to their entrepreneurial potential and the related economic development. Otherwise, there is a possibility of negatively affecting entrepreneurial intentions (Svenson, 2008).

Riddell and Song(2011) have found that education increases re-employment rates of unemployed. On the other hand unemployment is cause and the result of higher education for Turkey (Erdem & Tuğcu,2012:306). Harvey (2000) study investigating 'employability in higher education' stated that flexible organizations, flexible and increasingly empowered employees will be needed, which requires transformative and empowering learning.

The study by Dollar&Gatti (1999) have found that less human capital investment in women is not an effective economic choice. Besides gender inequality negatively affects economic growth. Klasen (2000) has shown that gender inequality in education, reduces the average quality of human capital. It has a direct impact on economic growth. Luci (2009) paper for 184 countries has stated that women's participation in the labor market has a positive effect on growth. However economic growth has no clear effect on female labor force participation. In the study titled "Female Education, Labor Force Participation and Choice of the Employment Type: Evidence From Uganda" conducted by Bbaale and Mpuga in 2011, multiple qualitative preference models method was used. As a result of the study, it has been determined that the factor of women's educational status is in the direction of increasing women's employment. In the Osuna (2018) study, with the household labor market participation model method, the change in age, education level and tax rates in female labor force participation found to be important factors. In the study of Kılıç and Öztürk (2014), the effects of education, economic and marital status, place of residence and gender perception factors on employment has been found to be effective on employment. Guris and Kaya, in their 2019 study, pointed out the

difficulty of using panel data in labor market surveys in Turkey and mentioned the benefit of using a pseudo panel data set. One of the findings of the study is that the return of age on wages is estimated with an upward deviation (6%) in the equation estimated from the cross-sectional data, while the return on education is estimated as a downward deviation (2%). In the study of Güriş, Topdağ and Bozkurt (2019), in their study for female employment in OECD countries for (2004-2016) period examined with an unbalanced panel logit model. However, in the study, which mentioned the disadvantage of unbalanced panel qualitative preference models being a still developing method, it was determined that when there is a one-unit increase in women's participation in higher education, the probability of women joining the workforce is approximately 96 times higher than the probability of not participating.

The Effects of Cyclical Fluctuations on Employment

The first effect of globalization on employment can be expressed as the interruption of the power of states to act individually. The dominance of the single market understanding at the global level has greatly limited the decision-making power of states on their own. New technologies have changed the nature of the workforce. There has been some shifts in some sub-sectors. Some work that were previously in decline has been revived, such as Gaming and Edtech (GSER,2021:37). The cyclical fluctuations such as pandemic has had a significant impact on the way work is done. For example, much more business is done online, through social media, or digitally, as the way goods and services are sold.

This position of global capital, which produces in countries where the supply of labor is cheap, is rapidly changing when labor costs increase. The factors affecting entrepreneurship are as follows (Öztürk, 2008);

- The legal and institutional basis that demonstrates that the property rights regime is sound and transparent,
- An architecture that makes it possible to make a profit dominates the economy.
- Structurally; elimination of rigidities in labor markets, production of tax structure
- and employment should be removed from a punitive nature, market entry and exit should be made more transparent and
- to be free,
- Establishing enforcement-bankruptcy laws in a way that does not hinder competition,
- Commercial laws must be of a nature that supports entrepreneurship, partnership and competition.

According to the Global Startup Ecosystem Report 2021, the sectors in the growth phase are: agtech & new food, blockchain, advanced Manufacturing & Robotics, aI & big data, fintech. Sub-sectors in mature phase are; cybersecurity, edtech, cleantech, life sciences, gaming and declining sub-sectors are adtech and digital media.

When product-market harmony is not realized, many enterprises can also result in bankruptcy. The strongest companies and the strongest ecosystems are built by founders who can juggle two opposing ideas. Entrepreneurial careers often go in cycles, and so does the growth of ecosystems. Today, "performance" classification, which measures the size of the total startup values formed depending on the exits in the ecosystem and the amount of funding is defined in European ecosystems. One of the indicators of emerging ecosystems is "Access to finance". For instance Istanbul has created an ecosystem value of 4 billion dollars in the last

2.5 years, 181 million dollars of which is early stage funding (<https://startupgenome.com/report/gser2021>).

Methodology and the data

Spatial panel data models are very important in regional science and geography (Baltagi, Kelejian and Prucha, 2007). The general iv model is estimated using the two stage least squares estimator. The assumptions of instrument relevance and instrument exogeneity are the same with simple regression model with a single endogenous regressor. The model considers the instrumental variable (IV) estimation of the spatial autoregressive (SAR). The generalized spatial two stage least squares (GS2SLS) estimator is studied where the number of instruments increases with the sample size. The model is a general form of panel data regression model with OLS;

$$y_{ij} = \alpha_0 + \alpha_1 x_{1ij} + \alpha_2 P_{ij} + s_{1ij} \quad (1)$$

one can get a biased and inconsistent results with OLS, because P_{ij} could be correlated with the error s_{1ij} . Solution to this problem is instrumental variables (iv)- 2SLS procedure. In this procedure one can specify a model for P_{ij} :

$$P_{ij} = \beta_0 + \beta_1 x_{1ij} + \beta_2 Z_{ij} + s_{2ij} \quad (2)$$

In equation (2), Z_{ij} is the instrumental variable and has such characteristics:

- It effects P_{ij}
- It does not effect Y_{ij} directly, only through P_{ij}
- It is not effected from other factors

In stage 2;

$$P_{ij} = \hat{P}_{ij} + s_{2ij} \quad (3)$$

If we substitute P_{ij} by it's predicted value $\hat{P}_{ij}$ in the (1) equation we get:

$$y_{ij} = \alpha_0 + \alpha_1 x_{1ij} + \alpha_2 \hat{P}_{ij} + s_{1ij} \quad (1')$$

Estimation of the modeified equation (1') with OLS gives consistent results for the model.

$$Lemp_{ij} = \alpha_0 + \alpha_1 Lcost_{1ij} + \alpha_1 Lpart_{1ij} + \alpha_2 LFPRbas_{ij} + \alpha_2 LFPRadv_{ij} + s_{1ij} \quad (1'')$$

The variables of the model are taken from Worldbank and consists of 20 OECD countries for the period of (2012-2021) shown below.

Lemp	Employment to population ratio, 15+, female (%) (national estimate)
LFPRbas	Labor force with basic education, female (% of female working-age population with basic education)
LFPRadv	Labor force with advanced education, female (% of female working-age

	population with advanced education)
Lcost	Cost of business start-up procedures, female (% of GNI per capita)
Lpart	Part time employment, female (% of total part time employment)

GS2SLS random-effects IV regression				Baltagi EC2SLS random-effects iv regression		
Lemp	Coef	Robust Std.Err.	P	Coef	Robust Std.Err.	P
LempL1.	0.751	0.091	0.000	0.941	0.011	0.000
LFPRbas	0.046	0.037	0.220	0.009	0.002	0.000
LFPRadv	0.270	0.160	0.091	0.073	0.033	0.028
Lcost	-0.016	0.009	0.076	-0.003	0.001	0.030
Lpart	0.321	0.130	0.014	0.095	0.021	0.000
constant	-1.671	0.717	0.020	-0.503	0.138	0.000
Wald chi2(5)=1507.78				Wald chi2(5)=57266.86		
Prob>chi2=0.0000				Prob>chi2=0.0000		
Instruments:LFPRbas,LFPRadv,Lcost,Lpart,yeardummies(the same for both)						

Results and Discussion

In this study, the factors determining women's employment, which is one of the important variables in determining the development levels of countries and sustainable development policies, are discussed. For this purpose, the factors affecting the female employment status of 20 OECD countries for the period of 2012-2021 were examined in a panel data environment with the instrument variables method. The two different estimation results were found to be close to each other. In order to overcome the problem of the endogeneity of the variables, GS2SLS and EC2SLS estimation were used. It provides a model in which both EC2SLS and GS2SLS are consistent and EC2SLS is asymptotically more efficient than GS2SLS (Baltagi and Liu, 2009). Higher education has a significant effect on the variables discussed. It is seen that both iv random-effect and Baltagi EC2SLS estimation results are close to each other.

Within a series of variables related to the labor market, the effects of education on employment, including basic level and advanced level, as well as the effects of part-time work and the start-up costs have been investigated. Higher education has 0.27% effect on female employment in G2SLS while it's coefficient is 0.07 in EC2SLS. Part time employment also has a 0.32% positive impact on female employment in G2SLS and it is 0.09 in EC2SLS. Other variables are close in their signs and magnitudes.

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The impact of Budget Deficit on economic growth in the Republic of North Macedonia

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Abstract

The overall aim of this research is to observe the impact of budget deficit on economic growth in the economy of the Republic of North Macedonia. The research methodology consists on simple regression analyses. For this purpose, annual quantitative data are used obtained from National Bank of the Republic North Macedonia and covering the period 1993–2020. The outcomes detect that there is a positive and statistically significant relationship between the budget deficit and the economic growth of the Macedonian economy. Findings have shown that budget deficit have a positive influence on economic growth. The research also contributes in the macroeconomic aspect to the opening of discussions among the relevant stakeholders, including those coming from the policy-making area.

Keywords: economic growth, budget deficit; deficit financing; GDP.

JEL Code: I20

INTRODUCTION

Approaches regarding the sizing on budget deficits, the means of finance and especially the size of public debt have a series of specificity colors for different economies, especially in the current economic downturn. The globalization allows the liberalization of capital flows, of the investment in the context of the intensified international competition. This makes economic developments in one country to influence and be influenced by economic developments in other countries. Thus, the effects propagated by the current crisis in various economic sectors affects the confidence in the financial system, in the market mechanisms, leading to the installation of uncertainty about the future in the economy. All these may lead to widening the budget deficit, which requires the identification of new opportunities for the income structure and budget expenditure.

The current global economic crisis has important consequences regarding the relevance of the economic theories. This crisis involves giving up the paradigms of modernity obsessed by immediate efficiency, by the immediate financial gain and requires a review of the economic theories and processes (Nenovski at al. 2011).

According to the dictionary of economics the budget deficit is a negative balance of the public budget between the received income and the expenditures made by the end of the budget execution (Strategic planning of Ministry of Finance 2015-2017, p.5). The deficit which is based on the difference between the total public expenditure incurred by payments through transfers and the ones for purchase of goods and public services and the amount of tax income is considered the primary deficit.

If to the primary deficit there are added the interest payments on the state loan, noted in the budgeted as public expenditure, there is obtained the total deficit.

1. LITERATURE REVIEW

Budget deficit is the economic challenge of many countries in recent decades. This problem is more widely seen in developing countries, as they are deprived of efficient private sector. This leads to extending governmental activities and increasing government economic share in such countries such that a main share of total demand is assigned to expenditure and government investment. In contrast, in revenue side, government lacks adequate revenues to cover its huge expenses. The result of such process in these countries is nothing but permanent budget deficit. If government relies on banking resources for financing the budget deficiency, it may lead to economic inflation such that internal (domestic) imbalance would also transfer to the external economic sector, since increased government expenditure initially leads to increased growing of total demand. While, government increased expenditure at total supply side may not result in increased supply due to economy's structural problems and total supply unattractiveness. The ultimate result of these effects is emerging of inflation in the economy. In this situation, importing increases and exporting decreases. Thus, imbalanced state budget transferred to the external part causing current account deficit in these countries. Afonso and Tovar Jalles (2011) in a study examined the effect of budget deficit (from state debt point of view) and total efficiency of production factors on the economic growth of 155 countries selected around the world. Research

results demonstrate that state debts have a negative, significant effect on economic growth; whereas, total efficiency of production factors has positive, significant impact. (Nenovski and Smilkovski 2021) The low and controlled budget deficit has conditioned for the state to move into reasonable frames that placed the RM in the group of low-debt countries. The maximum amount of its public debt was reached in the middle of the first decade of this century and was about 40 percent of the GDP of the country. In subsequent years it has come to its abrupt decrease after early repayment of a substantial part of the external debt of the state. (Kostadinovska-Milosovska and Petrevski 2019) The economy of the Republic of North Macedonia has suffered a lot of shocks, including the last prolonged political crisis. As a consequence of this entire period of time, there are poor economic ratios, ie negative or modest rates of growth and welfare.

2. CAUSES AND CONSEQUENCES OF THE BUDGET DEFICIT

The budget deficit has now become a common phenomenon in many countries, on the background of the public expense's amplification. In North Macedonia, the budget deficit has been lately one of the most difficult problems faced by the economic policy.

In the present circumstances of economic activity, where the financial need is greater than the available funds, the budget elaboration at all levels is one of the primary issues, in particular in keeping the principle of budget balance. In most cases, the budget balance is not achieved automatically through covering the budgetary expenses with the income expenses. In this case we can say that the budget is elaborated with the financing deficit.

When the state budget is related to an economy that ensures full use of labor, we can speak about the cyclically adjusted budget, which represents the surplus or deficit that will exist if the economy ensures the full use of labor meaning that if the national income equals with the potential national income.

The total deficit recorded in one year may be divided into two parts:

- structural deficit, which occurs when the cyclically adjusted budget is in deficit;
- cyclical deficit, which is the total budgetary deficit minus the structural deficit.

The existence of the budget deficit is due to several causes, such as: decreased production of goods and services in the economy, increased spending in order to achieve certain social programs, increasing the invisible sector activity of the economy; the increase of marginal costs of the social production, the of excessive monetary emission and which is not accompanied by economic growth. On the other hand, the budgetary income and expenditure levels are also affected by the business cycle stage. When the economy is contracting, the budget is heading towards the deficit as a result of reducing the amount of the collected income.

Regarding the acceptance or otherwise of the concept that the budget deficit is “harmful” to the economic and social life, there are some controversies over time which have varied significantly.

Basically, over time, economists' views on the effects of the budget deficits on the economic performance of a state were related to two main approaches. On the other hand, it was considered

that the deficits resulting from the reduction in marginal rates of the tax have an incentive effect on the labor productivity. On the other hand, the budget deficits have been considered a cause of the economic stagnation and its instability (Mill, 2015).

Amid the worsening economic imbalances, the proponents of the state intervention in the economic adjustment mechanisms, in particular by using an increased volume of public spending, have proposed a number of approaches which are mainly a redefinition of the concept of balanced budget and they are trying to propose a number of theories on the role of the budget deficits to stimulate the economic growth processes. Thus, even in theory and in practice, it was proposed the subordination of the financial balance in favor to the general economic equilibrium, considering that the financial balance is just one component of the latter. From this general idea the theory appeared, first formulated by William Beveridge, and called “systematic deficit theory” according to which it can be reached the overall economic balance through the budget deficit.

The theory of systematic deficit is likely to lead to a balanced economic growth, but in practice it is limited, on the one hand, by the borrowing capacity of the state, and, on the other hand, by the efficiency use of the state, on economic principles, of resources. In addition, based on the principle that the private economic decision is better than the administrative decision (for investment), it results that a fiscal policy focused on reducing the level of taxes (with favorable effects in stimulating the consumption and private investment) must be accompanied by the reduction of the volume of expenditure (mainly the function of the redistribution of subsidies) and not by their increase.

The increasingly use of budgetary levers as a means of intervention in the economy, as well as the difficulties in the annual balancing of the state budget have led to the idea that the budget should not be balanced every year, but only on one economic cycle. Because the surpluses from the favorable times are going to cover the deficits in unfavorable times, the proponents of these approaches consider the budget deficits as a means to achieve the economic balance and to revive the development process.

The tax policies proposed by the Chicago school monetarists, primarily by the American professor Milton Friedman, who focused on reducing the tax in parallel with the reduction in public expenditure aiming at the liberation of the private initiative and at the reshaping of the state's role in the economy, were applied successfully in some developed countries in the early 80s or in other countries with less developed economies in the 90s.

If there are some economies in recession, with structural problems and which must confront in parallel some seemingly contradictory aspects, such as the relative shortage of real resources in the economy – the societal mentality focused on the existence of some extensive protection systems – the sizing problem of budget deficits and of public debt is very strongly addressed and falls in a very limited budget range of options.

The sizing of budget deficits and of public debt is part of the overall budget strategy, which in very restrictive economic conditions should meet a basic choice, meaning the one for the economic development, but also to take into account the possibility of inflationary financing of government deficits.

The sustainability of the fiscal and budgetary policies is an issue extensively discussed in the specialized literature and the public decision-making process. The arguments that come to support this claim are numerous. On the one hand, it is considered that ensuring the sustainable development requires, simultaneously, economic, social development and environmental protection, and the fiscal and budgetary policies, due to their redistributive character, influence the sustainable development by the manifested effects on the economic growth or on the investment in human capital (Gupta, Keen, Clements, Fletcher, Mani, 2002, p. 1). Other economists highlight the importance of the sustainability of the fiscal and budgetary policies in achieving the economic growth and also the importance of the existence of some budgetary constraints which ensure long term sustainability. On the other hand, the international bodies such as the International Monetary Fund (IMF) or The Organization for Economic Cooperation and Development (OECD) have paid attention to these issues, as well to analyzing methods and monitoring of the sustainability of fiscal and budgetary policies or of public debt as the industrialized countries are increasingly confronted with difficulties more and more generated by increasing levels of debt (Horne, 1991, pp. 1-5). However, the problem of unsustainable or excessive indebtedness has not been fully resolved. In most Member States of the European Union the aspects about the sustainability of public finances are already formed by priority public policy. This is because the debt policy is quite costly in terms of the interest expenditure and of the reallocation of public funds between different categories of expenditure. Moreover, in the current context it is required a reform of welfare state since the majority of EU countries are facing the aging population and rising unemployment problem, which requires the development of social programs (Raffelhüschen, 1999, pp. 167-170).

The approaches on the budget deficit sizing, on the means of finance and especially on the size of public debt become specific for different economies. The concrete conditions existent from an economic, financial, social, administrative point of view raises some problems that require a very serious approach of the potential negative impact of a sizing of budget deficits and of public debt over the real possibilities of non-inflationary financing.

In Romania, in the quite complex field in which the economic activity takes place, in an attempt to highlight the place held by the budget deficit, a special role is assigned to the determination of the share of public financial deficit in the expenditure and income of the general consolidated budget.

The general consolidated budget is an instrument of the budgetary and fiscal policy by which are related not only the income and expenditure of the state budget (the central budget and local budgets), but also their connections, especially the budget deficit, with the scanty sold of the current account of the payment balance, with the gap between investment and savings.

Currently, knowing the budget deficit and the concern for its reducing are still of great importance for North Macedonia, especially since our country is facing great difficulties in the economic development and the situation of conflicts and war of Balkans and the period of transition. On the other hand, as a candidate status of the European Union, so must comply with the condition imposed by the European Community Treaty on limiting the budget deficit to 3% of the Gross Domestic Product (GDP) and the public debt to 60% of GDP in the 2010.

3. METHODOLOGY AND DATA

The aim of this research was to analyse the effects of GDP growth on the governmental budget deficit. For this purpose, we use quantitative data annually provide from National Bank of the Republic North Macedonia and cover the period 1993–2020. This research methodology consists on the simple regression model, Mathematically, our model can be expressed by the following equation:

$$GDP_i = \beta_0 + \beta_1 Deficit + \mu_i$$

Where GDP growth is the dependent variable, β_0 is the intercept and budget deficit is the independent variable and the μ is the disturbance term.

- GDP – real GDP growth rate
- Deficit – budget deficit

4.1 The analysis of the statistical data

Next, we present some statistical data on the budget deficit development and on its share in GDP in 1993-2020, and also the structure of the general consolidated budget, in 2018-2020. The level and evolution of the consolidated general budget deficit as a share in GDP are presented in the table and chart below:

The evolution of the consolidated general budget (% of GDP), in 1993-2020

Table 1. Reports and data supplied by the National Bank of Republic North Macedonia.

Consolidated general budget deficit								
Year	Deficit	GDP	Year	Deficit	GDP	Year	Deficit	GDP
1993	-13.4	-7.5	2003	-1.0	2.2	2013	-3.8	2.9
1994	-2.9	-1.8	2004	0.0	4.7	2014	-4.2	3.6
1995	-1.2	-1.1	2005	0.2	4.7	2015	-3.5	3.9
1996	-0.5	1.2	2006	-0.5	5.1	2016	-2.6	2.8
1997	-0.4	1.4	2007	0.6	6.5	2017	-2.7	1.1
1998	-1.7	3.4	2008	-0.9	5.5	2018	-1.8	2.9
1999	0.0	4.3	2009	-2.6	-0.4	2019	-2.1	3.9
2000	2.4	4.5	2010	-2.4	3.4	2020	-8.1	-6.1
2001	-5.9	-3.1	2011	-2.5	2.3			
2002	-5.2	1.5	2012	-3.8	-0.5			

Source: Reports and data supplied by National Bank of Republic North Macedonia.

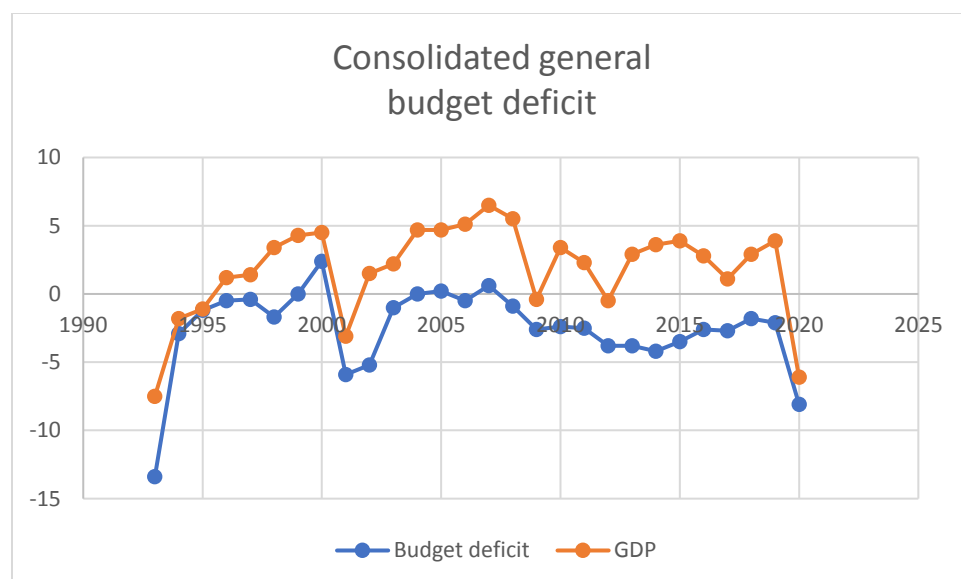


Figure 1. The consolidated general budget (% of GDP), in 1993-2020

According to the chart above, it is shown that the level of the consolidated general deficit fluctuated from -2.401 % GDP, in 2010, to -4.214% GDP, in 2014, reaching -8.11% in 2020 and -5.924% at the end 2021. In general, the evolution of the consolidated general budget deficit highlights its appearance on an upward path. In recent years, this increasing trend of the budget deficit has been influenced by the increased capital expenditures necessary for the projects initiated by the government, particularly by the increase of the expenditures on goods and services at the expense of the investment expenditure, due to the capacity reduction of funding by income from direct foreign investment, especially amid the current financial and economic crisis, but also the budget expenditures in 2020 and 2021 is being base to situation with the Covid 19 the year when the economic activity of the country and entire world was in pandemic situation.

Transfers to the Health Insurance Fund account for about 25 percent of all social transfers and has been declining. In contrast with regional peers and EU countries, North Macedonia's total health expenditures as a share of GDP gradually declined between 2008 and 2016 from 4.6 to 4.3 percent of GDP, and out-of-pocket spending is very high. Meanwhile, arrears have accumulating, which reached 0.6 percent of GDP at year-end 2016, which implies structural inefficiencies. Finally, because of its current adjustment structure, the system tends to favor the least efficient over the most efficient facilities.

Regarding the structure of the consolidated budget in 2010-2017, there is an increase in the share of expenditure amid the cutbacks of the budget income.

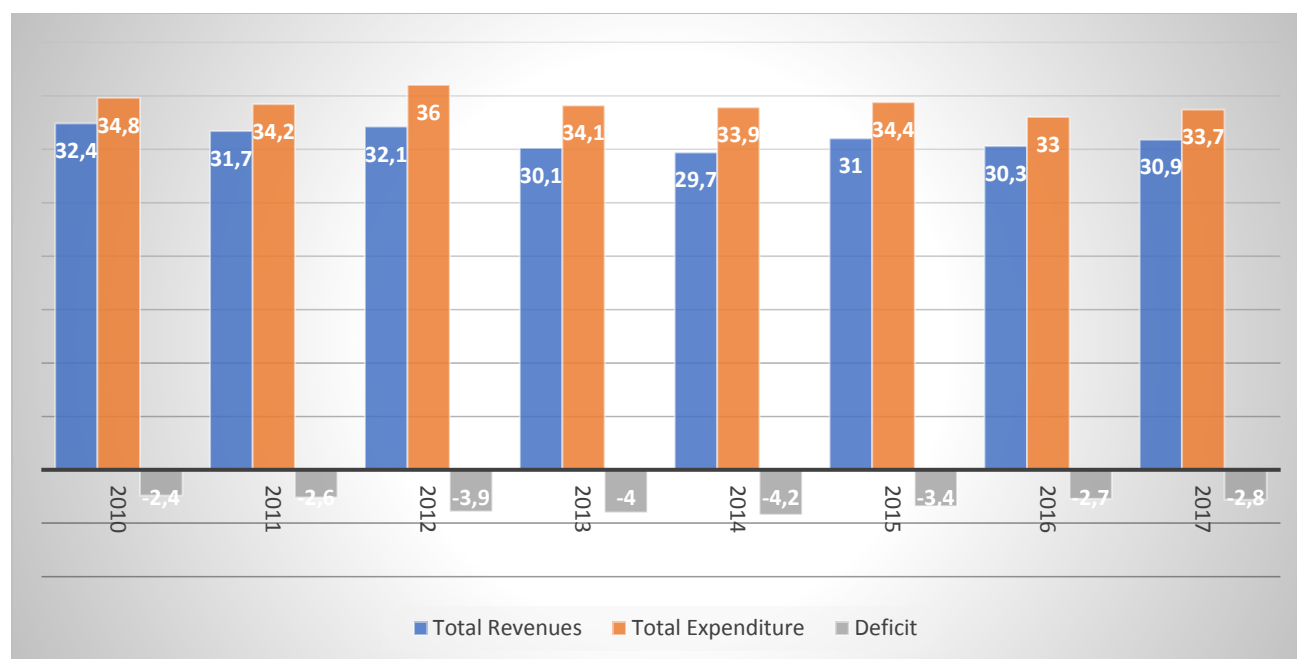


Figure 2. Consolidated budget structure (% of GDP) in 2010-2017

North Macedonia's public debt is comparatively moderate and has even declined slightly over the past year. However, it has doubled in the past 10 years, because of repeated primary deficits and public investment by state-owned enterprises. In 2007, North Macedonia pre-paid part of its debt to the Paris and London clubs, which reduced debt as a share of GDP from 33.2 percent in 2006 to 23 percent in 2008—the lowest level during that decade. Since then, its debt dynamics have worsened, due to growing primary deficits and more borrowing by the government and SOEs, so that between 2008 and 2016 debt as a share of GDP shot up from 23 to 48.5 percent. But by the end of 2017, public debt had gone down slightly, to 47.6 percent, as the government withdrew its cash reserves—the first decline since 2008. This year debt has risen slightly as the country issued a €500 million Eurobond at historically favorable terms. As of June 2018, North Macedonia's public and publicly guaranteed (PPG) debt-to-GDP ratio was 47.7 percent, less than the 52 percent average for the Western Balkans (the WB6), but higher than the STEE7 average of 45 percent). While this remains moderate from a global standpoint, the margin for further debt accumulation has narrowed quickly. The speed at which North Macedonia has accumulated debt since 2008 calls for decisive action to stabilize public debt.

4. EMPIRICAL RESULTS

The results of this analysis are estimate through ordinary least squares (OLS) method, based on the detained results we estimate the following regression model:

$$GDP = 4.05 + 0.89 Deficit$$

For one percentage point (1 pp) increase of budget deficit, the GDP growth increase for 0.89 percentage point, holding the other factors unchanged. Regarding the statistical significance, the coefficient of the budget deficit is statistically significant at 0,1% significant level, meaning that the budget deficit has significant effect on GDP growth.

The coefficient of the determination is 0.6415 that means 64,15% of varieties of GDP growth can be explained by budget deficit.

5. RECCOMENDATIONS FOR EFFECTIVE FINANCING THE BUDGET DEFICIT IN REPUBLIC OF NORTH MACEDONIA

The influences that are causing the increase in budget deficits can be summarized and grouped for a better understanding of the phenomenon into two broad categories: economic and psychological influences.

The psychological influences combined with the economic ones act directly on the financial markets, leading to loss of values on the capital markets and to depreciations, sometimes sudden currencies. Although certain exchange rate depreciation is a method often used to equilibrate the trade balance, an uncontrolled amplification of the budget deficits can sometimes lead to currency depreciation. They, over a certain level, neutralize the gains obtained on an external level by strong worsening of the internal imbalances, especially by highlighting the inflationary pressures in the economy.

Capital spending has consistently been under-realized. While between 2009 and 2017 central government budgeted capital spending averaged 14 percent of total spending (4.9 percent of GDP) 27 percent of the budgeted funds were not used. Under-realization is likely to stem from over-budgeting to begin with, low absorption capacity among budget users, and the fact that capital expenditures were treated as a residual to achieve fiscal targets. However, most capital spending in North Macedonia is directly related to the performance of non-tax revenues and foreign grants—their main source of financing—which have be done under-performing. Hence, a significant part of the under-execution of capital spending is in fact neutral to the budget deficit. The quality of

capital spending, in terms of its potential to support economic growth, also seems to have fallen in recent years. It is not clear how public investments are prioritized in North Macedonia, and there are no criteria for ranking alternatives because the Organic Budget Law has no specific requirements for appraising, selecting, monitoring, or evaluating projects. Between 2009 and 2014, as “Skopje 2014” was carried forward, spending on administrative buildings increased at the expense of investments in infrastructure and maintenance. In 2009, 81 % of public investment was spent on either infrastructure 63 % or maintenance 18 %; only 19 % for administrative buildings. By 2012, under “Skopje 2014,” investment in administrative building had reached 33 %. This likely had negative consequences for economic growth—spending on administrative buildings does not have the same economic impact as infrastructure investment. However, the trend has now reversed: the share of investment in infrastructure is again 63 percent, largely because of construction of the two Corridor VIII highways.

Regarding the economic influences, we can say that they also act strongly about senses strictly determined by the used ways to cover the budget deficit. The modalities used are subject to an analysis, by the direct or indirect influence that is generated on the economic mechanisms and on the economic stability.

The problem of budget deficit financing, of choosing the best finance option is the subject of much debate among economists. In this regard, in the specialized literature we find the following ways to finance the deficits: tax increase financing, financing by reducing the budget spending, financing by issuing currency and financing by public debt.

This presentation of modalities of financing does not also represent a hierarchy of the “best” alternatives in terms of a cost-benefit analysis. Each of these variants is characterized by the advantages and disadvantages depending on the economic background in which they are used.

Thus, the financing method of the budget deficit by increasing tax translates into increasing the amount of taxes to reduce the budgetary imbalances. Due to influences, in general negative, in the economic activity, in almost all cases an increase in taxation, by the direct effect of defalcation of financial resources from the private economic decision for investment or consumption to the redistributive state consumption leads to a weakening of the development effort, by weakening the ability to invest and reduce the solvable demand of intermediate and ultimate consumers, with an unfavorable effect on the market supply-demand ratio.

The funding of excessive budget deficits by reducing the public expenditure may be an appropriate solution; however, it is effective only in the short term. Practicing a restrictive budgetary policy, at least by reducing the government consumption can have positive results on the public financial balance. Promoting such long-term policies will be followed, surely, by negative consequences that will affect the economic growth. The problem arising when promoting a restrictive budgetary policy refers to the categories of budget expenditure that will be reduced.

In this context, there may be difficulties related, on the one hand, to the social impact of such a policy and, on the other hand, to the discussions that will be held at government level between its ministries, in which each representative will try to protect the interests they represent.

A restrictive budget policy can be implemented in crisis situations, when countries face with excessive public deficits which usually lead to higher inflation, to exchange rate fluctuations and which affect the whole economic system. In such cases, it must be followed the rationalization of public expenditure by reducing the unproductive spending and increasing the spending for investment in infrastructure and in human capital (Lenain, 2000, p. 139).

Amid the deepening of some structural crisis phenomena, the increase of budget deficits over the financeable limits in a non-inflationary manner comes as an additional factor that contributes to significant imbalances in the economy. In addition, where budgetary expenditures are directed towards the satisfaction of, first, the redistribution function of the state and for grants, in the absence of a real multiplier coefficient, the state budget deficit worsens.

Another method used to cover budget deficits, which may have profound negative impact on the correlations in the financial and real economy, is the additional issuance, uncovered, by the national currency. This will only lead to an uncontrolled and unwarranted increase in money supply, immediately aggravating the inflationary phenomena in the economy.

If the public power cannot adjust the public expenditure at the income levels or if by making such expenditures it is desired the achievement of better results in employment field, there arises the problem of financing the budget deficit, which can be done either by issuing currency or by state loans.

The process of monetization of the budget deficit is clearly inflationist until the economy is heading towards a new long-term equilibrium, with a high price level. If the government decides to maintain this policy for a longer period it will result in a corresponding increase in money supply, i.e., a continuation of inflation.

If we analyze the problem of using loans by the state to finance the budget deficit it can be considered that the primary element that must support the decision consists of the need that the “profit” made on medium and long term by funding the public expenditure to be large enough to cover the debt service. It should also be covered the loss of utility that the market supports by depriving it of the resources used to cover the deficit, and the public policy decision-makers must maintain their credibility after the use of state loan.

By the state loan, the government meets its short-term deficit without any tax increase but, because there must be paid the interest on debt, it may be observed that a large part of the future tax income will be used for service debt and not to finance future public goods and services.

In North Macedonia, the financing of the budget deficit was achieved mostly by contracting state loans, both from the resources of external and internal origin, meaning by internal and external market loans and by the temporary support from the general account of the State Treasury. On the internal market, the resource suppliers to finance the budget deficit are the banking and non-banking sector, and also the population, by subscribing to the state bonds issues, such as Treasury certificates, state bonds or foreign currency, issued by the Ministry of Public Finance. The state loans in the external market are represented by: foreign government loans and Treasury bonds with foreign currency interest.

The effective of authorities conduct to budget deficit was contradictory and did not follow strictly the law, either when it was restricted, or when it became lax.

However, the financing of the budget deficit by loans from the temporary availability of the General Account of the Treasury, even in the short term, has the advantage of low cost, in the long term has significant disadvantages which consist of increasing liquidity and refinancing risk, with negative impact on the management of public debt, especially when volatility is high.

Unfortunately, while North Macedonian's economy is facing economic depression, it is found in the government decisions making that there not been taken the necessary steps to apply a policy of boosting investment in order to revive the economic development. Furthermore, we are witnessing a process that is particularly worrying: the aggregate consumption systematically exceeds the aggregate production. On the other hand, has had a pro-cyclical fiscal policy based on unrealistic estimates of income and on public spending increases which have led to the accumulation of significant macro-economic imbalances manifested by a current account deficit and inflation rate. The budget income has been over-estimated, and the expenses realized beyond the available resources were not channeled towards productive activities, being geared mainly towards staff costs and expenditure on goods and services.

If this trend continues, there is an imminent danger for North Macedonian economy to sink more and more into poverty and under-development. The responsible government should be the first to notice this and take the necessary measures. To ignore the financial policy measures to stimulate the investment process is to disregard the current fundamental requirement of the revival of the economic development.

6. CONCLUSION

The question, whether public debt is a means of or a burden on economic growth, is widely discussed in the scientific literature. The theory provides arguments how government borrowing and increasing debt can stimulate, impede or make no influence on economic development. There is quite of empirical research devoted to the analysis of the impact the public debt makes on economic growth, despite this, the results are ambiguous. Following this idea, our objective was to examine if such relationship exists in the case of North Macedonia, and if yes, to calculate the corresponding turning point. For this purpose, we use simple regression model for the period 1993 – 2020, having GDP growth rate as dependent variable, and budget deficit as independent variables. Our results undoubtedly go in favor of the hypothesis that budget deficit affects economic growth for the case of North Macedonia at around 64,15% of GDP. To conclude, even though general government debt level of GDP (as calculated) would significantly reduce the debt sustainability pressure in North Macedonia, while promoting growth at the same time, it should not be mistaken as optimal level of indebtedness. Namely, as IMF suggests, to ensure resilience to shocks (such as the ongoing COVID-19 crisis) without jeopardizing economic growth perspectives, we need sufficient fiscal buffer to mitigate their impact. Therefore, the optimal debt level for North Macedonia would be somewhere below depending on the fiscal capacity of the country.

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Government Policies in the RNM, a Stabilizing Factor (Destabilizing) Towards Civil Society

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Abstract

Civil society is rightly seen as a valuable contributor to the interests of citizens. A free and democratic system can never really be like this if there is no active citizenship, which means that the awareness and engagement of citizens in political life is not only limited to participation in elections but in the whole policy-making process. Based on the annual reports from the relevant European institutions on the quality of good governance, the government policies in the RNM, as well as the democratic processes promoted by the government, do not give the expected results due to hasty government policies and continuous servicing of political innovations that find our society unprepared which also results in social destabilization. This theoretical-empirical paper analyzes the impact of government policies and their impact on the role of active society as a democratic value in free systems of government and how these policies are either a stabilizing or destabilizing factor of this society, such as (variables) Citizens' trust in Judiciary, Rule of Law, Political Polarization, Poor Educational System and Corruption of Public Sector. According to the data from relevant objective European institutions such as Varieties Of Democracy (V-Dem) reports of the European Commission for the Republic of North Macedonia where in most areas, North Macedonia is assessed as moderately prepared, Eurostat for the last decade (2010- 2020), as well as with the conclusive statistical methods of correlation for the interconnection between the variables and factorial analysis from which it results that there is a positive statistical correlation of civil society cohesion in the RNM with the Level of Corruption in the Public Sector, as well as during political polarization (especially before the elections) civil society is significantly destabilized in the RNM.

Keywords: Government Policies, Civil Society, Political Polarization, Corruption

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1. Introduction

The social and political values of the EU are fundamental pillars that are aspired by countries that are on the way to EU membership. This socio-political journey of aspiring countries, such as the Republic of North Macedonia, is followed concisely by the EU commissions for enlargement according to the established standards. Relying on the annual reports from the relevant European institutions on the quality of the implementation of the Ministry of Foreign Affairs in the EU, it has been concluded that the democratic processes promoted by governments in the Ministry of Foreign Affairs do not provide the appropriate and expected results. Concretely, the journey for the membership of the RMV in the EU has proven to be harmful for the democratic processes, especially in the sensitivity of the cohesion of the civil society to the reforms and deviant social phenomena as a result of the "accelerated" government policies, or as a service to them to an "unprepared" society for a qualitative and quantitative reform. The intense pressure for effectiveness and efficiency results in finding cuts in the transfer of rules through copying and pasting legislation from member countries and limiting democratic policy-making to political deliberations rather than broad policy consultations between state and non-state actors.

So, in this context, this theoretical-empirical paper analyzes the impact of government policies and socio-political deviations on the sensitivity of civil society cohesion in RNM by analyzing the sensitivity of civil society from the impact of government policies of RNM in the last decade. The sensitivity of civil society includes the perception of citizens about the Accountability of the Judiciary, Political Polarization, Corruption and Bribery in the Executive, Respect for the Constitution by the Executive and Corruption in the Public Sector. Referring to data from relevant European objective institutions such as Varieties Of Democracy (V-Dem) and EuroStat for the last decade (2010-2020), with the inferential statistical methods of Pearson's correlation for the relationship between variables, as 1. Core of Civil Society with variables 2. Accountability of the Judiciary, Political Polarization, Corruption and Bribery in the Executive, Respect for the Constitution by the Executive and Corruption in the Public Sector and Linear Regression Analysis (the level of influence of these variables together on the cohesion of the core of civil society).

So, based on this concept, as a result, the research questions are presented as well:

-Is there a connection between the cohesion or the core of civil society and the Accountability of the Judiciary, Political Polarization, Corruption and Bribery in the Executive, Respect for the Constitution by the Executive and Corruption in the Public Sector in RVM!?

-Does it exist and what kind of impact do government policies have on the cohesion or core of civil society in RMV!?

As a result of these two research questions, two basic research hypotheses are formulated, which are further analyzed and interpreted with correlational statistics and factorial analysis (linear regression) based on data from Varieties Of Democracy (V-Dem) and EuroStat for the decade the last (2010-2020).

H1. There is a statistical relationship between the cohesion of civil society (core) and the variables Accountability of the Judiciary, Political Polarization, Corruption and Bribery in the Executive, Respect for the Constitution by the Executive and Corruption in the Public Sector in RNM.

H2. Government policies in RNM result in stabilization (destabilization) of civil society cohesion (core).

2. Government policies and civil society in the Republic of North Macedonia

Politics is most often defined as activities and interactions, which take place through discussion and negotiation, between interested parties, in which the power, status and influence of the people involved play the most important role. In the Methodology for Policy Analysis and Coordination, policy is defined as "The process of taking or not taking action by the government to solve a certain problem or a series of related problems, as well as a way to determine the directions for achieving the set goals ".

The policy-making process is a general it's term that encompasses the various stages of policy formulation and implementation. This process is neither linear nor circular and may take years or decades to result in political change or a particular outcome and actors and strategies may change over time. Principles of policy development: compatibility, feasibility, analysis, transparency, planned implementation.

Consequently, the policy-making process in the Republic of North Macedonia is seen as consisting of three phases that are not cyclically connected to each other. In Macedonia there is

the setting of the agenda, decision-making and implementation; as three phases that are characteristic in the policy-making process. At the same time, we can talk about an overlap between these stages, where the solution is often defined in the stage of setting the agenda and the approval of the decision is implied. In this way, unilaterally and without public evaluation of available solutions (policy options), laws and other acts are approved, which are then implemented. In all these stages, in fact, inconsistent involvement of stakeholders is observed. At the same time, in cases where stakeholders are involved, there are inherent obstacles because the solutions are (often) predetermined. In most cases, the legitimization, monitoring and evaluation phases are not implemented at all, or implemented inconsistently. The non-implementation of these phases directly affects, in addition to the quality of policies, and the opportunities for the involvement of civil society organizations and other actors. The analysis shows that the Republic of North Macedonia has determined the appropriate normative framework for the inclusion of civil society organizations in the decision-making process. However, what is noticeable is the lack of political will to consult with stakeholders. The culture of consultation depends on a long-term process of democratization that is conditioned by many factors.

On the other hand, to understand and define concisely the social, political and cultural aspect of civil society in North Macedonia, it should be based on the content of international reports, especially European ones, for the development of North Macedonia in its journey towards the values of the European Union. So, referring to the European reports of the last years, the society in North Macedonia is viewed from several socio-cultural perspectives, defining it as a dividing axis, and the primary axis of this division is ethnicity (which often coincides with the religious division). This division has been observed by many international organizations and their bodies, including the European Commission (EC), the Advisory Committee of the Framework Convention on National Minorities, as well as other monitoring mechanisms of the Council of Europe (EC) and the United Nations (UN), but also in analyzes implemented at the national level.

In the reports of the last years (2015-2018) of the Advisory Committee of the Framework Convention for the Protection of National Minorities (FCPNM) of the EC, it urgently recommends that the country "take all the necessary measures to build an integrated society which is deeply based on the rule of law, human rights, including the rights of minorities, respect for differences as well as discarding the ethno-nationalist exclusivist policy which additionally reinforces the formation of parallel societies" (FCPNM-European Union, 2016).

The review made for the approval of the Ohrid Framework Agreement (OFA) prepared in 2015 emphasizes the fragile inter-ethnic situation, the lack of trust between communities and the need for constant attention on social cohesion. Field research in this field also shows that inter-ethnic relations are important both personally (78.4 %) and for the country (86.3 %) (Klekovski, 2016).

On the other hand, despite ethnicity as the axis of division of society in North Macedonia, equality and non-discrimination as subcategories of this division give an even more complicated structure to civil society in North Macedonia. This approach is in line with the prerequisites for the realization of interculturalism according to the EC, which include: human rights, democracy and the rule of law, equal dignity and mutual respect, gender equality, overcoming barriers that hinder intercultural dialogue and considering the religious dimension. In addition, non-discrimination and effective equality are some of the structural principles and prerequisites for the effective contribution of all to the common good, provided for in the Ljubljana Principles for the Integration of Different Societies of the OSCE. According to these directions, the prohibition of discrimination brings equality before the law and equal protection under the law and means the removal of obstacles to effective equality. Ensuring effective equality according to law and practice also means the positive obligation to adopt the policies of the goal and, when necessary, also special measures (OSCE- Ljubljana Principles, 2012).

The legal framework of non-discrimination and equality in the Republic of North Macedonia consists of: the Constitution, laws and ratified international agreements. The basic values of the constitutional order are: basic rights and freedoms of the citizen accepted by international law and confirmed by the Constitution. The right to non-discrimination and equality are included in Article 9 of the Constitution, where the basic rights and freedoms of the citizen are given, regardless of gender, race, skin color, national or social origin, political and religious beliefs, social position or wealth.

Also, the European reports of recent years (2016-2019), especially those of the European Network of experts on non-discrimination, prove a multitude of deficiencies, both in relation to the legislation in this field, and in relation to its implementation in practice. They include the lack of harmonization within national legislation and international standards, including the non-inclusion of sexual orientation as a basis for legislation, insufficient funding of national institutions for the protection of human rights, the culture of impunity for hate speech crimes, issues of the

rule of law and the decline of trust in institutions, including the judiciary, the lack of independence of the National Equality Body as well as attacks on civil society and activists with a critical voice (Kotevska, 2018).

3. Presentation of results and interpretation of hypotheses

As we highlighted above in the methodological review of the research, referring to data from relevant European objective institutions such as Varieties Of Democracy (V-Dem) and EuroStat for the last decade (2010-2020), with the inferential statistical methods of Pearson's correlation- it for the relationship between the variables (the Core of Civil Society with the variables Accountability of the Judiciary, Political Polarization, Corruption and Bribery in the Executive, Respect for the Constitution by the Executive and Corruption in the Public Sector) and the Linear Regression Analysis (the level of influence of these variables together to the cohesion of the core of civil society).

Table 1. Civil society cohesion index in RNM despite the country's political variables (political phenomena)

	Year										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Core of Civil Society	.7380	.7380	.7190	.7110	.7130	.7020	.6010	.7880	.8230	.8700	.8760
Accountability of the Judiciary	1.770	1.547	1.547	1.023	1.023	.8450	.7900	1.348	1.348	1.348	1.348
Political Polarization	3.088	3.385	3.385	3.385	3.483	3.461	3.401	3.401	3.401	3.401	3.401
Corruption and Bribery in the Executive	1.253	1.118	1.118	1.118	1.118	1.118	1.121	1.973	1.729	1.365	1.365
Respect for the Constitution by the Executive	2.497	2.380	2.377	2.234	2.234	2.234	2.234	2.365	2.124	2.348	2.348
Corruption in the Public Sector	1.788	1.616	1.616	1.616	1.360	1.360	1.360	1.863	1.689	1.689	1.689

Source: Varieties of democracy (V-Dem) 2021.11.05 (<https://www.v-dem.net/en/analysis/VariableGraph>)

In order to have a more concise overview of the cohesion and stability of civil society in the EU and RMV according to the V-Dem indices extracted according to standard European

methodologies, the data in Table 1 clearly shows the discrepancy and variation of the data during the years 2015-2016 before and during the parliamentary elections and the change of government in RNM where the cohesion of the society drops significantly.

Also, the data reflect the deep difference in judicial responsibility in RMV with quite low coefficients during these years, where compared to European indices in judicial responsibility, the differences are large (in European countries the index is close to 3) as one of the values that strengthen cohesion and the stability of civil society. Also, political polarization according to the data in RNM is presented as higher compared to the EU Index, which is presented with an average of 1.5, while in RNM this reaches 3.5 for these years.

Bribery and corruption in the executive as one of the indications for a stable society shows the real situation in RNM in contrast to the European one. The transparency index for the corruption of the executive in RNM is very low (in the EU it continues to have an average close to 3) even though with the new SDSM government (2017-2019) there is a small and significant increase in transparency but still far from European values. In the index for the respect of the Constitution by the executive itself, with a significant oscillation during the years 2016-2019 in RNM where even the SDSM government is attributed non-European values for this index, especially with the intention of passing some laws in an accelerated manner with a European flag.

One of the most important segments of the cohesion of civil society is the index of corruption in the public sector, which despite the European indices, the one of the RNM has a very low transparency index (perception of high corruption), characterizing the policies of this government. current.

So, referring to these official data and on the other hand the semantic content of the hypotheses presented in the methodological part of the research, the statistical method (data processed with SPSS 21) which are used for their interpretation are those of correlation and linear regression (dependence and level of dependence).

H1. There is a statistical correlation between the cohesion of civil society (core) and the variables Accountability of the Judiciary, Political Polarization, Corruption and Bribery in the Executive, Respect for the Constitution by the Executive and Corruption in the Public Sector in RNM.

Table 2. Correlation between the civil society cohesion index in the RMV and the political variables (phenomena) of the RMV

		Core of Civil Society	Accountability of the Judiciary	Political Polarization	Corruption and Bribery in the Executive	Respect for the Constitution by the Executi.	Corruption in the Public Sector in RNM
Core of Civil Society in RNM	Pearson Correlation	1	.381	-.003	.443	.261	.723*
	Sig. (2-tailed)		.074	.992	.147	.536	.042
	N	11	11	11	11	11	11

*. Correlation is significant at the 0.05 level (2-tailed).

Result: Table 2 shows only one significant statistical correlation, also according to Pearson's correlation coefficient $R = .723$ (sig=.042, i.e. $p < 0.05$), we say that there is a significant positive correlation between the cohesion of the society civil society and the level of public corruption, in other words, there is a significant change in the cohesion of civil society depending on the corruption index in the RMV.

H2. Government policies in RMV result in stabilization (destabilization) of civil society cohesion (core).

Table 3. Linear regression between the civil society index in RMV and group variables together

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.690 ^a	.476	.217	.0716932

a. Predictors: (Constant), Accountability of the Judiciary, Political Polarization, Corruption and Bribery in the Executive, Respect for the Constitution by the Executive and Corruption in the Public Sector in RNM

Table 4. Significance of linear regression - ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.040	5	.008	1.553	.420^b
	Residual	.026	5	.005		
	Total	.066	10			

a. Dependent Variable: MacedoniaCore of Civil Society

b. Predictors: (Constant), Accountability of the Judiciary, Political Polarization, Corruption and Bribery in the Executive, Respect for the Constitution by the Executive and Corruption in the Public Sector in RNM

Result: So, the variables in the group together do not determine (influence) the cohesion of the civil society in RNM according to $\text{sig}=.420$ $p>0.05$ (there is no statistical significance for the second confidence limit) Anova, in other words, these variables as group together have no influence on the cohesion of civil society in RNM (due to the fact that society is generally more than destabilized).

So, referring to the above results of correlation and linear regression, we find that the civil society in RNM over time (more than two decades) is unstable and current political policies and phenomena have no influence either on further destabilization or on stability and its strengthening despite the European civil society that shows high cohesion and a significant destabilization only before government policies.

4. Conclusion and recommendations

Referring to the main purpose and objectives of the research, which was to determine the impact of government policies and socio-political deviations on the sensitivity of the cohesion of civil society in RNM from the impact of (variables) citizens' perception of the Accountability of the Judiciary, Political Polarization, Corruption and Bribery in the Executive, Respect for the Constitution by the Executive and Corruption in the Public Sector, and, as well as on the other hand referring to the findings of the research where we found that before and during the parliamentary elections and the change of government in RNM where the cohesion of society drops significantly, then, the deep difference in judicial responsibility in the RNM with quite low coefficients, the political polarization according to the data in the RNM is presented as too high, the index of transparency for the corruption of the executive in the RNM is very low (in the EU there continues to be an average close to 3) although with the new SDSM government (2017-2019) there is a small and noticeable increase for transparency but still very far from European values, then during the years 2016-2019 in RNM where even the SDSM government is attributed non-European values for this index, especially with the intention of passing some laws in an accelerated manner with a European flag, as well as in the RNM has a very low transparency index (perception of high corruption), characterizing the policies of this current government. So, from all this we

find that there is a significant difference in the model, sensitivity, stability and cohesion of the civil society in the Republic of North Macedonia and that of the European Union as a result of the current government policies, we say that the goal and objectives of the research were achieved .

Also, the main conclusion of the research is that there is a significant positive correlation between the cohesion of civil society and the level of public corruption, in other words, there is a significant change in the cohesion of civil society depending on the corruption index in RNM, where referring to this, we find that the civil society in RNM over time (more than two decades) is unstable and the current political policies and phenomena have no influence either on further destabilization or on its stability and strengthening despite the European civil society that shows cohesion high and a significant destabilization only before government policies.

From all this, as well as the annual remarks of the European reports on the development of civil society in the Republic of North Macedonia towards European values, they are in a fair proportion where the tendency of the government strategies are in this direction, but here are the accelerated and non-qualitative policies under the pretext of especially the high level of corruption and mistrust in the legal system in North Macedonia makes the current policies have a counter-effect in society, therefore in addition to the compilation of strategies by the government for a genuine journey towards European values as a recommendation for the government in their strategy to incorporate the elements of Interculturalism as a mechanism of the European Union - reinforcing civil society according to the Council of Europe - White Book of Intercultural Dialogue - 2008.

The number of civil society organizations, which have a positive influence and participation in the policy-making process, is increasing, but there is still room and need for the participation of organizations from different profiles and fields, with the aim of covering the segments of society and carrying out quality policies. for development. The legal framework that enables participatory participation in policy development has been enriched, so that every civil organization has the opportunity for a certain form of involvement. In order to make a decision to participate in policy development, organizations must be well aware of legal regulations, the policy-making process, tools, principles and principles, which must be respected. It is necessary to prepare a plan for undertaking actions, answer certain questions and perceive the risks, challenges, but also the benefits of participatory participation both individually and in general. The participatory process of policy development is beneficial to citizens, organizations and society as

a whole and creates a fair and transparent policy. Therefore, such policy development should be supported and enabled by the government, but also by the civil sector itself. The process of participating with participation enables the increase in the number of ideas, resources, information, research, quality decisions, as well as the strengthening of democratic processes, partnerships, increasing trust, etc. In order to achieve a successful and legitimate policy development process, coordinated and participatory activities between different actors are necessary - civil society organizations, government institutions, the business sector, research centers, media, etc.

Therefore, the basic assumptions of systematic and institutionalized involvement of the political process remain a matter of the long-term goals of civil society and activism. However, in the meantime, civil society organizations in North Macedonia are left with some short-term tactics to influence, taking into account the existing factors in practice.

1. Civil organizations in the conditions of a relatively closed decision-making process can adapt ambitious goals to ensure the minimum political will necessary to stay in the process. For these needs, it is extremely important to continuously conduct stakeholder mapping, identify allies and adversaries, in order to effectively define achievable short-term goals. But when this is not possible, civil society organizations can increase their potential impact by:

2. Mobilizing support and creating membership through which they strengthen their image as an interested party;

3. Action through coalitions, especially since the practice in North Macedonia shows that organizations as individuals are more difficult to see or are subject to exclusion in the decision-making process;

4. Media exposure of problems - in situations where the process of cooperation with public institutions and decision-makers results in the ignoring or exclusion of civil organizations.

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AN EMPERICAL ANALYSIS ON IMPACT OF SELF EMPLOYMENT PROGRAMMES ON
EMPLOYMENT GENERATION, LIVING STANDARDS AND SAVING HABITS OF SHG
MEMBERS: A CASE STUDY ON MAA DAKHINAKALI SHG

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Abstract

Poverty is one of the cause of unemployment which affect living standards and saving habits of the population .The word poverty can measure in two terms. Absolute poverty and Relative poverty. As per this plan programmes are prepared to strengthen the population so that they can overcome the poverty line. For this poverty eradication programmes are classified into five parts .Self-Employment Programmes, Wages employment programmes, Housing for the poor, Development of Rural Infrastructure, Marketing initiative through ORMAS. The above mentioned objectives are achieved through SGRY and SOISY, IAY OBB, Prime Minister Gram Yojna Rural Connectivity programmes etc. To find out the effectiveness of these programmes the proposed study designed and will be conducted .It is a case based study of A SHG situated in Kendrapara district of Odisha .Primary source of date will be used and a pre and post expenditure pattern and saving habits will be checked .Research hypothesis will be taken to justify the impact of the Study . Data will be Analysed through SPSS.

Keywords : Poverty , Eradication Programmes , saving habits, Expenditure pattern.

Introduction

The word poverty derived from, Latin word pauper which means poor, via Anglo Norman "poverty". Poverty refers to the inability of the individual or family to secure basic needs even in social surrounding of general property. It is shortage of common things like food, clothing's, shelter and safe drinking water all of which are basic needs and these are unit of measurement of life. Shortage of these basic needs demise the quality of life.

According to the human development report 1997 poverty is the denial opportunity to lead long, healthy, creative life and to enjoy a decent standard of living, Freedom, dignity, self-respect and the respect of others. In fact it is a socio-economical phenomenon which defines a precise definition "it's a measure of absolute poverty".

We can define poverty into two different ways. The absolute and relative poverty. Absolute poverty refers to the set standard which is consistent overtime and between the countries. In absolute standard minimum physical quantities of cereals, pulses, milk, butter are determined for a substance level and the price quotations convert into monetary terms to physical quantities. The number of people below a poverty threshold and this poverty threshold is independent of time and place. It also used as a synonym for extreme poverty and it is exist with the absence of enough resources such as money to secure basic life necessities like if the calories food intake is less than 2000-2005 calories for an adult male. The relative poverty defined as living standard of the population in comparison with poverty line. According to the related standard, income distribution of the population in different fractal groups is estimated and a comparison of the levels of the living of the top 5 to 10% with the bottom 5 to 10% of the population reflects the relative standards of poverty.

Absolute poverty is "a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends on not only income but to services. According to the David Gordon's the absolute poverty present with absent of any two of the followings.

- Food
- Safe drinking water available nearby 15 minutes workable distance of each way
- Sanitation facility
- Health
- Shelter (less than four person in a room)
- Education (learn to read)
- Information (access to newspaper, radios, television, computer and telephone)
- Access to services

After the privatization and globalization of economy, we are economically unfit to remove poverty among the society. At the year 2011-12 poverty rate of India is 21.9 percent that is 269 million people in the country did not have income to access the minimum basic needs as per Tendulkar committee. Further as per Rangarajjan committee it was revised to 29.5 percent of the population that was 363 million They are still fighting for breakfast and to arrange only one meal for a day is difficult for them .Out of 260 million 75% of are from rural poor. So such a high incidence of Poverty is a matter of serious concern and it a challenge for India to have planned and process economy so with the view of the fact poverty eradication is a major objective for planned economic development in India.

Experience of different states with economic growth and poverty reduction has varied and it is difficult to prepare a policy to fight for the poverty so it is difficult to offer any general policy prescription, It was realized that a sustainable strategy of poverty alleviation has to be based on increasing the productive employment opportunities in the process of growth itself to extent the process of growth some section of the population to be taken into account. To formulate specific poverty alleviation programmes for generation of a certain minimum of income for the poor. The strategy for poverty alleviation is essentially two fold. Firstly-An effort is underway to provide greater opportunity for the poor to participate in the growth process by focusing on specific sectors which offers such opportunities. Secondly – Poverty alleviation and social sector programmes have seen strengthened and restricted with special programme for the weaker sectors of society.

Economic growth with a focus on employment generating sectors has been a key element of the strategy for poverty reduction along with an importance aid on provision of basic human

services like education, water supply health and sanitation. If our plan programmes are able to remove the shortage of these basic needs. To make our society as a poverty free nation and to tackle the problem of poverty some programmes are implemented by government of India. These programmes are known as anti-poverty weapons. Which are used as sword to fight the poverty? The antipoverty strategy comprises of a wide range of poverty alleviation programmes. Many of which appreciate for more than years and have been strengthened under anti-poverty schemes. Both wages employment and self-employment programmes are provided to the people below poverty line. The poverty alleviation schemes are introduced in two broad categories. First wage employment schemes and secondly self-employment schemes. It always tried to give maximum opportunities to the beneficiaries Government has considerably enhanced allocation for the provision of education, health, sanitation and other facilities to the poor. Investment in agricultural development provides such programmes fruitful and it also provides avenues for employment and income. Anti-poverty programmes that seen to transfer assets and skill to people for self-employment coupled with public works. Programmes that enable people to cope with transient poverty are the third stands for the larger antipoverty strategy. We will discuss the anti-poverty programmes of Ministry of Rural Development which act as tool to alleviate poverty.

Poverty alleviation programmes mainly divided into five parts like

1. Self-Employment Programmes
2. Wages employment programmes
3. Housing for the poor.
4. Development of Rural Infrastructure
5. Marketing initiative through ORMAS. The above mentioned objectives are achieved through SGRY and SOISY, IAY OBB, Prime Minister Gram Yojna Rural Connectivity programmes etc.

Literature Review

Singh Rubee and Rj Archana (2018) explain in their study” Generation of Poverty and Employment in India” that the concept of sustainable economic growth implies progressive changes in the socio-economic formation of a country and have impact on eradicate poverty,

unemployment and also inequality, illiteracy, malnutrition etc. Anti-poverty and employment generation programmers are implementing a proper way to eradicate poverty and increasing employment generation.

Chadha G.k (2011) in his study Employment and poverty in rural India stated that there is a tremendous scope through policy implementation level to improve employment opportunity and poverty eradication.

Garys.Fields(2014) explained in his study ‘Self-employment and poverty in Developing countries that the self-employment programmes focusing economic growth on improving the economic opportunity of the poor further it create off –farm opportunity in rural area .It helps to utilize skills in other jobs.

Raj Archana and Rubee Singh (2018) explained Anti-poverty and employment generation programmers are implementing through policies and a way to eradicate poverty and increasing employment generation.

Objectives

- To know various antipoverty measures and employment generating programmes.
- To find out impact of antipoverty programmes with employment Generation and changes in living standard.

Methodology: For the study both primary and secondary data has been used. Telephonic interview methods are followed for collecting the Data. To find out the impact of poverty eradication programmes impact on employment generation, living standard and in promoting saving habit “Maa Dakhinakali SHG “of Indupur ,Odisha has taken as a case for the proposed study. Hypothesis test has been used to find out the Impact.

Ho- Poverty eradication programs have no impact on employment generation and changes in living standard and promoting saving habits of the SHG

H1- Poverty eradication programs have impact on employment generation and changes in income level and living standard of the SHG members.

Limitation of the study: Present study has conducted on a SHG and conclusions are based on the analysis of the collected data.

Poverty eradication programmes;

The global multidimensional poverty index 2018 shows that 271 million people moved out of poverty in India. Government of India taken various antipoverty measures for generating employment as income is the substitute of various forms of poverty.

Integrated Rural Development Programeme (IRDP)

Integrated Rural Development Programme (IRDP) is a rural developmental programme and design to train rural youth for self-employment. It is one of the largest micro –enterprise programme having reached about 50 million borrowers. It was started in 1980-81 and continued as a major self-employment scheme till April 1, 1991. Then it was restructured as the Swarna Jayanti Gram Swrozzgar Yojna.

Jawahar Rozagar Yojna (JRY)/ Jawahar Gram Samridhi Yojna

JRY was plan as centrally sponsored scheme on 1st April 1989 when National Rural Employment Programme (NREP) merged with Rural Landless Employment Guarantee Programme (RLEGP). Objectives of the scheme are generation of additional gainful employment for the unemployed persons for both men and women in the rural areas.

SGRY is a programme started with merger of employment assurance programme (EAS) and Jawahar Gram Samridhi Yojna (JGSY) with effect from 25th Sept 2001. SGSY is expected to take care of food security, additional wage employment and village infrastructure, as food grain provided in this programme is an additional criteria of the programme.

IAY (Indira Awas Yojana)

To provide social milieu government providing rural housing to the citizens IAY is one of the best housing programme which aims to provide rural houses to BPL families in rural areas, mostly targeted SC/ST households and free bonded labours. It was first merged with the JRY in 1989 and then again separated into individual scheme for the rural poor in 1996. It is noted that IAY is a successful programme implemented by the Ministry of Rural Development.

Food for work programme: The food for work programme started in 2000-01 .It aims at wage employment

Mahatma Gandhi national rural employment guarantee Act

NAREGA aims at social equity and justice as herring in fundamental changes in the villages which will bring through its implementation. The act has introduced in 2nd February 2006 in 200 districts all over the country including 19 district of Orissa. SGRY and NFFWP have subsumed under NREGA in these district under sec of the Act. It emphasis on enhancement of livelihood security of the rural household by guaranteeing at least 100 days wage employment in a year to every household whose adult member volunteer to do unskilled manual work

National food for work programme: It was launched on November 2004 with an objective to provide additional resources available under Sampoorna Grameen Rojgar Yojna.

National Rural livelihood mission: Ajeevika(2011): to promote skill and placement the ministry of Rural Development initiated this programme as part of national Rural livelihood programme in 2011

Pradhan Mantri Kausal Vikash Yojna: It was launched in March 2015 to provide skill training this plan is implemented through ministry of skill Development.

To find out the Impact of poverty eradication programmes on employment generation , living standard, and in promoting savings among members a survey has been undertaken on Maa Dakshina Kali SHG of Indupur , Odisha .This SHG group was started in the year 27 Sept 2010 with 50 rupees monthly saving by its members .Total 16 members are involved in this SHG .The total fund Rs 2,87,000 was deposited by the group members for smooth operation of the group .During this year's there members were involved in small business with help of SHG fund. Agriculture (Paddy farming) second member started Dairy firm and the third member involved in fishery farming. To study the Impact of the self-employment programmes on the employment and living standard pre and post activity income and expenditure pattern, savings has been collected and studied for the year.

Table :1

Activity	Income Groups	Pre Activity Expenditure Pattern and employment generation							
		Food	Education	Clothing	Healthcare	Other	Saving	Total expenditure	Employment opportunity
1	2	3	4	5	6	7	8	9	10
Farming	25 000	18 000(72.29)	2400 (9.63)	2000 (8.03)	1200 (4.81)	1300 (5.22)	-	24900(100)	No
Dairy Farming	30 000	20 000 (67.79)	3000 (10.17)	3000 (10.17)	1000 (3.39)	2500 (8.47)	-	29 500(100)	NO
Fishery	35 000	23 500(67.14)	3000 (8.57)	5000 (4.28)	1200(3.42)	3400 (9.71)	-	35 000(100)	No

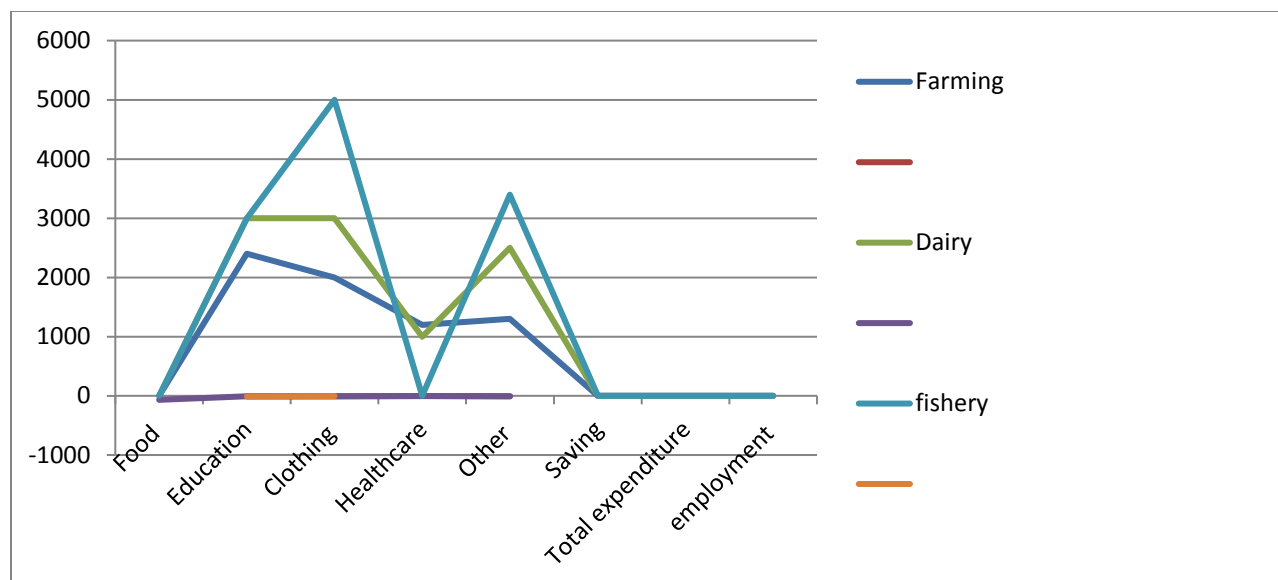


Chart-1: Pre Activity Expenditure Pattern and employment generation

As per the data from the table 1 and chart 1, those who have engaged in different activities they all are fall under 35 000 .Members who are involved in farming activity they earn 25 000 ,who are involved in Dairy farming earn 30 000 annually ,members who involved in fishery earn 35 000 per annually .As per the table 1 members who are involved in farming activity their expenditure on different items is 24 900. 72.29 percent of the total expenditure incurred on food items ,9.63 percent they spend on education of their children ,8.03 percent spend on clothing ,4.81 percent spend on healthcare ,5.22 percent spend on other items .Members who are involved in Dairy farming their pre benefits arise 30 000 they earn and without saving their expenditure pattern are 20000 for food item which is 67.79 percent of the total expenditure ,3000 (10.17) for education ,3000 for clothing ,3.39 percent for healthcare and 2500 which is 8.47 percent of total for other expenses of 29 500 total expenditure .if a glance have thrown on the data given for Fishery activity the income was 35 000 whereas the total expenditure was 35 000 and the respondent spend 67.14 percent of his income on food items and others on non-food items .In all three cases the members have not created any employment opportunity. To establish a co relation between pre assistance income level, expenses pattern and the savings with employment generation post assistance position of the respondent have been collected and it is found from the table number- 2 that those who are involved in farming activities their income level increases up to 80,000 simultaneously expenditure pattern increase they spend 73.17 on food items, 8.37 on education, 6.98 on clothing' 2.61 percent on healthcare and he has employed two workers. If

analyses data for dairy farming it's seen that income level increase up to 1 10 000 whereas expenditure increases to 97 000 and spend 13.4 percent for savings and created employment for one person further his expenditure pattern increases with increase in income.

Table 2;

Activity	Income Group	Post Activity Expenditure Pattern and employment generation							
		Food	Education	Clothing	Health care	Other	Saving	Total expenditure	Employment opportunity
1	2	3	4	5	6	7	8	9	10
Farming	80 000	42 000 (73.17)	4800 (8.37)	4000 (6.98)	1500 (2.61)	5000 (8.72)	19700 (34.38)	57 300 (100)	Wages employment (Two workers)
Dairy Farming	1,100,000	50000 (51.54)	24 000 (24.74)	8000 (8.24)	5000 (5.15)	10 000 (10.30)	13 000 (13.40)	97 000 (100)	One Milk Distributor(Throughout the year)
Fishery	130 000	50000 (49)	20 000 (19.60)	10 000 (9.80)	12000 (11.76)	20 000 (19.60)	28000 (27.45)	102000 (100)	Two helper

Respondent who were involved in farming activity their level of income increases up to 80 000 approximately .with increase in their income there are changes in their expenditure pattern. They spend 42 000 on food items which 73.17 percent. Educational expenditure increase by 6.98 percent, there is a increase in healthcare expenses by 2.61 percent .positive side is they promote habits of savings by 34.38 percent .Most important thing is that due to self-employment Programmes they have engaged two supporting workers .Incise of dairy

farming income level increase up to 1,10 000 and they spend 50, 000 which is 51.54 percent of the total expenditure. As per table 2 it is found that in the fishery activity income level increases up to Rs 1,30, 000 and they spend 500000 on food expenditure which is 49 percent, 19.6 percent spend on education and 9 percent on clothing, 11.76 percent on health care and they saves 28 000 which is 27.45 percent .Further they employed two works as helping hand for their business.

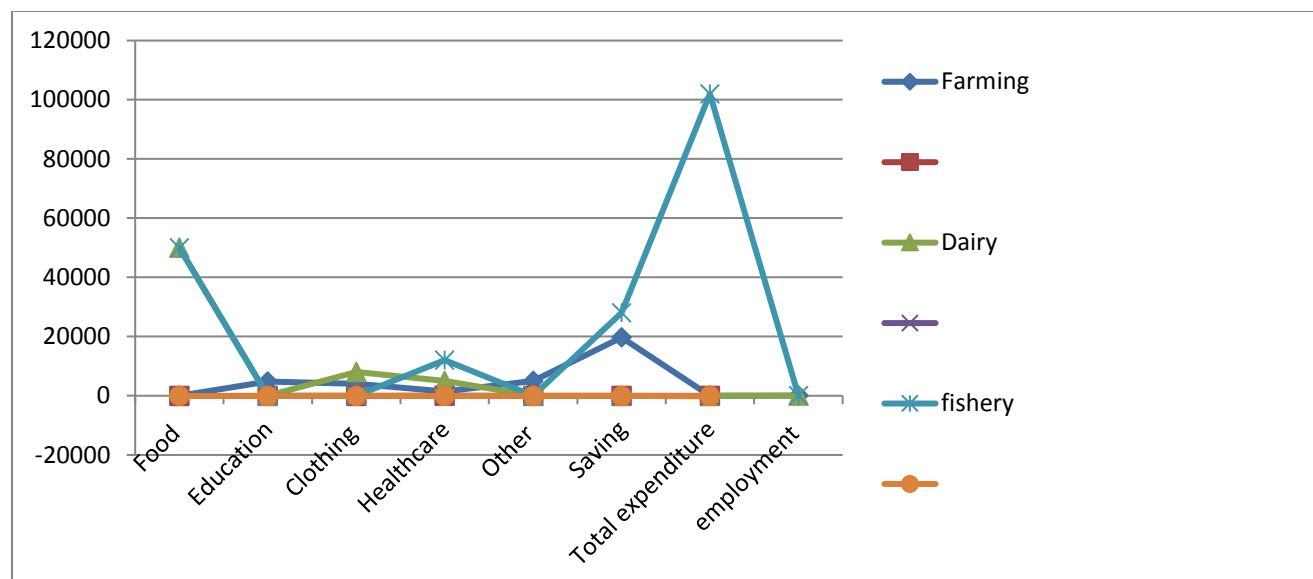


Chart-2:Pre Activity Expenditure Pattern and employment generation

Correlations			
		preincome	Postincome
preincome	Pearson Correlation	1	1.000**
	Sig. (2-tailed)		.000
	N	6	6
postincome	Pearson Correlation	1.000**	1
	Sig. (2-tailed)	.000	
	N	6	6
**. Correlation is significant at the 0.01 level (2-tailed).			

Inference: There is a significant between pre membership income and post membership income so Null hypothesis may be rejected and alternative hypothesis may be accepted. Poverty eradication programs have impact on employment generation and changes in income level and living standard of the SHG members.

Correlations		
		Pre expenditure
Pre expenditure	Pearson Correlation	1
	Sig. (2-tailed)	
	N	6
Post expenses hh	Pearson Correlation	1.000**
	Sig. (2-tailed)	.000
	N	6
**. Correlation is significant at the 0.01 level (2-tailed).		

Inference: It is found from the table that there is a positive change in the expenditure pattern of the members .due to changes in the income level there is changes in the expenditure pattern .In most of the cases the members increase their level of expenditure due to increase in expenditure level standard of living also increases.so Poverty eradication programs have impact on employment generation and changes in income level and living standard of the SHG members.

Correlations			
		Saving	Postsaving
saving	Pearson Correlation	1	1.000**
	Sig. (2-tailed)		.000
	N	6	6
postsaving	Pearson Correlation	1.000**	1
	Sig. (2-tailed)	.000	
	N	6	6
**. Correlation is significant at the 0.01 level (2-tailed).			

Inference: It is found from the data that due to increase in income ,the members promote habits of savings. Poverty eradication programs have impact on saving habits of the SHG members.

Conclusion: Science 1st five year plans to sustainable Development goals, poverty eradication programmes have its importance in countries priority list. At many points of time Government of India made policies of poverty eradication but fails to address the issue fully .It is nevertheless said that wages employment programme has no effect on eradicating poverty but as per the researcher it was

that self-employment programmes have minimize rate of poverty and generate employment opportunity.

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Effects of Digital Technology on Mental Health of Children

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Abstract

COVID-19 has triggered barriers in persevering with ordinary existence nearly anywhere with inside the global with the aid of using inflicting the implementation of social distancing and sooner or later enforcing the lockdown. This has emerge as the purpose for the boom in generation utilization in every day existence for expert paintings in addition to for leisure purposes. There has been an accelerated incidence of generation utilization in youth and kids for the duration of lockdown leaving its effect on their lives both in a advantageous or bad aspect. The usual documented percent boom of generation utilization in kids became approximately 15%, of which telephone utilization has 61.7% of incidence. Disturbance in mind functioning is usually recommended to be originated with the aid of using compromise of neuroplasticity of the nerves. The radiofrequency (RF) radiations emitting from the telephone are of dubious situation as a mind tumor threat element in kids. The accelerated utilization will have consequences on mind functioning to be able to compromise sleep and cognitive skills and expand threat for sure intellectual ailments including, however now no longer restrained to, melancholy, anxiety, Alzheimer`s disease, and attention-deficit/hyperactive disorder (ADHD). Despite being a hazard for growing intellectual illness, video games are demonstrated to lessen melancholy and anxiety, and boom creativity, skills, and cognition in kids. The accelerated utilization of generation will have a advantageous and bad effect at the intellectual improvement of youth and kids relying at the traits with inside the utilization. However, dad and mom must be tracking their kids` intellectual fitness and conduct in those tough instances of pandemic.

Keywords: Digital Technology, Effect on Children, Mental Health

JEL Code: J13

INTRODUCTION

Technology has spread out hyperlinks for people to with ease get admission to information, help, and support, there are sizable dangers related to its accelerated utilization. With generation turning into extra usual in youngsters' lives, it's crucial to determine what age children ought to get a telecellsmartphone as there may be lasting consequences of telecellsmartphone utilization at an early age. Specifically, display screen time and social media use amongst children and young adults were connected with an accelerated incidence of intellectual fitness concerns. The consequences of generation on youngsters and young adults may have an effect on social skills, their improvement and may be connected to some of different next factors. Research has indicated that net addiction, especially amongst more youthful demographics including teenagers, is turning into a substantial issue. It has been connected to depression, low self-esteem, and loneliness – signs that frequently cause diagnosable intellectual ailments and irritating troubles that have been already present. The passive use of social media sites (including Instagram, Twitter, Snapchat, and Facebook) is specially connected to being a danger element for accelerated ranges of depression. Overall, in phrases of the connection among display screen use and each bodily and intellectual fitness outcomes, there were numerous research that advocate better ranges of display screen use in youngsters and young people is related to decreased bodily activity, accelerated danger of depression, and decrease well-being.

Too much screen time risks children's mental health

Results from instructional researches appear to verify that an excessive amount of use of smartphone, pill and different cell gadgets will gift a chance thing to kids' intellectual health. Just an hour an afternoon observing a display may be sufficient to make kids much more likely to be troubled or depressed. This may be making them much less curious, much less capon a position to complete tasks, much less emotionally strong and decreasing their self-manage. The American Academy of Pediatrics suggest much less than one to 2 hours of enjoyment display time consistent with day for kids and discourage the usage of any display media through kids beneath Neath years of age.

Another take a look at shows that excessive display time is large definitely correlated with anxiety, depression, psychopathological signs and symptoms and negative sleep quality. It is exciting to notice that researchers advise that further to lowering display time, we also can manage for kids' intellectual troubles through growing their bodily activities.

LITERATURE REVIEW

The dependency of generation has risen as much as important factor and it maintains growing with inside the youngsters and children of various groups across the globe. Among the

technologies, maximum broadly used device is smartphone. There are many worrisome situations which can be resulting from the smartphones as referred to with inside the aforesaid section. Smartphones are stated to emit radiofrequency (RF) able to achieving the mind main to the undesirable events. The frequency variety of 30 KHz–three hundred GHz is recommended to be the feasible human carcinogen [14]. This RF emission is documented for growing the mind tumor danger in youngsters and children. It became located that the mind location uncovered to RF radiation are liable to expand the glioma and acoustic neuroma for tumors in youngsters and children [12]. The danger is stated to be maximum in populace of <20 years [04]. Children and children are greater uncovered to RF radiations of Wi-Fi telecellsmartphone because of smaller heads, better conductivity, and thinner skulls than the adults [09].

These elements make contributions with inside the better absorption of RF radiation via youngsters' brains [09]. Smartphone additionally motive the sleep disturbance because of the RF radiations [11]. The use of cell phones became related to the decrease attention of Beta-hint protein (lipocalin-kind prostaglandin D synthase) which synthesizes the crucial sleep-selling neurohormone named as prostaglandin D [25]. Along with the mind tumor danger, WHO stated the Wi-Fi telecellsmartphone being the fitness danger including, interest deficiency, impaired cognition, impaired mastering, sleep disruptions, and sensitivity to stress. Other noteworthy situations are Alzheimer's disease, "were given dementia", depression, anxiety, and danger for growing any feasible neurodegenerative condition [11]. There is high quality and poor proof concerning the usage of generation on the subject of neurodevelopment or neuroplasticity: some of the poor effects, immoderate publicity to the display can have an effect on mind improvement in poor ways [22], it could growth the danger of cognitive, behavioral, and emotional disturbances in children and younger adults (or the danger of dementia in vintage age).

VRT (digital truth generation)-primarily based totally rehabilitation is an increasing number of used to inspire affected person recuperation with inside the bodily and cognitive domains [21]. The benefits of the usage of VRT in neurorehabilitation are the opportunity of recuperating a compromised characteristic as a manner to stimulate [23] neuronal reorganization and the induction of neuroplasticity (to maximize motor mastering and neuroplasticity) and regain capabilities and abilities (even partially) with the aid of using interacting with a digital truth environment (VRE). The reference literature indicates that the alleged hazard of the usage of smartphones [29,24], specifically as a danger component for the improvement of mind tumors, is in truth nonetheless debated and, although the worry may be justified, we haven't any proof that the hazard is real [06,19,20].

Impact of TV and Videos

Television has been round for a protracted time. There are numerous research which have been achieved however their pattern sizes are instead small to attain any conclusions for a huge

population. However, tv has a massive effect on youngsters from the day 1 due to the fact all and sundry has it in his/her home. Studies have related the tv with the eye trouble in formative years and youngsters [15]. It is likewise documented that looking tv earlier than three years of age can also additionally have sizeable impact on cognitive functioning of the child [28]. This pandemic has been the cause for elevated use of tv amongst youngsters. Analyses of ways youngsters' brains react to tv use are scarcer than the ones regarding cognitive or behavioral outcomes, and causality stays hard to ascertain [11].

Gaming has end up an crucial a part of the existence of youngsters, from time to time main to the "Internet Gaming disorder" or "Gaming disorder" because of their addictive propensity. Gaming is usually recommended to have fantastic effect on human praise system (thru dopaminergic pathways), impulse control, and sensorimotor co-ordination [26]. Game playtime and frequency of play has elevated hastily throughout the activities of COVID-19 [17]. Playing videogames withinside the pandemic embarked a few high quality outcomes in lowering depression, tension, enhancing intellectual health, and fighting loneliness [02]. Videogames also are documented to stimulates or enhance the cognitive characteristic as concluded with the aid of using the latest studies [02].

According to the preceding look at on videogames in COVID-19, videogames have extra high quality affects as aforementioned because the poor effect, and the blanketed poor affects had been exceptionally least impactful on every day existence as they had been most effective complaining approximately the wastage of time [02]. The use of smartphones and different technology throughout the pandemic has been elevated distinctly because of quarantine. One look at observed the every day phone and pill publicity of two out of three youngsters beneath Neath forty eight months in Spain [05]. The youngsters elevated their generation utilization throughout COVID-19 pandemic, i.e., withinside the cause of gaming, on-line classes, and passing time which include social media use [08]. As already mentioned, the appearance of the pandemic has encouraged the behavioral sample of the more youthful era on the subject of health, lifestyle, and bodily hobby stage to display dependency, reasons numerous diseases, social problems, negative faculty overall performance and negatively consequences on signs in their bodily and intellectual health [01].

In fact, there has been an boom with inside the time spent in the front of monitors or a hyper-connection to the net. In general, the related sedentary lifestyle. In a look at carried out in China [27], the superiority of PSU (intricate phone use) become 43.three% with inside the ordinary pattern, with 41.9% in girls and 45.5% in men. To date, little qualitative studies has been carried out with adolescent phone customers while that is specially intricate or immoderate use. The outcomes of the look at with the aid of using Conlin and Sillence [07] proven the complexity of discriminating among purposeful and amusing phone use from intricate use in an generation wherein smartphones are so deeply found in cutting-edge existence. Among the intricate

elements stated become the want to have their telephones with inside the on the spot area even at night, the tension of getting misplaced their telephones or the distraction from their telephones even as studying different people.

The feel of consolation and evasion furnished with the aid of using smartphones appears to assist keep away from unsightly thoughts, feelings or reports with the aid of using presenting a range of latest stimuli. When the diploma of net dependency will become high, topics (generally younger adults) display a low stage of inhibitory (psychophysiological) control, even as topics who've a decrease diploma of dependence on each a pc and the Internet have a extra bendy worried system, that is indicated with the aid of using the very best stage of inhibitory control [18]. From this look at, it is able to be assumed that much less Internet structured college students may be capable of adapt to a hastily converting environment.

How do social media affect children's mental health?

There seems to be mixed findings from researchers.

On one hand, using social media advantages children's growth. Social media webweb sites permit teenagers to perform on line a few of the obligations which might be vital to them offline: staying linked with pals and family, making new pals, sharing pictures, and replacing ideas. Social media makes use of additionally offer more desirable studying opportunities, permitting center and excessive faculty college students to connect to each other on homework and organization projects.

Some research have indicated that social media use can be tied to bad intellectual fitness outcomes, consisting of suicidality, loneliness and reduced empathy. Other research have now no longer discovered proof for harm, or have indicated that social media use can be useful for a few individuals. One researcher said that, except indistinct booking, worries concerning social media use can be misplaced.

PSYCHOLOGICAL EFFECTS

Overuse or dependence on technology may have adverse psychological effects, including:

Isolation

Technologies, together with social media, are designed to convey human beings together, but they'll have the alternative impact in a few cases. A 2017study in teenagers elderly 19–32 years observed that human beings with better social media use had been greater than 3 instances as probably to experience socially remoted than people who did now no longer use social media as often. Finding approaches to lessen social media use, together with placing deadlines for social apps, may also assist lessen emotions of isolation in a few human beings.

Depression and anxiety

The authors of a 2016 systematic evaluate Trusted Source mentioned the hyperlink among social networks and intellectual fitness issues, consisting of despair and anxiety. Their studies located combined results. People who had extra wonderful interactions and social guide on those structures seemed to have decrease degrees of despair and anxiety. However, the opposite become additionally true. People who perceived that that they'd extra poor social interactions on line and who had been extra liable to social assessment skilled better degrees of despair and anxiety. So, at the same time as there does look like a hyperlink among social media and intellectual fitness, a large figuring out aspect is the kinds of interactions human beings experience they're having on those structures.

Physical health effects

Eyestrain

Technologies, inclusive of hand-held tablets, smartphones, and computers, can preserve a person's interest for lengthy periods. This may also result in eyestrain. Symptoms of virtual eyestrain can encompass blurred imaginative and prescient and dry eyes. Eyestrain might also result in pains in different regions of the body, inclusive of the head, neck, or shoulders. Several technological elements may also result in eyestrain, inclusive of: screen time.

- screen glare
- screen brightness
- viewing too close or too far away
- poor sitting posture
- underlying vision issues

Taking every day breaks farfar from the display screen may also lessen the chance of eyestrain. Anyone frequently experiencing those signs have to see an optometrist for a checkup. The 20-20-20 rule for virtual viewing When the use of any shape of virtual display screen for longer durations of time, the American Optometric Association suggest the use of the 20-20-20 rule. To use the rule, after each 20 mins of display screen time, take a 20-2d ruin to study something as a minimum 20 toes away. Doing this could assist lessen the pressure at the eyes from observing a display screen for a non-stop period.

Poor posture

The manner many humans use cellular gadgets and computer systems can also make contributions to wrong posture. Over time, this could result in musculoskeletal issues. Many

technology sell a “down and ahead” consumer function, which means the man or woman is hunched ahead and searching down on the screen. This can positioned an needless quantity of stress at the neck and spine. A 5-yr take a look at withinside the magazine Applied Ergonomics discovered an affiliation among texting on a cellular telecellsmartphone and neck or top returned ache in younger adults. The effects indicated the consequences have been normally brief time period, aleven though a few humans endured to have long-time period signs and symptoms.

However, a few research assignment those effects. A 2018 take a look at Trusted Source withinside the European Spine Journal discovered that the posture of the neck at the same time as texting made no distinction in signs and symptoms together with neck ache. This take a look at concluded that texting and “textual content neck” did now no longer impact neck ache in younger adults. However, the take a look at did now no longer encompass a long-time period follow-up.

It can be that different elements impact neck ache, as well, together with age and interest levels. Correcting posture issues at the same time as the usage of generation can also additionally result in an average development in posture and power withinside the core, neck, and returned. For example, if someone reveals themselves sitting withinside the identical function for hours at a time, together with sitting at a table at the same time as working, often status or stretching can also additionally assist lessen pressure at the body. Additionally, taking brief breaks, together with taking walks across the workplace each hour, can also assist hold the muscle groups free and keep away from anxiety and wrong posture.

Sleep problems

Using generation too near bedtime can also additionally reason troubles with sleep. This impact has to do with the truth that blue mild, consisting of the mild from mobileular phones, e-readers, and computers, stimulates the brain. Authors of a 2014 take a look at located that this blue mild is sufficient to disturb the body’s herbal circadian rhythm. This disturbance ought to make it more difficult to doze off or result in someone feeling much less alert the following day. To keep away from the capability effect of blue mild at the brain, human beings can forestall the usage of digital gadgets that emit blue mild withinside the hour or earlier than bedtime. Gentle sports to wind down with instead, consisting of studying a book, doing mild stretches, or taking a bath, are alternatives.

Reduced physical activity

Most everyday digital technologies are sedentary. More extended use of these technologies promotes a more sedentary lifestyle, which is known to have negative health effects, such as contributing to:

- obesity
- cardiovascular disease
- type 2 diabetes
- premature death

Finding ways to take breaks from sedentary technologies may help promote a more active lifestyle. Other forms of technology may help, however. Research from 2017 Trusted Source indicates that active technologies, such as app notifications, emails, and wearable technologies that promote exercise may reduce short-term sedentary behavior.

This could help people set healthful patterns and become more physically active.

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In children

Children's brains are still developing and may be more sensitive to the effects of technology and its overuse than adult brains. A 2018 review of various studies noted the possible adverse effects of children using different technologies.

Children who overuse technology may be more likely to experience issues, including:

- low academic performance
- lack of attention
- low creativity
- delays in language development
- delays in social and emotional development
- physical inactivity and obesity
- poor sleep quality
- social issues, such as social incompatibility and anxiety
- aggressive behaviors
- addiction to these technologies
- higher BMI

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earlier than bedtime. Gentle sports to wind down with instead, consisting of studying a book, doing mild stretches, or taking a bath, are alternatives.

How to Avoid Situation?

It can be almost not possible to keep away from era in all forms, however it's miles essential to display your youngsters and restriction the quantity of time spent on social media or searching at a display. The American Academy of Pediatrics recommends much less than one to 2 hours of enjoyment display time according to day for youngsters and discourages using any display media through youngsters below years of age. Additionally, the use of displays for speaking with pals and cherished ones can be useful for a few youngsters and teenagers, however it's miles essential that dad and mom display this use to make sure that it's miles positive.

It is usually recommended that dad and mom and caregivers use era along youngsters and youth, and have interaction them in discussions approximately secure and wholesome media use. This can assist your toddler create more healthy behavior in terms of the use of era and social media to be able to advantage them withinside the future.

Because youngsters don't begin displaying signs till they may be round eight to ten years old, intellectual infection in youngsters can move undetected. As dad and mom, it's vital which you examine the tell-story symptoms and symptoms and signs related to intellectual fitness issues so that you can get your toddler the remedy they want have to an problem be present. Below are a number of the maximum not unusualplace caution symptoms and symptoms in teenagers and adolescents:

- Extreme mood swings
- Drug or alcohol use
- Severe changes in sleeping habits, personality traits, and behavior
- Difficult time concentrating
- Extreme sense of worry or fear during daily activities
- Attempting to harm one's self or thinking about it
- Partaking in risky behaviors that can lead to harming themselves or others
- Sudden weight loss or weight gain
- Feeling withdrawal or sad
- Signs of addictive behavior in regards to the internet

If you watched that your toddler can be experiencing a intellectual fitness condition, do now no longer wait to searching for assist. There isn't anyt any disgrace in going to a physician or scientific psychologist that focuses on counseling for youngsters in terms of intellectual disorders. If you don't recognise in which to head for assist, recollect speaking for your toddler's

college counselor, their pediatrician, or maybe a intellectual fitness expert inside your area. Natural options to pills encompass CBD for youngsters, which has proven promise in treating tension and symptoms and symptoms of melancholy in kids liable to ADHD.

Even in case your toddler isn't always displaying signs of a intellectual fitness sickness however seems to be a touch too connected to their telecellsmartphone or computer, it's essential which you take a seat down down with them and give an explanation for the risks of technology. Creating those barriers and informing your kids approximately capacity threats is an fantastic manner to live organized must an problem arise. Create an open dialogue together along with your kids and concentrate to their mind and worries approximately social media. Does display time guide their fitness and well-being? Do they display depressive signs whilst speaking approximately their social networks? Moving forward, attempt to be as vigilant as viable in terms of tracking their display time. By being organized and being open together along with your kids, you'll with any luck be capable of save you or get worse intellectual fitness situations inside your youngsters. And remember, in case your toddler does want intellectual fitness treatment, get them assist as quickly as viable.

CONCLUSION

Increased technological utilization at some point of the pandemic has its advantageous and terrible impacts, relying at the utilization. As lots as smartphones are manner of escaping loneliness in lockdown, they're additionally liable for inflicting extreme intellectual contamination which include melancholy, tension, sleep irritability, and cognitive impairment. The RF radiations emitting from the cellphone are of dubious problem as mind tumor hazard element in kids. Further on, even though tv utilization is probably now no longer as lots because the cellphone, it additionally has its outcomes on kids as much as a few extent. Videogames are tested to be strain remedy gear for the kids in addition to adults. Videogames are claimed to lessen melancholy and tension, and boom creativity, cognition, and skills [16].

Parents must be checking on their kids for any viable terrible effect of improved utilization of technology. Individuals who're touchy to strain or vulnerable to expand melancholy, tension must be advocated to make their distance from the every day information due to negativity [03]. Parents are cautioned to introduce efficient and innovative video games of their houses and must inspire their kids.

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Theories of business impact factors

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Abstract

In recent years, technology and its applications have played an important role in everyday life and are essential to many of our daily activities. In addition, information technologies and information and communication technologies are developing rapidly. E-commerce and other information and communication technologies have therefore become important tools for economic growth and productivity and are changing the structure of the world around us. Indeed, technologies have radically changed the essence of global relations, the sources of competitive advantage and opportunities for economic and social development.

JEL classification: C88, L21, L86, M21

Keywords: RBT, B2B, TRA, TAM

Introduction

Technologies such as the Internet, personal computers, mobile telephony, and wireless communications have transformed our world and transformed it into an interconnected network of people, businesses, educational institutions, and governments that communicate with each other. through a multitude of channels.

The rapid development of technology has taken us to a world where anyone can enjoy the benefits of network connectivity from anywhere. The key benefits, but also the obstacles that have emerged from this participation in the web world.

Body of work

In addition, the rapid pace of internet penetration has created a wide literature on e-commerce and e-commerce. Recent studies showing the growing volume of economic activity in almost all industrialized countries have contributed to a growing interest in e-commerce and developing countries. Both national and international institutes seem to focus on e-development opportunities in the private and public sectors. In fact, initiatives related to new technologies and electronic transactions have been initiated by the European Union through initiatives such as eEurope [eEurope] and its follow-up, i2010 [i2010 Europe].

1. In order for a company to be able to meet the needs, but also to take advantage of the presented needs, it must join the electronic framework and adopt the electronic business both in its customer relations and in its commercial relations. Alliances with all

elements of the company's value chain are needed to integrate all its functions into the new electronic reality, as business competitiveness is largely determined by the company's ability to work continuously with others. Thus, Enterprise Interoperability is a strategic necessity for all companies and is a necessary element for all companies investing in innovation systems. The European i2010 initiative clearly recognized interoperability as a very important issue that needs to be overcome, but for a company to be able to take action to adopt and implement systems based on new technologies, it needs to be prepared at different levels (infrastructure), mentality, etc.).

2. Business interoperability.

Business to Business (B2B e-commerce) facilitates business relationships and transactions, significantly reducing costs compared to what is required for similar transactions through traditional channels and traditional trade. Thus, it provides businesses with a different business value, depending on how each organization uses the communications network.

A distinction that can be made for the implementation of enterprise interoperability by companies is [Lee et al., 2003]:

- Basic operational interoperability.
- Businesses implement the online network to automate the exchange of business documents.
- Collaborative business interoperability.
- Networks are used to create enterprise applications with their business partners.

An important term in B2B e-business is e-marketplaces [E - market definition]. Online shopping is an online environment where B2B sellers and buyers come together to trade more efficiently online. The main advantages for users of an online shopping site are low costs [Bakos, 1991], greater flexibility, better information, better cooperation and less time. Participation in electronic markets can also lead to improved customer service and better-quality products and services [Braun, 2002]. However, there are some disadvantages, and these are the costs of applications, development and integration with the company's internal systems and the fees required for subscription and transactions.

Online shopping sites can be classified according to the exchange mechanism they use [Timmers, 1998], where they focus on [Grieger, 2003] or even the structure of their property. (neutral e-commerce sites, collaborative e-commerce sites, private exchanges, etc.).

The B2B region has been particularly interested in what makes an e-commerce business successful. Different models and frameworks have been developed and various success factors have been identified in research efforts focused on specific B2B industries. One such piece is the study of e-business training to support business interoperability.

Business preparation for interoperability.

Although e-business can significantly help a company gain a competitive position in the market and competitive advantages over its competitors, such an effort to adopt e-business involves a high risk. Numerous examples have been observed in which the implementation of e-commerce has led to catastrophic failure. Indeed, the inefficient and hasty implementation of e-commerce by companies contributes to the waste of significant resources, without bringing significant benefits.

To minimize the risk and maximize the potential benefits of running an e-business, the company needs to study its readiness. Therefore, it is important for the company to know if it is ready to do this and how ready it is. However, the answer to being prepared is not simply a "yes" or a "no", but a complex system that shows the potential of the business. On the other hand, a business may be ready for some business interoperability applications, but not mature enough to use some others. So, even if it is not prepared, the company will be able to make

proper planning to improve its weaknesses and to be able to in the future for the world of e-commerce.

The above concept that a business is ready is called electronic training or electronic training. Electronic availability can also be defined as the ability to use information and communication technologies to grow the economy and cultivate prosperity [Wikipedia, E-training]. A similar definition is given by Choucri et al. [2003], where e-learning is defined as the ability to pursue value-creating opportunities that are facilitated using the Internet.

Electronic availability is sometimes mentioned in the same sense as the maturity of ICT. The maturity of ICT is therefore the ability of an organization, a business, a community or even a country to make the most of information and communication technologies, while this concept has also been used to use new technologies in education [Becta, 2007]. A mature electronic business is one that encourages the ability to use new technologies, trusts the internet, compromises costs, knows the benefits, and uses technology as much as possible.

Therefore, electronic availability answers questions such as:

1. How will a company be assured that it will succeed and benefit from joining e-business?
2. How will the repayment of his investments in time, human resources and money be ensured?

In addition, the new reality with the development of the Internet requires the existence of companies that can adapt quickly to change. Thus, the conduct of ongoing internal audits by companies - which is directly related to training - has become particularly important in recent years as a means of coping with the complexity of communication observed.

Related theories on business impact factors.

From time to time various theories have been proposed that show how a business, an organization or a group and its operation are affected by various elements, such as the environment and its internal structure. These factors are also related to the company's incentives for interoperability, maturity, its behaviour, and various other technological, administrative, and organizational elements. Some of these theories of factors have prevailed and are therefore repeated and identified in more recent studies on the factors that influence companies' motivation and willingness to conduct automated transactions.

The theory of justified action.

The theory of motivated action (TRA) emerged from social psychology [Ajzen and Fishbein, 1975]. TRA consists of three general structures:

1. Behavioural intent.
2. Attitude.
3. Subjective norm.

The theory suggests that a person's intention to behave depends on his attitude towards behaviour and subjective norms. If a person intends to follow a behaviour, then he is likely to follow it. In addition, everyone's intentions are influenced by their attitude towards behaviour and subjective norm. Behavioural intention measures the intensity of a person's intention to perform the behaviour, while the attitude consists in the person's beliefs about the consequences of the behaviour multiplied by his own assessment of the consequences. On the other hand, the subjective norm is defined as: "the perception of the individual for most people who are important for it considers whether or not they should engage in this behaviour." Thus, if a person considers the proposed behaviour (attitude) positive and considers that other important people want to have a specific behaviour (subjective norm), then there is a greater intention (motivation) on his part and it is very likely that he will fulfill the behaviour.

The equation resulting from the above behaviour is:
Behavioural Intention = Attitude + Subjective Norms

Therefore, this model suggests that external stimuli affect a person's posture by changing the structure of their beliefs. In addition, the subjective rules that are part of the intention to behave are related to the idea that third parties have about whether the person should adopt a behaviour. A high correlation between positions, subjective norms, and behavioural additions has been confirmed in many studies (e.g. [Sheppard et al., 1988]).

According to TRA, all other factors that influence behaviour do so only indirectly by influencing posture or subjective norms. Ajzen and Fishbein cite these factors as external variables.

Examples of such variables may be project or user characteristics, political influences, organizational structure, etc.

Based on the above theory, the behaviour of a company's managers during the adoption and implementation of electronic business systems can also be justified.

Theory of planned behaviour.

Planned Behaviour Theory (TPB) is a term also used in psychology. It also deals with the relationship between attitude and behaviour. Ajzen was also proposed by Ajzen [Ajzen, 1991] as an extension of his earlier theory of motivated action. It has been applied in studies on the relationships between beliefs, attitudes, intentions and behavioural in various fields, such as advertising, public relations, etc.

TPB was created mainly because of studies that - by rejecting the theory of justified action - have shown that the close relationship between intentional behaviour and actual behaviour is not so accurate, because intentional behaviour does not lead always to a behaviour due to occasional limitations. Thus, a new element of influence was added: perceived behavioural control and the theory of projected behaviour appeared. Perceived behavioural control comes from the theory of self-efficacy (SET) proposed by Bandura [Bandura, 1977], which in turn is related to social cognitive theory [Bandura, 2001].

The self-efficacy defined in the above theory is the belief of an individual in his effectiveness in performing specific tasks. In fact, people who consider themselves extremely efficient behave, think, and feel differently from those who are perceived as ineffective. According to Bandura, expectations such as motivation, performance and feelings of frustration associated with repeated failures determine behavioural responses. Expectations can be divided into two groups:

- - waiting for self-efficacy and waiting for the result, if waiting for the result refers to an individual's assessment that a certain behaviour will lead to specific results.
- Because the theory of self-efficacy helps to explain the different relationships between beliefs, attitudes, intentions, and behaviours, it has also been applied in various health-related areas (e.g., exercise and mental health in adolescence).

It follows from the above that the theory of projected behaviour depends on the intention of the behaviour, which is a function of the individual's attitude towards the behaviour, the subjective norms related to the performance of the behaviour, but also the person's perception of convenience. with which the behaviour can be performed.

It also explains the theory of planned behaviour in a completely different way from the behaviour of a company's directors in the implementation of e-business.

Technological acceptance model.

The Technology Acceptance Model (TAM) is an information systems theory that models how users get to the point of accepting and using a technology. The model suggests that when users are presented with a new software package, a set of factors influences their decision when and how to use it.

1. Perceived utility (PU): the degree to which a person believes that a system will improve the performance of his work.
2. PEOU noticeably easy to use: the degree to which a person believes that a system will not require effort (familiarity).

The technology acceptance model is one of the most important extensions of justified action theory. As new technologies become more complex and there is an element of uncertainty on the part of principals who make decisions about successful adoption, individuals form attitudes and intentions about trying to learn new technologies. However, attitudes towards use and intention to use may be incomplete or incorrect. Thus, the actual use cannot be a direct or immediate consequence of these attitudes and intentions.

Many researchers have conducted similar studies to demonstrate the empirical relationship between utility, ease of use, and system utilization. Particular attention was paid to controlling the robustness and validity of the questionnaire used in Davis' work. However, there are also criticisms of the theory of acceptance of technology, which focuses on the questionable value of the theory and its interpretive and predictive power.

In fact, to integrate user acceptance models, the Unified Theory of Acceptance and Use of Technology (UTAUT) has been developed. This model is superior to any individual model it includes.

Dissemination of innovation.

The diffusion of innovation [Rogers, 2003] is related to how, why and to what extent new ideas and technology are disseminated. It applies, for example, to the acceptance of new technological products (e.g. computer), food (e.g. sushi), musical style, ideas (e.g. feminism), etc. According to the definition given in Rogers' book, diffusion is the process by which a process communicates over time through channels to members of a social system. The definition contains four elements that exist in the process of disseminating innovation:

1. Innovation: An idea or practice that is perceived as news by an individual user or group of users.
2. Communication channels: how messages get from one individual to another.
3. Time: There are three-time factors. Are:
 - a. Innovation decision.
 - b. Relative time for an innovation to be adopted by an individual or group.
 - c. Innovation adoption rate.
4. The social system: a group of related groups working to solve a common problem to achieve a common goal.

The spread of innovation as a research topic began in the 1950s at the University of Chicago, with funding from television producers looking for a way to measure the effectiveness of television advertising. The field has been developed and processes of diffusion of competitiveness have been studied, where the diffusion of an innovation causes an opposite innovation, which is also competitive diffused from the first. Examples are competing products, political opponents, etc.

The spread of innovation also affects the adoption of e-commerce by companies, as the company is affected by the innovations presented in the field of employment. The technologies that accompany them are crucial for the company to decide if it is worth adopting an innovation

and if it has the necessary resources to make such an investment. Particularly critical of a business is adopting the right innovation at the right time.

Technology - Environment - Organizational framework.

Technology - Environment - Environment - TOE was proposed by Tornatzky and Fleischer in their respective book [1990] and influenced many later models, making it perhaps the most important framework, especially in business. interoperability. The framework defines the three areas that a business uses to determine how it can take advantage of new e-commerce technology:

1. Technology.

The technology within the organization, as well as the existing technology available in the industry, is considered to determine the company's ability to adopt e-commerce.

2. Environment.

The environment includes industrial potential, competition, external resources and government cooperation and regulations.

3. Organization.

The organization's strategy and structure include the size and scope of the company's operations, the concentration, standardization and complexity of its management structure, the quality of human resources and the amount of indifferent internal resources.

The TOE framework laid the groundwork for many other later models. This is the case of the model Tan et al. [2003], which studies the use of online shopping by small businesses. It is reported that the factors directly related to the success or failure of an e-commerce initiative fall into three categories:

1. IS factors First, the infrastructure needs to be studied to answer questions such as: Is the current configuration compatible with the new technology required? The complexity of the technology is that current staff cannot manage it properly?

2. Organizational factors.

The next step is to study your body issues to see if your body is ready. The availability of management and its knowledge of the technology that will be used in the new e-commerce strategy are also studied. If technological knowledge is not enough to understand the business uses of new technology and how they are integrated into the overall business strategy, the chances of success are low.

3. Environmental factors.

External factors are linked to business partnerships that could add an additional element of risk. This risk is related to the fact that the company does not know if its partner will react positively to the new technology or if the partner's existing technology and infrastructure can be successfully integrated into the technology that the company will implement. Careful planning and open channels of communication with partners can mitigate risk. On the other side of the coin, the risk is related to the pressure that can be exerted by a partner trying to force the company to implement a new technology. The last environmental factor refers to the level of competition that exists in the company's industrial sector.

Resource-based view.

Resource-based theory (RBT) is a financial instrument used to determine a company's strategic resources. The basic principle is that the basis of a company's competitive advantage is related to all the valuable resources at its disposal.

The company's resources are all the advantages, skills, organizational processes, knowledge, etc., which are controlled by the company and which help it to capture strategies that will improve its efficiency and effectiveness. Therefore, the company must take advantage of these resources to gain a competitive advantage. Transforming a temporary competitive advantage into a sustainable and stable competitive advantage requires that these resources be heterogeneous and not entirely mobile.

Thus, a competitive advantage can be obtained if the company's current strategy creates value and cannot be implemented by its current or potential future competitors. Although a competitive advantage can be maintained in a business, this is not always the case. However, it is considered stable when competitors' efforts to make this competitive advantage unnecessary have ceased. An alternative perspective is that a competitive advantage can be considered stable when it offers above-average long-term gains.

The basic steps of this theory are:

1. Identify potential company resources and keys:
2. Assess whether these resources meet the following criteria (VRIN as shown by their initials):
 - Valuable: a resource should help a company implement a value creation strategy either by outperforming competitors or reducing its weaknesses.
 - Rare: to be valuable, a resource, by definition, must be scarce.
 - Imitation / Original: If a valuable resource is controlled by a single company, it can become a source of competitive advantage. In fact, this strategic advantage can be maintained if competitors are not able to reproduce it to a perfect extent. The term "isolation mechanism" was coined by Rumelt [1984] to explain why companies may not be able to emulate a resource to such an extent that they can compete with the company that owns it. An important fundamental factor of imitation is the doubt that arises when the source of the competitive advantage is unknown.
 - Irretrievable: even if a resource is scarce, creates value and can only be imitated incompletely, an equally important aspect is its lack of replacement or substitution. If competitors can counter the company's strategy with a replacement, prices fall to the point where there is ultimately zero profit for the business. Each of the above features is necessary, but not sufficient for a lasting competitive advantage.
3. Interest and protection of resources held by the above characteristics.

The Hierarchy of Influence Model.

According to the Hierarchical model of effects, consumers go through some stages of knowledge, while heading to a certain market. The original model refers to four phases that appear in the following order:

1. Awareness 2. Interest 3. Desire 4. Action

Therefore, the consumer follows the specific steps for each purchasing decision, but the length of stay in each phase may differ from one phase to another. Various other stages have been proposed from time to time in the above series. The most important of these are belief and satisfaction, which appear in different positions in different theories. A significant improvement of the model was its reduction in three stages:

1. Faith (faith or learning)
2. Influence (interest or desire)
3. Motivation (action or behaviour)

The model of the hierarchy of influence is mainly related to the field of marketing of products and services. However, it is also linked to operational interoperability in the broadest sense, as it explains how people are affected until they reach a market decision. The same goes

for a company going through different stages until it decides to make an investment related to the interoperability of e-commerce and business.

Phase theory.

Stage theory is based on growth theory to explain the process by which information and communication technologies are developed in business. In general, phase theories are based on the idea that the elements of a system move and go through a pattern of stages in time and that these stages can be described based on the characteristics of each.

Thus, the development of information and communication technologies takes place in stages in which each has specific characteristics. The following steps can be differentiated in the field of e-commerce:

1. Messaging.
2. Online advertising.
3. Online order.
4. Online payment.
5. Order online sales support / assistance.
6. Electronic business.

Institutional theory.

Institutional theory is a large-scale theoretical approach that emphasizes rational myths, homogeneity, and rules to explain why an organization adopts a attitude or implementation. Thus, there are also mandatory regulatory and mimetic pressures for companies to adopt information and communication technologies [Teo et al., 2003]. Inter-organizational relations are also a key factor. They are determined and made up of six key factors: necessity, asymmetry, reciprocity, efficiency, stability, and legitimacy. Some studies show that the main reasons influencing the adoption of e-commerce by small and medium-sized enterprises are customer demand and competition [Oliver, 1990]. Others report that the nature of the local economy and the expansion of a community's geographic isolation may affect the adoption of local or provincial e-commerce [Steinfeld and Whitten, 1999].

Conclusions.

The use of technology also gives businesses the opportunity to provide mass services, but allows them to learn as much as they can about each customer and their needs, offering more personalized services (something which is done, for example, with membership cards). As a result, a learning relationship is created, which becomes more significant over time, through continuous collaboration between customers and businesses. In particular, the more customers inform the company about their needs and how they want to receive the services, how and how much they use them, the more competitive the business becomes and the more difficult it becomes for competitors to request them. , as a new customer should invest in time and energy to teach competitors what they really want and how they want to be offered.

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3. https://ec.europa.eu/agriculture/statistics/factsheets_en

WOMEN'S EMPLOYMENT IN THE WORLD AND IN TURKEY

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Abstract

The international system is constantly changing and transforming. The international social structure within the changing and transforming international system is also changing. The place of women in this structure also changes. In particular, women who produce economic value come to important positions in the modern world and undertake duties and responsibilities. In this context, while the importance of working women (women's employment) is evaluated both in the international system and in Turkey, a distinction will be made between the private and public sectors. The statistical rates and numbers of working women (women's employment) and the difficulties they experience will form the basis of the study. In addition, in the study, a comparison will be made with the data of working men while determining the importance of working women. Thus, the equality of working women and working men under the same conditions will be emphasized. The data to be used within the scope of the study will be obtained from the institutions as International Labor Organization (ILO), UN Women, World Bank (WB), Turkish Statistical Institute (TUIK).

Keywords: Working Women, Women's Employment, Turkey, International System, Private Sector-Public Sector

JEL Codes: J16, J21, J71.

1. Importance of Women's Employment in the International System

In the changing and transforming international system, the importance of women in business life is also shaped differently. Especially if it is foreseen that technological developments are increasing day by day, the place of women in working life can be shaped accordingly. It is possible to observe the best example of this in women who can work from home. It is obvious that gender equality in the international system is not reflected in business life. In business life, women make great efforts to gain a place for themselves. As a result of changing socio-economic conditions, women's integration into business life can also vary from country to country with the influence of factors such as religion and culture. In addition, marriage, birth, etc. The point of view that leave processes will be a problem for reasons such as these is also effective in the preference of male employees instead of females.

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2. Women's Employment in the World

Within the scope of the working phenomenon that has existed since the beginning of humanity, women assumed roles such as slaves, apprentices, and apprentices, while the entry of women into working life, in a sense similar to today's, coincides with the end of the 18th century. The most important factor in this was the emergence of the labor force that is needed with the organization of production that emerged with the industrial revolution and can be employed at low wages. With the employment of women in jobs other than planting and harvesting in the changing agricultural production conditions with the industrial revolution, they also took part in the service sector, especially at the point of sale of the produced products. In this period, with the rapid spread of production that does not require qualified labor, especially in large-scale textile factories, women left the house, unpaid family work and agricultural field. However, unqualified female workforce was seen as a substitute for male workforce with long working hours and low wages in this period (Yılmaz et.al., 2008: 91; Küçük, 2015: 3).

In the first part of the study, the number of female employees in the world and their ratios will be given, and the injustice in participation in the international labor force will be revealed. Considered in this context, the current global labour force participation rate for women is just under 47%. For men, it's 72%. That's a difference of 25 percentage points, with some regions facing a gap of more than 50 percentage points (ILO, 2022).

2.1. Women's Employment in The Public-Private Sector in The World

In the international system, the presence of women in business life in the public and private sectors is quite low compared to men. The biggest indicator of this situation is the number of women in the assemblies of countries and the boards of directors of companies or the general number of female employees in public-private institutions. For all that some countries such as France, Germany, India, Italy, the Netherlands, Norway, and South Korea are among the countries that have implemented quotas for women on boards of public companies (Catalyst.org, 2021).

In this context, on female labor force in the public and private sectors, the Bureaucracy Lab published in 2019, a blogpost exploring gender discrimination and the pay gap in the public sector that looked at five key facts from the Worldwide Bureaucracy Indicators, a cross-national dataset on public sector employment and wages.

According to this blogpost firstly, the public sector remains a larger employer of women than the private sector. Globally, women represent 46 percent of the public sector workforce compared with 33 percent in the private sector. While women are outnumbered by men in the private sector in 130 countries, they are rapidly gaining in the public sector, where they outnumber men in 55 nations, according to new data on high- and upper-middle income countries (Mukhtarova at al., 2021).

Secondly, female representation in the public sector is strongly correlated with country incomes. Female employment in the private sector is generally believed to have a U-shaped relationship, implying that female participation rates in the private sector rises with country incomes to a certain threshold. However, as income continues to rise further, female private sector participation rates begin to fall (Goldin, 1986: 34-39; Goldin, 1995: 55-56; Jayachandran, 2020: 1-2), the WWBI shows a consistently positive and significant relationship between female participation in the public workforce and country incomes (Mukhtarova at al., 2021).

Thirdly, while most public sectors have higher participation by women, they are largely confined to a few industries and occupations. More than 64 percent of the public sector education workforce is female and women account for more than 70 percent of workers in the health care sector. Comparatively, less than 38 percent of the public administration workforce is female. One important reason for this disparity: Bias in task assignments that relegates women to jobs where they are less visible and less likely to get opportunities for advancement. A 2019 WHO report showed that female healthcare workers are concentrated in lower-status occupations such as nurses and midwives, while men still outnumber women among physicians and medical specialists (Mukhtarova at al., 2021).

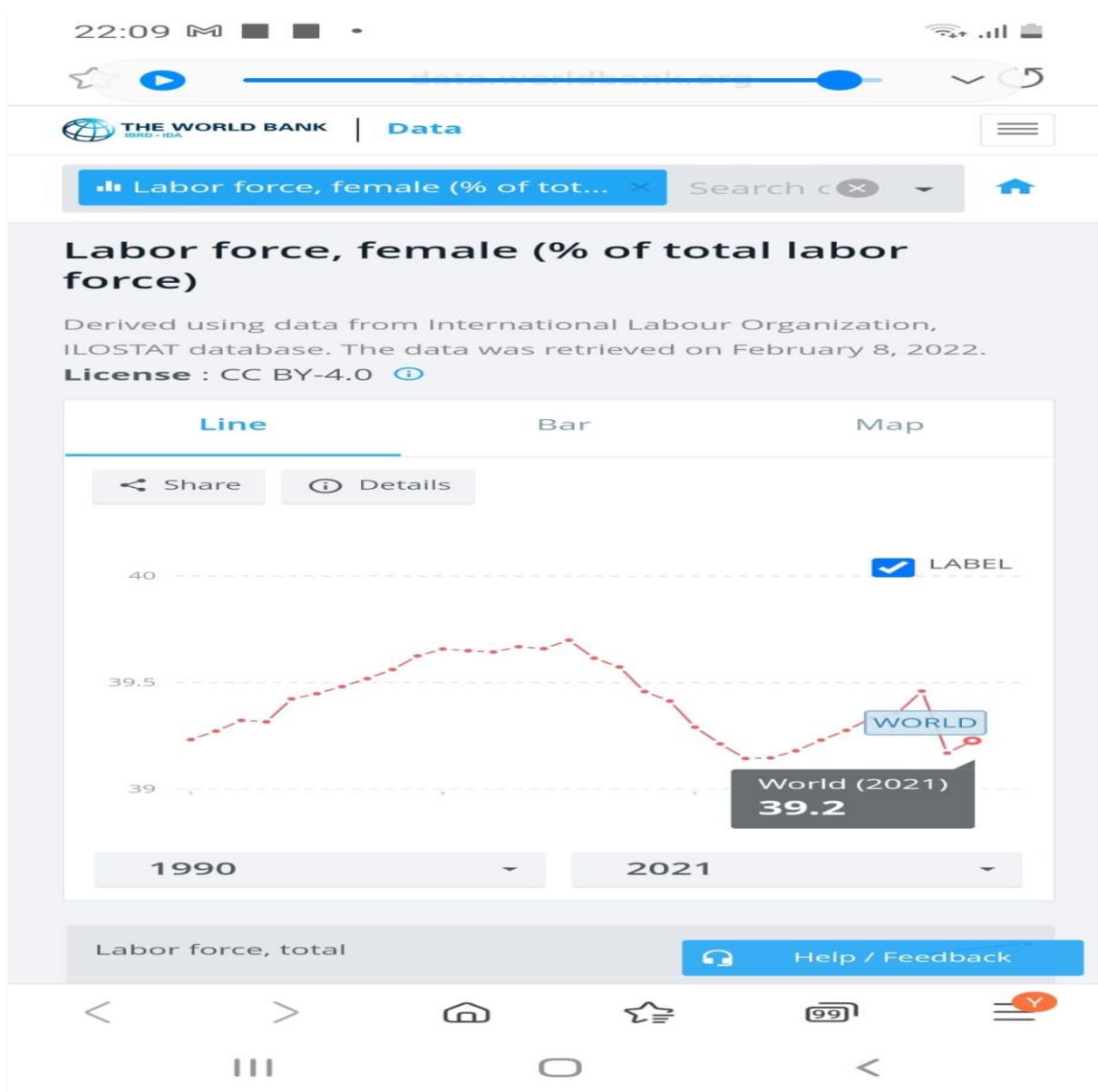
Fourthly, women receive a much larger wage premium for working in the public sector than men. Although public employees in most nations receive a premium compared with their counterparts in the private sector, the higher wages are not uniform across genders. Women in the public sector enjoy a wage premium of almost 30 percent over those employed in the private sector. The previous blog found that women's average wages are 86% of men's in the public sector and 76% in the formal private sector. This has large implications for female participation rates in the private sector given the immense opportunity costs (Mukhtarova at al., 2021).

Lastly, female wage penalties persist even in industries with high representation of women. Lower female labor force participation rates are only one source of the gender pay gap. However, even in industries with large female representation (such as the education and healthcare sectors), their participation is mostly confined to lower-paid occupations (women

represent over 84 percent of the global supply of nurses while remain a minority of doctors). In 191 of 201 observations for gender wage premiums by industry, women face a wage penalty compared with their male counterparts. The average global gender wage penalty is 14 percent for education, 20 percent for healthcare, and 21 percent for public administration (Mukhtarova et al., 2021).

Although women's employment in the world has improved in the process (Figure 1.), it has not reached the desired level yet. In order to reach the expected level, it can be stated that equality and justice are an indispensable need in business life.

Figure 1. Labor Force, Female (% of Total Labor Force) in The World 1990-2021



Source: (The World Bank, 2022).

3. Women's Employment in Turkey

With the expression of gender equality in the modern international system, women's employment rates in Turkey have also increased, although not visibly. It is possible to state that women in Turkey, where gender equality is culturally ancient, have been pushed into the background by the influence of religious etc. factors throughout the historical process. However, with the advantages of the modern world, it has become inevitable for women to integrate into business life. Although it has not reached the desired levels, the current state of women's employment rates in Turkey has been shared by the Turkish Statistical Institute. These rates will be discussed within the scope of the study.

3.1. Women's Employment in The Public-Private Sector in Turkey

Women's employment rates in Turkey do not show great changes with women's employment rates in the international system. In this context, according to the results of the household labor force survey; In 2020, the rate of employed people aged 15 and over in Turkey was 42.8%, while this rate was 26.3% for women and 59.8% for men. The highest employment rate in Turkey was realized in TR21 (Tekirdağ, Edirne, Kırklareli) region with 50.9% in 2020. The lowest employment rate was in the TRC3 (Mardin, Batman, Şırnak, Siirt) region with 26.0%. The highest female employment rate was in TR90 (Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane) region with 34.7%, while the highest male employment rate was in TR21 (Tekirdağ, Edirne, Kırklareli) region with 67.9%. The lowest employment rate was in the TRC3 (Mardin, Batman, Şırnak, Siirt) region with 12.6% for women and 40.4% for men. However, when the labor force participation rate according to education level is examined; In 2020, it has been observed that women participate more in the workforce as their education level rises. The labor force participation rate of illiterate women is 12.4%, the labor force participation rate of women with less than high school education is 24.1%, the labor force participation rate of women with high school graduates is 29.9%, the labor force participation rate of women with vocational or technical high school graduates is 37.0%. female labor force participation rate was 65.6%. In addition, according to the results of the household labor force survey; While the rate of part-time workers in employment was 12.4% in total in 2020, this rate was 19.5% for women and 9.3% for men. The employment rate of individuals in the 25-49 age group with children under the age of 3 in their household was 59.8% in 2014, while it became 56.8% in 2020. When this ratio is analyzed by gender; In 2020, the employment rate of women in the 25-

49 age group with children under the age of 3 in their household was 25.2%, while the employment rate for men was 85.5% (TUIK, 2022).

According to the results of the life satisfaction survey; In 2021, 61.9% of the employees stated that they were satisfied with the time spent commuting to work, while this rate was 63.5% for female employees and 61.3% for male employees (TUIK, 2022).

Although the number of women in senior positions in public and private institutions is lower than expected, according to the data of the Ministry of Foreign Affairs; While the rate of female ambassadors was 11.9% in 2011, this rate increased to 26.5% in 2021. While the rate of male ambassadors was 88.1% in 2011, it became 73.5% in 2021. According to the data of the Turkish Grand National Assembly; As of the end of 2021, it was seen that the number of female deputies was 101 and the number of male deputies was 481 among 582 deputies. While the rate of female deputies entering the parliament was 9.1% in 2007, this rate became 17.4% in 2021. According to higher education statistics; While the rate of female professors among professors working in higher education was 27.6% in the 2010-2011 academic year, it became 32.4% in the 2020-2021 academic year. The rate of women working in the associate professor staff was 40.1%, and the rate of women working in the teaching staff staff was 50.6%. According to the results of the household labor force survey; While the rate of women in senior and middle management positions in companies was 14.4% in 2012, it became 19.3% in 2020 (TUIK, 2022).

It is observed that the factors affecting women's employment in the public-private sector in Turkey overlap with the general international system. In other words, it exhibits similar qualities with the 2019 results of Bureaucracy Lab. In short, in Turkey also; the public sector remains a larger employer of women than the private sector, female representation in the public sector is strongly correlated with country incomes, while most public sectors have higher participation by women, they are largely confined to a few industries and occupations, women receive a much larger wage premium for working in the public sector than men, female wage penalties persist even in industries with high representation of women.

Conclusion

There are many factors affected women's such as geography, processes and historical background, cultural factors, religious and ethnic elements. So, some statistical datas could be change country by country but generally main reasons affected women employment if we compare with men employment. The main reason is women's roles in the societies. Women has

many roles in their whole life; mother, cook, designer, engineer etc. So, the main reason is INEQUALITY is affected women's business life.

Around the world, finding a job is much tougher for women than it is for men. When women are employed, they tend to work in low-quality jobs in vulnerable conditions, and there is little improvement forecast soon.

The problems in women's entry into business life and their survival and the reasons behind the very low female employment rates are the existence of the male-dominated world itself. This situation continues in Turkey as well as in the rest of the world. One of the most beautiful words that should not be forgotten in today's world where gender equality is constantly being mentioned is: "Women make up half the world, and they educate the other half."

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Role Of State Prosecutor In Criminal Procedure For Juvenile In The Republic Of Kosovo

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Abstract

In Kosovo, in the application until the issuance of the Juvenile Criminal Law in Kosovo, all parts of the criminal law referred to the work of entities in juvenile proceedings, according to UNMIK Regulation No. 1/99 and 24/99.

Juveniles in a particular category for work were found necessary to issue the Criminal Law for Juveniles in Kosovo with legal provisions, which refer to juvenile perpetrators of criminal offenses, but without neglecting international instruments and acts. By juvenile, we mean a person aged 14 to 18, which provides legal conditions for initiating the preparatory procedure for a juvenile.

The Juvenile Justice Code contains the relevant provisions for regulating the preparatory procedure for juveniles, starting from the material procedural provisions and the execution of criminal sanctions. The role of the State Prosecutor juveniles in the preparatory procedure for juveniles is to issue a decision to initiate the preparatory procedure and, from that moment, approach the investigation of the criminal case, to issue and gather the necessary evidence by applying the favorable legal provisions until at the end of the investigation, then decide to send the criminal case for further work.

Keywords: Juvenile, Criminal Offense, Juvenile State Prosecutor

JEL Code: K14

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Introduction

With the end of the war in Kosovo on June 10, 1999 it came out with ruined institutions and destroyed legal infrastructure, it felt necessary to start with the constitution of self-governing bodies, in order to organize the institutional functioning of its citizens.

Initially, work was done to make the role of the interim international administration functional, in accordance with UNMIK Regulation No. 1/99, dated 25 June 1999, in compliance with internationally accepted standards and with the enforcement of laws in Kosovo. However, Article 3 of this Regulation drastically violated the rights of the citizens of Kosovo, because it stated: “Kosovo laws which were in force in its territory before March 24, 1999, will continue to be implemented in Kosovo unless they conflict with the standards referred to in Article 2”. They caused great dissatisfaction, because in Kosovo since 1989, when all the institutions of Kosovo were destroyed, discriminatory laws were issued until the end of the war, which directly violated the rights and freedoms of the citizens, not leaving aside the category of sensitive in the company of minors, therefore, it was deemed more than necessary to improve the Regulation in question.

UNMIK Regulation No. 24/99 of 12 December 1999, which amends the existing Regulation, was issued in Article 1, including paragraph b. “The legislation in force will be implemented in Kosovo, applies to laws issued until March 22, 1989”, with other clarifications up to Article 2.

Given this situation, many other laws were issued and what is more important and more progressive, the Juvenile Criminal Law was issued in Kosovo, according to UNMIK Regulation, No. 8/2004, dated 20 April 2004, which was seen as a great achievement, because Kosovo finally broke away from the legislative continuity of the non-existent state - the former Yugoslavia in the criminal field.

According to the Juvenile Justice Code, in addition to the issues it addresses and have addressed before, it addresses diversity measures, educational juvenile detention, etc. Raising the professional level and further training of prosecutors, judges, as well as representatives of other institutions should continue at an increased pace.

History of juvenile criminal proceedings in the Republic of Kosovo

In Kosovo, in the application until the issuance of the Juvenile Justice Code [1] in force was the Criminal Law for Juveniles of Kosovo [2], as well as all provisions of criminal procedure laws which referred to the work of entities in juvenile proceedings, according to UNMIK Regulation no. 01/99 [3] and 24/99 [4].

Given this situation, work was done to issue new laws for Kosovo to be permanently detached from the application of the laws of the non-existent state is completed. 8/2004, 20 April 2004. It was considered a great achievement, because with the Criminal Code of Kosovo, the Criminal Procedure Code of Kosovo, the Law on Execution of Criminal Sanctions, the legislative continuity of the non-existent state - the former Yugoslavia and the application of its laws in Kosovo was finally severed. With the application of the Juvenile Criminal Law of Kosovo, the gap created by the field of work with juvenile offenders was filled. Theorists and practitioners were interested in applying at work, so after concluding that difficulties had arisen, efforts were made to issue and finalize the Juvenile Justice Code. Efforts have been made with the Juvenile Justice Code to concretize legal provisions in order to facilitate work.

Criminal proceedings with juvenile perpetrators, as the most sensitive category of society, require harmonization and adaptation of legal provisions in the spirit of the Constitution of the Republic of Kosovo as well as other international acts and agreements. Legal provisions of the Juvenile Justice Code, international instruments and acts, provide the legal definition of a juvenile, which means a person who at the time of the commission of the criminal offense, was aged 14 (fourteen) to 18 (eighteen) years.

The juvenile as a perpetrator of criminal offenses, has a well-defined participation in the commission of criminal offenses, which is evidenced by the annual statistics which are worked and track the spread of crime in Kosovo. In this regard, as an illustration, we emphasize that based on general statistics worked at the local level, the participation of juvenile offenders in Kosovo is around 11%.

Perpetrators of criminal offenses reported by the police, capture the figure of 8,000 cases, given that for information that from January 1, 2020 to March 31, 2021 were reported 8,280 cases where the perpetrators are juveniles [5], while this gives we understand that more needs to be done with minors.

The category of minors has been given due attention, as a special procedure is conducted, which is also conducted according to the laws that were in force in the non-existent state, the former Yugoslavia. The legal provisions referring to juvenile labor were provided for in the Criminal Procedure Code of the Socialist Federal Republic of Yugoslavia, which repealed the Criminal Procedure Code [6] that was in force according to the official gazettes of the Federal Socialist Republic of Yugoslavia, no. 50/67,54/ 70 and 6/73. Rules issued on the basis of this Law and other provisions that are in conflict with the Law on Criminal Procedure according to the Official Gazette of the Socialist Federal Republic of Yugoslavia, no. 26 on 16 May 1986, the Law on Criminal Procedure entered into force.

Development of criminal proceedings for juveniles in Kosovo

Since minors are the future of society and the bearers of general processes, every society is interested in making an increase in their education and in order to remove the next generation from the negative phenomena that appear in society, being providing better conditions for their education and integration into the general flow of society.

This means that the interest of society is that the presence of juveniles in the commission of criminal offenses to be as low as possible, while the general analysis shows that juveniles have a participation in more specific criminal offenses, which are thefts, so in order to remove the same from these habits, it is necessary to constantly work with the category of minors, to emerge as an obstacle which will stop them from the appearance of antisocial phenomena in society by minors.

Given this, it is seen necessary that the rights and freedoms of all categories in society be guaranteed by legal infrastructure, which means that minors should also enjoy fundamental rights and freedoms, such as the right to life, and the right to education, because otherwise a layer will be recruited which will not understand the reality it will face.

After June 10, 1999, with the end of the war, Kosovo was left without institutions, so in order to function in the general social order, it was considered more than necessary to start with the constitution of the provisional institutions of self-government. The Interim Administration in Kosovo began to be installed in the functioning of power, starting from the legislative and executive, as well as the administration of the judiciary, exercised by the Special Representative of the Secretary-General of the United Nations [7]. The same Regulation stipulates which laws will be in force, as well as the entry into force of the Regulations which will be issued by UNMIK.

Introduction of the Juvenile Criminal Law of Kosovo

The start of work of courts and prosecutors in the territory of Kosovo, revitalized life in jurisprudence and began efforts for a contribution to prevent the spread of crime. With the issued Regulations, the work of courts and prosecution offices was of ad hoc character. The law applicable under the Regulations issued by the Special Representative of the Secretary-General of the United Nations shall apply to the entire territory of Kosovo together with other international instruments and acts.

As there was no Juvenile Criminal Law in Kosovo, but the Laws which were in force were in force, as well as all other international acts and instruments, with the issuance of the Criminal Procedure Code of Kosovo (CPCK) [8], the Criminal Code of Kosovo (CCK) [9], in order not to create a legal vacuum, at the suggestion of local and international experts, the procedure for issuing the Juvenile Criminal Law of Kosovo was expedited to cover the work with juvenile offenders in terms of procedural.

The issuance of the LPJK marks an important achievement for the work of the judiciary, because it works with a more codified matter, which facilitates further work. The subjects and parties in the procedure are given the opportunity to have the opportunity to impose better pace and efficiency during the work. The police, judges, prosecutors, as they are provided with a more advanced legal infrastructure, will surely have the opportunity not to violate fundamental human rights and freedoms during their work.

Juvenile Justice Code

The issuance of the Juvenile Justice Code marks an important era in the work of jurisprudence bodies such as prosecutors and courts, becoming more advanced code. Normally, part of the work of the Juvenile Justice Code, as well as the holders of jurisprudential functions are the general legal provisions of the Criminal Procedure Code of Kosovo, instruments and other international acts, which must be applied during the performance of work.

JJC, which is in force since July 08, 2010, contains six parts divided into chapters [10]:

- Part one - general provisions,
- The second part - dealing with the minor and the child,
- The third part - the procedure
- The fourth part - the execution of measures and punishments
- Part five - protection of child victims of crime
- Part Six - Transitional and Final Provisions.

This Code is in accordance with: DIRECTIVE 2013/48/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 October 2013 on the right of access to a lawyer in criminal proceedings and on European arrest warrants, and on the right to have an informed person after deprivation of liberty and to communicate with third parties and consular authorities while you are deprived of your liberty; DIRECTIVE 2012/29/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2012, which sets minimum standards for the rights, support and protection of victims of crime, and which replaces Council Framework Decision 2001/220/JHA; DIRECTIVE 2011/92 /EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 December 2011 on combating the sexual abuse and exploitation of children and child pornography, and replacing Council Framework Decision 2004/68/JHA; DIRECTIVE 2016/800 OF THE COUNCIL AND THE EUROPEAN PARLIAMENT, dated 11 May 2016, concerning procedural protection measures for children who are under suspicion or accused in criminal proceedings; DIRECTIVE 2012/13 OF THE COUNCIL AND THE EUROPEAN PARLIAMENT, of 22 May 2012, concerning the right to information on criminal proceedings [11].

Actions of the State Prosecutor in criminal proceedings for juveniles

Upon receiving the information from the Kosovo Police officer, the juvenile state prosecutor should be on standby to give all necessary instructions to the police, such as the actions taken to secure the scene by the police patrol, the formation of a team of experts required to oversee the scene and the prosecutor's exit to the scene.

Upon arrival at the scene, the juvenile state prosecutor verifies whether all relevant persons are in accordance with legal provisions, in order for the on-scene inspection to be better.

The scene has been secured, appropriate actions are being taken in order to preserve the evidence from the scene. The actions to be taken at the scene are: finding the tools used, such as firearm and its type, cold weapon and its type, blunt tools and their types, as well as other tools that are suitable for committing a criminal offense.

If we are dealing with the criminal offense of murder, then the juvenile state prosecutor orients the work around gathering the required evidence and providing them for further work, and also when he comes to the scene during the examination process should to preserve all the evidence which is related to the criminal case.

After conducting the inspection at the scene, for further placement and setting the pace to be decided by the prosecutor, making efforts to always take the necessary actions for further work.

Necessary requests are issued to perform other actions, requests which are sent to the pre-trial judge.

After taking these actions, the police are instructed to summarize the case, with all the necessary evidence, and special care must be taken that the juvenile cannot stay in detention for more than 24 hours, while within this time the treatment of the juvenile detained according to the police decision, must be adequate, otherwise his rights provided by the Juvenile Justice Code will be violated.

The juvenile should be sent immediately to the emergency center of the regional hospital, to be considered whether he can afford the detention in mental and physical terms, which medical report

will also serve in the court, which will eventually be for further action. the measure for ensuring the presence of the juvenile is applied, the detention that will be assigned, cannot be longer than 30 days for criminal offenses according to the competence.

Upon receipt of the criminal report, the case is sent to the state prosecutor for juveniles, preferably in each prosecutor it is good to have a public prosecutor for juveniles. Given that in Kosovo the number of prosecutors is not enough, then all prosecutors are in charge of juvenile work. For more professional work, it is preferable that prosecutors as well as courts have been appointed by a prosecutor or juvenile judge.

The role of the State Prosecutor in the juvenile preparatory procedure

By juvenile we mean a person aged 14 to 18, an age which provides legal conditions for initiating the preparatory procedure for a juvenile.

The categorization of persons as minors is foreseen by the legal provisions [12], which explicitly give the definition for this category, but this division of juveniles has been foreseen in the applicable laws according to which a preparatory procedure has been developed and in the applicable laws according to of which a preparatory procedure for minors has been developed. The JJC contains the relevant provisions for the regulation of the preparatory procedure for juveniles, starting from the material procedural provisions and the execution of criminal sanctions.

Juvenile preparation procedure

The preparatory procedure begins with a decision of the state prosecutor for juveniles. The ruling shall determine the juvenile against whom the preparatory procedure is applied, the time of commencement of the preparatory procedure, the description of the offense defining the elements of the offense, the legal name of the offense, the circumstances and facts justifying the reasonable suspicion of the offense, evidence and information collected and report on any sentence or measure previously imposed on the juvenile. A stamped copy of the ruling on the preparatory proceedings shall be sent without delay to the juvenile judge. The provisions of the Code of Criminal Procedure apply mutatis mutandis to the preparatory proceedings [13].

During the course of the preparatory proceedings, the juvenile judge guarantees the rights of the juvenile and oversees the preparatory proceedings. The guardian and the parent, the adoptive parent, the guardian of the minor and the guardianship body may participate in the actions taken during the preparatory procedure. When such persons are present at such actions, they may make proposals and question the person being questioned. For the purposes of the juvenile procedure, the juvenile is interrogated when necessary, with the assistance of a pedagogue, psychologist, defectologist, or other expert [14].

The Juvenile Justice Code [15] provides for the termination of the preparatory procedure and the State Prosecutor for juveniles terminates the preparatory procedure whenever from the collected evidence it is concluded that: there is no reasonable doubt that the juvenile has committed a certain criminal offense; the statute of limitations for criminal prosecution has expired; the offense is included in the amnesty; the prescribed conditions are present or there are other circumstances that impede the prosecution.

The State Juvenile Prosecutor immediately informs the court, the probation service, the custodial body, the injured party and the police if the police have initiated the termination of the preparatory procedure. The Juvenile State Prosecutor immediately notifies the juvenile of the termination of the preparatory procedure, except when no action has been taken in the preparatory procedure [16].

If the preparatory procedure has started, it must be completed within six (6) months. If the proposal for imposition of a measure or sentence is not submitted, within this period, the criminal proceedings are automatically terminated. At the request of the State Juvenile Prosecutor, the juvenile judge or the juvenile panel, I may allow the preparatory proceedings to continue for a period of six (6) months in cases where the juvenile state prosecutor proves that the preparatory proceedings are continuously actively developed and that any delay is beyond the control of the juvenile state prosecutor. This may include, inter alia, complex procedural procedures, ie when there is more than one defendant or injured party, and when an application for international legal assistance has been submitted. The request of the prosecutor must be submitted before the expiration of the time limit for the preparatory procedure [17].

Before the completion of the preparatory proceedings, the juvenile state prosecutor shall notify the defense counsel of his intention to complete the proceedings within fifteen (15) days. During this period the defense counsel may file a request for consideration of new facts or evidence. If the juvenile state prosecutor approves the request, the preparatory procedure is not completed and a new notice of completion is required. If no request is submitted, the procedure is completed within the deadline communicated to the parties. The state juvenile prosecutor does not consider the request for review of new facts or evidence after the completion of the preparatory procedure [18].

Conditions during the interrogation of the juvenile

The juvenile should not be questioned more than twice, as each interrogation causes a burden on the juvenile. The following conditions must be met during the interrogation of the juvenile:

- To be present his legal representative - parent;
- If there is no parent, the adoptive parent or guardian appointed for the minor should be present,
- Depending on the stage of development of the preparatory procedure, the public prosecutor should be careful to appoint counsel for the juvenile,

To respect all the guaranteed rights that belong to him in the sense of Article 231 of the CPCCK, when he is before the prosecutor to give his statement, and if he has been interviewed by the police, then in the sense of Article 214 of the CPCCK to respect all the rights that belong to him, and this legal provision is also respected by juvenile judges.

The most advanced step according to the JJC, is noticed - the diversity measures that are foreseen by the JJC [19], which are of the most favorable character for the position of the juvenile in order to reintegrate as quickly as possible in the general social flows.

Imposition of diversity measures

In the spirit of the mentioned instructions and rules, the diversity measures were introduced, as a more advanced step that were foreseen by the Juvenile Criminal Law of Kosovo. The types of diversity measures envisaged under the JJC [20] are more favorable to the position of the juvenile than they are intended to prevent, where possible, the initiation of legal proceedings against the

juvenile perpetrator, to assist in positive rehabilitation and reintegration of the juvenile juveniles in his community for the purpose of preventing recidivist behavior.

The diversity measures that can be imposed on the juvenile perpetrator are [21]:

- conciliation between the perpetrator of the juvenile and the injured party, including an apology from the juvenile to the injured party;
- reconciliation between the minor and his family;
- compensation of the injured party based on the mutual agreement between the injured party, the juvenile and his/her legal representative, in accordance with the financial situation of the juvenile;
- regular attendance at school;
- acceptance of employment or training in an adequate profession with its skills and abilities;
- performing unpaid community service in accordance with the ability of the juvenile perpetrator to perform such work. This measure may be imposed with the consent of the minor for a period of ten (10) to sixty (60) hours;
- education in traffic rules;
- psychological counseling;
- engaging in charitable activities;
- payment of a certain amount of money intended for charitable purposes or in the victim compensation program in accordance with the financial situation of the minor;
- engaging in sports and recreational activities, and
- counseling between families of minors;
- refrain from any contact with certain individuals that may have a negative impact on the minor;
- not to visit certain places or environments that may have a negative impact on the minor, and
- refrain from drug and alcohol use;
- police reprimand.

Diversity measures may be imposed by the prosecutor on a juvenile who has committed a criminal offense punishable by a fine or imprisonment of up to three (3) years or a criminal offense committed by negligence for which the sentence is punishable. up to five (5) years imprisonment, except those which result in death.

To impose diversity measures, certain legal conditions must be met [22]:

- acceptance of responsibility for the criminal offense by the juvenile;
- expression of readiness by the juvenile to agree with the injured party and
- the consent of the minor or parent, adoptive parent or guardian on behalf of the minor to implement the imposed diversity measure.

The Probation Service immediately informs the competent body which imposes the diversity measure for the non-fulfillment of the diversity measure obligations by the juvenile who can decide to resume the prosecution of the case.

The imposition of diversity measures in the Republic of Kosovo during the period 2015-2020 is presented in the following tables

Table 1 Number of juveniles who have been imposed the diversity measure during a 12-month period by gender⁴

	2015	%	2016	%	2017	%	2018	%	2019	%	2020	%
By gender	392	100	507	100	702	100	518	100	511	100	324	100
Boys	380	96.9	486	95.8	674	96	483	93.2	484	94.7	294	90.7
Girls	12	3.1	21	4.2	28	4	35	6.8	35	6.3	30	9.3

Based on the results in table no. 1 it is noticed that the imposed measure of diversity by gender in a period of 12 months is variable from year to year. In 2015, a total of 392 diversity measures were

⁴ [23]

imposed, continuing to increase the number to 507 in 2016 and 702 in 2017, while from 2018 to 2020 we have a decrease from 518 in 2018 to 324 in 2020.

In terms of gender, boys dominate every year compared to girls, but for boys we have a small decrease from 380 or 96.9% in 2015 to 324 294 or 90.7% in 2020, while for girls the number is the opposite is increasing from 12 or 3.1% in 2015 to 30 or 9.3% in 2020.

Table 2 Number of juveniles who have been imposed the diversity measure during a period of 12 months according to ethnicity⁵

	2015	%	2016	%	2017	%	2018	%	2019	%	2020	%
According to the entity	392	100	507	100	702	100	518	100	511	100	324	100
Albanian	365	93.1	482	95	673	95.8	496	95.7	496	97	306	94.4
Serbian	12	3.2	6	1.18	11	1.56	7	1.35	4	0.78	4	1.23
Rome	4	1	2	0.39	3	0.42	4	0.77	3	0.58	6	1.85
Ashkali	4	1	3	0.59	3	0.42	4	0.77	6	1.17	0	0
Egyptian	1	0.2	3	0.59	4	0.56	4	0.77	0	0	2	0.61
Turkish	0	0	2	0.39	1	0.14	1	0.19	2	0.39	1	0.30
Bosnian	4	1	4	0.78	2	0.28	2	0.38	0	0	5	1.54
Others	2	0.5	5	0.98	5	0.71	0	0	0	0	0	0

Regarding the ethnicity that the diversity measure has been imposed during a period of 12 months, the largest number are Albanians, followed by others. In 2015 the number of Albanians is 365 or 93.1% having an increase to 673 or 95.8% in 2017, and then in the next two years we have an equal number of 469 or 95.7% and in 2020 the number has decreased to 306 or 94.4 %. Among Serbs we have a small decrease and decrease, so in 2015 we have 12 or 3.2%, halving the number in 2016 to 6 or 1.18%, while in 2017 we have an increase to 11 or 1.56%, while from 2018 we have a gradual decrease in the number from 7 or 1.35% to 4 or 1.23% in 2020. Regarding Roma

⁵ [24]

and Bosnia's the number is slightly increasing, where in 2015 the number of Roma and Bosnia's is 4 or 1%, while in by 2020 the number will reach 6 or 1.85% Roma, respectively 5 or 1.54% Bosnia's. In Ashkali the number is from 4 or 1% in 2015, having increased in 2019 to 6 or 1.17%, while in 2020 we have none. Among Egyptians, the number is slightly increasing from 1 or 0.2% in 2015, having increased in 2016 to 3 or 0.59%, while in 2017 and 2018 the number is equal to 4 or 0.56%, respectively 0.77%, while in 2019 we have no case, that in 2020 we have 2 or 0.61%. As for the Turks, the number is almost the same from 2016 by 2 or 0.39% and in the next two years we have from 1 or 0.14% respectively 1 or 0.19%, while in 2019 we have 2 or 0.39% and in 2020 we have 1 or 0.30%. While in terms of others we have 2 or 0.5% in 2015, in 2016 we have 5 or 0.98% and in 2017 the number is 5 or 0.71%, and in the next three years we have no case.

Table 3 Number of juveniles who have been imposed the diversity measure during a period of 12 months by region⁶

	2015	%	2016	%	2017	%	2018	%	2019	%	2020	%
By region	392	100	507	100	702	100	518	100	511	100	324	100
Pristina	90	22.9	118	23.3	162	23.07	102	19.69	161	31.5	135	41.66
Peja	54	13.7	45	8.87	89	12.67	54	10.42	68	13.3	26	8.02
Prizren	66	16.8	101	19.9	116	16.52	101	19.49	87	17.02	59	18.20
Gjakova	9	2.29	17	3.35	12	1.70	24	4.63	23	4.5	53	16.35
Ferizaj	41	10.4	33	6.50	116	16.52	38	7.33	13	2.54	2	0.61

⁶ [25]

Gjilan	64	16.3	99	19.52	124	17.66	96	18.53	101	19.76	31	9.56
Mitrovica	38	9.7	94	18.54	83	11.82	103	19.88	58	11.35	18	5.55

Regarding the region, the number of juveniles who have been imposed the diversity measure during a period of 12 months is that in the first place is Pristina, where in the region of Pristina we have an increase in the number from 90 or 22.9% in 2015 to 162 or 23.07% in 2017, while in 2018 we have a decrease to 102 or 19.69% and in 2019 the number goes to 161 or 31.5%. while after Pristina ranks Prizren with 66 or 16.8% cases in 2015, increasing the number to 116 or 16.52% in 2017, while then we have a decrease from 101 or 19.49% in 2018 to 59 or 18.20% in 2020 In the Peja region the number of cases is from 54 or 13.7% in 2015 and in subsequent years having an increase and decrease of cases so in 2020 the number of cases is 26 or 8.02%. Regarding the Gjakova region, the number of cases is increasing starting from 9 or 2.29% in 2015 and increasing in 2020 to 53 or 16.35%. In the region of Ferizaj and Gjilan we have a drastic increase and decrease of cases, so that in Ferizaj from 41 or 10.4% and in Gjilan from 64 or 16.3% in 2015, the number increases drastically in 2017 and 116 or 16.52% in Ferizaj and 124 or 17.66% in Gjilan, and then having drastic reductions until 2020 where the number of cases is 2 or 0.61% in Ferizaj and 31 or 9.56 in Gjilan. While in Mitrovica from 2015 to 2018 we have an increase of cases, respectively from 38 or 9.7% in 2015 to 103 or 19.88% in 2018, while in the next two years we have a drastic reduction leading the number of cases to 18 or 5.55% in 2020.

Table 4 Number of juveniles who have been imposed the diversity measure during a period of 12 months according to age⁷

	2015	%	2016	%	2017	%	2018	%	2019	%	2020	%
By age	392	100	507	100	702	100	518	100	511	100	324	100
17	140	35.71	183	36.09	288	41.02	179	34.55	262	51.27	131	40.43
16	119	30.35	134	26.42	196	27.92	151	29.15	124	24.26	92	28.39
15	89	22.70	137	27.02	161	22.93	129	24.9	102	19.96	78	24.07
14	44	11.22	53	10.45	57	8.11	59	11.38	23	4.5	23	7.09

The number of juveniles who have been imposed the diversity measure during a period of 12 months according to age is that in the first place are juveniles aged 17 years, followed by juveniles aged 16, 15 and 14 years. In juveniles aged 17 years from 2015 to 2020 we have a decrease in cases, but during this period increase and decrease in cases, so in 2015 we have 140 or 35.71% increasing the number to 288 or 41.02% in in 2017 and a decrease to 179 or 34.55% in 2018, while again an increase in the number to 262 or 51.27% in 2019, and in 2020 we have a decrease to 131 or 40.43%. Regarding juveniles aged 16 years we have a gradual decrease of cases from 119 or 30.35% in 2015 to 92 or 28.39% in 2020, except in 2017 where we have an increase in the number to 196 or 27.92%. In juveniles aged 15 years from 2015 to 2017 we have an increase in the number, from 89 or 22.70% in 2015 to 161 or 22.93% in 2017, and then until 2020 we have a decrease in the number up to 78 or 24.07%. While in juveniles aged 14 years until 2018 we have an increase in the number from 44 or 11.22% in 2015 to 59 or 11.38% in 2018, while in the last two years the number is the same 23 or 4.5%, respectively 7.09%.

⁷ [26]

Table 5 Number of juveniles who have been sentenced to the diversity measure during a period of 12 months according to the type of criminal offense⁸

	2015	%	2016	%	2017	%	2018	%	2019	%	2020	%
According to the type of criminal offense	392	100	507	100	702	100	518	100	511	100	324	100
Criminal offenses against the person (life and body (Chapter XVI)), freedoms and human rights (Chapter XVIII) as well as against sexual integrity (Chapter	215	54.84	235	46.35	416	59.25	249	48.06	413	80.82	187	57.71

⁸ [27]

XX) of which:												
Murder (Article 178)	0	0	0	0	0	0	0	0	0	0	0	0
Minor bodily injuries (Article 188)	183	85.11	202	85.95	317	76.20	203	81.52	228	55.20	81	43.31
Serious bodily injuries (Article 189)	0	0	1	0.42	2	0.48	3	1.20	17	4.11	2	1.06
Unlawful deprivation of liberty (Article 196)	0	0	0	0	0	0	0	0	0	0	0	0
Rape (Article 230)	0	0	0	0	0	0	0	0	0	0	0	0
Sexual assault (Article 232)	0	0	0	0	0	0	0	0	0	0	1	0.53
Other criminal offenses in	32	14.88	32	13.61	97	23.31	43	17.26	168	40.67	103	55.08

this category												
Criminal offenses against property (Chapter XXVII)	75	19.13	120	23.66	31	4.41	50	9.65	10	1.95	21	6.48
Other criminal offenses	102	26	152	29.98	255	36.32	219	42.27	88	17.22	116	35.8

In table no. 5 is the number of juveniles who have been imposed the diversity measure during a period of 12 months according to the type of criminal offense. According to the type of criminal offense in the first place are listed criminal offenses against the person (life and body (Chapter XVI), freedoms and human rights (Chapter XVIII) as well as against sexual integrity (Chapter XX), criminal offenses for which the measure of diversity has been imposed is decreasing from 2015 to 2020. However, during this period we have an increase and decrease in the number, so in 2015 the number was 215 or 54.84%, leading to 2017 the number to 416 or 59.25%, while in 2018 we have a decrease to 249 or 48.06%, but in 2019 we have again an increase in the number to 413 or 80.82%, while in 2020 the number has decreased significantly to 187 or 57.71%. Types of criminal offenses against the person (life and body), freedoms and human rights, as well as against sexual integrity, we have no case for criminal offenses: murder (Article 178), unlawful deprivation (Article 196) and rape (Article 230), while for the criminal offense of sexual attack (article 232) we have only one case in 2020. For the criminal offense of minor bodily injury (article 188) the number is from 2015 to 2017 increasing, respectively from 183 or 85.11% in 2015, up to 317 or 76.20% in 2017, and then the number has decreased to 81 or 43.31% in 2020. While for the criminal offense of serious bodily injury in 2015 we have no case, while in 2016 we have one case, increasing the number until 2019 at 17 or 4.11%, while in 2020 we have a decrease to 2 or 1.06%. For other criminal offenses in this category the number is increasing, starting from the first two

years with 32 cases or 14.88%, respectively 13.61%, which by 2019 reaches 168 or 40.67%, where in 2020 we have a decrease small at 103 or 55.08%.

Regarding criminal offenses against property (Chapter XXVII) the number is decreasing every year, from 75 or 19.13% to 21 or 6.48% in 2020. While for other criminal offenses we have a small increase of criminal offenses from 102 or 26% in 2015 to 2017 the number has increased to 255 or 36.32% and decreased to 116 or 35.85%, but from 2015 to 2020 compared to the period from 2015 to 2017 we have an increase of small number of other criminal offenses.

Table 6 Number of juveniles who have been imposed the diversity measure during a period of 12 months according to the type of diversity measure⁹

	2015	%	2016	%	2017	%	2018	%	2019	%	2020	%
According to the type of diversity measure	392	100	507	100	702	100	518	100	511	100	324	100
Reconciliation between the juvenile perpetrator and the injured party, including an apology from the juvenile to	240	61.22	282	55.62	417	59.4	280	54.05	286	55.96	152	46.91

⁹ [28]

the injured party												
Reconciliation between the minor and his family	25	6.37	39	7.69	17	2.42	14	2.7	47	9.19	46	14.19
Compensation for the damage of the injured party based on the mutual agreement between the injured party, the juvenile and his legal representative, in accordance with the financial situation of the juvenile	5	1.27	16	3.15	9	1.28	11	2.12	13	2.54	7	2.16
Regular attendance at school	11	2.8	12	2.36	10	1.42	12	2.31	23	4.5	0	0

Accepting employment or training in an profession adequate to its skills and abilities	2	0.51	1	0.19	32	4.55	0	0	6	1.17	5	1.54
Performing unpaid community service in accordance with the ability of the juvenile perpetrator to perform such work	70	17.85	82	16.17	121	17.23	96	18.53	48	9.39	42	12.96
Education in traffic rules	25	6.37	45	8.87	72	10.25	57	11	20	3.91	16	4.93
Psychological counseling	14	3.57	30	5.91	24	3.41	48	9.26	68	13.3	56	17.28

According to the type of diversity measure imposed on them during a period of 12 months, the conciliation measure between the juvenile perpetrator and the injured party was imposed the most, including the apology from the juvenile to the injured party. However, the number of this type of measure from 2015 to 2017 is increasing, respectively from 240 or 61.22% in 2015 to 417 or 59.4% in 2017, while by 2020 it has decreased to 152 or 46.91%. Increasing is the type of

reconciliation measure between the juvenile and his family from 25 or 6.37% in 2015 to 46 or 14.19% in 2020, with a decrease in 2017 to 17 or 2.42% and in 2018 to 14 or 2.7%.

The type of compensation measure of the injured party based on the mutual agreement between the injured party, the juvenile and his legal representative, in accordance with the financial situation of the juvenile is increasing from 2015 to 2020, respectively in 2015 we have 5 cases or 1.27% and until 2019 the number is 13 or 2.54%, while in 2020 we have a decrease to 7 or 2.16%, but compared to 2015 to 2020 the number is increasing from 1.27% in 2.16%.

Regarding regular school attendance, the number is increasing from 2015 to 2019, respectively from 11 or 2.8% in 2015 to 23 or 4.5% in 2019, while in 2020 we have no case.

Acceptance of employment or training in an adequate profession with its skills and abilities is variable from year to year and varies from 2 or 0.51% in 2015, decreasing the number to 1 or 0.19% in 2016, while in 2017 we have a drastic increase bringing the number to 32 or 4.55%, but in 2018 we have no case, while in the next two years we have 6 or 1.17% in 2019 and in 2020 5 or 1.54%, but in 2020 in the ratio with 2015 we have an increase in number.

Regarding the type of diversity measure, the performance of unpaid community service in accordance with the ability of the juvenile perpetrator to perform such work, the number of cases is declining, where in 2015 we have 70 cases or 17.85%, reducing the number of cases in 2020 to 42 or 12.96%, but it should be noted that from 2015 to 2017 there was an increase of 121 or 17.23%.

The type of diversity of education in traffic rules from 2015 to 2020 is declining, since 2015 there have been 25 cases or 6.37% marking an increase of up to 72 cases or 10.25% in 2017, while from 2017 by 2020 we have a decrease in the number of cases up to 16 or 4.93%, respectively from 25 cases or 6.37% in 2015 we have a decrease in the number of cases up to 16 or 4.93%.

In terms of psychological counseling we have increased over the years the number of cases from 14 or 3.57% in 2015 to 56 cases or 17.28%.

Conclusion

The object of study and research in this paper is the role, function and work of the state prosecutor for juveniles as a party and as a state body in criminal proceedings. In this topic is also elaborated the role and function of the state juvenile prosecutor in juvenile criminal proceedings based on the provisions of the Criminal Procedure Code of Kosovo and the Juvenile Justice Code in Kosovo. The treatment of juveniles in the Republic of Kosovo is very important, because their occurrence in the participation of criminal offenses is increasing based on the statistics of the Kosovo Police, therefore the State Prosecutor for Juveniles, JJC, is very important because they prevent negative phenomena.

During the research we can conclude that the measure of diversity imposed on minors during a period of 12 months by gender is that men dominate, while the number of underage girls is increasing. While according to the ethnicity, although the number is decreasing, the Albanian juveniles are dominant, followed by other ethnicities. Regarding the region where the diversity measure has been imposed, over a period of 12 months we have a decrease, while in the region of Pristina and Gjakova we have an increase. Regarding the age of minors, the number is also declining, while in the first place is the age group of 17 years, followed by the younger age group. Regarding the number of juveniles who have been sentenced to the diversity measure during a period of 12 months according to the type of criminal offenses, more have been imposed for criminal offenses against the person (life and body (Chapter XVI), freedoms and human rights (Chapter XVIII) as well as sexual integrity (Chapter XX), followed by other criminal offenses and criminal offenses against property (Chapter XXVII): conciliation between the perpetrator of the juvenile and the injured party, including apology from the juvenile to the injured party, conciliation between the juvenile and his family, Compensation for the injured party based on mutual agreement between the injured party, the juvenile and his / her legal representative, in accordance with the financial situation of the juvenile, regular attendance at school, acceptance of employment or training in an adequate profession with his abilities and skills, performing unpaid community service in accordance with the ability of the juvenile perpetrator to perform such work, education in traffic rules and psychological counseling.

References

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- [2] UNMIK Regulation no. 2004/8 dated 20 April 2004.
- [3] UNMIK Regulation no. 2004/8 dated 20 April 2004.
- [4] UNMIK Regulation no. 1/99 dated 25 June 1999, On the Authorizations of the Interim Administration in Kosovo.
- [5] The Statistical Report of the work of Kosovo prosecutors, gives this figure that in 2020 the participation of juvenile perpetrators in criminal offenses is 11.1%, in 2021 the participation of juvenile perpetrators in criminal offenses is 11.6%.
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- [7] UNMIK Regulation, 01/99, 25 June 1999, Section 1.
- [8] UNMIK Regulation 26/2003, 6 July 2003.
- [9] UNMIK Regulation 26/2003, 6 July 2003.
- [10] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA
- [11] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA Article 1, paragraph 2
- [12] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article 3
- [13] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article, 53
- [14] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article 5

[15] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article 55

[16] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO / NO. 17/18 OCTOBER 2018, PRISTINA, Article 55, paragraph 2

[17] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article 57.

[18] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article 58.

[19] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article 19-21

[20] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article 19

[21] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article 20

[22] CODE No. 06/L-006 OF JUVENILE JUSTICE, OFFICIAL GAZETTE OF THE REPUBLIC OF KOSOVO/NO. 17/18 OCTOBER 2018, PRISTINA, Article 21

[23] Source: Muhamet Racaj, Besim Kelmendi, "Contemporary juvenile crime in the Republic of Kosovo in the period 2015-2020", Journal of Positive School Psychology <http://journalppw.com> 2022, Vol. 6, No. 2, Page-5896-Scopus-Q2 - 0899 ISSN 2322.

[24] Source: Muhamet Racaj, Besim Kelmendi, "Contemporary juvenile crime in the Republic of Kosovo in the period 2015-2020", Journal of Positive School Psychology <http://journalppw.com> 2022, Vol. 6, No. 2, Page-5897-Scopus-Q2 - 0899 ISSN 2322.

[25] Source: Muhamet Racaj, Besim Kelmendi, "Contemporary juvenile crime in the Republic of Kosovo in the period 2015-2020", Journal of Positive School Psychology <http://journalppw.com> 2022, Vol. 6, No. 2, Page-5897-Scopus-Q2 - 0899 ISSN 2322.

[26] Source: Muhamet Racaj, Besim Kelmendi, “Contemporary juvenile crime in the Republic of Kosovo in the period 2015-2020”, Journal of Positive School Psychology <http://journalppw.com> 2022, Vol. 6, No. 2, Page-5898-Scopus-Q2 - 0899 ISSN 2322.

[27] Source: Muhamet Racaj, Besim Kelmendi, “Contemporary juvenile crime in the Republic of Kosovo in the period 2015-2020”, Journal of Positive School Psychology <http://journalppw.com> 2022, Vol. 6, No. 2, Page-5898–5899-Scopus-Q2 - 0899 ISSN 2322.

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Çok Kriterli Karar Verme Yöntemleri ile Lisans Öğrencileri İçin En Uygun Dizüstü Bilgisayar Modelinin Belirlenmesi

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Özet

Günümüz bilişim teknolojileri çağı haline gelmiştir. Bu durum toplumu teknolojiye ayak uydurmaya zorunlu hale getirmektedir. Özellikle üniversitelerde lisans eğitimi alan öğrenciler için dizüstü bilgisayarlar eğitimin parçası haline gelmiştir. Halihazırdaki ekonomik şartlar dikkate alınarak optimum fayda sağlayacak dizüstü bilgisayarın belirlenmesinde öğrenciler doğru ve yerinde karar vermek durumundadırlar. Ancak lisans öğrencilerinin bu türden karar problemlerinde çok kriterli karar verme yöntemlerini (ÇKKV) kullanmadıkları tespit edilmiştir. Bu düşünce ile çalışmada, Düzce Üniversitesi Yönetim Bilişim Sistemleri lisans bölümünde eğitim gören öğrencilere eğitim materyali olarak en uygun dizüstü bilgisayar modelini tercih etme konusunda yardımcı olmak amaçlanmıştır. Bu karar probleminin modelinde altı kriter ve sekiz alternatif yer almaktadır. İlgili lisans bölümündeki temsilci statüsündeki öğrenciler karar vericiler olarak kabul edilmiştir. Belirlenen kriterlere göre alternatifler TOPSIS yöntemine göre sıralanmıştır. Gerçekleştirilen analizler sonucunda; Düzce Üniversitesi Yönetim Bilişim Sistemleri lisans öğrencileri için en uygun dizüstü bilgisayar modeli sırası ile A8 (Casper) ve A2 (Dell) olarak tespit edilmiştir. Çalışmanın sonuçları ilgili öğrenci grubu ile paylaşılmıştır.

Anahtar Kelimeler: Çok Kriterli Karar Verme, TOPSIS Yöntemi, Enformatik
Jel Kodları: M11, C02, C51, C61

Determining the Most Appropriate Laptop Model for Undergraduate Students with Multi Criteria Decision Making Methods

Abstract

Today has become the age of information technologies. This situation compels the society to keep up with technology. Laptop computers have become a part of education, especially for undergraduate students at universities. Considering the current economic conditions, students must make the right and appropriate decision in determining the laptop computer that will provide optimum benefit. However, it has been determined that undergraduate students do not use multi-criteria decision-making methods (MCDM) in such decision problems. In this study, it is aimed to help the students studying at Düzce University Management Information Systems undergraduate department to choose the most suitable laptop computer model as educational material. There are six criteria and eight alternatives in the model of this decision problem. Students with representative status in the relevant undergraduate department were accepted as decision makers. According to the determined criteria, the alternatives are ranked according to the TOPSIS method. As a result of the analyses carried out; The most suitable laptop model for Düzce University Management Information Systems undergraduate students was determined as A8 (Casper) and A2 (Dell), respectively. The results of the study were shared with the relevant student group.

Keywords: Multi Criteria Decision Making Methods, TOPSIS Method, Informatics
JEL Codes: M11, C02, C51, C61

1. GİRİŞ

Günümüz bilişim teknolojileri çağı haline gelmiştir. Bu durum bizleri teknolojiye ayak uydurmaya zorunlu hale getirmektedir. Artık teknoloji bir ihtiyaçtan öte bir zorunluluk haline gelmiş bulunmaktadır. Bu zorunluluklardan birisi de dizüstü bilgisayarlardır. Özellikle lisans öğrencileri için derslerinin bir parçası durumundadır.

Bilişim teknolojilerinde yaşanan gelişmeler, bilişim alanında yaşanan değişimleri de etkilenmektedir. Bu teknolojilerin kullanımı ile yaşanacak dönüşümler özellikle bilişim sektörlerinde çalışmayı hedefleyen üniversite öğrencilerinin iş yaşamına hazırlıklarında dikkat etmeleri gereken bir etkidir. Bu öğrencilerin eğitimleri hemde kullandıkları araçlar bu değişimin bir unsurudur. Farklı özelliklere sahip olan bilgisayar modelleri olsa dahi bunların sahip oldukları nitelikler kullanıcının özelliklerine göre farklı önem seviyelerine sahiptirler (Aytekin ve Kuvat, 2018).

Bu çalışma kapsamında yönetim bilişim sistemleri bölümü öğrencilerinin dizüstü bilgisayar seçimlerinin AHP (Analytic Hierarchy Process) ve TOPSIS (Technique for Order Preference by Similarity to Ideal Solutions) yöntemlerinden faydalanılarak yapılması amaçlanmıştır. Öncelikle AHP yöntemi ile belirlenen kriterlerin ağırlıkları tespit edilmiştir. Daha sonra TOPSIS yöntemi ile alternatiflerin öncelik sırası belirlenmiştir. Kriterler ve alternatifler belirlenirken ilgili literatür ve karar verici konumundaki öğrencilerin görüşleri dikkate alınmıştır.

2. LİTERATÜR TARAMASI

2.1. TOPSIS Yöntemi

TOPSIS yöntemi, Hwang ve Chen (1999) tarafından Yoon ve Hwang'ın (1981) çalışmaları kaynak gösterilerek ortaya çıkmıştır. Bu yöntem çok kriterli karar verme yöntemlerinden biri olarak kabul edilmiştir. Bu yöntem yardımıyla alternatiflerin belirlenen kriterler doğrultusunda minimum ve maksimum değerler arasında ideal durumları dikkate alınarak gerçekleştirilir (Demireli, 2010).

TOPSIS yönteminde, en iyi çözümü bulmak için gerekli yakınlık bulunurken hem negatif ideal hemde pozitif ideal çözüme uzaklığı dikkate almak gerekir. Pozitif ideal ya da ideal çözüm olarak belirtilen en iyi çözüm, maliyet kriterlerini minimize eden, fayda kriterleri ise maksimize eden bir çözümdür (Özden, 2011).

2.2. TOPSIS Yöntemi ile Yapılan Çalışmalar

(Özfıdaner vd., 2020) çalışmalarında, Adana ilinin meteoroloji istasyonu verilerini kullanarak yıllık maksimum ve minimum sıcaklığı, yıllık buharlaşma ve toplam yağış miktarı verileri ile oluşturulan çözüm modeli ile 1963-2016 seneleri arasında meydana gelen kuraklık ve kuraklık şiddetini belirleyebilmişlerdir (Özfıdaner vd., 2020).

(Orçun ve Eren, 2017) çalışmalarında, BIST (Borsa İstanbul)'de işlem görmekte olan teknoloji şirketleri mali performanslarının TOPSIS yöntemi ile analizini gerçekleştirilmişlerdir. Çalışmada öncelikle finansal oranlar saptanmış ardından bu oranlar her bir şirket için tek tek değerlendirilmiştir. Modelin çözümü Excel programından yararlanılarak gerçekleştirilmiştir (Orçun ve Eren, 2017).

(Temizel ve Bayçelebi, 2019) çalışmalarında, tekstil imalat sanayiinde faaliyet gösteren işletmelerin belirli mali oranlarına bakılarak performans sıralamalarını belirlemek amacıyla TOPSIS yönteminden yararlanılmıştır. Elde edilen finansal oranlar ise karar noktaları olarak belirlenmiştir. TOPSIS yönteminden elde edilen sıralamalar ile işletmelerin senelik ortalama gelirleri arasındaki

korelasyon incelenmiş ve yöntemin sonuçları gerçekleşen getiri değerleri ile ilişkili olduğu gözlenmiştir (Temizel ve Bayçelebi, 2019).

(Kaygusuz vd., 2020) çalışmalarında, CAMELS değerlendirme sisteminin bileşenlerini kullanarak bankaların finansal performansları TOPSIS yöntemiyle analiz etmişlerdir. Bu bağlamda Türkiye’de faaliyet gösteren 10 bankanın geçmişe dönük 10 senelik verileri kullanılmıştır. Uzman görüşlerden faydalanılarak finansal oranların bankaların finansal performansını ne oranda etkilediği tespit edilmeye çalışılmıştır. Etkileme ağırlıklarından yola çıkarak da ağırlıklaştırılmış normalize matris oluşturulmuştur. TOPSIS yönteminin son aşamasında ideal çözüme göre yakınlık hesabı ve bankaların finansal performanslarının puanları ve sıralaması gerçekleştirilmiştir (Kaygusuz vd., 2020).

3. METEDOLOJİ

3.1. Araştırmanın Amacı

Çalışmanın temel amacı, üniversitelerin lisans bölümlerinde öğrenim gören öğrencilere derslerinin bir parçası haline gelmiş en uygun dizüstü bilgisayar modelinin belirlenmesinde ÇKKV yöntemleri kullanarak yardımcı olmaktır.

3.2. Kriterlerin ve Ağırlıklarının Tespiti

Gerçekte daha fazla olan kriter sayısı literatür ve karar vericilerin görüşleri doğrultusunda altı adet olarak belirlenmiştir. Karar verici konumunda olan bölümlerdeki öğrenci temsilcilerinin kriterleri kıyaslamaları ve AHP yönteminin analiz aşamaları kullanılarak kriterlerin nihai ağırlıkları tespit edilmiştir.

3.3. Karar Vericilerin Tespiti

Optimum özelliklerdeki dizüstü bilgisayar modelinin belirlenmesi için Karar vericiler olarak bölümlerdeki öğrenci temsilcileri seçilmiştir.

3.4. Kriter ve Alternatiflerin Belirlenmesi

Başlangıçta daha fazla olan kriter sayısı, karar vericilerin değerlendirmeleri sonucu sıralamaya giren ilk altı kriterin alınması ile objektif bir şekilde tespit edilmiştir. Karar vericiler ilgili literatürü de dikkate alarak aşağıda belirtilen kriterleri tespit etmişlerdir:

K1: İşlemci Hızı

K2: Ekran Boyutu

K3: Çözünürlük

K4: Disk Kapasitesi

K5: Ağırlık

K6: Fiyat

İlgili Literatür taranarak karar vericilerle birlikte kriterlerin tespit edilmesinde sonra karar vericiler aşağıdaki alternatifler üzerinde fikir birliğine varmışlardır. Bu alternatifler:

A1: HP

A2: Dell

A3: Lenova

A4: Asus

A5: MSI

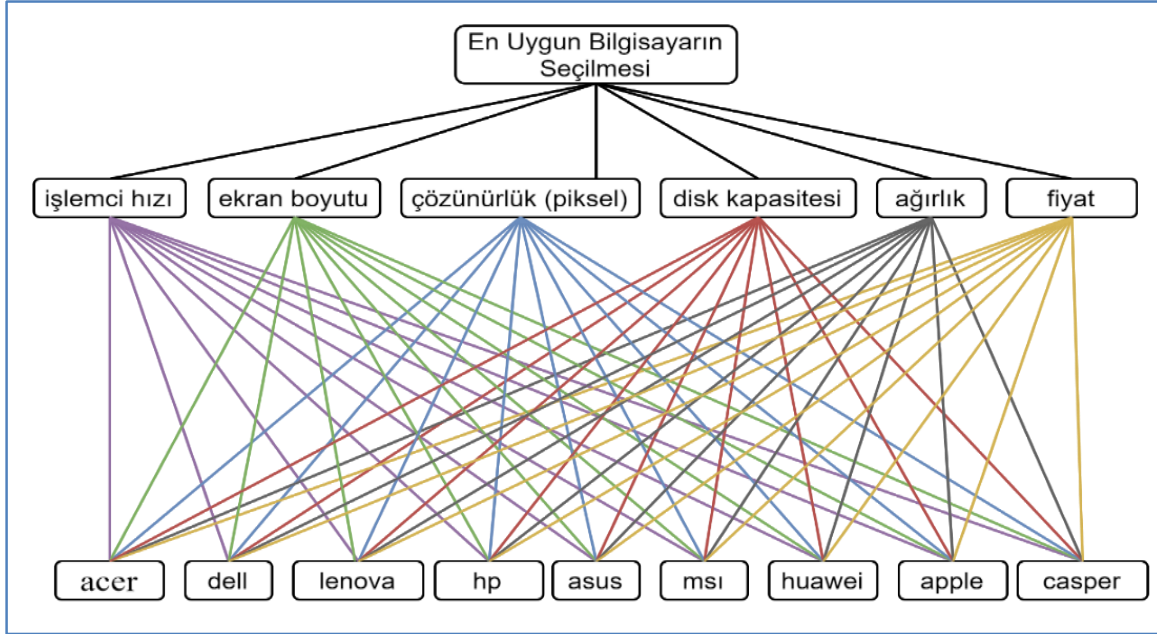
A6: Huawei

A7: Apple

A8: Casper

3.5. Araştırmanın Modeli

Çalışmanın hiyerarşik modeli Şekil 1’de ifade edilmiştir. Modelde Öncelikli olarak amaç sonra kriterler ve alternatifler ifade edilmiştir.



Şekil 1. En uygun Dizüstü Bilgisayarın Belirlenmesi Modeli

4. UYGULAMA: ÇKKV Yöntemleri ile En uygun Dizüstü Bilgisayarın Belirlenmesi

4.1. AHP Yöntemi ile Kriterlerin Ağırlıklarının Belirlenmesi

Çalışmada ÇKKV yöntemi olarak TOPSIS yöntemi esas alınmıştır. Ancak TOPSIS yöntemi kriterlerin ağırlıklarını hazır kullanan bir metottur. Bu nedenle öncelikle AHP yöntemi ile kriterlerin ağırlıkları tespit edilmiştir. İlgili ağırlık değerleri Tablo 1’de ifade edilmiştir.

Tablo 1. AHP Yöntemine göre Kriterlerin Ağırlıkları

	K1 İşlemci Hızı (Ghz)	K2 Ekran Boyutu (İnç)	K3 Çözünürlük (Piksel)	K4 Disk Kapasitesi (GB)	K5 Ağırlık (kg)	K6 Fiyat (TL)	Ağırlık
K1	0,5144	0,3750	0,4719	0,6338	0,2800	0,3219	0,4328
K2	0,0643	0,0469	0,0169	0,0423	0,1200	0,0215	0,0520
K3	0,0735	0,1875	0,0674	0,0352	0,1200	0,2575	0,1235
K4	0,1715	0,2344	0,4045	0,2113	0,2400	0,3219	0,2639
K5	0,0735	0,0156	0,0225	0,0352	0,0400	0,0129	0,0333
K6	0,1029	0,1406	0,0169	0,0423	0,2000	0,0644	0,0945

4.2. TOPSIS Yöntemi ile En Uygun Dizüstü Bilgisayarın Belirlenmesi

1. Aşama: Temel Veri Matrisinin Ağırlıklar ile İfade Edilmesi

TOPSIS yöntemi ile alternatifler arasından optimum olanının belirlenmesi sürecinde analizlere başlamadan önce alternatiflerin kriterler çerçevesinde performans değerlerini gösteren verilerin ve kriterlerin ağırlıklarının açıkça ifade edilmesi gerekmektedir. Bu kapsamda Tablo 2’de temel veri seti ve kriter ağırlıkları ifade edilmiştir.

Tablo 2. Temel Veri Seti ve Kriterlerin Ağırlıkları

	K1 İşlemci Hızı (Ghz)	K2 Ekran Boyutu (İnç)	K3 Çözünürlük (Piksel)	K4 Disk Kapasitesi (GB)	K5 Ağırlık (kg)	K6 Fiyat (TL)
A1: HP	4,2	15,6	768	256	1,85	5.900
A2: Dell	4,8	14	768	256	2	5.450
A3: Lenovo	3,6	14	1080	256	1,60	5.200
A4: Asus	3,6	14	1080	256	1,90	6.200
A5: MSI	4,2	15,6	1080	256	1,60	6.760
A6: Huawei	3,9	13	1440	256	1,30	6.500
A7: Apple	3,2	13,3	1600	256	1,29	8.900
A8: Casper	3,6	14	1080	512	1,29	5.910
Ağırlıklar	0,432832	0,051957	0,12352	0,263915	0,033278	0,094498

2. Aşama: S⁺ Matrisinin ifade Edilmesi

TOPSIS yöntemine göre alternatiflerin nihai sıralamasının tespit edilmesinde S⁺ değerlerinin tespit edilmesi gerekmektedir. Bu kapsamda hesaplanan değerler Tablo 3'te açıkça ifade edilmiştir.

Tablo 3. TOPSIS Yöntemi için Kullanılan S⁺ Değerleri

S⁺	K1 İşlemci Hızı (Ghz)	K2 Ekran Boyutu (İnç)	K3 Çözünürlük (Piksel)	K4 Disk Kapasitesi (GB)	K5 Ağırlık (kg)	K6 Fiyat (TL)	S⁺ Değerleri
A1: HP	0,0005	0,0000	0,0010	0,0059	0,0000	0,0000	0,007
A2: Dell	0,0000	0,0000	0,0010	0,0059	0,0000	0,0000	0,007
A3: Lenovo	0,0022	0,0000	0,0004	0,0059	0,0000	0,0000	0,008
A4: Asus	0,0022	0,0000	0,0004	0,0059	0,0000	0,0000	0,008
A5: MSI	0,0005	0,0000	0,0004	0,0059	0,0000	0,0001	0,007
A6: Huawei	0,0012	0,0000	0,0000	0,0059	0,0000	0,0000	0,007
A7: Apple	0,0039	0,0000	0,0000	0,0059	0,0000	0,0004	0,010
A8: Casper	0,0022	0,0000	0,0004	0,0000	0,0000	0,0000	0,003

3. Aşama: S⁻ Matrisinin İfade Edilmesi

TOPSIS yöntemine göre alternatiflerin nihai sıralamasının tespit edilmesinde S⁻ değerlerinin tespit edilmesi gerekmektedir. Bu kapsamda hesaplanan değerler Tablo 4'te açıkça ifade edilmiştir.

Tablo 4. TOPSIS Yöntemi için Kullanılan S⁻ Değerleri

S⁻	K1 İşlemci Hızı (Ghz)	K2 Ekran Boyutu (İnç)	K3 Çözünürlük (Piksel)	K4 Disk Kapasitesi (GB)	K5 Ağırlık (kg)	K6 Fiyat (TL)	S⁻ Değerleri
A1: HP	0,027	0,000	0,001	0,006	0,000	0,001	0,036
A2: Dell	0,035	0,000	0,001	0,006	0,000	0,001	0,044
A3: Lenovo	0,020	0,000	0,002	0,006	0,000	0,001	0,029
A4: Asus	0,020	0,000	0,002	0,006	0,000	0,001	0,029
A5: MSI	0,027	0,000	0,002	0,006	0,000	0,001	0,037
A6: Huawei	0,023	0,000	0,003	0,006	0,000	0,001	0,034
A7: Apple	0,016	0,000	0,004	0,006	0,000	0,002	0,028
A8: Casper	0,020	0,000	0,002	0,025	0,000	0,001	0,047

4. Aşama: Alternatiflere Ait Nihai Sıralamanın İfade Edilmesi

TOPSIS yönteminde alternatiflere ait nihai sıralamanın tespit edilmesi için analizlerin sonucunda C^* değerlerine bakılır. Böylelikle doğru sıralama tespit edilebilir. Bu doğrultuda Tablo 5'te her bir alternatifte ait nihai sıralama ifade edilmiştir.

Tablo 5. TOPSIS Yöntemine Göre Alternatiflerin Nihai Sıralaması

	S ⁺	S ⁻	C*	Nihai Sıralama
A1: HP	0,00744	0,03574	0,82775	4.
A2: Dell	0,00689	0,04380	0,86408	2.
A3: Lenova	0,00845	0,02910	0,77492	7.
A4: Asus	0,00849	0,02946	0,77620	6.
A5: MSI	0,00686	0,03682	0,84288	3.
A6: Huawei	0,00718	0,03417	0,82634	5.
A7: Apple	0,01014	0,02829	0,73618	8.
A8: Casper	0,00261	0,04739	0,94779	1.

4.3. Bulgular ve Yorumları

Çalışmada, üniversitelerin lisans bölümlerinde öğrenim gören öğrencilerin ihtiyacı haline gelen dizüstü bilgisayarların sekiz alternatif arasından optimum olanın belirlenmesinde AHP ve TOPSIS Yöntemleri hibrit olarak kullanılmıştır. Karar vericilerle birlikte kararlaştırılan altı kritere ait ağırlıklar AHP yöntem ile tespit edilmiştir. Bu ağırlıklar TOPSIS yöntemi ile gerçekleştirilen analizlerde de kullanıldığı için çalışmada hibrit bir yaklaşım vardır denilebilir. Bahsedilen yöntemler ile gerçekleştirilen analizler neticesinde en uygun alternatif (0,94779) C^* değeri ile Casper (A8) olduğu görülmüştür.

5. SONUÇ VE ÖNERİLER

Güncel eğitim sisteminde özellikle üniversitelerin lisans bölümlerindeki öğrencilerin dersleri daha iyi takip etmeleri ve ödevlerini kolaylıkla bitirebilmeleri dizüstü bilgisayarlarının olup-olmaması ile yakından ilişkilidir. Öğrenciler yukarıda bahsedilen nedenlerden dolayı kendilerine optimum fayda sağlayacak dizüstü bilgisayar almak durumundadırlar. Fakat maliyetler açısından ve diğer yönlerden zarar etmemek için bilimsel yöntemlerden faydalanarak bu eylemi gerçekleştirmeleri daha uygun olacaktır. Optimum fayda sağlayacak dizüstü bilgisayarın seçilmesi problemi ÇKKV problemi olarak düşünüldüğünden çalışmada AHP ve TOPSIS yöntemleri hibrit yapıda kullanılarak en uygun bilgisayarın seçilmesi işlemi değerlendirilmiştir. Çalışmanın literatür taraması bölümünde farklı sektörlere ait işletmelerinin farklı türden karar problemlerini ÇKKV yöntemleri kullanarak çözümledikleri ifade edilmiştir.

Çalışmanın uygulama kısmında, Düzce Üniversitesi İşletme Fakültesi Yönetim Bilişim Sistemleri bölümü öğrencilerinin gereksimi olan en uygun özelliklerdeki dizüstü bilgisayarın belirlenmesinde AHP ve TOPSIS yöntemleri hibrit yapıda kullanılarak değerlendirmeler yapılmıştır.

Karar vericilerle birlikte kararlaştırılan altı kritere göre alternatifler kıyaslanmış ve böylece alternatifler ilgili yöntemlerin analiz aşamaları dikkate alınarak önceliklerine göre sıralanmıştır. Bu sıralamaya göre en uygun dizüstü bilgisayar modeli A8 (Casper), ikinci sırada ise A2 (Dell) dir.

Çalışmanın sonuçları doğrultusunda en uygun dizüstü bilgisayar modelinin A8 (Casper) olduğu karar verici konumundaki öğrenci temsilcilerine bildirilmiştir. İleride yapılacak benzer çalışmalarda güncel ÇKKV yöntemleri kullanılabilir.

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USE OF BUSINESS INTELLIGENCE IN A COMPETITIVE STRATEGY DEVELOPMENT OF COMPANIES

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Abstract: Business intelligence is a broad set of applications, technologies and knowledge for gathering and analyzing data for the purpose of helping users make better business decisions.

The paper presents a synthesis of the BI domain and the requests for informational technologies with data organization for BI applications, hierarchies and data cubes followed by the data aggregation and organization for BI-OLAP reports.

The main challenge of Business Intelligence is to gather and serve organized information regarding all relevant factors that drive the business and enable end-users to access that knowledge easily and efficiently and in effect maximize the success of an organization.

Business intelligence produces analysis and provides in depth knowledge about performance indicators such as company's customers, competitors, business counterparts, economic environment and internal operations to help making effective and good quality business decisions.

BI applications include activities for decision-making support, interrogation and reporting, statistic analysis and forecast. The option for BI instruments must be a major preoccupation of any companies' management. Some of the benefits of adopting these instruments will be presented in the paper as a premises for justifying the research in this area and will be afterwards also demonstrated through the case study on using BI instruments and ERP-type applications together with ERP Microsoft Dynamics.¹

The case study illustrates the way through which BI instruments and ERP-type applications can work together in order to give the most accurate image of a company's activity.

Keywords: Business Intelligence; Data Warehouse, OLAP, Enterprise Resource Planning applications.

JEL classification: C88, L21, L86, M21

Introduction

In the current economic context, fast access to data and information is essential. Whether the information comes from inside or outside a company, the first priority remains the accuracy and diversity by which the reports are obtained. In response to these needs under different stages of development, the concept of Business Intelligence (BI) emerged.

BI technologies are an important basis underlying the success of the business, since the term was introduced to describe a set of concepts and methods to improve decision making by

¹ <https://www.microsoft.com/en-us/dynamics/erp-ax-overview.aspx>

using fact-based systems. Since the beginnings of the current use of computer in companies, the most advanced and most innovative companies have adopted systems of information processing, predecessors BI today, because these companies understand the need to rely on facts, not on opinions or assumptions. These early systems have helped companies evaluate performance and modify current activities to pursue strategic goals. Even if they offered significant value, these systems were often restricted by difficulties inherent, such as limitations and complexity of data - problems that still exist today. BI allows a better understanding, analysis and even a prediction of a business activity. Among the most important issues that you have most companies in relation to data, reports and analyzes, we can mention the following:

- Data grouped into different departments within a company. This dispersion causes data to be analyzed in different ways to calculate indicators incoherent analysis leading to unpredictable and inadequate measures taken based on the data.
- Reports are not always explicit. If we don't know the origin of the data for a report or how certain measurements are calculated, then their real value and data cannot be understood or communicated.
- Integration of reports is very time consuming. With reports coming from so many different places, will be held at the same problems mentioned in the previous paragraph. Errors may occur, delays or it may be too late.
- People who prepare the reports spend too much time in finding and adjusting the data instead of analyzing the data.
- The data is on different systems with different software platforms, and are not necessarily compatible.

1. Brief topic explanation literature review

Business Intelligence is considered by many authors as computer based techniques used in extracting and analyzing critical business data, such as revenues from product sales, or costs associated revenues.

BI is a term introduced by Howard Dresner of the Gartner Group in 1989 to describe a set of concepts and methodologies to improve business decision making by using fact and reality-based systems. Systems based on facts include executive information systems, decision support systems, enterprise information systems, management support systems, OLAP, and new technologies such as data mining, data visualization and geographic information systems.

„Business Intelligence is an umbrella term for various business managing approaches based on well-informed decisions, which lead to a high performance level within organizations (McKnights, W., 2004; Melfert, F., Winter, R., Klesse, M., 2004; Mukles, Z., 2009; Hatch D., Lock M., 2009; Borysowich, C., 2010; Jamaludin, I. A., Mansor, Z., 2011; Mircea M. (ed.), 2012).

BI applications include applications relating to decision making, questioning and reporting, statistics and forecasting².

² <http://searchdatamanagement.techtarget.com/definition/business-intelligence>

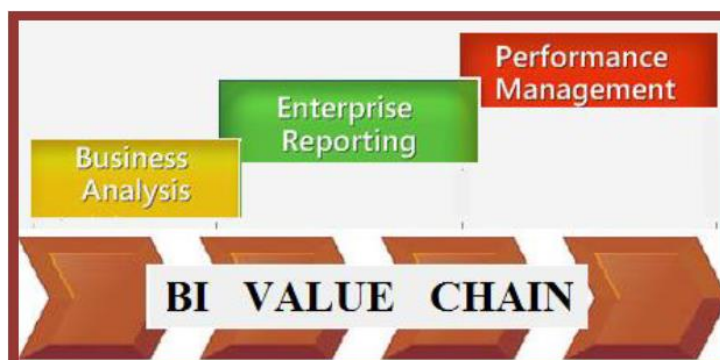


Figure 1. Business Intelligence (BI) definition (Vătuțiu, Udrică ve Tarcă 2013: 395)

Business Intelligence (BI) has today an important role in generating current information for strategic and operational decisions, so organizations need to focus on these investments for a better understanding of internal and external forces that influence decision making in order to improve performance (Vătuțiu, Udrică ve Tarcă 2013: 395).

Some authors find that the problem is that many definitions are given only software or technological components. BI is the essential element of understanding what is happening within an organization and the business environment, and appropriate measures to achieve organizational objectives. Of course, this technology is the component that adds quality information with which users can analyze operations, what happened, what is happening and what will happen in the future.

2. The aim of the study

This paper aims to highlight the way companies today have included in their own strategy development and BI tools used extensively in information and communications technology (ICT) as this technology creates substantial and sustainable competitive advantages.

ICT affects not only how individual activities are carried out, but the the process, resulting in information flows, increase a company's ability to exploit the links between activities inside and outside the company.

3. Methodology

In carrying out this work we used qualitative research methods considering that qualitative research is based more on textual interpretation, requiring proper definition of the concepts or their scientific substantiation, highlighting the importance of the theme addressed. I believe that qualitative research fits best the field of study to which I directed my view. I say this based on research tools and methods used.

4. Available findings

In a typical environment for the organization, transactional applications and other enterprise applications are designed to provide information to users. Most of the information presented relates to the current state of the business. BI is organized to support structured decisions not on the realization of complex requirements that adress BI.

BI services complete the " spectrum decision " of strategic decisions with tactical decisions, operational decisions.

BI environment includes all development activities, information processing, support necessary to provide extremely reliable and relevant business information, also analysis capabilities of business activity. Within the scope of BI, organizations seek to design and implement successful BI systems. These can be defined as systems that provide quality information in providing analytical information, in decisions making as a source for orientating activities to achieve organizational goals.

BI analyzes business operations and produces information to help users understand, improve and optimize business operations. BI, although sometimes used as a synonym for support systems of decisions, is a broader concept in terms of technology, including knowledge management, data mining, etc. BI solutions consist of query and reporting, OLAP, statistical analysis, forecasting and data mining tools.

4.1. Business Intelligence (BI) architecture

The definitions around this concept, although separate into question the common elements found in the BI system architecture. From the architectural point of view, BI can divide into two parts:

- 1) Data Warehouse
- 2) Data access, data analysis, reporting and delivery.

The main difference between traditional media (eg, decision support systems, executive information systems, etc.), this information supports traditional BI and is more application adjusted.

The typical architecture of a BI system is listed below and includes two major components:

➡ **Data sources.** The starting point is the collection and integration of data from multiple sources. Different types of data can be data sources:

- Data from current activity - such as sales data, data from Human Resources, data on stocks, data from marketing;
- Data from orders received from suppliers or e- sides;
- Data from market research;
- Data obtained from third parties - such as surveys, demographic, etc.

➡ **Data Warehouse (DW) and Data Mart (DM).** Using tools extract, transform, load (Extract, Transform, Load - ETL) data from different sources allows storing them in a database designed to support the analyzes obtained by BI. These databases are called Data Warehouse.

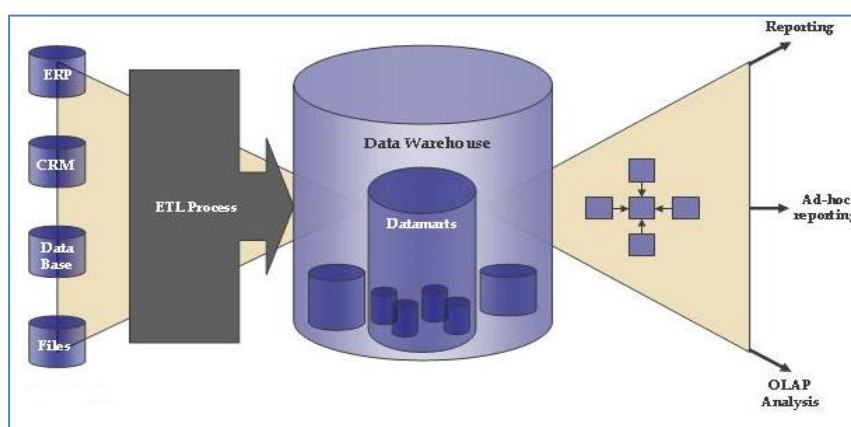


Figure 2. Business Intelligence - Data Warehouse - ETL³

Data Warehouse (DW) is a database that contains data managed and integrated power sources in her operational organization (such as SAP, CRM, ERP). It can gather user's manual entries that establish criteria and parameters for grouping or classification of records.

A source for data storage where data is extracted from operational databases. Data is validated, cleaned, processed and eventually becomes cumulative and ready to be loaded into the data warehouse.

This database contains structured data query and analysis that can be accessed by users. The data storage can be created or updated anytime, with minimal disruption to the operating systems. It's provided by the strategy implemented in ETL.

Data storage is a dedicated database containing detailed data, stable, non – volatile and consistent, which may be analyzed in solution over time.

Sometimes it is necessary for only a part of the detailed data to be considered through a data mart. A data mart is generated from the data storage that contains the data and is focused on a specific topic and there is frequently accessed data or summaries.

Data marts be designated to act as strategic decision support for managers responsible for some specific business area. data storage operates at an enterprise level and contains all the data used for reporting and analysis, while data mart is used by a specific business department and is focused on a particular topic.

Data warehouse operates at an enterprise level and contains all the data used for reporting and analysis, while data mart used by a specific department of a business and are focused on a particular topic.

4.2. Managing Data for BI applications

Reference architecture for BI applications (data warehouse - DW) includes the following main functional components:

- DW itself with DM. It contains data and functions that allow data to be accessed, viewed and modified.
- ETL applications that allow data to be extracted transformed and loaded into DW.
- Applications BI decision support. It's part of the reporting and enables policy makers that are based on the results to find the best solutions.

Design DW and DM is based on a model representation of multidimensional data providing at least two major advantages of functionally can guarantee fast response time even to complex questions, and logically, the dimensions match the criteria factors the decision analyzes the reports.

Multidimensional representation is based on star schema that contains two types of data tables: tables and tables of raw data size. Sized tables correspond to the primary entities under DW, and in most cases are obtained directly from tables stored in OLTP system. OLTP system has a high degree of normalization, to enter and retrieve data quickly. DW star schema design or purpose (SS) is the normalized model, simplifying it and provide more tables to faster retrieval of data. This allows modeling normalize of the database in a way that users can understand and significantly increases performance whilst types of queries to be executed. The most important reason for reporting data de-normalization is that it summarizes some redundancy between tables.

³http://etl-tools.info/en/bi/datawarehouse_concepts.htm

The transition from the OLTP model, the dimensional model is important for several reasons, and performance is not among the last, but the dimensional model can solve several situations where the data is very difficult if not impossible to manage in most OLTP models. Some of these conditions are: The sizes change over time - management changes and old reports, where changes occur and it is necessary that the oldest data to be represented as it was, and new one as it is. For example, changes in the person's name raises issues of effective management in a situation, assuming multiple tables and updates are complicated.

The role dimensions play - manage multiple calendars with multiple relationships between different tables where calendars change. For example, in each fiscal year the calendar changed, but has kept relations with previous methods for historical and trend analysis. The integration of the primary keys from multiple systems - some systems have alphanumeric keys and other keys have integers or compound. Integration of different types of keys is a major problem that often leads to systems with tools (ETL) complicated.

4.3. Multidimensional data structures used in BI applications

Primary data tables refers usually to transactions of two types of data:

- 1) Links to charts dimensions that are necessary to correct a reference to the information contained in each primary data table;
- 2) Numerical values of attributes that characterize the corresponding transactions and that is the actual goal of the analysis OLAP (Online Analytical Processing and multidimensional analysis) later.

Primary data tables are necessary because they allow links to versions of the normalized tables of sizes and provides large tables, complete utilization and data aggregation. In other words, the primary data table is part of the model or calculates the monetary amounts that retains data types that are run per year, grouped by categories, etc.

The data related primary "just raw data and keys to relate the tables of sizes. For many OLAP tools, refer to the star schema designs and are optimized to work with them to primary data table is an important piece.

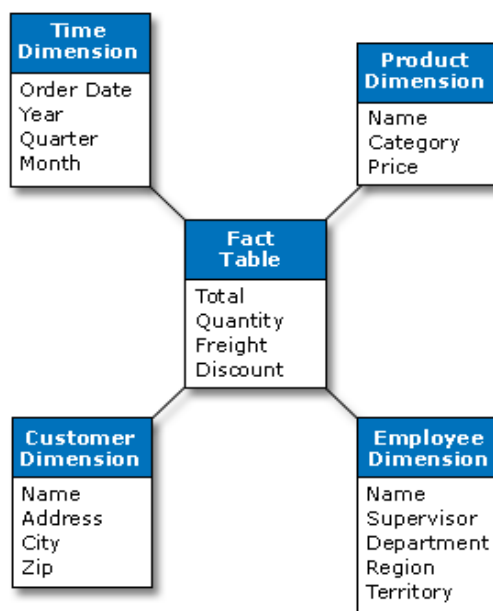


Figure 3. Primary data table

Sometimes dimension tables are connected in turn to other tables sizes, in order to reduce memory consumption. This connection scheme star turns in snowflake schema.

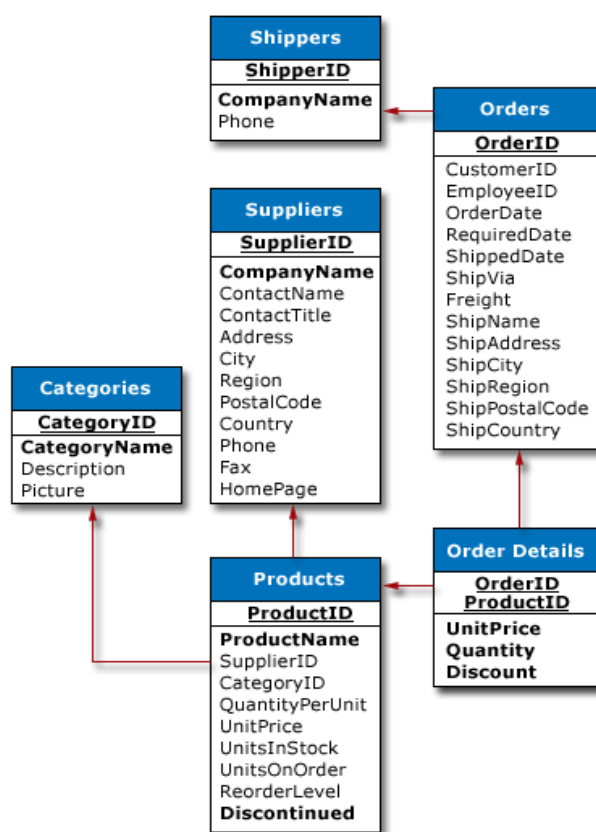


Figure 4. Snowflake schema⁴

5. BI applications in the development strategy of modern companies

5.1. ERP systems, support for BI tools

Enterprise Resource Planning (ERP) systems are integrated software solutions used to manage the resources of any organization.

Organizations recognize the wealth of information from ERP systems, the difficulty lies in the ways of exploitation. Since ERP systems were not originally designed to provide real-time reports for a massive number of users, the entire system could facilitate decision support function. Hope that ERP systems should provide analytical and reporting functions best is therefore reduced. In order to justify the return on investment (ROI), more and more organizations are turning to BI tools that make the data collected ERP, customer relationship management (CRM), and other data applications to be relevant.

BI systems can extract data from ERP systems, and can perform various analyzes and provide high quality reporting that assists users accurate and timely decisions. More and more organizations are increasingly expanding more and more ERP systems beyond internal company level to improve sales, customer satisfaction and decision making (Stedman, 1999:49).

Among the most important benefits of implementing ERP are:

⁴ [https://msdn.microsoft.com/en-us/library/office/aa140038\(v=office.10\).aspx](https://msdn.microsoft.com/en-us/library/office/aa140038(v=office.10).aspx)

- ➡ **Providing relevant analysis.** Although operational reports from the ERP system provide the latest business events, they do not satisfy the needs of managers for forecasting and ad-hoc report. BI systems, on the other hand, provide online analytical processing (OLAP) and data mining tools to uncover significant trends and patterns. For example, users can use BI tools to obtain more detailed information to generate scenarios - best - or worst - for business planning. Therefore, ERP systems, BI adds value by providing relevant and comprehensive analysis of operational data;
- ➡ **ERP investment optimization.** By integrating ERP and BI systems, organizations can continuously improve competitive advantage. For example, a BI solution famed purchase could allow staff to discover patterns in prices, which in turn allows the company to obtain better prices by changing purchasing processes. These findings are then used to improve ERP system.

5.2. BI tools in improving investment effectiveness ERP

BI tools can be used to generate different views of the business aspects of managing existing data, obtained from information systems of the company. BI can be used by any organization to structure its information from ERP applications and other repositories for fast and efficient decision making.

Structured query language conventional (SQL) and reporting tools provide ad-hoc queries. However, BI tools allow users to build queries required in a more efficient and easy to use. Companies that adopt BI can strengthen their decision to employees in a timely and reliable manner. BI provides better business information through a strong adherence to organizational data. As a BI system includes technologies for reporting, analysis, and exchange of information, it can be integrated ERP system to truly maximize the return on investment in ERP.

Although some systems offer enterprise-type functionality reporting and query the basic organizational data are dispersed in business information systems. Isolated reporting capacity is insufficient for an organization to seek a consolidated view of business operations.

Therefore, BI applications are moving toward providing tools that can be used throughout the organization to access, analyze and share information from a variety of data sources. In today's competitive market, a company that holds distinct advantages over rivals BI market. Relationships that a company has with suppliers, customers, partners, products, and market will enable managers to make wise decisions that can lead to impressive revenue growth, cost reduction and profit improvement.

Distinct from conventional reporting tools such as spreadsheets, BI reporting tools provides a visual interface for accessing and navigating multidimensional data sources that are stored in transactional systems. This means that policy makers and analysts will be easier and faster access to frequently updated information that supports faster and better decision making.

A powerful BI tool can generate different views of the data available on the system. Data Mart and Data Warehouse can provide various information timely and well-structured BI tools. It only takes a few seconds to use BI software that generates the required business views. For example, the software BI can be used for financial viewpoints, such as:

- Sales or entry orders. Sales by good customers, with comparisons over time; sales to customers and performed by sales agents; Sales to customers by location, etc.;
- Bills receivable. Seniority bills charged by the sales agent, the age bills charged by collecting them, collecting them according to the customer, and the collection period that have exceeded the period of collection;
- Reconcile bank. The cash balance in the bank statement;
- General Accounting. Sales and profit by distribution channel real budget, etc.;

- Highlighting best customers;
- Parameters affecting sales;
- Activities that generate or leading to waste of money in different locations, product line or campaigns.

BI tools play a major role in improvement in the quality of decision making. Generally speaking, companies need to focus the activities of BI in the following areas in order to make their business more competitive: cost reduction, profitability analysis, analysis of use of the product or service by placing the target market and CRM.

5.3. Case study on the deployment of ERP and BI tools using Microsoft Dynamics ERP product

The case study illustrates how BI tools and applications that ERP can work together to provide an accurate picture of a company. As discussed in chapter six, ERP provides a visual on the business enterprise encompassing all functions and departments ; and an enterprise database where all business transactions are entered, recorded, processed, monitored and reported. These together with BI tools offer the possibility of obtaining the information in any desired form of management of a company.

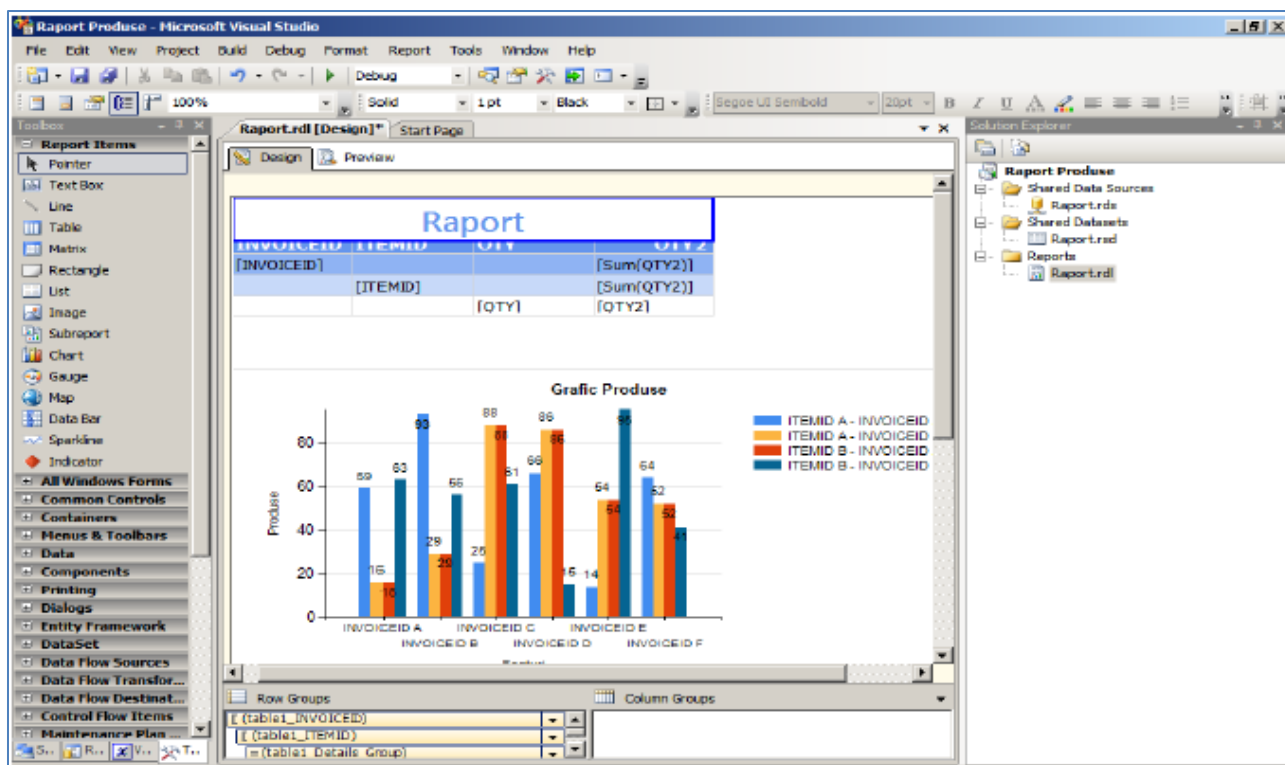
All applications involved in this research study are provided by a single source, namely Microsoft. Advantages offered applications provided by a single provider mentioned in chapter two. Ease of use offered by the graphical user interface for Microsoft products is well known.

In addition to the complexity of reporting opportunities offered by Microsoft Dynamics AX 2009 ERP sometimes is necessary and ad hoc reports. Exemplification of the following, which were used in complex software applications, obtaining reports and simplicity emerges through how Microsoft managed to make it possible to work with these applications individually, but especially in an integrated way.

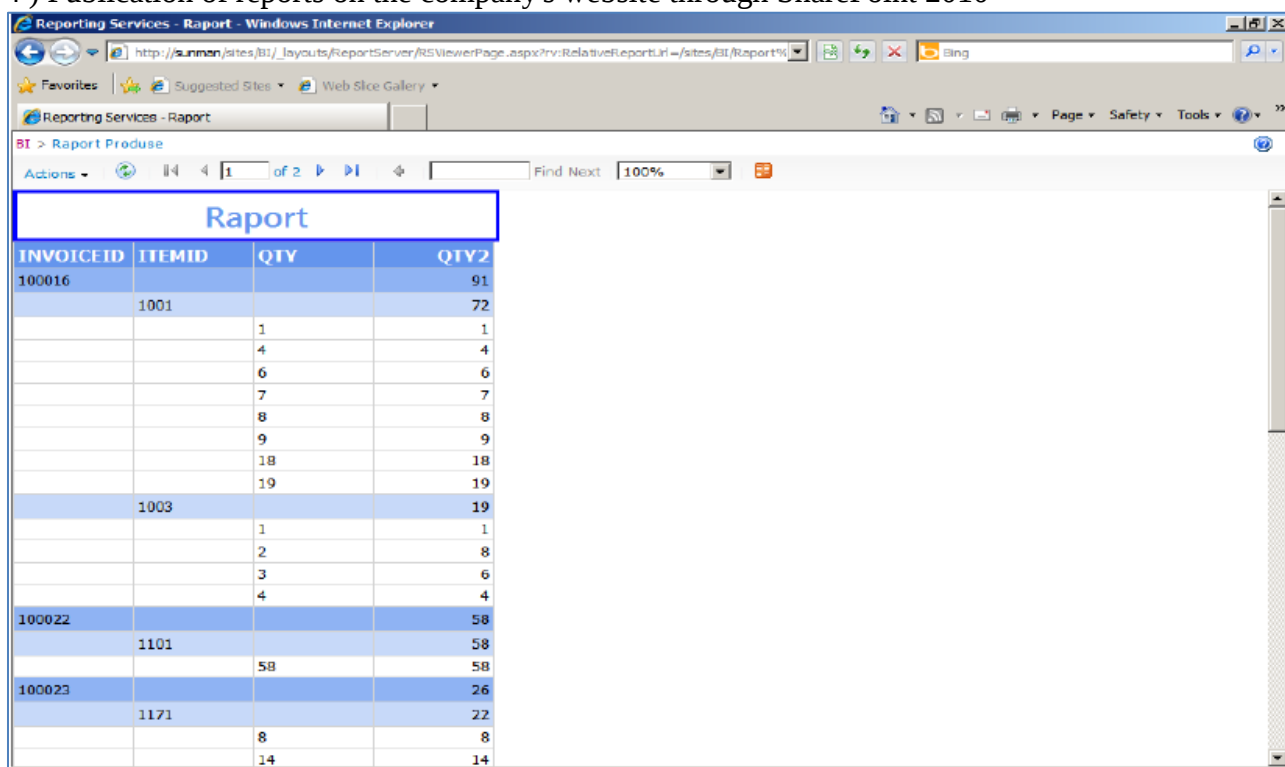
Those who want to have non-specific reports obtained quickly and that they can make known immediately to all not necessarily be specialists in ICT. They can create queries, obtain reports, analyze information only focusing on everyday problems and not on specific problems ICT specialists. Next making a brief illustration of the experimental demonstration.

1) Selection of Microsoft Dynamics AX 2009 database tables containing information to be analyzed:





4) Publication of reports on the company's website through SharePoint 2010



This example proved the possibility of combined use of two types of software applications, BI and ERP respectively. The particularity of the example illustrated by offering two types of applications that is coming from a single vendor, Microsoft Corporation respectively.

Microsoft Corporation provides a common platform for running, which eliminates the effort to harmonize using applications. BI tools has been used for Microsoft Business Intelligence suite that is in SQL Server Enterprise, which includes software components to build, deploy and maintain BI infrastructure. The main components that come with SQL Server BI are :

- SQL Server Database Engine
- SQL Server Integration Services (SSIS)
- SQL Server Analysis Services (SSAS)
- SQL Server Reporting Services (SSRS)

The resulting reports must be sent to all to respect the principle of a single truth. The application used was SharePoint.

Conclusions

BI is a general term for applications, platforms, tools and technologies that support the exploration of business data, data relationships, and trends. BI provides timely and accurate management information for a better understanding and better business decisions in real time.

BI technologies used (eg, dashboards, graphical interfaces, performance indicators, drills, filters, etc.) are found in executive information systems ; and organizational data were scattered around various data sources are often connected to a single decision support solution. The key issue is to provide a uniform and integrated vision on the data.

BI is trying to solve this problem through a targeted approach on data center architecture where it's the integral analytical data source for decision-making.

BI objectives include work on understanding the strengths and weaknesses of both internal and external, and the relationships between various data for better decision making. Also taking into account and finding opportunities for innovation while reducing costs and use of resources.

Only by optimizing its performance, a company can survive and remain a competitor in a changing market, being flexible to new demands (Muntean, M., Cabău, L., 2011). Corporate data represents a valuable asset, one absolutely indispensable for decision makers.

Business Intelligence ist in conclusion *“the ability of an enterprise to act effectively through the exploitation of its human and information resources.”*⁵

Discussion part

The results found lead to the conclusions being drawn namely that ERP systems are extremely complex, and extraction of data for BI is especially difficult in a manner independent of the features they offer an ERP system. BI software is gaining more users at the company as they realize the benefits of decision support capabilities type as presented in the case study.

The advantages offered by ERP systems still refer to:

- Streamlining transactional data of the enterprise.
- Ability to add intelligence BI systems ERP data.
- Together, ERP applications can improve greatly and BI performance and ability to make decisions within an enterprise.
- Recognition of ERP systems as a powerful tool for managing enterprise resource planning and supply chain.
- Ability to integrate ERP and enterprise-wide management of transactional data.

⁵ <http://www.b-eye-network.com/view/1119>

- The performance brought the company through data accuracy, reduced processing time thereof.
- Possible integration of interdepartmental data.
- Possible integration of additional tools or further processing of data via other applications.

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Are Energy Price Shocks Temporary? An Analysis Based on Fourier ADF and Fractional Fourier Unit Root Tests

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Abstract

Due to climate changes and contractions in the global energy supply, energy prices have increased worldwide, especially after 2000. Additionally, the removal of restrictions due to Covid 19 and the embargoes due to the Russia-Ukraine War have accelerated the increase in energy prices. These increases in energy prices increase the intermediate input costs and cause an increase in the prices of goods and services at the global level. In this context, the aim of this study covering the period 2000:01-2022:01 is to analyze whether energy price shocks are temporary in 22 OECD countries (Czech Republic, England, Ireland, Spain, Sweden, Italy, USA, Germany, Belgium, Greece, Austria, Bulgaria, Finland, France, Netherlands, Japan, Canada, Latvia, Poland, Slovakia, Turkey, Denmark) by using Fourier ADF and Fractional Fourier ADF unit root tests. According to the study results, energy price shocks are permanent in all countries except the Netherlands. Dependence on non-renewable energy sources should be reduced significantly, and renewable energy policies should be given weight globally to prevent price instabilities arising from energy price shocks.

Keywords: Energy price shocks, Fourier ADF and Fractional Fourier ADF unit root tests, 22 OECD Countries

1. Introduction

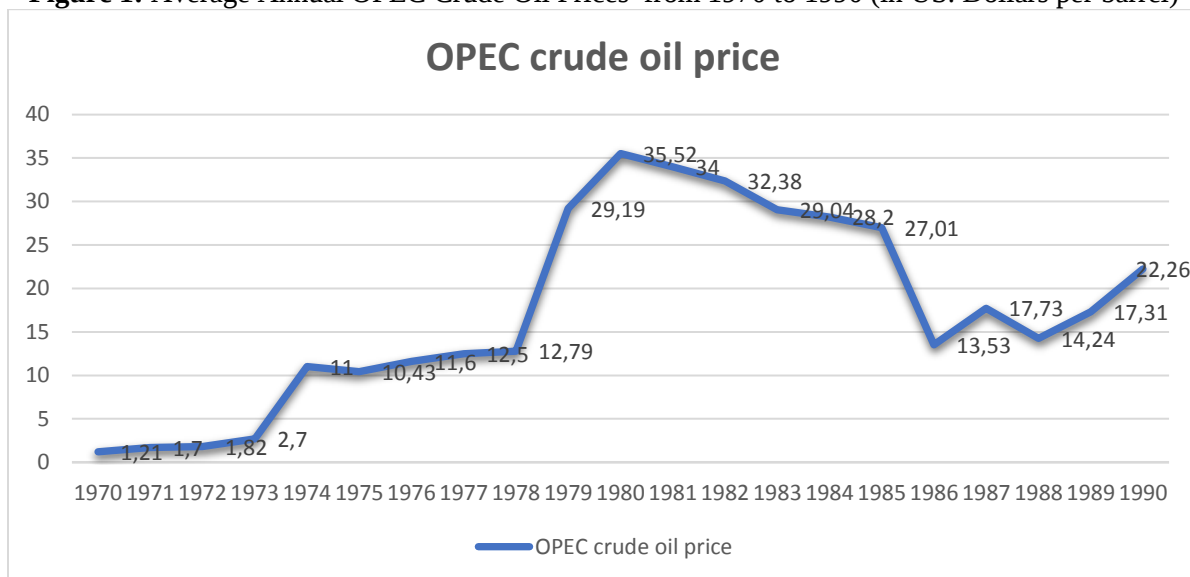
The volatilities in energy supply and demand cause an increase in energy prices, significantly increasing macroeconomic instability, especially in energy-dependent economies. As it is an essential input in production, increases in energy prices increase production costs and trigger inflation, while reducing production negatively affects economic growth and causes stagflation. In this context, it is vital to have energy resources, produce energy, and ensure energy security at the national and global levels to ensure macroeconomic stability.

Energy crises have gained importance, especially after the 1970s. The first significant energy crisis happened with the embargo imposed on the countries supporting Israel by the OPEC countries due to the support of the USA and the western countries in the Yom Kippur War between the Arab countries and Israel in 1973. OPEC countries have reduced oil production by 5 million barrels per day. In the first six months of the embargo, prices increased by 400% (Aksoy, 2016). The increase in oil prices, a critical intermediate input in production, caused a rise in production costs and thus inflation. The 1973 oil crisis caused the golden age ended which started in the 1950s with high growth rates and the Keynesian Revolution, which left its mark on the world economy after the Second World War, and the world countries met with stagflation. According to World Bank statistics, while the inflation rate in England was 7.07% in 1972, this rate increased to 9.19% in 1972. In today's EURO Zone, the inflation rate, 5.90% in 1972, increased by 34% to 7.91% in 1973. The inflation rate in the USA, which was 3.27% in 1972, rose to 6.17% in 1973. Wages, which were increased by the pressure of the unions due to the decrease in purchasing power in 1974, caused a wage-inflation spiral and led to a further increase in inflation in 1974. The inflation rate was in England in 1974 and 1975, respectively; 16.04% and 24.20%. In today's EURO Zone, the inflation rate in England increased by 45% compared to the previous year and reached 14.96% in 1974. The inflation rate in the USA in 1974 was 11.05%. Decreases in purchasing power have led to a reduction in economic growth and, thus, increased unemployment rates by reducing total demand. The growth rate in the EURO Region, which was 5.47 in 1972, decreased to 2.62 in 1973, and negative growth occurred in 1974. The growth rate in England, which was 6.31 in 1972, was -2.54 and -1.46 in 1973 and 1974, respectively. The growth rate in the USA, which was 4.64 in 1972, decreased to -1.44 in 1973.

The second oil crisis took place in 1979, due to the Islamic revolution in Iran and the strikes and protests during the overthrow of the Shah, in the 1978-December-1979-March period, when Iran completely cut off oil exports to the world. Although the loss in oil production decreased from 9% to 3%, and the contraction in oil exports decreased from 15% to 6%, thanks to the increase in oil production by other OPEC member countries, especially Saudi Arabia, the contraction in oil production turned into a crisis. could not be avoided. The hostage crisis between the USA and Iran, the freezing of Iran's assets traded in the US financial system, and the Iran-Iraq War on September 22, 1980, caused panic in the markets, and the oil demand increased. Increasing demand with the psychology of scarcity caused oil prices to rise. OPEC countries have increased their official sales prices by making sales transactions in the spot market instead of long-term contracts. In the January-1979-October-1981 period, oil prices increased by 162% (Pala, 1993:81).

Due to the crises experienced in 1973-1979, the countries started to look for more efficient new energy sources on the one hand, and on the other hand, they tried to find new oil sources. Saudi Arabia attempted to compensate for the decrease in its revenues by increasing oil production, and the increase in oil supply caused oil prices to fall. Figure 1 presents the change in OPEC crude oil prices from 1970 to 1990. The figure indicates that the oil price was 2.7 dollars in 1972, increased to 11 dollars in 1973. While the prices in dollars were volatile from around 11 dollars in the 1973 to 1978 period, they rose to 29.19 dollars in 1979 and 35.52 dollars in 1980. The search for alternative sources by the world countries caused the oil prices to fall to 14 dollars in the late 1980s.

Figure 1: Average Annual OPEC Crude Oil Prices from 1970 to 1990 (in US. Dollars per barrel)

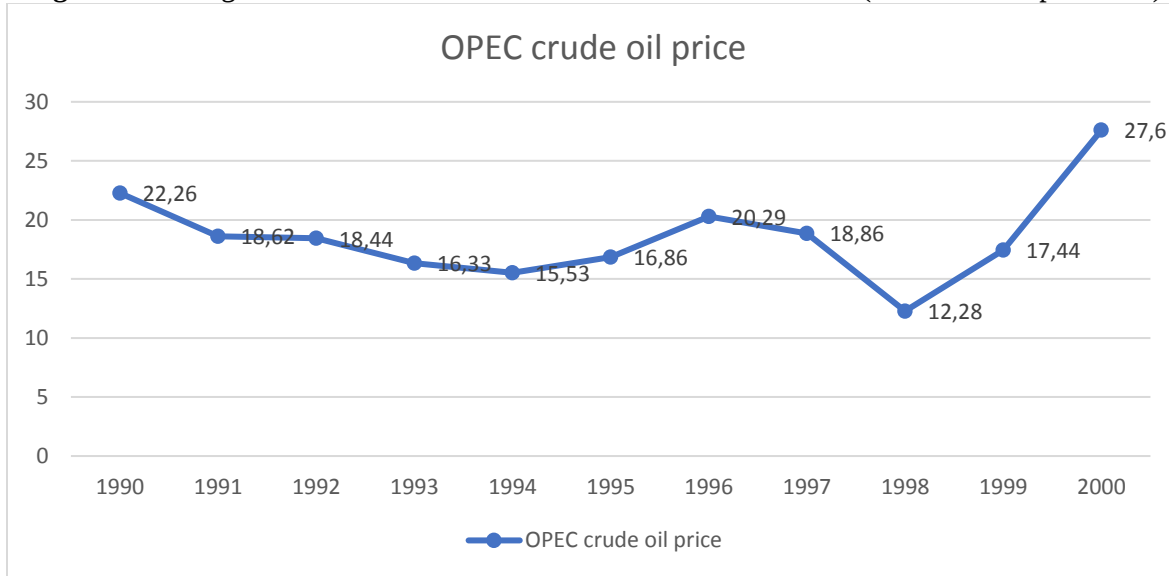


Source: Statista

The third oil crisis occurred in 1990 with the invasion of Kuwait by Iraq and the beginning of the Gulf War. With the end of the Iran-Iraq War in August 1988, Iraq, on the one hand, healed the wounds of the war; on the other hand, it restructured its military power and became a threat by getting stronger. In 1990, Iraq claimed that Kuwait's oil fields on the Iraqi border belonged to it and that Kuwait had harmed itself by extracting oil without complying with the quotas. (2019). However, during the Iraq-Iran war, the Emir of Kuwait lent Saddam billions of dollars against Iran, which he perceived as a threat to his regime. Saddam demanded that this debt be erased from the Emir of Kuwait. However, the Emir of Kuwait did not fulfill the demand (Daban & Daban, 2018). The primary purpose of this invasion was to seize 20% of the oil produced by OPEC and become a new power in the Middle East. Due to the invasion of Kuwait, the USA attacked the Gulf by sending 700 planes. Oil prices rose again due to the contraction in the oil supply (Yergin, 2014). OPEC oil price, which was 17.31 dollars in 1989, grew to 22.26 dollars in 1990. Oil prices declined to pre-war levels after the war.

Another oil crisis occurred in the fall of 1997. The main reasons for the fifth oil crisis are (i) the decrease in oil demand of Asian countries due to the economic crisis in East Asia, (ii) the warmer winter months compared to other years, and (iii) the increase in oil production of Venezuela and OPEC countries, which expect an increase in oil demand, and (iv) the political instability in the Middle East countries (Noreng, 2004). Oil prices fell as oil supply exceeded oil demand. Figure 2 shows the change in oil prices in the 1990-1996 period. Furthermore, Figure 2 indicates that the OPEC oil price of 20.29 dollars in 1996 decreased to 18.86 in 1997 and 12.28 dollars in 1998. The fact that OPEC countries offered the oil supply to the market according to the quotas they determined, and the Southeast Asian countries started to increase their oil demand by recovering caused the oil prices to rise again in 1999 (Noreng, 2004). The oil price, which was 12.28 dollars in 1998, increased by 42% to 17.44 dollars.

Figure 2: Average Annual OPEC Crude Oil Prices from 1990 to 2000 (in US Dollars per barrel)



Source: Statista

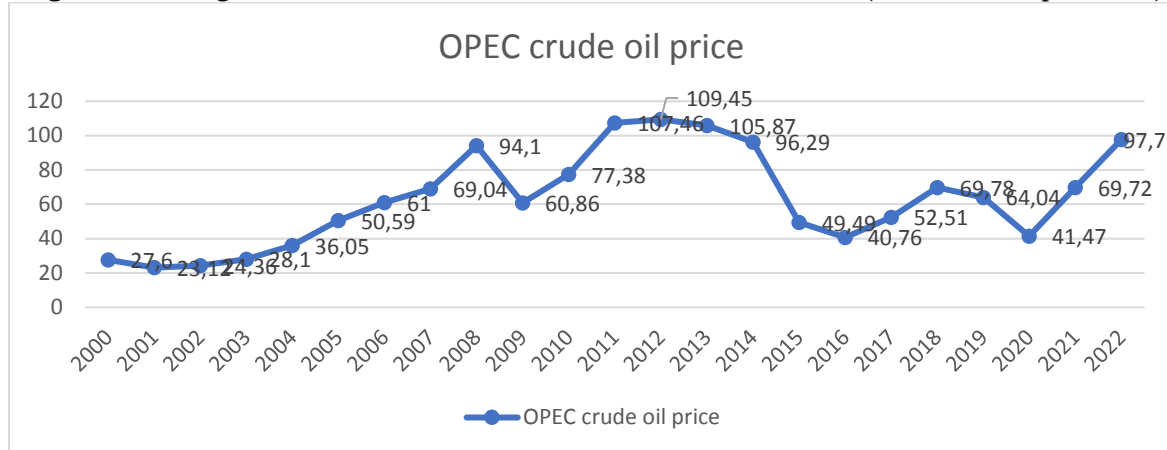
The electricity crisis in the US state of California in 2001 is another energy crisis that left its mark on the world agenda. Rising energy prices due to the liberalization program carried out in California brought electricity distribution companies to the brink of bankruptcy, and increasing electricity prices caused severe power cuts (Sevaioğlu, 2006). In the summer of 2000, the spot electricity price increased five times compared to 1999. Arbitrary capacity restrictions by companies using market power and increases in natural gas prices are the main factors that cause electricity prices to rise. Natural gas companies have shares in electricity companies (Bahçe, 2007).

In the 2002-2008 period, oil prices increased at a record level. (i) The attack on the World Trade Center on September 11, 2001, (ii) the reoccupation of Iraq in 2003, (iii) the increase in political uncertainty in Saudi Arabia due to the death of the King of Saudi Arabia, (iv) the intensification of conflicts between Palestine and Israel, (v) the increase in ethnic clashes in Nigeria, (vi) the increase in political instability in Venezuela, (vii) the continuous interruption of Iraqi oil exports due to sabotage, (viii) the increasing demand due to economic growth, (ix) the decrease in oil reserves by oil production companies, the fact that oil is a non-renewable resource and (x) the determination of oil prices by international financial markets (Bayraç, 2005; Yetkiner & Berk, 2009; Fattouh, 2010) led to a significant increase in oil prices in the 2000-2008 period. Figure 3 shows the change in OPEC oil prices in the 2002-2022 period. The OPEC oil price, approximately 24 dollars in 2002, increased continually until 2008 and rose to 94 dollars.

The decrease in oil demand due to the economic contraction caused by the 2008 global crisis caused a sharp decline in oil prices, and oil prices started to rise again in the 2010-2014 period. This increase in oil prices is due to the decrease in oil supply due to the Arab Spring in the Middle East. Figure 3 indicates that the oil price decreased from 94 dollars to 60 dollars in 2008-2009; on the other hand, Figure 3 shows that it started to increase again in the 2010-2014 period. In 2013, oil prices rose to 105 dollars. However, it was observed that oil prices began to decrease again in the 2014-2016 period. This decrease in oil prices, (i) the increase in the US shale oil production, (ii) the rise in oil production in Iraq and Libya, the failure of OPEC to reduce the production quota, (iii) the increase in energy efficiency in developed countries, (iv) the slowdown in

economic growth in developed countries other than the USA, (v) the economic recession in China, (vi) the appreciation of the US dollar with the expectation that the FED will increase interest rates are the factors that play an essential role in the decrease in oil prices (Eraydın, 2015; Yalçın Erik and Koşaroğlu, 2016; Ertemel, 2019).

Figure 3: Average Annual OPEC Crude Oil Prices from 2000 to 2022 (in US Dollars per barrel)



Source: Statista

The increase in oil demand because OPEC member countries and Russia stopped oil production in 2017 and the economic recovery process of developed countries caused a rise in oil prices between 2017 and 2019. 2019 has been a new turning point for the world economy. The restrictions imposed due to the Covid 19 case, which occurred for the first time in Wuhan, China, in December 2019, caused a decrease in energy supply and demand at the global level. Although the contraction in supply and demand caused a decline in oil prices in 2020, the removal of restrictions as of the second half of 2020 caused an explosion in energy demand, causing an increase in the prices of all energy resources, especially oil and natural gas. The Russia-Ukraine War further fueled the rise in energy prices. In this context, in this study, whether energy price shocks are temporary or not was analyzed using Fourier unit root tests.

2. Data and Methodology

This study covering the period 2000:01-2022:01 aims to analyze whether energy shocks are temporary in 22 OECD countries. In this context, we use monthly energy price index data published for each country in the FRED database.

2.1. Methodology

In the current literature, whether shocks are temporary or not is tested using unit root tests (Hsu et al., 2008; Yılancı et al., 2019; Yılancı & Pata; 2020). The fact that the series has a unit root indicates that the studied series will not converge to its mean value in the long run, while the fact that the series does not contain a unit root indicates that the series will converge to its mean value in the long run. In this context the fact that the series is stationary is interpreted as the effect of the shocks is temporary. The fact that the series is not stationary is stated as the effect of the shocks is permanent (Bozoklu et al., 2020). This study uses Fourier ADF and Fractional Fourier ADF unit root tests to analyze whether energy price shocks are temporary.

2.1.1. Fourier ADF Unit Root Test

The Fourier ADF unit root test developed by Enders & Lee (2012) is derived by adding trigonometric functions to the structural unit root test ADF unit root test. In this context, the test equation can be expressed as follows;

$$\Delta y_t = \rho y_{t-1} + c_1 + c_2 t + c_3 \sin\left(\frac{2\pi kt}{T}\right) + c_4 \cos\left(\frac{2\pi kt}{T}\right) + \varepsilon_t \quad (1)$$

The trigonometric terms in the equation are used to test the presence of structural breaks in the series. The π in the equation represents the pi number, the k value represents the optimal frequency value, and the T value represents the sample size. The optimal frequency value also gives the number of structural breaks. While the null hypothesis states that the series has a unit root, the alternative hypothesis states that the series does not have a unit root. The ρ statistic in the equation gives the Fourier ADF unit root test. To decide whether the series contains a unit root, the calculated Fourier ADF test statistic is compared with the critical values in Enders & Lee (2012: Table 1(a) and Table 1(b)) in accordance with the selected model. If the calculated Fourier ADF test statistic is greater than the critical values in absolute value, the null hypothesis is rejected, and it is decided that the series is stationary.

Test stages can be listed as follows;

- The optimum frequency value is found by giving values from 1 to 5 instead of k in 1 in the equation. The optimum frequency value is the k value, which gives the regression equation where the error term has the smallest value. This value also represents the number of breaks.
- After estimating the regression equation with the optimum frequency value, it should be tested whether the coefficients of the trigonometric terms ($c(3)$ and $c(4)$) in this equation are statistically significant. The F statistic is used to decide whether the terms are statistically significant, and the calculated F statistic is compared with the F critical values developed by Enders & Lee (2012). Trigonometric terms are statistically significant if the calculated F statistic is greater than the critical F values. The trigonometric terms are statistically significant, indicating that the series contains a structural break.

If the coefficients of the trigonometric terms in the equation are not statistically significant, the FADF test statistic is invalid. In this case, the ADF test statistic should be used instead of the FADF test statistic.

2.1.2. Fractional Fourier ADF Unit Root Test

While Enders & Lee (2012) use integers for structural breaks in the ADF unit root test, Omay (2015) developed the Fractional Fourier ADF Unit Root Test, stating that fractional frequency values would give more robust results. The estimated equation is based on the regression equation estimated by Enders & Lee (2012); only fractional values are used, not whole numbers, instead of the k value.

In this context, the test equation can be written as:

$$\Delta y_t = \rho y_{t-1} + c_1 + c_2 t + c_3 \sin\left(\frac{2\pi k^f t}{T}\right) + c_4 \cos\left(\frac{2\pi k^f t}{T}\right) + \varepsilon_t \quad (2)$$

Test stages of the Fractional Fourier ADF Unit Root test can be listed as follows.

- In Equation 2, by giving values from 0.1 to 5 for k, the regression equation that minimizes the sum of squares of error is estimated.
- After estimating the regression equation with the optimum frequency value, it should be tested whether the coefficients of the trigonometric terms ($c(3)$ and $c(4)$) in this equation are statistically significant.

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significant. The F statistic is used to decide whether the terms are statistically significant, and the calculated F statistic is compared with the F critical values developed by Omay (2015). Trigonometric terms are statistically significant if the calculated F statistic is greater than the critical F values. The trigonometric terms are statistically significant, indicating that the series contains a structural break.

Omay (2015) obtained critical t values for values from 0.1 to 2, and Bozoklu et al. (2020) obtained critical t values for values from 0.1 to 5. Therefore, to decide whether the series is stationary when the k value is greater than 2, Bozoklu et al. The critical values developed by (2020) should be used.

3. Results

In the study, we first examine descriptive statistics of energy price series. Table 1 gives descriptive statistics for energy prices.

Table 1. Descriptive Statistics

Countries	μ	Max	Min	σ
Czech Republic	88.53019	120.4000	59.70000	16.77303
United Kingdom	85.39195	127.7000	47.18517	23.93243
Ireland	88.09480	128.1787	53.43192	19.44811
Spain	87.38233	135.1914	56.76183	19.01418
Sweden	97.45720	158.0419	60.36155	18.20357
Italy	90.20340	138.0000	63.20000	15.61391
USA	197.1325	271.1490	113.5000	41.45643
Germany	90.84559	122.6784	58.10367	15.55149
Belgium	95.28618	172.6593	62.59638	20.25552
Greece	81.43643	139.0993	41.30254	26.46330
Austria	92.37584	123.2039	65.49967	14.85822
Bulgaria	88.47698	124.6300	44.79000	20.81535
Finland	90.24555	132.5700	59.73820	17.58154
France	91.75664	132.7142	63.64091	17.50592
Netherlands	93.07982	172.1353	58.46571	17.07525
Japan	90.87062	111.0547	76.29490	9.751115
Canada	93.30625	127.1257	61.22108	15.53060
Latvia	79.42165	124.6798	37.85990	26.66546
Poland	86.79617	125.3400	50.44326	18.96232
Slovakia	88.85376	114.0900	43.02975	17.49742
Turkey	84.42029	340.6111	9.952249	51.21807
Denmark	92.01714	131.3235	67.67372	12.90111

According to Table 1, Lithuania has the lowest average energy prices, while the country with the highest in the United States. Sweden and Belgium follow the USA, respectively. While the USA, Lithuania, and Greece have the highest volatility in energy prices, Japan is the country with the lowest volatility in energy prices.

Table 2 shows the results of Fourier ADF and ADF unit root tests. As stated before, for the calculated FADF test statistics to be valid, the trigonometric terms in the estimated regression equation for each

country must be statistically significant. In this context, Table 2 indicates that the calculated F statistics are smaller than the F critical values. F statistics are not significant. For this reason, we should use ADF test statistics instead of FADF test statistics to decide whether the energy price series are stationary. Therefore, Table 2 demonstrates that the probability value of the ADF test statistic is greater than 0.10 in all countries. Energy price series are not stationary. Thus, energy price shocks are permanent.

Tablo 2: Fourier ADF and ADF Unit Root Tests

Country	f	Min SSR	F	Opt. Lag	FADF	ADF	Prob
Czech Republic	2	522.69	2.71	3	-1.225	-0.687	0.8432
United Kingdom	4	536.34	1.82	1	-0.263	-0.578	0.8717
Ireland	4	705.85	2.07	1	-0.62	-0.773	0.8243
Spain	4	1087.28	2.80	1	-0.26	-0.448	0.8973
Sweden	5	1415.33	1.88	0	-0.31	-0.327	0.9174
Italy	4	668.03	3.24	3	0.51	-0.028	0.9542
USA	4	10176.48	1.55	2	-1.50	-1.549	0.5068
Germany	4	618.39	3.11	1	-0.65	-0.737	0.8339
Belgium	4	1669.90	2.97	3	0.81	0.356	0.9807
Greece	4	1162.47	3.20	1	0.007	-0.243	0.9295
Austria	4	599.93	2.41	1	-0.78	-0.879	0.7933
Bulgaria	4	768.54	1.49	1	-1.10	-1.256	0.6499
Finland	4	986.00	1.98	1	-0.14	-0.239	0.9301
France	4	598.66	2.60	1	-0.04	-0.232	0.9311
Netherlands	1	1133.42	5.67	2	3.22	1.089	0.9974
Japan	4	373.04	1.91	3	-0.47	-1.028	0.7434
Canada	4	2150.93	0.97	2	-1.38	-0.875	0.7948
Latvia	1	473.26	2.70	1	1.63	-0.675	0.8494
Poland	2	200.67	5.46	2	-1.09	-0.016	0.9553
Slovakia	3	508.17	2.19	1	-2.36	-1.508	0.5277
Turkey	1	6412.90	1.25	6	1.56	-0.115	0.9453
Denmark	1	663.14	5.82	1	3.05	-0.218	0.9329

Note: F critical values for T=200 and 1%, 5% and 10%, respectively; 10.02, 7.41 and 6.25

Table 3 demonstrates the results of the Fractional Fourier ADF unit root test. The results obtained are mostly consistent with the Fourier ADF unit root test. Table 3 indicates that only the F statistics are significant in the Netherlands. For this reason, the Fractional Fourier ADF test statistic was used to decide the stationarity of the series in the Netherlands. It was determined by looking at the ADF test statistic in other countries. According to the estimation results, energy price shocks are permanent in all except the Netherlands.

Tablo 3: Fractional Fourier ADF Unit Root Test

Country	f	Min SSR	F	Opt. Lag	FADF
Czech Republic	1.70	516.99	5.19	4	-1.32
United Kingdom	1.50	532.18	2.36	1	-0.58
Ireland	3.90	705.16	2.15	1	-0.15
Spain	4.00	1087.28	2.80	1	-0.26
Sweden	0.10	1408.81	1.85	0	-0.31
Italy	4.10	667.72	3.20	3	0.54
USA	3.90	10169.42	1.63	2	-1.53
Germany	4.00	618.39	3.11	1	-0.65
Belgium	4.00	1669.90	2.97	3	0.81
Greece	3.90	1161.28	3.28	1	-0.02
Austria	3.90	559.74	2.44	1	-0.80
Bulgaria	4.60	763.65	2.04	1	-1.33
Finland	3.90	985.08	2.07	1	-0.17
France	3.90	597.15	2.76	1	-0.04
Netherlands	0.60	1090.82	9.08*	1	3.72*
Japan	4.10	372.93	1.94	3	-0.47
Canada	0.10	2116.41	6.29	3	-3.82
Latvia	1.60	464.90	5.01	1	-1.13
Poland	1.80	198.26	6.55	2	-1.45
Slovakia	2.80	507.54	2.68	1	-2.35
Turkey	0.10	5197.32	4.26	6	2.95
Denmark	0.90	663.12	5.57	1	3.01

Notes: F critical values for T=200 and 1%, 5% and 10%, respectively; 12.76, 9.85 and 8.50. Critical values are taken from Omay (2015) page 124.

T critical values for T= 200, k=0.60 and 1%, 5% and 10%, respectively; It is -4.45, -3.90, -3.61. Bozoklu et al. (2020) taken from page 10.

* ** *** represents 10%, 5% and 1% significance level, respectively.

4. Conclusion

Although renewable energy sources have increased globally due to sustainable development policies, the use of non-renewable energy sources is still above 70%. Since oil and natural gas are non-renewable resources, the increase in demand during periods of economic prosperity, the contractions in total supply caused by the instability in the Middle East countries, and the spread of the information that the reserves are decreasing cause an increase in oil prices. Increasing concerns about energy supply security and the determination of oil prices in international markets also cause speculative price increases. The increase in natural gas demand with climate changes and natural gas usage as an intermediate input in electricity generation also cause cumulative increases in energy prices. Covid 19 process and the Russia-Ukraine War have led to a rise in energy prices, which have already increased since the beginning of the 2000s. The high dependence on foreign energy and the fact that energy resources are concentrated in the hands of certain countries cause volatility in energy prices to disrupt macroeconomic balances at the global level. In this context, in this study covering the period 2000:01-2022:01, whether energy price shocks are temporary or not was analyzed using the Fourier ADF and Fractional Fourier ADF unit root tests. The results obtained

from the study show that energy price shocks are permanent in all countries except the Netherlands. In this context, dependence on non-renewable energy sources should be reduced.

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The Romanian service sectors. The evolution of the service sector in Romania

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Abstract

From the 1990's, after the regime change, the Romanian services sector began to grow significantly. According to Gavrea et al., (2015) "As a managed economy the Romanian service sector was underdeveloped before 1990s, due to the government's propensity to regulate supply and the inability to satisfy the need for services." As with many countries, the service sector became increasingly relevant after a change into the consumer economy. Since Romania became a member of the European Union it also had to follow tighter European directives which were the basis for establishing unitary and non-discriminatory regulations allowing players to join and leave unregulated markets.

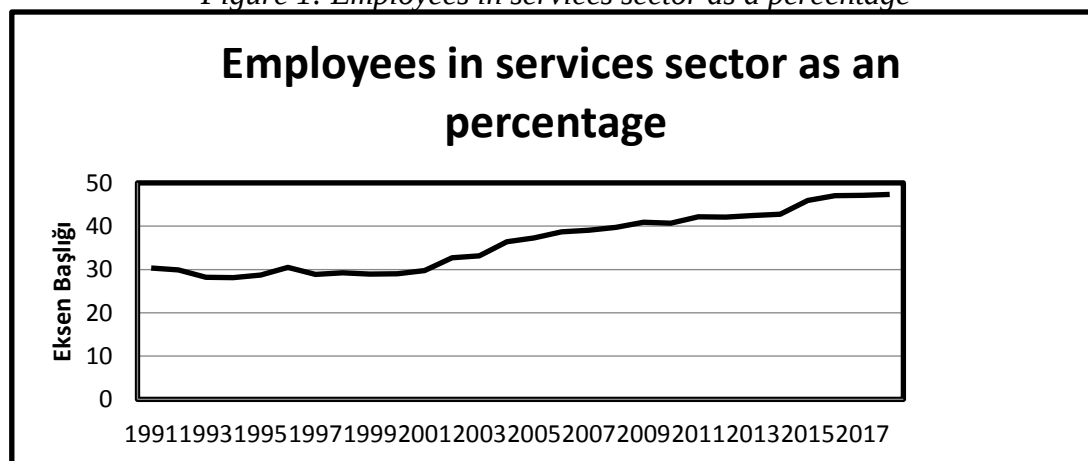
JEL classification: C88, L21, L86, M21

Keywords: OTE, technology, virtual space.

These laws also allow for easier distribution of information and greater access to different business resources for people. The higher the public benefits, the more stable and successful a nation is.

The latest up-to-date technologies that businesses invest in, such as AI or automation, has a significant effect on profitability, resulting in more industry expansion. There is an growing number of workers employed in the public sector and the diversity of business services available to the workforce is constantly increasing.

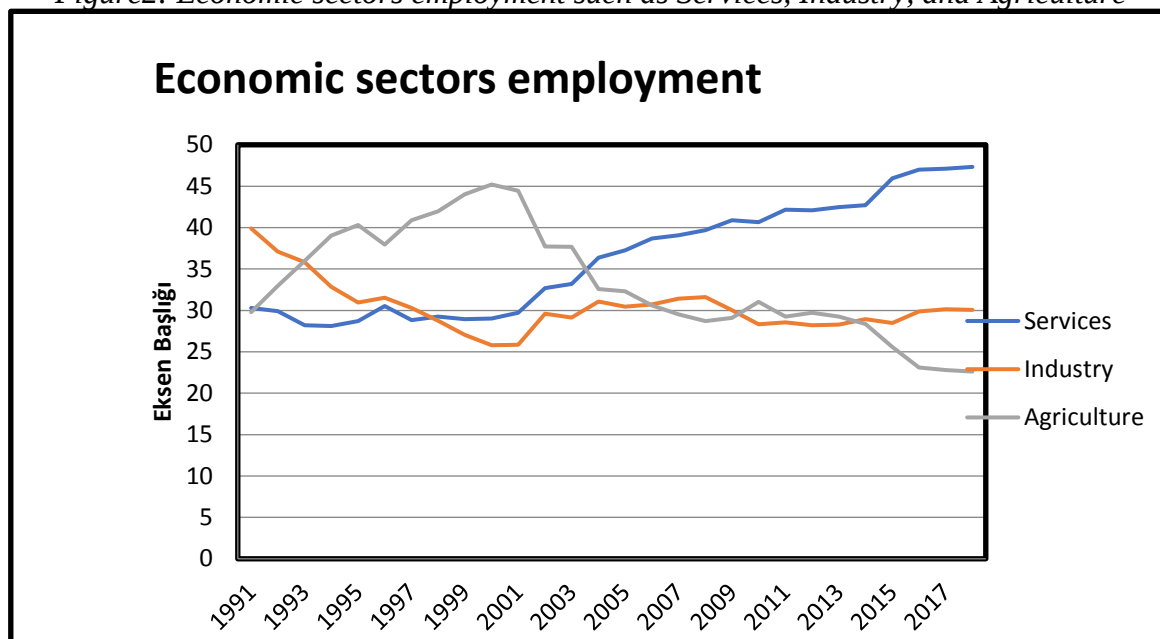
Figure 1: Employees in services sector as a percentage



Source: My interpretation created from data of World Bank, containing world indicators

Jobs in services stood at 30% in 1991. Owing to the difficult transition years, this figure declined to 28% in 1993. It is also the lowest level in the period under study. It hit 30.5 percent in 1996, but in the following year it slipped below the 30 percent level just to stay nearby. In 2002, the level of 30% increased again to 32% and fell again until 2008, when it hit 40%. Growth slowed for the next two years, and the share stagnated at around 40%, rising from 42% in 2012 to 47.3% in 2018

Figure2: Economic sectors employment such as Services, Industry, and Agriculture



Source: My interpretation created from data of World Bank, containing world indicators

Throughout 1991, the Romanian economy accounted for 30% of employment throughout utilities. The remaining workers worked in agriculture and processing. This statistic stood at 47 percent in 2019. In 1998, 28% of industrial jobs were replaced by the employment of utilities at 29%. In 2004, 32% of agriculture workers were overtaken by 36% of telecommunications workers.

Around 1991 and 2001, employment in the sector declined sharply from 40% to 25%. Many plants were closed after privatization, and workers also lost their jobs, leading to financial difficulties. Most of these workers migrated to the urban centers of Romania in communism during the period of forced industrialization. Since the fall of the monarchy, the right to own property was reintroduced and many people returned to their countries. Many citizens then migrated to rural areas and after losing their jobs in factories started work in agriculture.

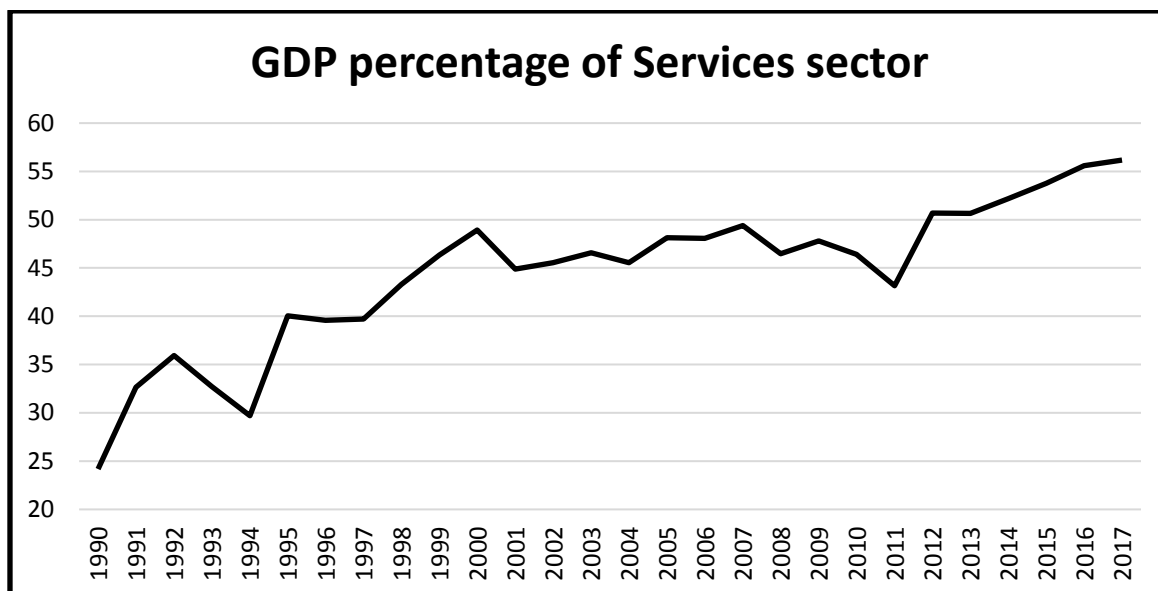
Whilst the number of workers working in the sector fell in the 1990s, the proportion of those working in agriculture increased almost simultaneously, whilst the number of services employees stagnated. The downturn in the services sector was since the Romanian strategy in the early 1990s was incorrect, primarily due to the Communist perception of services that were unable to have demand. However, traditional rural principles, scarcity of knowledge and services may be addressed. Thus, although agricultural employment declined from 40% in 1991 to 25% in 2000 and 2001, they rose from 30% in 1991 to 45% in 2000.

In the previous period, employment in agriculture fell sharply to 28 percent in 2008 in 2000-2008. Simultaneously, employment in the sector has increased from 25% in 2001 to 31.5% in 2008. Between 2008 and 2010 it fell to 28 percent due to the global economic crisis.

In the same period, the number of workers employed in agriculture rose from 28 percent in 2008 to 31 percent in 2010.

Employment in agriculture decreased to 22.5% in 2018 but remains one of the largest in the European Union. Industry employment increased from 28% in 2010 to 30% in 2018.

Figure 3: GDP percentage of Services sector



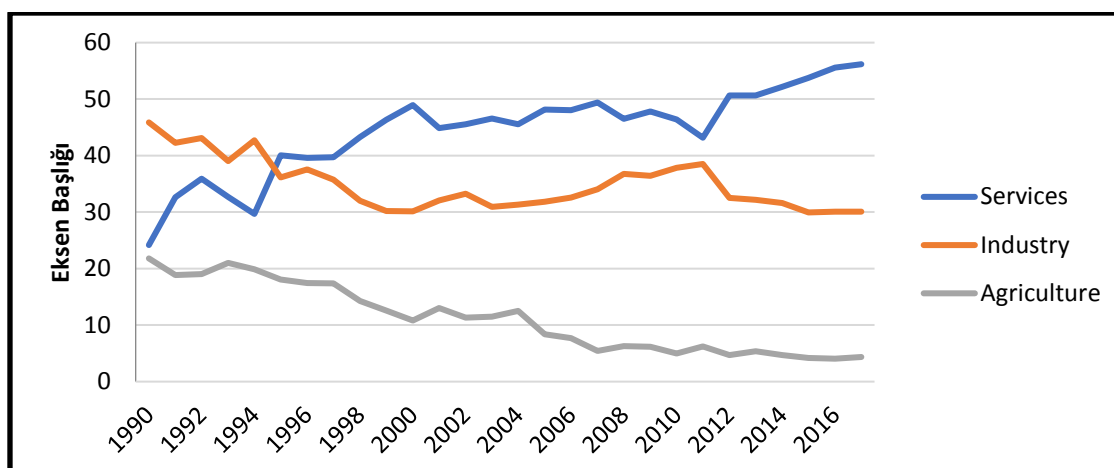
Source: My interpretation created from data of World Bank, containing world indicators

When the service sector is seen as a percentage of GDP, it is seen that it was quite small in comparison with other countries. At the beginning of the 1990s it accounted for just 24% of Romanian GDP and exceeded 36% in 1992.

Then, the share of services declined from 36 percent in 1992 to 29 percent in 1994, due to sporadic privatizations and economic difficulties. This continued to grow until it reached 49 percent in 2000. It stagnated between 45% and 50% between 2000 and 2007. After 2008 the global economic downturn started to decline until the minimum since 2000 was reached: 43% in 2011.

A drop in population consumption and a reduction in wages and per capita income also cause this decrease. In 2012, the Romanian economy began to recover after the recession, reached 50%, continued to rise, reaching 56% in 2018, and is expected to grow in the next few years. It represents the trend towards a services economy.

Figure 4: The changing value-added structure of the three economic sectors as a percentage of GDP



Source: My interpretation created from data of World Bank, containing world indicators

Looking at the evolving composition of Romania's economic sectors, in 1990, the trade contributed the highest interest in Romania's GDP, at 45%. Agriculture had a 21% share, while services were just 24% like the agricultural sector. It was because Romania was a developed economy prior to 1989 and politicians proceeded to industrialize the country aggressively without taking consumer demand into account.

There was also a communist view of utilities that were perceived as an opaque field that did not generate profit. As can be seen from this statistic starting with the phase of transformation began in the 1990s, the services market expanded exponentially to satisfy the previously unmet demands of the private sector. Over the period 1994-2000, there was the largest growth from 29% in 1994 to 50% in 2000. Owing to privatizations, the manufacturing sector started to decline.

Most plants were closed because they had not been able to cope with existing Western European peers using superior technologies and methods on the free market. As a result, the share of the market began to decrease in the 1990s and in 1995, the utility sector was overwhelmed as services rose to 40% when the business fell to 36%. In 2000, it hit a total of 30 percent. It rose from there to 38.5 percent in 2012.

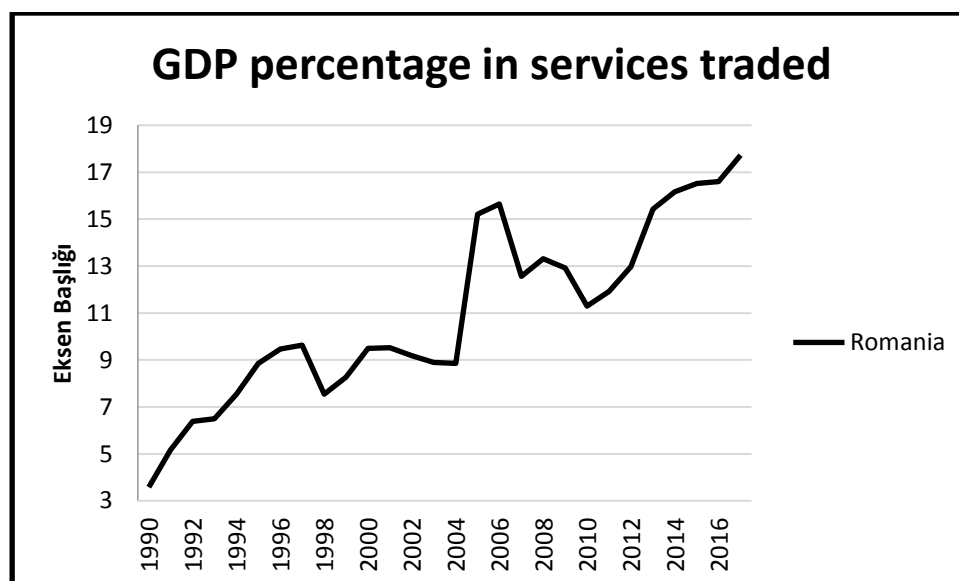
Around 2012 and 2017, it dropped from 38.5% in 2012 to 30% in 2017. That is because, as incomes start to increase and as Romania transitions to a high-income economy, many firms that came to Romania in the 1990s, including many sewing plants and manufacturing products, have shifted their manufacturing to East or North Africa where labour costs are smaller.

This reduction represents Romania's shift to a service-based economy as the share of services rose at the same time as the sector declined in the same period from 50 percent in 2000 to 56 percent in 2017.

In 1990, agriculture peaked at 21 percent. In 1995, it decreased below 20%, accounting for 18% of the Romanian GDP, and in 2005 it decreased below 10%. It then dropped below 5% in 2012 and stayed stable at about this amount, which stood at 4.3% in 2019.

It also constitutes one of the highest numbers of the European Union even though it is a low amount.

Figure 5: GDP percentage in services traded



Source: My interpretation created from data of World Bank, containing world indicators

In 1990, services trade accounted for just 3% of GDP. It is because Romania traded primarily commodities and not resources with other countries directly after the regime transition. It represents the mindset of the former government, where utilities are not seen as having value and where the emphasis has been on the industrialization and development of goods. When Romania turned to a free market economy, trade in finance and services started to increase as a percentage of GDP. Many service providers in state hands have been privatised and many new businesses have started to emerge.

However, demand for services started to increase in the former Communist countries as well as in Romania. Both factors led to a rise in services trading from 3 percent in 1990 to 9.5 percent in 1997 as a percentage of GDP. In 1998, the percentage dropped to 7.5%. Around 1998 and 2000, it again rose from 7.5% in 1998 to 9.5% in 2000. The trade in services as a percentage of GDP stagnated around the average of 9 percent between 2000 and 2004. It is rising again from 9% in 2004 to 15% in 2006 from 2004 to 2006

It was an indicator that more and more service providers were investing in Romania and therefore the country was exporting more value-added services. Services trading was not affected so much by the 2008 financial crisis, as in 2011 it dropped by only 3% to 12%. This was also because the world financial crisis had the greatest impact on trade in goods; people bought less products and services while demand for services did not fall too quickly.

Trade in services as a percentage of GDP rose from 12% in 2011 to nearly 18% in 2017 thanks to the post-financial crisis rebound and also due to Romania's greater value-added trading companies. Different factors may justify why trade in services as a proportion of GDP remains so small relative to trade in products.

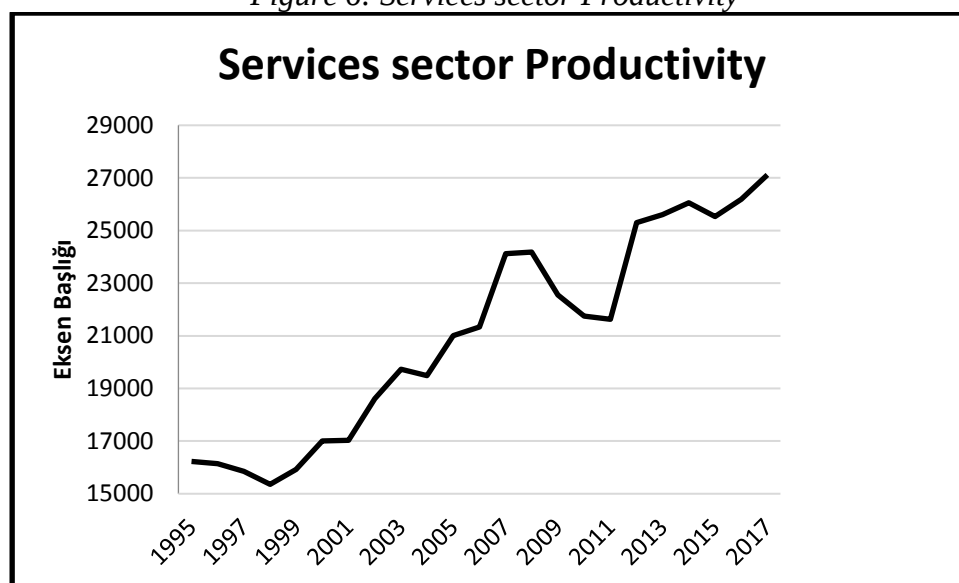
The subjective quality of resources is one of the most significant factors. Before the assets are available for trade, they cannot be shipped or deposited. This means that the end users are physically connected to the service provider.

This should also be remembered that in the coming years this issue should be less widespread due to the broader use of the internet.

One explanation is that utilities are governed differently according to the laws of each region, making it hard to identify cross-border service providers that obey the same rules and methodologies of the host country.

However, certain parts of the financial industry are either nationalized or heavily regulated by the government in many countries. In these situations, it would also be difficult to recruit service providers from other nations.

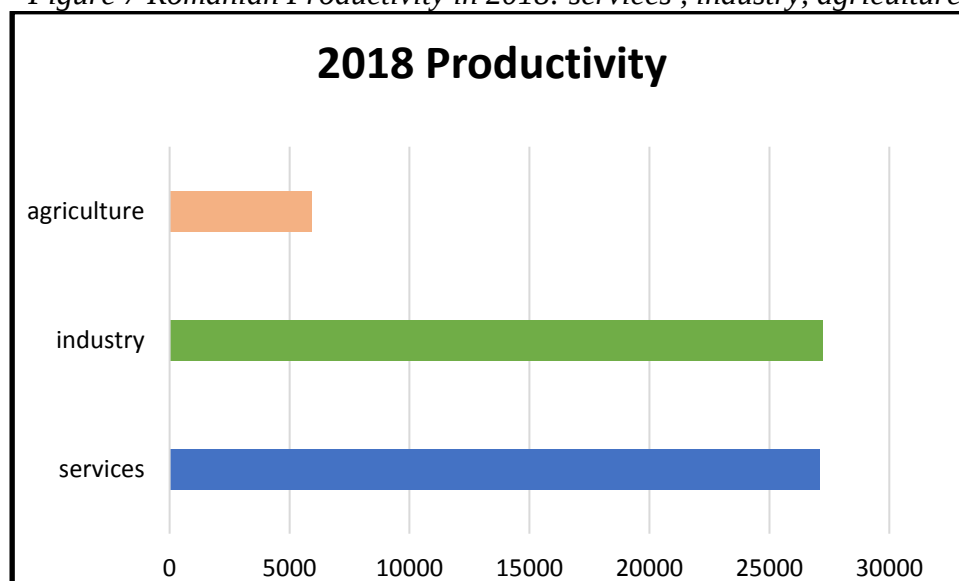
Figure 6: Services sector Productivity



Source: Author compilation based on data created from World Bank, containing world indicators

Productivity stagnated in the second half of the 1990s at about 15 000 US dollars in added value / workers. Between 1998 to 2008, the additional expense of USD 15 000 per worker was raised to USD 24 179 per job. Between 2008-2011 production fell to 22 000 USD in value added / worker because of the economic downturn. Between 2011 to 2017, the value added / worker grew again to 27,117 USD

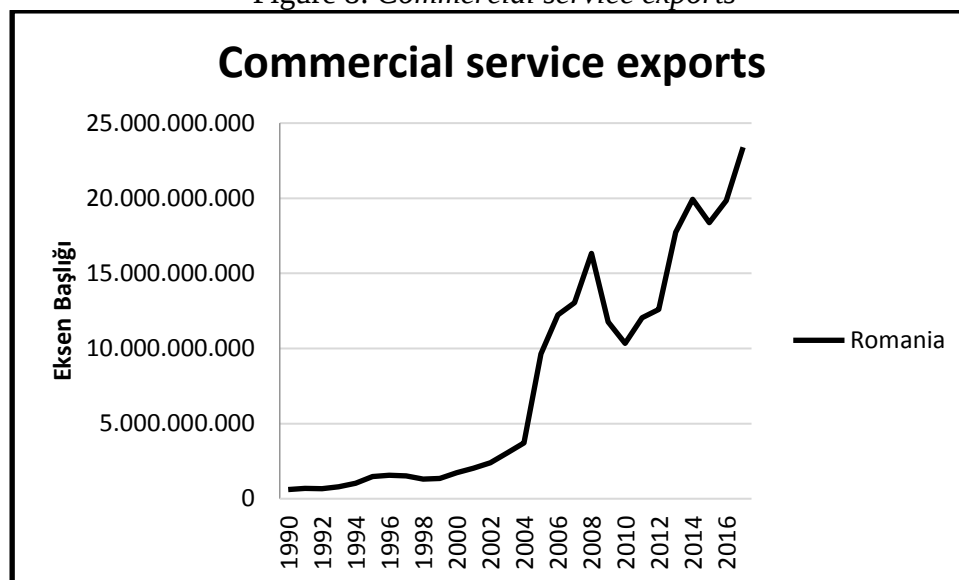
Figure 7 Romanian Productivity in 2018: services , industry, agriculture



Source: My interpretation created from data of World Bank, containing world indicators

Looking at the output of various economic sectors in 2018, we can see that the lowest for agriculture is just USD 5917. Industries and the sector have almost the same efficiency as businesses at 27 117 USD added output per worker while manufacturing efficiency is marginally higher at 27 243 USD added / worker output.

Figure 8: *Commercial service exports*



Source: My interpretation created from data of World Bank, containing world indicators

Private exports of services are gross exports of services less government exports of services not used elsewhere. Service export is any service provided to residents or companies of another country by the resident of one country. It can be noticed that Romania export relatively few services with no such high value immediately after the regime change. This can be explained by the fact that more attention was given to the export of goods during the Communist period.

Between 1990 to 1994, the valuation rose between \$610 million in 1990 to \$1 billion in 1994, and then stagnated at that amount to 2 billion dollars in 2001. The greatest growth occurred between 2004 and 2008, when the value increased from 3,7 billion in 2004 to 16,3 billion in 2008.

This were the boom years before the financial crash and for different purposes growing numbers of creditors preferred Romania, including the accession to the European Union in 2007. Profit fell through the recession from \$16.3 billion in 2008 to \$10.3 billion in 2010. From 2010 to 2020, the valuation of Romania, because of the economic growth, rose again to \$23.4 billion.

More and more companies have also begun to invest in Romania's IT industry, which has been able to add more and more to their commercial services exports.

Conclusions.

Technology also allows service providers to give their customers complete control over the content of a service. For example, a trip in which through a special online application it is possible for the customer to book tickets, wherever he wants, choosing a place, food and even a means of delivery for his transfer to the final destination. This means, of course, that the company is able to identify all possible options for its customers in terms of its services.

New updated features are also offered in the distribution of products or services, as the customer can monitor the progress of his order at any time and can know exactly when he will receive the product or when he will receive a service. Examples of orders are books sent to an online store (for example, Amazon, Public), the telephone application to OTE to modernize the telephone connection, which is connected to a series of actions to be performed by both the company and the customer. OTE constantly informs about the activation period or about the actions that the customer must take to receive the new updated services. In any case, providing the customer with information about the services or products they buy is considered a competitive advantage.

Given the higher risk faced by the customer in online shopping and the need for speed, convenience, accessibility and reliability, the range of services from well-known companies offers a definite advantage to these companies. In the virtual space, someone trusts a well-known travel agency to organize a trip, rather than another, that they do not know, while the issue of attracting customers through a well-designed website is particularly important. offers a pleasant navigation and user experience.

The main criterion for using the technology should be the provision of value to the customer, which should be constantly monitored with appropriate indicators. Through technology, certain actions of the service process are eliminated, which ultimately does not add value. This reduces the cost and time of completing a process. In cases where the cost of the service exceeds its price (due to competitors, for example, providing services at a lower cost, asking customers), this has a negative effect on the business. Thus, any investment in infrastructure, the use of technology, the training of staff to adapt services to unique customers, all this must not be done without considering issues of real value to the customer.

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**THE EFFECTS OF ECONOMIC FREEDOM ON THE ECONOMIC GROWTH:
evidence from developing economies of Southern and Central Europe region**

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Abstract

Considering the modern economic growth theories, it is highlighted that economic freedom is essential to economic development. That is why the determinants of economic growth are widely investigated worldwide by many academics. This paper analyzes the impact of economic freedom on economic growth for a panel of European developing countries. The growth of the gross domestic product was investigated through annual data of eight countries of Southern and Central Europe for the period 2000-2019. Data were collected through Fraser Institute and World Bank Development Indicators. Pooled OLS, Fixed effects, and Random effect estimation techniques have been conducted. The Hausman test was applied to determine the most appropriate models between FE and RE. The study showed a positive and statistically significant relationship between the economic freedom index and the real GDP per capita in these countries for the time series 2000 – 2019. Such results are in line with the findings of Gorlach & Le Roux (2015); Brki, Gradojevi, and Ignjatijevi (2020). Taking into consideration such results, this paper suggests governments develop their policies in order to regulate better policies and institutions of countries their countries being supportive of economic freedom. Finally, these findings will contribute further to the existing empirical literature regarding the relationship between economic freedom and economic growth in developing countries rather than resolve the current debate regarding this nexus.

Keywords: Economic freedom index, growth, Panel, FE, RE.

JEL Classification: O47; O52; C33

1. INTRODUCTION

Considering the modern economic growth theories, it is highlighted that economic freedom is an important factor of the economic development. That is why the determinants of economic growth are widely investigated worldwide by many academics. In addition, recent studies have been conducted in order to highlight the role of the economic freedom in enhancing the economic growth in the developing countries, yet the existing empirical findings are mixed and no consensus has been reached regarding the direction and the strength of the nexus between economic freedom and economic growth in the developing countries.

Based on this we examine this potential relationship on a sample of 8 countries of Southern and Central Europe for the time period 2000 - 2019. We have used data regarding the economic freedom index from Fraser Institute in order to define and measure the impact of economic freedom on the GDP per capita growth rate expressed in percentage and taken from World Bank Data Indicators. The economic freedom index published by Fraser Institute measures the degree to which the policies and institutions of countries are supportive of economic freedom. To understand the underpinnings of economic growth in this part of the Europe, this research (directly or indirectly) addresses the following questions: Can economic freedom contribute to the economic growth in these European countries? To investigate the impact of economic freedom on economic growth in these European economies, for the time span 2000-2019, several econometric techniques have been used such as Pooled OLS, Fixed effects and Random effects model, while Hausman Taylor test has been applied in order to determine whether fixed or random effects model is the appropriate model for this analysis.

The structure of this paper is as follows: first section is dedicated to the introduction, second section includes the existing relevant research in this field, third section includes methodology, fourth explain empirical findings, while the last section reveals the conclusion and recommendations of the study.

2. LITERATURE REVIEW

Governments aim to achieve high economic growth rates, and this is one of their priorities. Numerous studies have attempted to uncover the nature of the relationship between economic freedom and economic growth. Using a variety of econometric methods and different indicators of economic freedom, scholars attempted to answer the same question: does economic freedom lead to economic growth? Other studies have attempted to determine which segment of economic freedom contributes to growth. Therefore, many theoretical and applied studies focused on economic growth as one of the most important macroeconomic variables in the construction of economic policy of any country. The results of the studies vary, depending on the economic indicators used; some indicators show a direct and strong relationship with economic growth, while others deny the existence of such relationship.

One of the first papers that explored the relationship between economic freedom and growth was that of Islam (1996), while the first study concerning the analysis of the link between different dimensions of economic freedom and economic growth was conducted by Ayal and Karras (1998). The evidence from these studies was mixed. Depending on the quantitative or econometric method the researchers used in their analyses, some of the results showed that no robust relationship exists, while others demonstrate the impact of certain aspects of economic freedom on the economic growth.

Moreover, Scully (2002) focused on the impact of economic freedom on economic growth and income distribution, and the impact of government policies on economic growth and income redistribution. The study excluded the least developed countries due to the heterogeneity and selected 25 developed countries. The results of the study confirmed that increasing economic freedom leads to an increase in the economic growth and improves income distribution.

Gordillo and Arce (2003) in their study they emphasize the positive impact of economic freedom and political freedom on **the** economic growth. The study used cross-sectional data covering 45 countries for the time period from 1975 to 1995, using GDP per capita as a dependent variable, and independent variables were the Index of Economic Freedom and the Index of Political Freedom. The transition period proved to be suitable for examining the impact of economic liberalization on economic flows.

Pääkkönen (2010), explored how economic freedom affected GDP growth per worker on a panel sample of 25 transition countries that spanned the period from 1998 to 2005. Using panel analysis, Tiwari (2011) studied the impact of certain components of economic freedom (foreign aid and foreign direct investment) on the economic growth within 28 countries from the Asian continent in the time period between 1998 and 2007. The evidence suggested that there was a positive relationship between fiscal as well as financial freedom and economic growth. Similar results were reported from Haydaroglu (2016) for Brazil, Russia, India, China and South Africa (BRICS). Fabro and Aixala (2012) examined the direct and indirect effects of economic freedom and political freedom on the economic growth. Their study covered cross-sectional data for 79 countries in the period 1976-2005, suggesting that institutional quality is important for economic growth, whether by stimulating the allocation of resources or indirectly by encouraging investment in physical and human capital, economic freedom primarily affects institutional quality, followed by civil liberty and then political freedom.

Keseljevic and Spruk (2013) in their paper investigates the components of the Index of Economic Freedom on the GDP per capita, where the independent impact of each component on the level of economic freedom will affect the level of per capita income, for the period from 1996 to 2011, by utilizing data for 135 countries. The findings showed that the components of economic freedom index vary in their effect on economic freedom, where some of them may even have an adverse effect on growth.

Türedi (2013) studied the impact of two dominant indicators of economic freedom on the level of GDP per capita on a sample of 12 Islamic countries (from 1995 to 2010) and found a positive and statistically significant relationship. On the other hand, Akin et al. (2014) explored the impact of economic freedom on economic growth for countries with different income levels. They carried out a panel analysis on a sample of 94 countries for the 2000–2010 time period and concluded that in all countries, regardless of the level of income, the level of economic freedom has a positive, statistically significant relationship with the economic growth.

Gorlach & Le Roux (2015) in a group of 12 countries for the Southern African Development Community (SADC) investigated the causal link between the elements of the economic freedom index and GDP per capita and found a positive and statistically significant impact of all five components of the given index.

In his paper, Hamza (2017) examined the relationship between the economic freedom variable and the economic growth of Egypt, the UAE and Iraq, for the period from 2000 to 2015, where the rate of economic growth as the dependent variable, and the index of aggregate economic freedom-in terms of ranking, degree and classification- as the independent variable in addition to the phantom variables, The result showed positive correlation between the index of economic freedom and the rate of GDP growth in the UAE, while there was no relationship between the variables in the results of Egypt and Iraq.

Brki, Gradojevi and Ignjatijevi (2020) analyzed the impact of economic freedom along with traditional economic factors on the economic growth for a panel of European countries. The growth of the gross domestic product was observed over a twenty-year time period on a sample of 43 developing and developed countries. Based on a robust dynamic panel setting, it was concluded that an increase in the economic freedom expressed by the Index of Economic Freedom/Heritage Foundation (but not its levels) are related to economic growth. The EU membership status either had no effect or it curbed the effect of the economic freedom on growth. The study also suggests that the subprime economic crisis of 2008–2009 exerted a negative impact on the growth of European economies.

3. RESEARCH METHODOLOGY AND DATA

The study is conducted by using secondary annual data regarding the economic freedom index and economic growth for 8 countries of Southern and Central Europe. The data regarding the economic freedom were collected on the basis of annual reports published by the Fraser Institute, while a comprehensive database can be found on their website <https://www.fraserinstitute.org/>. Data on the economic growth where GDP per capita growth in % is used as a proxy, were taken from the World databank <http://data.worldbank.org/>, for the time period 2000 – 2019.

This section determines the empirical methodology and data used to analyze the impact of economic freedom index on the economic growth in Southern and Central Europe countries over the period 2000 to 2019. Several models have been employed in this paper: Pooled OLS, Fixed and Random effects models. While Hausman test is applied in order to determine the choice among

fixed effects and random effects model, thus to determine the appropriate mode for this empirical analysis.

Pooled OLS model in literature is due to the fact that it is known as a constrained model in panel data analysis. The specification of the model is as follows:

$$y_{it} = \beta_0 + \beta_1 x_{it} + u_{it} \quad (1)$$

$$\text{GDP_cap}_{it} = \beta_0 + \beta_1 EF_{it} + \varepsilon_{it} \quad (1)$$

where,

GDP_cap - Gross Domestic Product, a proxy for economic growth

EF - Economic Freedom index

The main problem of this model is the existence of biased coefficients, appearing heterogeneity between units of a given sample and over time in panel data model.

In order to eliminate the problem of heterogeneity in the pooled OLS, our paper employs more sophisticated models such as Fixed effects, and Random effects model. In addition, Hausman test is used in order to choose the appropriate model between Fixed and Random effects model for this empirical analysis.

4. EMPIRICAL FINDING

In this study, cross-sectional time-series data includes T=20 (time period) and n=8 (countries). The panel data was balanced, but with some missing values. In this model, Economic Freedom index is used as independent variable, while GDP_cap growth as %, indicates the dependent variable. Descriptive analysis is illustrated in the table below in order to see the statistical properties of the variables, giving information regarding the number of observations, their mean values, the value of standard deviation as well as the minimum and maximum value. The number of observations of GDP per capita and Economic freedom index is 145 and 137, respectively. The mean value and standard deviation value of the dependent variable are 4,10 and 2,95. The dependent variable gdp_cap has maximum value of 11,93 and minimum value of -5,99. The mean value and

standard deviation value of the independent variable are 6.9 and 0.419. The independent variable EF has maximum value of 7.81 and minimum value of 5.59.

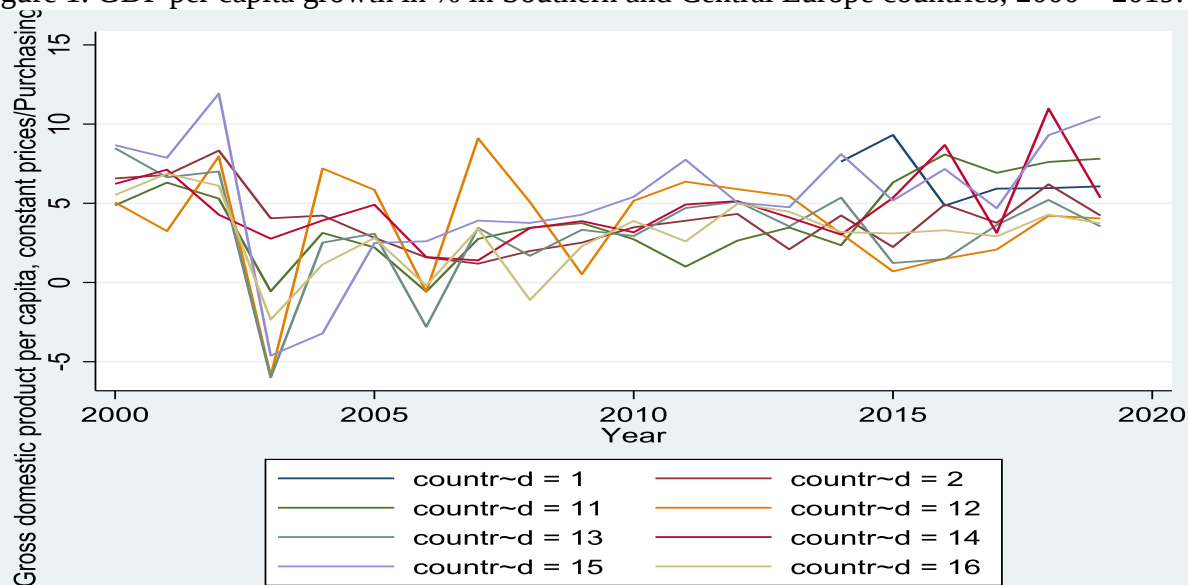
Table 1. Descriptive statistics of the data

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>gdp_cap</i>	145	4.107828	2.955219	-5.998	11.93
<i>EF</i>	137	6.959	.4190984	5.593784	7.81

Source: authors calculations

From the graph below, we can see that in 2002, Romania had the highest growth by 11,93 %, followed by Poland in 2018 by 10,97, Romania in 2019 (10,48) and Albania in 2015 (9,31). Montenegro had the lowest growth in 2003 (-5,99), followed by Moldavia in 2003 (-5,89), Romania in 2003 and 2004, with respective values of growth -4,61% and -3,21%.

Figure 1. GDP per capita growth in % in Southern and Central Europe countries, 2000 – 2019.

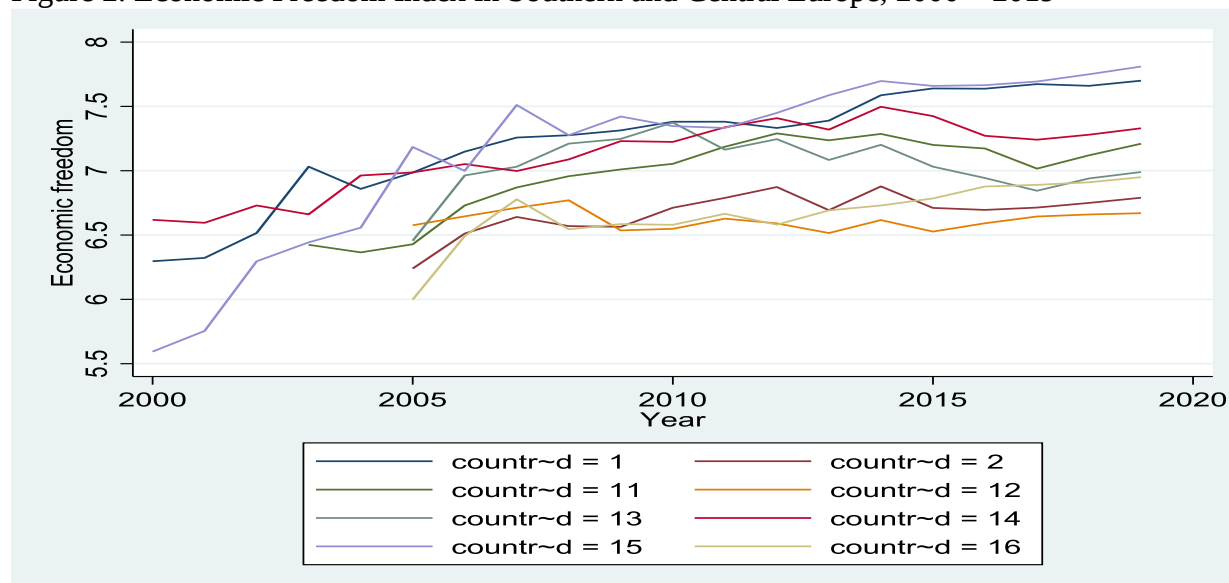


Source: Southern and Central Europe database indicators

From the next graph we can see that in 2018 and 2019, Romania had the highest economic freedom index respectively 7.81 and 7.75, followed by Albania in 2019 with 7.7 and Romania in 2014, with 7.69. Romania had the lowest economic freedom index in 2000 and 2001, by -5.59 and -5.75, followed by Serbia in 2005 with 5.99, Bosnia and Herzegovina in 2005 with 6.23. Therefore, we

can conclude that all countries have a positive tendency of economic freedom. Romania is classified as a country with the lowest Economic freedom index in 2000, while in 2019, as a country with the highest economic freedom index.

Figure 2. Economic Freedom Index in Southern and Central Europe, 2000 – 2019



Source: Southern and Central Europe database indicators

The following table summarizes the regression results from the Pooled OLS, Fixed and Random effect estimations. Moreover, from the Pooled OLS model results we can see that economic freedom has a positive relationship with economic growth and due to the p-value ($p = 0.018$) is statistically significant. R-squared equals 0.088, which suggest that 8,88% of the changes of the gdp-cap are explained by the changes of the economic freedom index.

In order to eliminate the problem of heterogeneity in the pooled OLS, the paper employs more sophisticated models such as Fixed effects and Random effects model, while Hausman Taylor test has been employed to determine whether fixed or random effect model is appropriate for this analysis. (See Appendix, Table 1, 2 and 3). Having into consideration that the Hausman test results p-value is 0.1512, thus < 0.05 , this suggests that Random Effects model produces better coefficient estimates and is more appropriate than Fixed effects model. Therefore, all regressions are estimated and interpreted by using the Random effects model. Also, the results of the Random Effects model show that there exist a positive and significant relationship between economic freedom index and GDP per capita growth rate in these set of countries for the time period 2000 – 2019.

Table3. Panel regression results

VARIABLES	Pooled OLS	FIXED EFFECTS	RANDOM EFFECTS
<i>gdp_cap</i> (dependent variable)			
<i>EF</i> (independent variable)	1.909 (0.018) **	1.266 (0.074) ***	1.857 (0.001) **
Constant	-9.210 (0.103)	-4.743748 (0.334)	-8.850 (0.026) **
Number of observation	122	122	122
R-squared	0.0887		
F	5.79 (0.017) **	3.25 (0.074)***	
Wald Chi 2			10.63 (0.0011) *
Hausman test		2.06 (0.151)	

Note: (*) statistically significant at 1%, (**) statistically significant at 5 % , (***) statistically significant at 10 %

Source: authors calculations

5. CONCLUSIONS AND RECOMMANDATIONS

This paper investigates the relationship between economic freedom index and economic growth for eight countries of Southern and Central Europe, covering data for the time period 2000-2019. The sources of data are Fraser Institute and World Development Indicators. In addition, in order to determine such relationship several models have been applied such as Pooled OLS, Fixed effects and Random effects model, while Hausman Taylor test was applied in order to determine what is the appropriate model among fixed and random effects model. Moreover, the Hausman test findings suggest that Random Effects Model produces better coefficient estimates, thus is the appropriate model for this analysis. Finally, the Random effects model imply the existence of a positive and statistically significant relationship between the economic freedom index and the real GDP per capita for these eight developing countries of Southern and Central Europe, for the time spin 2000 – 2019.

This paper recommends that the economic decision makers should pay attention to the variables that affect economic freedom in order to enhance economic growth in their respective countries. In order to determine the value of the results obtained in this paper it is necessary to repeat the study on the same sample after a certain period of time, and include a longer period of time and to make comparisons in order to establish or refute the consistency of the observed relationships. It is recommended to carry out the same research (with the same time period and sample of countries) but with the help of other quantitative methods of analysis, and to compare and determine the robustness of the results obtained.

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APPENDIX

Table 2. Country id

Country	Country_id
Albania	1
Bosnia and Herzegovina	2
Macedonia (North Macedonia)	11
Moldova	12
Montenegro	13
Poland	14
Romania	15
Serbia	16

Table 4- **FIXED EFFECTS MODEL**

```

Fixed-effects (within) regression               Number of obs   =       122
Group variable: shtet_id                       Number of groups =        8

R-sq:                                           Obs per group:
    within = 0.0280                             min =          6
    between = 0.6987                             avg =       15.3
    overall = 0.0887                             max =       20

corr(u_i, Xb) = 0.3464                         F(1,113)        =       3.25
                                           Prob > F         =     0.0741

```

```

-----+-----
      gdp_cap |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
      EF |      1.266608   .702637     1.80   0.074    -1.125443    2.658658
      _cons |     -4.743748   4.891025    -0.97   0.334   -14.43375    4.946255
-----+-----
      sigma_u |   .94399992
      sigma_e |   2.569464
      rho |   .11892465   (fraction of variance due to u_i)
-----+-----
F test that all u_i=0: F(7, 113) = 1.42                Prob > F = 0.2042

```

Table 5- **RANDOM EFFECTS MODL**

```

Random-effects GLS regression               Number of obs   =       122
Group variable: shtet_id                   Number of groups =        8

R-sq:                                           Obs per group:
    within = 0.0280                             min =          6
    between = 0.6987                             avg =       15.3
    overall = 0.0887                             max =       20

corr(u_i, X) = 0 (assumed)                   Wald chi2(1)    =     10.63
                                           Prob > chi2     =     0.0011

```

```

-----+-----
      gdp_cap |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      EF |      1.857041   .5695986     3.26   0.001    .7406482    2.973434
      _cons |     -8.850273   3.968824    -2.23   0.026   -16.62902   -1.071521
-----+-----
      sigma_u |   .28241732
      sigma_e |   2.569464
      rho |   .01193665   (fraction of variance due to u_i)
-----+-----

```

Table 6- **HAUSMAN TAYLOR TEST**

---- Coefficients ----				
	(b)	(B)	(b-B)	$\sqrt{\text{diag}(V_b - V_B)}$
	fixed	random	Difference	S.E.
EF	1.266608	1.857041	-.5904332	.4114077
b = consistent under Ho and Ha; obtained from xtreg				
B = inconsistent under Ha, efficient under Ho; obtained from xtreg				
Test: Ho: difference in coefficients not systematic				
$\chi^2(1) = (b-B)' [(V_b - V_B)^{-1}] (b-B)$				
= 2.06				
Prob>chi2 = 0.1512				

IMPACT OF FDI AND TRADE OPENNESS ON THE ECONOMIC GROWTH:

Evidence from developing countries of Europe and Central Asia

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Abstract

During liberalization and globalization, trade openness and foreign direct investment were developed as significant incentives for economic growth in developing economies. These indicators are integral to the overall development effort and national growth. This paper investigates and evaluates the impact of FDI and trade openness on economic growth for a panel of 17 developing countries. The economic growth of Europe and Central Asia over the last two decades (2000-2019) was investigated by employing several regression techniques such as Pooled OLS, Fixed, and Random effects models. Finally, the Hausman Taylor test has been performed in order to determine which is the appropriate model for this empirical analysis of Fixed and Random effects. The findings from the Pooled OLS suggest that there exists a positive relationship between explanatory variables and dependent variables, but these relationships are insignificant. Based on Hausman test results, the p-value is 0.1597 higher than 0.05; it is suggested that the Random Effects model produces better coefficient estimates, representing the appropriate model. Findings suggest that there exists a positive and significant relationship between FDI and economic growth, while on the other hand, there is an insignificant relationship between trade openness and growth in this set of developing countries for the time span 2000 – 2019. Moreover, this paper does not resolve the ongoing debate regarding the nexus between FDI, Trade openness, and economic growth; instead, its results only contribute to the existing empirical literature.

Keywords: FDI, trade openness, growth, Panel

JEL Classification: O47, F43

1. Introduction

In the period of liberalization and globalization, trade openness and foreign direct investment have developed as major incentives to economic growth in developing economies. The purpose of this paper is to investigate and evaluate the impact of FDI and trade openness on economic growth within 17 developing countries of Europe and Central Asia over the last two decades (2000-2019). Even though past studies show that FDI and trade have a positive impact on economic growth, the size of such impact may vary. The literature continues to debate the role of FDI and trade openness in economic. This lack of consensus limits our understanding of the role of FDI and trade policies in economic growth processes and restricts our ability to develop policies to promote economic growth. This paper analyzes the role of foreign direct investment and trade openness in promoting economic growth across selected developing . Fixed effects and Random effects model have been utilized while Hausman test suggest that Random Effects Model produces better coefficient estimates sources for explaining the effects of FDI and trade openness on the economic growth for these developing countries. A positive relationship between FDI, trade openness and economic growth have resulted, but only FDI impact is statistically significant on the economic growth. Even though the relationship between trade openness and GDP per capita growth is positive, output suggests that this variable is not statistically important for determining the changes of the economic growth.

Finally, the structure of this paper is as follows: the second section includes the existing relevant research in this field, methodology and empirical findings are laid out in the third section, while the last section reveals the conclusion and recommendations of the study.

2. Literature Review

The literature shows that the results of the FDI inflows and trade openness impact on economic growth have been quite varied and inconclusive. The major factors responsible for these contradictions are because empirical studies include variances in data used, countries, data measurement and definitions, methodological approaches (Omisakin, Adeniyi and Omojolaibi, 2009). The varied views on the nexus between these variables indicate a literature gap, allowing us to develop more interest to further explore the relationship between FDI, trade openness and economic growth in the developing countries, where few studies have been conducted. There

have been different elements of theoretical and empirical studies meant to investigate the relationship among macroeconomic variables including FDI and openness to trade. Keshava (2008) and Hye, Lau (2015) have attempted to explore the interrelationship between FDI, trade openness and economic growth and the evidence has been mixed. Authors have examined the link between trade openness and economic growth and found a negative and unstable impact of trade openness index on economic growth throughout the sample in the long run. Sudesh (2007) examined the relationship between trade openness and economic growth in the case of India and found bidirectional causality among economic growth and trade openness indicators .

Nketiah, Cai, Adjei and Boama (2020) in their study concluded that foreign direct investment and inflation had (-, or +) impact but were not statistically significant on GDP growth (annual %). They recommend robust measures to enhance trade openness in terms of encouraging exports and inflow of FDI through the creation of an enabling and friendly environment to do business for output growth dynamics in Ghana. Adhikary (2011) conducted an assessment of the relationship between these economic variables in the period 1986-2008 in Bangladesh. Trade openness had a significant negative, but a diminishing effect on economy. In his opinion, the main reason which led to the negative impact of trade openness was the exchange rate depreciation, large volume of imported materials and negative trade balance position.

Hussain (2016) by using the time series data from 1973-2014, suggested a positive effect of foreign direct investment, trade openness and economic growth for the case of Bangladesh. Hussain (2017) asserted on the theory that FDI was considered as a key driver of global economic integration. The results showed that FDI had a positive impact on Pakistan's economic growth. The study recommended the government of Pakistan to increase FDI attraction to boost the economy. Moreover, Belloumi (2014) analyzes the relationship between foreign direct investment, trade openness and economic growth in Tunisia by applying the ARDL approach for the time series data for 1970-2008. The results show that there exists a long-run relationship between foreign direct investment, trade openness and economic growth. Nevertheless, Granger causality test indicated that there is no significant causal relationship that was running from FDI to economic growth and economic growth to FDI or even from trade openness to economic growth and vice a versa.

Farshid et al. (2009) analyzed the impact of FDI and trade openness on economic growth in selected countries such as China, Korea, Malaysia, Philippine, and Thailand. The result of this study demonstrates that there exists a cointegration relationship between and its determinants in APF model. Bhattacharya (2010) investigated the causal nexus between trade and foreign direct investment inflows on economic growth for the case of India. The author had employed the Johansen cointegration and multivariate Granger causality test based on the Error Correction Model (VECM) to examine the causality between all variables, suggesting bidirectional causality between foreign direct investment, volume of trade and economic growth in the Indian economy. Shaheen et al. (2013) also conducted an empirical analysis for the case of India, suggesting that trade openness and foreign direct investment have a different direction on economic development. A positive relationship is found for trade openness, but negative for foreign direct investment. On the other hand, Oluwaseyi (2013) analyzed the effects of trade openness, foreign direct investment and economic growth in Nigeria, implying that trade openness has a positive impact on economic growth in Nigeria.

As I already mention, there is a plenty of existing research on the nexus between FDI, trade openness and economic growth, yet the existing results are mixed and no reached consensus is made in this regard.

3. Data and Methodology

To explore the main objective of this paper, thus in order to examine the relationship between foreign direct investment, trade openness and economic growth, this study employs the annual time series for the period of 2000-2019, gather from World Bank Development Indicators. The reason for selecting the period was based on the data availability for these developing countries. The variables used in the model are measured as follows: we used economic growth proxied by real GDP per capita as the dependent variable. The independent variables include FDI measured as the net inflow of foreign direct investment as a share of GDP. The variable of trade openness is proxied by export plus import (trade) as a percentage of GDP. The analysis is conducted through the usage of the statistical software STATA.

Moreover, by using the Pooled Ordinary Least Squares (OLS) estimator, the study establishes the relationship between GDP growth (annual %), foreign direct investment, and trade openness. To examine the relationship between the variables, the following general model is specified:

$$y_{it} = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \dots + \beta_n x_{ni} + \varepsilon_i \quad (1)$$

$$GDP_cap_{it} = \beta_0 + \beta_1 FDI_{1i} + \beta_2 TOP_{2i} + \varepsilon_i \quad (2)$$

where,

- GDP_cap = Gross Domestic Product per capita, a proxy for economic growth.
- FDI = Foreign Direct Investment Inflows.
- TOP = Trade openness, i.e, export plus import as percentage of GDP.

In order to eliminate the problem of heterogeneity in the pooled OLS, paper employs more sophisticated models such as Fixed effects and Random effects and Hausman test is used in order to choose the appropriate model where the null hypothesis suggest that coefficients calculated by the random effects are identical as the coefficients calculated by the fixed effect estimators. If the null hypothesis is rejected, i.e. indicating insignificant $p < 0.05$, the Random effect estimator is better than Fixed effect and vice a versa.

4. Empirical Findings

Panel data in this research includes T=19 (time period) and n=17 (countries). Here, the same countries are observed for each period, therefore we have a panel data that is balanced. Results from pooled OLS, fixed effects, random effects, as well as the results of the Hausman test are presented in the following table. In the model, fdi and trade openness as independent, while gdp_cap is the dependent variable. Descriptive analysis is presented in the following table, in order to provide information regarding the number of observations, their mean value, the value of standard deviation as well as the minimum and maximum value.

Table 1. Descriptive Statistics for selected dependent and explanatory variables

VARIABLE	OBS	MEAN	STD. DEV	MIN	MAX
gdp_cap	331	4.682193	4.194261	-7.827749	33.03049

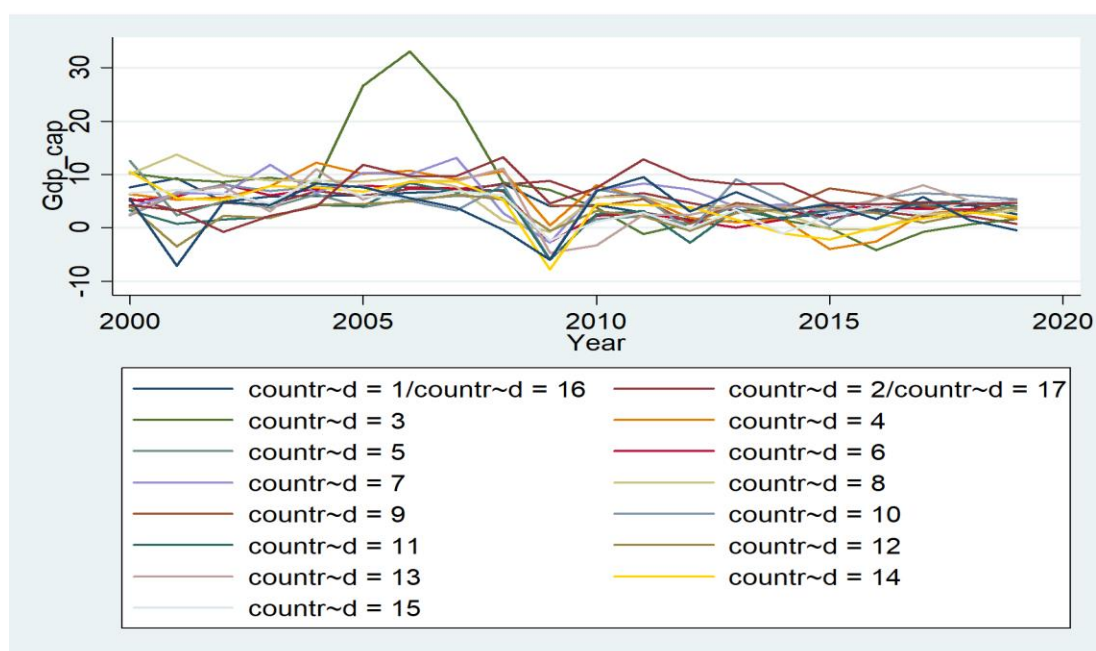
fdi	318	6.459896	6.689656	-13.51939	55.0703
tradeopp	331	85.82529	25.12197	22.49218	157.9743

Source: author calculations

The following figure, illustrates the GDP per capita growth in %, regarding the developing countries that I have selected for Europe and Central Asia for the time spin 2000 – 2019.

As we can see that in 2005, 2006 and 2007 Azerbaijan had the highest growth, respectively by (33.03), (26.66) and (23.59), then followed by Kazakhstan 2001, (13.69), Turkmenistan in 2008, (13.17) and Georgia in 2007, (13.16). Russian Federation had the lowest growth in 2009, (-7.82) followed by Turkey in 2009, (-7.14), Montenegro in 2009, (-5.99), Moldavia in 2009, (-5.88) and Romania in 2009, (-4.72). Therefore, we can conclude that in 2009 most countries had a negative growth., whis was registred due to the negative effects of the global financial crises. The highest positive growth rate in 2009 was achieved form Armenia (8.78), followed by Azerbaijan (7.05), Turkmenistan (4.57), Kosovo (4.19) and Albania (4.053).

Fig1. GDPgrowth in % in developing countries of Europe and Central Asia, 2000 – 2019 .

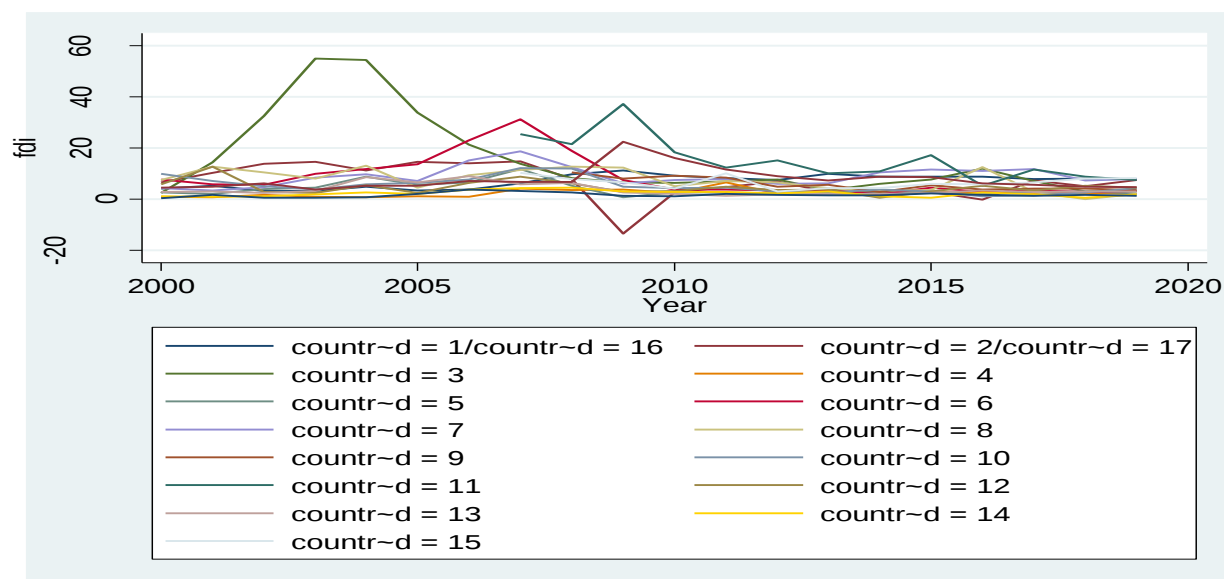


Source: World Bank development indicators.

The next graph illustrates the trend of the FDI inflows on these countries for the particular time period 2000 – 2019. Moreover, from the graph we can see that Azerbaijan had the highest fdi in

2003 and 2004, respectively by 55.07 and 54.36, followed by Montenegro in 2009, (37.27). Armenia had the lowest FDI inflow in 2009 and 2016, -13.51 and -0.16 respectively, followed by Kazakhstan in 2018 (0.04) and Turkey in 2000 (0.35).

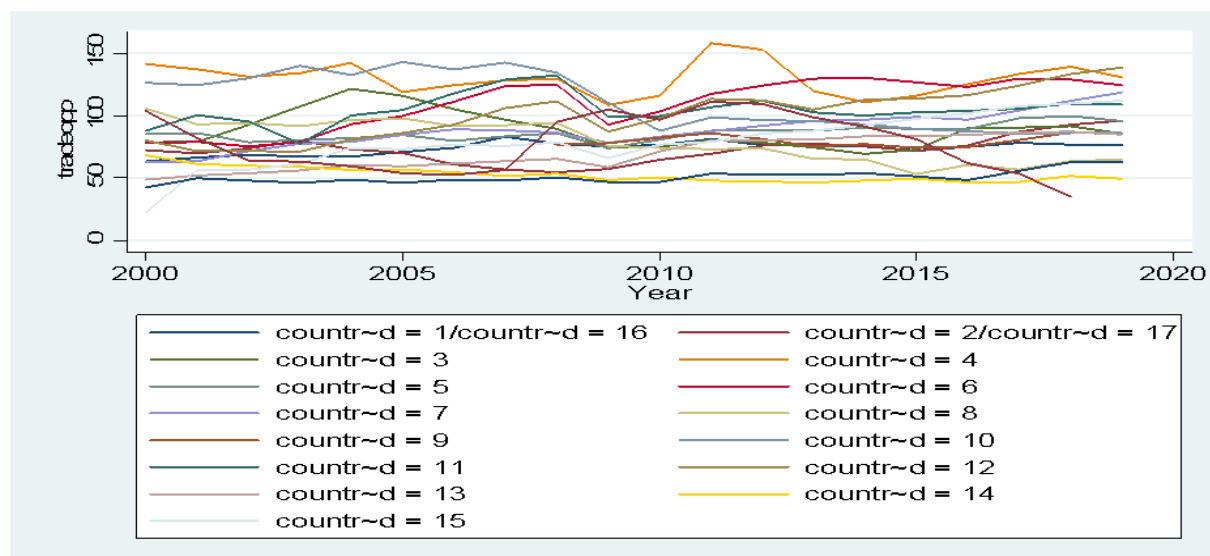
Fig 2. FDI-Net inflow sa share of GDP in developing countries of Europe and Central Asia, 2000 – 2019.



Source: World Bank development indicators.

The next graph shows the trend of the trade as % of GDP in these developing countries for the time period 2000 – 2019. As we can see, Belarus had the highest trade openness in 2011 and 2012, respectively by (157.97) and (153.08), followed by Moldavia in 2009, (143.02). Serbia had lowest trade openness in 2000, by (22.49), followed by Turkmenistan in 2018, (35.15) and Turkey in 2000, (42.35).

Fig 3. Trade Openness in the selected developing countries of Europe and Central Asia, 2000 – 2019 .



Source: World Bank development indicators.

As already indicated above, the main objective of this paper is to determine the relationship between FDI, trade openness and economic growth by analyzing developing countries from Europe and Central Asia for the time period 2000 – 2019. In addition, several regression techniques has been employed such as: Pooled OLS, Fixed and Random effects model. Finally, Housman Taylor test has been performed in order to determine what is the appropriate model for this empirical analysis from Fixed and Random effects models. The findings from the Pooled OLS, suggest that there exist a positive relationship between explanatory variables (fdi and tradeopp) and dependent variable gdp_cap , however, these relationships are insignificant. Moreover, in order to eliminate the problem of heterogeneity in the pooled OLS, this paper employs more sophisticated models such as Fixed and Random effect models as well as Husman test is performed in order to choose the appropriate model between them. From the Hausman test results, p-value is 0.1597, thus higher than 0.05, we can suggests that Random Effects model produces better coefficient estimates, thus represents the appropriate model from fixed and random effect models.

Table3. Panel regression results

VARIABLES	OLS	FIXED EFFECTS	RANDOM EFFECTS
gdp_cap (dependent variable)			
fdi (independent variable)	0,151 (0.016) **	0,13 (0.002) *	0.144 (0.000) *

tradeopp (independent variable)	0.007 (0.383)	0.036 (0.028) **	0.013 (0.228)
Constant	3,05 (0.000) *	0,63 (0.653)	2,48 (0.015) **
Number of observation	316	316	316
R-squared	0.064		
F	3,57 (0.029) **	10.17 (0.001) *	
Wald Chi 2			19,29 (0.0001) *
Hausman test		3.67 (0.1597)	

Note: (*) statistically significant at 0.1 % level, (**) statistically significant at 5%, (***) statistically significant at 10 %

Source: author's calculation

In addition, its findings suggest that there exist a positive and significant relationship between FDI and gdp_cap, while on the other hand there is an insignificant relationship between trade openness and gdp_cap in this set of developing countries for the time spin 2000 – 2019.

Conclusions and Recommendations

This paper investigates the impact of FDI and trade openness on the economic growth. Due to the availability of data, our empirical analysis was focused on a sample of 17 developing countries in Europe and Central Asia, for the time period 2000-2019. In this regard Pooled OLS, Fixed and Random effects estimation technique has been used in order to determine such nexus. In addition, by utilizing the Hausman Talyor test, results imply Random Effects model to be the appropriate based on which estimates are given the interpretation of the findings. Moreover, foreign direct investment had positive and significant effect on GDP per capita, while trade openness has positive but insignificant effect on GDP per capita.

Based on the findings, this study concludes by recommending more trade openness in terms of encouraging exports and inflow of FDI through the creation of an enabling and friendly environment to do business. The governments should develop policies to increase openness of foreign trade for domestic enterprises to take part in the global economy fully. The, future work should address how the effect of FDI on growth of economy varies by industrial structure, the

policy regime, the development of infrastructure, interest rate and exchange rate. Moreover, this paper recommend other studies to be undertaken by studying Foreign Direct Investment in each sector such as manufacturing, agriculture and other sectors in which FDI is imposed in so as to determine the effect of FDI in each sector to economic growth.

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<https://databank.worldbank.org/reports.aspx?source=world-development-indicators>

Appendix

Table 2. Country_id

Country	Country_id
Albania	1
Bosnia and Herzegovina	2
Kosovo	3
Macedonia (North Macedonia)	4
Montenegro	5
Serbia	6

Table 4-Fixed Effects

Fixed-effects (within) regression				Number of obs	=	316	
Group variable: country_id				Number of groups	=	17	
R-sq:	within	=	0.0641	Obs per group:	min	=	11
	between	=	0.0235		avg	=	18.6
	overall	=	0.0493		max	=	20
				F(2,297)	=	10.17	
corr(u_i, Xb) = -0.3480				Prob > F	=	0.0001	

gdp_cap		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	

fdi		.136423	.042608	3.20	0.002	.0525712	.2202749
tradeopp		.0366483	.0166298	2.20	0.028	.0039211	.0693754
_cons		.6317609	1.403374	0.45	0.653	-2.130056	3.393577

sigma_u		1.5681108					
sigma_e		4.0494914					
rho		.13039855	(fraction of variance due to u_i)				

F test that all u i=0:		F(16, 297)	=	1.84	Prob > F = 0.0254		

Table 5-Random Effects

Random-effects GLS regression	Number of obs	=	316		
Group variable: country_id	Number of groups	=	17		
R-sq: within = 0.0589	Obs per group: min	=	11		
between = 0.0664	avg	=	18.6		
overall = 0.0627	max	=	20		
	Wald chi2(2)	=	19.29		
corr(u_i, X) = 0 (assumed)	Prob > chi2	=	0.0001		

gdp cap	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]

fdi		.1449036	.0382261	3.79	0.000	.0699817	.2198254
tradeopp		.0139882	.0115921	1.21	0.228	-.0087319	.0367082
_cons		2.483735	1.021507	2.43	0.015	.4816183	4.485853
sigma_u		.93281944					
sigma_e		4.0494914					
rho		.05038946	(fraction of variance due to u_i)				

Table 6- Hausman Test

		---- Coefficients ----			
		(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
		fe	re	Difference	S.E.
fdi		.136423	.1449036	-.0084806	.0188203
tradeopp		.0366483	.0139882	.0226601	.0119237

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(2) = (b-B)'[(V_b-V_B)^(-1)](b-B)
 = 3.67
 Prob>chi2 = 0.1597

Mobilya İmalat Sektöründe Çok Kriterli Karar Verme Yöntemleri ile En Uygun Ahşap Kapı Türünün Belirlenmesi

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Özet

Mobilya üretim sektörü ile ilgili son çalışmalar incelendiğinde, özellikle yeni yapılan meskenlere ait oda kapılarının minimum maliyetle üretilmesi için teoride ve uygulamada çok sayıda çalışma yapılmıştır. Mobilya üretim işletmeleri maliyetlerini ve müşteri isteklerini dikkate alarak en uygun mobilya kapı türünün belirlenmesinde doğru ve yerinde karar vermek durumundadırlar. Ancak ilgili işletmelerin bu türden karar problemlerinde çok kriterli karar verme yöntemlerini kullanmadıkları tespit edilmiştir. Bu düşünce ile çalışmada, Düzce ilinde faaliyet gösteren ahşap kapı üretimi işletmelerine optimum fayda sağlayacak ahşap kapı türünün belirlenmesi konusunda ilgili işletmelere yardımcı olunmak istenmiştir. İlgili karar probleminde dört kriter esas alınmıştır. Alternatifler mobilya kapı türleri arasından belirlenmiştir. İlgili işletmelerin yöneticileri karar vericiler olarak seçilmiştir. Kabul edilen kriterlere göre alternatifler AHP ve TOPSIS yöntemlerine göre ayrı ayrı sıralanmıştır. Gerçekleştirilen karar analizleri sonucunda, en uygun ahşap kapı türleri sırası ile Membran Kapı, Lake kapı ve PVC kapı olarak sıralanmıştır. Çalışmanın sonuçları ilgili işletmeler ile paylaşılmıştır.

Anahtar Kelimeler: AHP Yöntemi, TOPSIS Yöntemi, Mobilya Sektörü
Jel Kodları: M11, C02, C51, C61

Determination of the Most Appropriate Wooden Door Type with Multi Criteria Decision Making Methods in the Furniture Manufacturing Industry

Abstract

When the latest studies on the furniture production sector are examined, many studies have been carried out in theory and practice, especially to produce room doors for newly built residences with minimum cost. Furniture production businesses must make the right and on-site decision in determining the most suitable furniture door type, considering their costs and customer requests. However, it has been determined that the relevant enterprises do not use multi-criteria decision-making methods in such decision problems. With this in mind, in this study, it is desired to help the relevant enterprises in determining the type of furniture door that will provide optimum benefit to the furniture door production enterprises operating in Düzce. The relevant decision problem is based on four criteria. Alternatives were determined among the furniture door types. The managers of the related businesses were chosen as decision makers. According to the accepted criteria, the alternatives are listed separately according to the AHP and TOPSIS methods. As a result of the decision analysis, the most suitable wooden door types were listed as Membrane Door, Lacquered Door and PVC Door, respectively. The results of the study were shared with the relevant businesses.

Keywords: AHP Method, TOPSIS Method, Furniture Industry
JEL Codes: M11, C02, C51, C61

1. GİRİŞ

Günümüz rekabet koşullarında özellikle ahşap kapı üreticilerinin yöneticileri çok sayıda alternatif arasından en uygun olanının tespit edilmesi problemi ile sıklıkla karşılaşılır. Karar verme sürecinin temelinde mümkün çözümler arasından optimum olanını belirli kriterler çerçevesinde değerlendirerek seçmek vardır. Bu değerlendirme sürecinde karar vericilere ait sözel nitelikteki hükümler sayısal verilere dönüştürülür (Tulunay, 1991).

Yerli ve yabancı literatür dikkatle incelendiğinde, firma yöneticileri karar problemlerinin en uygun çözümünün bulunması sürecinde doğru ve zamanında yanıt veren birçok sayısal yöntem kullanılmaktadır. Çok kriterli karar verme (ÇKKV) problemlerinin değerlendirilmesinde AHP ve TOPSIS yöntemleri sıklıkla kullanılmaktadır. İşletmelerin yönetsel kararlarındaki hata oranını azaltmak ve doğru karar alabilmek için çok kriterli karar verme yöntemlerinden faydalanmaları gerekir. Çünkü bir kısım karar problemlerinde çok sayıda kriter ve alternatifin girift olarak iç içe girmiş olduğu gözlemlenmektedir. Bu hâl çözüm sürecini zorlaştırmaktadır. Bu gibi durumlarda AHP ve TOPSIS yöntemlerinden faydalanılarak optimum çözümü bulmak hata oranını azaltacaktır.

Ürün çeşitliliği arasından optimum özelliklerdeki ürünün tespit edilmesi çok kriterli ve karmaşık problemdir. Optimum özelliklerdeki ürünün tespit edilmesi ilgili işletmeler için büyük kârlılık sağlarken uygunsuz bir kararda bazan işletmeleri iflasa kadar götürebilmektedir. Karadeniz Bölgesi ve özellikle Düzce, mobilya sektörü faaliyetleri açısından coğrafi konumu ve iklim şartları dikkate alındığında oldukça elverişlidir. Düzce, mobilya sektöründe gerekli olan hammadde ihtiyacını rahatlıkla karşılaması ve kolay erişimi ile avantajlı durumdadır.

Bu çalışmada, Düzce ilinde faaliyet gösteren ahşap kapı üretimi yapan mobilya işletmelerinin en uygun kapı türünün belirlenmesi konusundaki karar probleminin AHP ve TOPSIS yöntemleri ile çözümlenebildiğinin gösterilmesi amaçlanmıştır. Çalışma için gerekli olan veriler ilgili işletmelerin yöneticilerinden alınmıştır. Bu yöneticiler aynı zamanda karar vericiler olarak belirlenmiştir. Çalışmada geçen değerlendirmeler Excel programı aracılığı ile gerçekleştirilmiştir.

2. LİTERATÜR TARAMASI

Üretim işletmelerinde en uygun ekipman ve hammaddenin seçilmesi süreci tedarik zincirinin en önemli aşamalarındandır. Çünkü işletme için kârlılık sağlayacak hammaddenin tespit edilmesi, o işletmeyi bulunduğu sektörde emsallerine göre üstün kılar. Ancak bahsedilen belirlenme süreci bilimsel yöntemlerle yapılmalıdır (Özel ve Özyörük, 2007).

Hammadde ve ilgili unsurlarının seçimi ile ilgili literatürdeki çalışmalar incelendiğinde, en sık rastlanan kriterler; maliyet, kalite ve teslim zamanı olduğu görülmektedir (Öz ve Baykoç, 2004).

ÇKKV yöntemlerinin temelinde; amaç, kriterler ve alternatiflerin belli olduğu durumda karar vericilerin kriterler ve alternatiflerle ilgili karşılaştırmalarını dikkate alarak optimum çözümün bulunması vardır (Baysal ve Tecim, 2006). Karar problemleri değerlendirilirken kriterlerin ağırlıklarının doğru tespit edilmesi, alternatiflerin önceliklerine göre sıralanması açısından çok önemlidir (Lai ve Hwang, 1994).

Yukarıda açıklananlar ile karar vericilerin alternatifler hakkında tutarlı kıyaslamaları birleştiğinde, doğru ve en uygun kararın oluşmasında uygun şartlar sağlanmış olur (Jahanshahloo vd., 2006).

(Turgut ve Şahin, 2019) çalışmalarında, işletmelerin kuruluş yeri seçiminin önemini ele alarak Mersin ilinde bulunan yaş sebze ve meyve depolanmasında kullanılacak en uygun depo yer seçimi kararının verilmesi amaçlanmıştır. AHP yöntemi kullanılarak en uygun depo yeri seçimi için en ideal konum tespit edilmiştir. Karar vericiler ile yapılan görüşmeler doğrultusunda üç farklı alternatif konum üzerinden yapılan çalışmada maliyet, işgücü, çevre, pazar ve altyapı kriterlerinin ayrı ayrı ağırlıkları hesaplanmıştır. Sonuç olarak Tarsus ilçesi en uygun yaş sebze ve meyve depolama yeri olarak bulunmuştur.

(Kaplan, 2010) çalışmasında, hizmet sektörü için en uygun tedarikçi seçimi kararının belirlenmesi amaçlanmıştır. Çalışma AHP yöntemi kullanılarak değerlendirilmiştir. Kriterler literatür araştırması doğrultusunda belirlenmiştir. Tedarikçilerin göstermiş olduğu performans değerleri dikkate alınarak AHP yöntemi kullanılmıştır. Verilerin analizinde *Super Decisions* programından faydalanılmıştır. Karar vericilerin katılımı ile yapılan anket sonucunda kırk dört kriter dört kriter etrafında toplanmıştır. Çalışmada kriterler sırasıyla firma profili, kalite, maliyet ve servis hizmeti olarak belirlenmiştir.

(Ertuğrul ve Özçil, 2014) çalışmalarında, minimum enerji kaynağı kullanılarak en verimli iklimlendirme teknolojisinde üretilen klimaların seçim kriterlerini belirlemek ve en uygun klimanın seçiminin yapılmasını amaçlamışlardır. Çalışmanın uygulama aşamasında ÇKKV yöntemlerinden TOPSIS ve VIKOR yöntemleri ayrı ayrı kullanılmıştır. Çalışmada on karar vericinin kıyaslamaları dikkate alınarak analizler gerçekleştirilmiştir.

(Çakıl, 2017) çalışmasında, AHP ve TOPSIS yöntemlerini kullanarak bir mermer fabrikası için en uygun makinenin seçimi karar problemi için değerlendirmeler yapmıştır. Dört alternatif

belirlenmiş ve literatür taramasında elde edilen verilerle alternatiflere bağlı olarak yedi ana kriter ve otuz yedi alt kriter ile hiyerarşik yapı oluşturulmuştur. Sonuçta ilgili mermer işletmesi için en uygun makinenin belirlenmesi problemi AHP ve TOPSIS yöntemleri kullanılarak çözümlenmiştir.

3. METEDOLOJİ

3.1. Araştırmanın Amacı

İlgili mobilya sektörü ahşap kapı üreticisi işletmelerine, farklı türdeki ahşap kapılar arasından optimum olanının belirlemede ÇKKV yöntemleri kullanılarak yardımcı olmaktadır.

3.2. Kriter Ağırlıklarının Tespiti

İlgili işletmelerin yetkilileri ve karar vericilerin kıyaslamaları doğrultusunda tüm kriterler ayrı ayrı puanlanmış ve en fazla puanı alan ilk dört kriter çalışmanı temel kriterleri olmuştur. Böylelikle hem kriter sayısı hemde kriterlerin ağırlıkları tespit edilmiştir.

3.3. Karar Vericilerin Tespiti

Optimum özelliklerdeki ahşap kapı türünün belirlenmesi için ilgili işletmelerin yetkilileri karar vericiler olarak kabul edilmiştir.

3.4. Kriter ve Alternatiflerin Belirlenmesi

Başlangıçta daha fazla olan kriter sayısı, karar vericilerin değerlendirmeleri sonucu sıralamaya giren ilk dört kriterin alınması ile objektif bir şekilde tespit edilmiştir. Karar vericiler aşağıda belirtilen kriterleri tespit etmişlerdir:

K1: Fiyat (TL)

K2: İşçilik (Saat)

K3: Dayanıklılık (Puan)

K4: Kalınlık (mm)

İlgili Literatür taranarak karar vericilerle birlikte kriterlerin tespit edilmesinde sonra karar vericiler aşağıdaki alternatifler üzerinde fikir birliğine varmışlardır. Bu alternatifler:

A1: Panel kapı

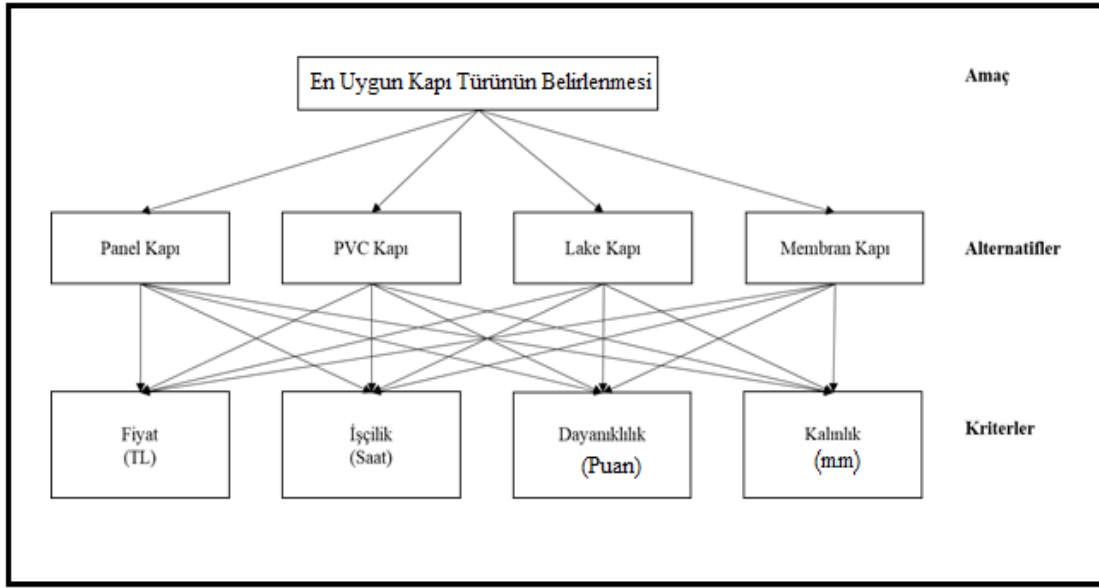
A2: PVC Kapı

A3: Lake Kapı

A4: Membran Kapı

3.5. Araştırmanın Modeli

Çalışmanın hiyerarşik modeli Şekil 1’de ifade edilmiştir. Modelde Öncelikli olarak amaç sonra alternatifler ve kriterler ifade edilmiştir.



Şekil 1. En uygun Ahşap Kapı Türünün Belirlenmesi Modeli

4. UYGULAMA: ÇKKV Yöntemleri ile En uygun Ahşap Kapı Türünün Belirlenmesi

4.1. En Uygun Ahşap Kapının Belirlenmesinde ÇKKV Yöntemlerinin Kullanılması

4.1.1. AHP (Analytic Hierarchy Process)

AHP 1970 yılında Saaty tarafından geliştirilen en uygun alternatifin tespiti için kullanılan çok kriterli bir yaklaşımdır. AHP, karar probleminin hiyerarşik yapısını oluşturan ve karar vericilerin ikili kıyaslama verilerini dikkate alarak analizler gerçekleştiren sayısal bir yöntemdir. Karmaşık bir karar probleminde alternatifleri açık bir şekilde sunarak karar vericilerin en uygun kararı vermesine katkı sağlamaktadır. AHP ile karmaşık karar problemleri kolaylıkla değerlendirilirken, sonuçlar karar vericiler ve ilgililer tarafından kolay ve anlaşılabilir olduğundan sıklıkla tercih edilen bir yaklaşımdır. AHP yöntemi; karar probleminin ayrıştırılması, önceliklerin belirlenmesi, sentezleme ve duyarlılık analizinden oluşmaktadır (Ömürbek vd., 2013).

4.1.2. TOPSIS (Technique For Order Preference By Similarity To Ideal Solution)

TOPSIS yöntemi 1981 yılında Hwang Yoon tarafından geliştirilen çok kriterli karar verme yöntemlerinden biridir. Bu yöntem ile alternatiflerin değerlendirilmesi, pozitif ideal çözüme en yakın

mesafe ve negatif ideal çözüme en uzak mesafe yaklaşımı dikkate alınarak yapılır (Soba ve Eren, 2008). Pozitif ideal çözüm en uygun optimum karar olarak seçilir. TOPSIS yaklaşımı karmaşık matematiksel yöntemler içermeyen bir sürece sahip olduğu için kullanıcıların sürekli ilgisini çekmektedir. Kolay anlaşılabilen, rahat kullanılabilen ve basit yorumlanabilme yapısından dolayı birçok farklı alanda uygulaması bulunmaktadır.

4.1.3. AHP Yöntemi ile En Uygun Mobilya Kapının Seçimi

1. Aşama: Temel Veri Setinin İfade Edilmesi

Çalışmanın AHP yöntemi ile değerlendirilmesi sırasında kullanılan temel veri matrisi Tablo 1’de belirtilmiştir. Çalışmadaki sayısal değerlendirmeler *Microsoft Excell* programı ile elde edilmiştir.

Tablo 1. Temel Veri Seti

	Fiyat (TL)	İşçilik (Saat)	Dayanıklılık (Puan)	Kalınlık (mm)
Panel Kapı	700	15	70	41
PVC Kapı	1500	6	90	75
Lake Kapı	1750	30	80	41
Membran Kapı	1100	20	70	41

2. Aşama: AHP Yöntemi ile Kriterlerin Ağırlıklarının Belirlenmesi

Temel veri matrisindeki değerler dikkate alınarak her bir kriterle ait ağırlık değerleri hesaplanmıştır. Bu değerler Tablo 2’de belirtilen matrisin son sütununda ifade edilmiştir.

Tablo 2. Kriterlerin Ağırlıklarının İfadesi

	Fiyat (TL)	İşçilik (Saat)	Dayanıklılık (Puan)	Kalınlık (mm)	Ağırlıklar
Fiyat	0,49188	0,75278	0,62222	0,22222	0,52278
İşçilik	0,09838	0,15056	0,62222	0,22222	0,27334
Dayanıklılık	0,16379	0,02138	0,08888	0,44444	0,17962
Kalınlık	0,24594	0,07528	0,02222	0,11111	0,11363

3. Aşama: AHP Yöntemine göre Alternatiflerin Sıralanması

AHP yönteminin analiz aşamaları dikkate alınarak kriterlerin ağırlıkları belirlendikten sonra karar vericilerin her bir alternatifini kriterler çerçevesinde kıyaslamaları verileri dikkate alınarak alternatiflerin nihai sıralaması Tablo 3’te açıkça ifade edilmiştir.

Tablo 3. AHP yöntemine göre Alternatiflerin Sıralanması

	S1	S2	S3	S4	Ağırlıklar	Sıralama Değerleri	Nihai Sıralama
Panel Kapı	0,05677	0,06260	0,40410	0,31825	0,52228	0,15551	4.
PVC Kapı	0,26334	0,19245	0,04834	0,04526	0,27335	0,20397	3.
Lake Kapı	0,55802	0,26384	0,25115	0,31825	0,17963	0,44484	2.
Membran Kapı	0,48751	0,48111	0,36378	0,31825	0,11364	0,48764	1.

4.1.4. TOPSIS Yöntemi ile En Uygun Mobilya Kapı Türünün Belirlenmesi

1. Aşama: Temel veri Matrisinin Ağırlıklar ile İfade Edilmesi

TOPSIS yöntemi ile alternatifler arasından optimum olanının belirlenmesi sürecinde analizlere başlamadan önce alternatiflerin kriterler çerçevesinde performans değerlerini gösteren verilerin ve kriterlerin ağırlıklarının açıkça ifade edilmesi gerekmektedir. Bu kapsamda Tablo 4'te temel veri seti ve kriter ağırlıkları ifade edilmiştir.

Tablo 4. Temel Veri Seti ve Kriterlerin Ağırlıkları

	Fiyat (TL)	İşçilik (Saat)	Dayanıklılık (Puan)	Kalınlık (mm)
Panel Kapı	700	15	70	41
PVC Kapı	1500	6	90	75
Lake Kapı	1750	30	80	41
Membran Kapı	1100	20	70	41
Ağırlıklar	0,522278	0,273345	0,179627	0,113638

2. Aşama: S⁺ Matrisinin ifade Edilmesi

TOPSIS yöntemine göre alternatiflerin nihai sıralamasının tespit edilmesinde S⁺ değerlerinin tespit edilmesi gerekmektedir. Bu kapsamda hesaplanan değerler Tablo 5'te açıkça ifade edilmiştir.

Tablo 5. TOPSIS Yöntemi için Kullanılan S⁺ Değerleri

S ⁺ matrisi	Fiyat	İşçilik	Dayanıklılık	Kalınlık		
Panel Kapı	0,00000	0,00388	0,00053	0,00000	S ⁺ ₁	0,06639
PVC Kapı	0,02490	0,00000	0,00000	0,00140	S ⁺ ₂	0,16215
Lake Kapı	0,04289	0,02757	0,00013	0,00000	S ⁺ ₃	0,26568
Membran Kapı	0,00622	0,00938	0,00053	0,00000	S ⁺ ₄	0,12703

3. Aşama: S⁻ Matrisinin İfade Edilmesi

TOPSIS yöntemine göre alternatiflerin nihai sıralamasının tespit edilmesinde S⁻ değerlerinin tespit edilmesi gerekmektedir. Bu kapsamda hesaplanan değerler Tablo 6’da açıkça ifade edilmiştir.

Tablo 6. TOPSIS Yöntemi için Kullanılan S⁻ Değerleri

S ⁻ matrisi	Fiyat	İşçilik	Dayanıklılık	Kalınlık		
Panel Kapı	0,04289	0,01077	0,00000	0,00000	S ⁻ ₁	0,23164
PVC Kapı	0,00243	0,02757	0,00053	0,00140	S ⁻ ₂	0,17869
Lake Kapı	0,00000	0,00000	0,00013	0,00000	S ⁻ ₃	0,01153
Membran Kapı	0,01644	0,00479	0,00000	0,00000	S ⁻ ₄	0,14568

4. Aşama: Alternatiflere Ait Nihai Sıralamanın İfade Edilmesi

TOPSIS yönteminde alternatiflere ait nihai sıralamanın tespit edilmesi için analizlerin sonucunda C^{*} değerlerine bakılır. Böylelikle doğru sıralama tespit edilebilir. Bu doğrultuda Tablo 7’de her bir alternatif için nihai sıralama ifade edilmiştir.

Tablo 7. TOPSIS yöntemine göre Alternatiflerin Nihai Sıralaması

Alternatifler	C [*] Değerleri	S ⁺ Değerleri	S ⁻ Değerleri	Nihai Sıralama
Panel Kapı	0,22277	0,06639	0,23164	4.
PVC Kapı	0,47574	0,16215	0,17869	3.
Lake Kapı	0,95839	0,26568	0,01153	1.
Membran Kapı	0,46581	0,12703	0,14568	2.

4.2. Bulgular ve Yorumları

Çalışmada, ahşap kapı üretimi sektörüne ait Düzce’deki işletmelerin ihtiyacı olan ahşap kapı türlerinin dört alternatif arasından optimum olanın belirlenmesinde AHP ve TOPSIS Yöntemleri hibrit olarak kullanılmıştır. Karar vericilerle birlikte kararlaştırılan dört kritere ait ağırlıklar AHP yöntem ile tespit edilmiştir. Bu ağırlıklar TOPSIS yöntemi ile gerçekleştirilen analizlerde de kullanıldığı için çalışmada hibrit bir yaklaşım vardır. Bahsedilen yöntemler ile gerçekleştirilen analizler neticesinde aşağıda tablo 8’de belirtilen durum ortaya çıkmıştır.

Tablo 8. AHP ve TOPSIS Yöntemleri ile Elde Edilen Karşılaştırmalı Sıralamalar

Alternatifler	AHP Sıralaması	TOPSIS Sıralaması	Nihai Sıralama
Panel Kapı	4.	4.	4.
PVC Kapı	3.	3.	3.
Lake Kapı	2.	1.	1.
Membran Kapı	1.	2.	2.

Tablo 8'in son sütununda ifade edildiği üzere nihai sıralama için TOPSIS yönteminden elde edilen sıralama baz alınmıştır. Çünkü Tablo 7 dikkatle incelenirse Lake ve Membran kapı arasındaki C^* değeri arasındaki fark, aynı alternatiflere ait Tablo 3'teki farktan büyüktür. Bu sıralamaya göre en uygun ahşap kapı türü Lake Kapı, ikinci sırada Membran Kapıdır.

5. SONUÇ VE ÖNERİLER

Güncel ekonomik şartlarda işletmeler çok çeşitli karar problemlerinin varlığı ile çelişkiye düşmektedirler. Bu çelişkiyi ortadan kaldırılmak için öncelikle bilimsel yaklaşımların kullanılması esastır. Bir karar probleminin birden çok analiz yöntemi veya yaklaşımla gerçekleştirilmesi optimum sonucun belirlenmesi içindir. Ayrıca ilgili karar problemi için literatürdeki benzer çalışmalar dikkate alınarak en uygun karar verme yöntemi seçilebilir.

Çalışmanın literatür taraması bölümünde farklı sektörlere işletmelerinin farklı türden karar problemlerini ÇKKV yöntemleri kullanarak çözümledikleri ifade edilmiştir. Çalışmanın uygulama kısmında, Düzce'de faaliyet gösteren ahşap kapı üreticileri için en uygun ahşap kapı türünün belirlenmesi problemi üzerinde AHP ve TOPSIS yöntemleri hibrit bir yapıda kullanılmıştır.

Karar vericilerle birlikte kararlaştırılan dört kritere göre alternatifler kıyaslanmış ve böylece alternatifler ilgili yöntemlerin analiz aşamaları dikkate alınarak önceliklerine göre sıralanmıştır. Bu sıralamaya göre en uygun ahşap kapı türü Lake Kapı, ikinci sırada ise Membran Kapıdır.

İlgili ahşap kapı üreticisi işletmelere çalışmanın sonuçları doğrultusunda en uygun ahşap kapı türünün Lake kapı olduğu belirtilmiştir. İleride yapılacak benzer çalışmalar için, en uygun alternatifin tespit edilmesinde yapay zekâ yöntemlerinin kullanılması önerilebilir.

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WOMEN IN MIGRATION AND MIGRANT POLICIES: SYRIAN MIGRANT WOMEN IN TURKEY AND THE WORLD

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Abstract

Migration, which is as old as human history in the international system, has brought many problems with it. Migration and immigration are taking place, especially from problem areas to stable areas. The main reason for this is that human beings want to keep themselves and their families safe. In this context, the people who migrate are always perceived as problematic, and the communities in the place of migration are perceived as trouble-free. In other words, immigrated societies are seen as superior/first class, while immigrants are seen as lower class. The situation is the same today. Women and children are the most affected by the current situation.

For this reason, in this study, the difficulties that immigrant women have experienced from the past to the present will be evaluated in the context of Syrian immigrant women in the last period. The experiences of Syrian migrant women who spread all over the world after the Syrian civil war will be examined by making a comparison between Turkey and the world. In this context, the data of NGOs such as UN Women, World Women Foundation as well as migration organizations in Turkey and the world will be included in the study. As a result, how immigrant Syrian women should be empowered in the society they live in and the studies on this subject will be explained.

Keywords: Women, Migration, Syrian Migrant Women, Turkey, International Society.

JEL Codes: J150, F220.

1. Women in International Migration

In the most general sense, migration is defined as “all displacements that occur within a time sufficient to produce a significant distance and impact” (Erder, 1986: 9) According to another definition, migration has been discussed in the literature for a long time as a process that starts with the decision taken by the man and affects women and children for reasons such as marriage or family reunification (Gülçür ve İlkcaracan, 2002). Poverty, security problems, labor market

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demand, family reunification, marriage, wage differences, and international connections are seen as the main reasons for women's migration (Mollard, 2010). Although there are very detailed classifications of migration, the scope of the study will focus more on women. For this reason, the concept of migration will not be examined in a multidimensional structure.

Considering the position of women in the international society from a general perspective, the importance of gender roles emerges. Thanks to the gender roles associated with their biological sex in their minds, people take on responsibilities such as being the expected mother, being the head of the family, and taking care of their family members. All social, economic, and cultural inequalities that make women subordinate and subordinate to men are legitimized by biological gender (Dökmen, 2009: 20-22; Bhasin, 2003: 2-3). It is possible to observe the most important example of this in-migration. The migration phenomenon was studied on a male basis until the 1970s. However, the basis of migration is women (Şeker and Uçan, 2016: 205-206).

The idea that women should be handled and studied separately from men in the migration process was first expressed in international conferences on women [United Nations World Conference on Women (1975, Mexico), World Conference on the Decade of Women (Copenhagen, 1980)] ((Şeker and Uçan, 2016: 205).

2. Women in International Immigration Policies and International Community

Today, 258 million people live in a different place than where they were born. This shows that the figure of 173 million in 2000 has increased by half over time (UN DESA, 2018). According to the data of the UN High Commissioner for Refugees (UNHCR), which is in the category of "interested", 65.6 million people have been forced to migrate from the regions they live in. The population seeking asylum outside their country is approximately 22.5 million (UNHCR, 2018a; UNCHR, 2018b). Half of this number consists of women.

Despite this, the women element in international migration and immigration policies began to be included only in the mid-1970s. With the Women's Conference held by the United Nations in Mexico in 1975 and the World Conference on the Decade of Women in Copenhagen in 1980, "immigrant women" became visible in international status.

In an international study, when the situation of female immigrants is analyzed by age groups and the level of development of the countries they migrate to, it is seen that female immigrants between the ages of 30-60 are predominantly in economically developed countries, while the percentage of female immigrants in the same age group is quite low in economically less developed countries. it is understood to be. The proportional size of female immigrants is not a

new phenomenon, and since the 1960s, the share of women in migration has been quite close to that of men. However, the proportional increase in the weight of female immigrants among immigrants, especially in Europe and North America, and even the increase in the rate of female immigrants to 70-80% in some regions, brought the concept of "feminization" of immigration to the agenda (Fleury, 2016, s. VI; Yılmaz, 2019: 385-386).

In the international community, the usual perception is known as the migration of the problematic to the unproblematic. At the same time, according to this perception, the immigrants developed, and the immigrants remained backward. However, migration is a whole with different reasons and results.

If the negative effects such as the direction of migration generally towards more developed countries in terms of economic and social welfare, cultural differences, informality, and fear of being sent back are left aside, migration makes it possible to reach better education and health conditions. For example, according to a study conducted by the World Bank, women in Guatemala, Mexico, and Morocco, along with migration, both have better health opportunities and an increase in health information levels, which can reduce maternal and infant mortality rates (Fleury, 2016: 18). On the other hand, according to another view, migration from rural to urban areas can negatively affect child mortality (Brockerhoff 1995, Harttgen ve Klasen 2009, quoted Fleury, 2016: 18). Similarly, according to a study conducted in Jordan, the eldest daughter takes over the duties after the mother immigrates, and these responsibilities negatively affect the daughter's education (Fleury, 2016: 17 quoted from Azcona, 2009). In addition to all these, the deterioration of family integrity affects all members of the family, especially the separation of the mother from the family can cause psychological problems both for the migrant mother and for her children (Yılmaz, 2019: 396).

Today, all countries in the international system, in cooperation with their own NGOs and societies, focus on the woman factor in their migration policies, and international organizations such as UN Women and World Women Foundation also support states in this direction.

3. International Community and Syrian Migrant Women

Today, the Syrian immigrant population fleeing the Syrian War in 2011 constitutes 1/3 of the global refugees in the international system with 6.6 million. 3.6 million of them are sheltered in Turkey. (EASO, 2020: 8). However, the vast majority of more than 80% of the residents of

the Syrian refugees in Turkey are known that consists of women and children (Middle East Monitor, 2020), but their numbers in the world are not available.

Although the international community and international organizations take an active role in the issue of women, sufficient work has not been done and the necessary support has not been provided for the migrant women in the Syrian Civil War, which took place in the last period and where there was intense migration throughout the process.

4. Syrian Migrant Women in Turkey

It is known that after the Syrian War in 2011, Syrian immigrants migrated to Turkey to a large extent and were accepted as refugees. In this context, although the exact number of Syrian migrant women in the international system is not known, it is possible to reach these figures in Turkey.

Figure 1. Turkey Refugee Statistics



Source: UNHCR, 2022c

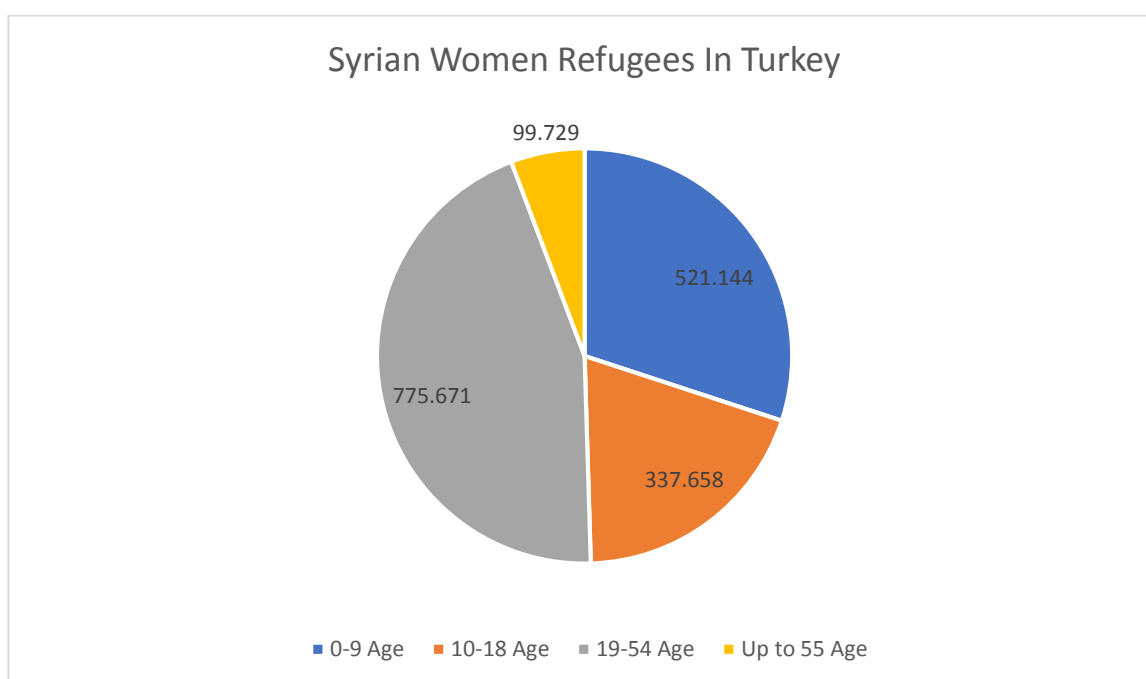
As can be seen in Figure 1, the most immigration to Turkey comes from Syria. So much so that Turkey, more than half the world's population of 6.6 million immigrants (3.65 million) carries the hosting country property for 11 years (UNHRCc, 2022).

In Turkey, where the number of Syrian women refugees is quite high, the relevant information is kept very up-to-date and systematically. This transparent and up-to-date information is not

only shared effectively with international and national organizations but also made available to everyone through the website.

Of course, Syrian migrant women also experience the problems experienced by migrant women all over the world. However, the perspective of the society and the policies of the state on these women in Turkey are quite different from the rest of the world. Based on this, there is a hospitable culture structure.

Figure 2. Syrian Women Refugees in Turkey in 2022



Source: By author (Refugees Association, 2022)

In this context as can be seen in Figure 2, After the Syrian War in 2011, the number of Syrian refugees in Turkey as of March 2022, showed a rapid rise, with 1.734.202 women refugees. The most intense age group among these is the 19-54 age group (The Directorate General of Migration Management, 2022). This age group is often called the “prime” age group. It is also defined as the working-age population (AFAD, 2014: 21). Nearly half of the women Syrians in Turkey note that the working age and being in a position to be able to contribute to the workforce is attractive (Akpınar, 2017: 24). On the other hand, the high population of young Syrian women under the age of 19 (49,52%) As of 23 June 2022, the number of Syrians registered in Turkey with temporary protection status, including those who returned to their homeland, decreased by 79 thousand 164 compared to the previous month and reached a total

of 3 million 684 thousand 488 persons (The Directorate General of Migration Management, 2022, Refugees Association, 2022).

It can be stated that Syrian women immigrants (refugees) in Turkey live in much better conditions than immigrant women in other parts of the world. We will examine the indicators of this in the last section.

5. How Promote Syrian Migrant Women?

After the civil war in Syria, Turkey showed an increase in the number of Syrian refugees in Turkey. Syrian women, international and at national level in the process, it was found help and support in getting support. Syrian refugees who spent more than \$ 40 billion in all of Turkey, are the largest donor country providing financial support in this regard (Birgün, 2019). As for women refugees in Turkey, practices are made that both facilitate their adaptation and encourage them to enter and adapt to business life economically with social life. It is possible to see the best example of these in Turkish and vocational courses provided by each municipality for Syrian refugee women to communicate effectively (Konrad-Adenauer-Stiftung, 2019). Similarly, the International Labor Organization (ILO)'s "Increasing of the Syrian Women, Girls and Host Communities of Resistance In Turkey Project" (ILO, 2019), the Republic of Turkey Ministry of National Education's "Ministry of Education Syrian children of Turkish Education System Integration Support Project" and "Conference on Entrepreneurial Women in Development and Social Interaction" (Republic of Turkey Ministry of Family and Social Policies, General Directorate on the Status of Women, 2016) organized by the Ministry of Family and Social Policies in cooperation with Ankara Development Agency and Syrian Friendship Association are promising.

For Syrian refugees in Turkey, outside of public institutions, many international/national organizations and NGOs also illustrate the importance of a structure that prioritizes women and women. These include the Association for Solidarity with Asylum Seekers and Migrants (SGDD-ASAM), the German International Cooperation Association (GIZ), the United Nations International Children's Emergency Fund (UNICEF), The World Bank (WB), the Refugees' Association, the Association for Women and Democracy (KADEM), etc. Many examples such as.

On the other hand, it is stated in UN Women reports that more than 90% of Syrian women, most of whom struggle to survive on a low income due to the cultural structure they come from (Khattab and Myrntinen, 2018: 16), are not aware of work permit regulations (UN Women and ASAM, 2018).

However, Turkey makes an effort for Syrian women refugees and attaches great importance to the basic needs of these women: shelter, health, and education. Turkey works for the Syrian refugee women, taking into consideration the relevant reports and manages over 11 years in a good way and opens the way for business and employment for these women. In this context, it primarily makes legal regulations.

Syrian women refugees in Turkey; health, living standards, their children's schools and residence close to schools, their work and working conditions, their communication, language learning and adaptation to daily life, their integration with society, etc. is of great importance. In this context, both public institutions and NGOs take care to fulfill their duties.

In the light of all these, the priority issue expected to be done is to provide support for their return to their homeland. In addition, adaptation support programs for Syrian refugee women who will continue to live in Turkey should continue to be supported by projects. Support should be obtained from the Academy in this regard. Along with the projects, international workshops, panels, congresses, and conferences should be organized to express what has been done and what needs to be done and should be discussed objectively. Field research should be increased and statistical data should be archived up-to-date. The attention of the countries of the world should be drawn to this issue and international organizations should be called at every opportunity to observe the Syrian women refugees in Turkey.

Conclusion

International migration has been evaluated with a male-dominated perspective throughout history. This process ended in the mid-1970s by the United Nations, making women visible in immigration. Despite all the difficulties they experience, migrant women can be resilient for their families and children and face all the problems they face.

Within the scope of the study, firstly, the emphasis was placed on migration and women in the international system, then the situation of Syrian women refugees in the international system and Turkey was evaluated with statistical data. Finally, "What can be done for Syrian women

refugees in Turkey?” By examining the subject of “What can be done for Syrian women refugees in the international system?” with an inductivist perspective. an attempt was made to answer the question.

In this context, both in the international system and in Turkey, what needs to be done for women refugees is not at a sufficient level. In this context, first of all, the formation of international community awareness is the most essential issue.

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IMPACT OF COVID 19 PANDEMIC IN INTERNATIONAL TRADE WITH SPECIAL REFERENCE TOWARDS FDI

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Abstract

Export and Import business plays an important role for Country economy and GDP. Among them retail sector places major share in that and providing 75 percent of employment opportunities in the country. Retailing in India placed fifth position in the world, it generate 10 percent in GDP. The Covid 19 lockdown period 1,2,3 and 4 were greatly affected in the retail business. Except those who were selling Essential Food & Grocery other than including digital marketing sources too were highly affected and All the Retail stores were forced to closed due to safety measures throughout India and Truck drivers not interested to drive and majority of the laborer's not interested to work for job. Based on the lockdown and pandemic situation makes the retailers forced under financial pressures and makes them to liquidity challenges. This paper focused towards impact of foreign direct investment in Organized Sector in India during lockdown period. It concludes the challenges faced by the industry in the form of sources of investment.

Keywords: Foreign Direct Investment, Retailers and Organized Sector

Introduction

The Country main earning sources in the form of taxation from retail sector and placed fifth position in the world, and generated around 10 percent in the country GDP and providing huge employment opportunity in the form of low level to high level of while colour job generated by the retail sector . (**Dhanabhakym**).The retail sector played an important role in manufacturing the goods and satisfy the basic needs of the consumer in the forms of goods and services. The Covid 19 change the micro and macro environment of the business organization.When it comes to export import business, it was totally affected mainly through lockdown of the business throughout the world.This retail sector were also included in that. The retail organized sector means those who are registered for sales tax, income tax, etc. Foreign direct investment , it is a cross border investment into production and the host country will generate revenue from that. The COVID-19 has affected and completely stopped the economy and directly imposed towards the Indian retailers.

Review of Literature

Retailers Association of India (2020).The covid 19 pandemic makes a drastic change in the retailers and unable to do any international trade . The inflow and outflow of the retail industry has come to a standstill. It is mainly due to closing down of business to safeguard the deadly disease and consumers are not interested to buy and spend any products apart from basic needs.

Pinakiranjan Mishra (2020) The COVID-19 pandemic situation were globally affected the retail sector and witnessed significant disruption.

Research Methodology

The data were collected descriptive studies ,includes primary and secondary data. A well -planned structured questionnaire with likert scale were prepared and distributed through google forms. The sample size of the research consisted 100 based on convenient sampling method. Due to lockdown period the researcher unable to take data from major retailers because the shops were closed during the study period.Through registered email the researcher contact them to collect the data. The data were collected from four state capitals including Delhi, Mumbai, Calcutta and Chennai. The completed questionnaires were analyzed using SPSS software version 20.0.

Percentage analysis were used to generate a profile of key demographic characteristics of the respondents. The chi-square test were used to analyse the relation between the source of Investment and with Retailers Perception, impact of COVID 19 pandemic in international trade with special reference towards FDI.

Analysis

Socio-Economic factor

Table 1: Gender

		Frequency	Percent
Gender	Male	80	80
	Female	20	20
	Total	100	100.0

Inference: The majority of the respondents belongs to male retailers.

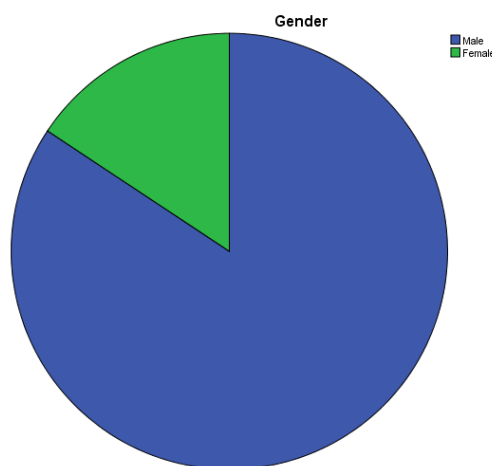


Figure 1: Gender

Table 2: Age

		Frequency	Percent
Age	Up to 25	26	26
	26-35	23	23
	36-45	24	24
	Above 45	27	27
	Total	100	100.0

Inference: The majority of the respondents age above 45 years old and followed by the below 25 years old.

Table 3: Qualification

		Frequency	Percent
Qualification	HSC	15	15
	Diploma	20	20
	UG	30	30
	PG	35	35
	Total	100	100.0

Inference: The majority of the respondents were studied post-graduation.

Table 4: Source of Investment

		Frequency	Percent
Source of Investment	Own Investment	13	13
	Bank loan	80	80
	Corporate investment	7	7
	Total	100	100.0

Inference: The majority of the respondents were having their retail units with the help of bank loan.

Table 5: Year of Experience in Retail Business

		Frequency	Percent
Year of Experience in Retail Business	Below 5 years	30	30
	5-10 years	30	30
	Above 10 years	40	40
	Total	100	100

Inference: The majority of the respondents were having their experiences more than 10 years in retail units.

Table 6: Number of Trained Manpower

		Frequency	Percent
Number of Trained Manpower	Below 50	49	49
	50-100	30	30
	Above 100	21	21
	Total	100	100.0

Inference: The majority of the respondents having less than 50 trained manpower in their retail units.

PERCEPTION OF ORGANIZED RETAILERS

Table 7: Cross tabulation between Source of Investment and Retailers Perception

Variables		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
FDI has greater impact over Indian retailing	Own Investment	4	3	2	3	1	13
	Bank loan	16	59	5	0	0	80
	Corporate investment	1	6	0	0	0	7
Total		21	68	7	3	1	100
Favorable government policies support FDI for easy entry into retailing	Own Investment	0	1	3	9	0	13
	Bank loan	4	5	40	20	11	80
	Corporate investment	0	5	2	0	0	7
Total		4	11	45	29	11	100
It understands customer's choice and serves according to their changing life styles.	Own Investment	2	3	0	4	4	13
	Bank loan	13	20	40	4	3	80
	Corporate investment	0	4	3	0	0	7
Total		15	27	43	8	7	100
It offers best management practices and IT friendly	Own Investment	12	0	1	0	0	13
	Bank loan	10	45	20	5	0	80

techniques	Corporate investment	0	3	04	0	0	7
Total		22	48	25	5	0	100
It offers huge employment opportunities.	Own Investment	0	1	7	1	4	13
	Bank loan	20	16	8	23	13	80
	Corporate investment	0	4	0	3	0	7
Total		20	21	15	27	17	100
It encourages investment and employment in supply chain management.	Own Investment	1	9	3	0	0	13
	Bank loan	36	44	0	0	0	80
	Corporate investment	0	3	04	0	0	7
Total		37	56	7	0	0	100

Inference: The majority of the retailers agreed towards FDI has greater impact over Indian retailing, It offers best management practices and IT friendly techniques, It encourages investment and employment in supply chain management.

The majority of the retailers were strongly agreed towards the huge employment opportunities.

The majority of the retailers were neutral towards favourable government policies support FDI for easy entry into retailing and It understands customer's choice and serves according to their changing life styles.

Hypothesis framed

H0: There is no Association between Source of Investment and Retailers Perception

H1: There is an Association between Source of Investment and Retailers Perception

Table 8: Chi Square Test: Association between Source of Investment and Retailers Perception

	Pearson Chi-Square	df	Asymp. Sig. (2-sided)	Results
FDI has greater impact over Indian retailing	34.512 ^a	8	.000	Significant
Favourable government policies support FDI for easy entry into retailing	41.515 ^a	8	.000	Significant
It understands customer's choice and serves according to their changing life styles	23.734 ^a	8	.000	Significant
It offers best management practices and IT friendly techniques	42.223 ^a	6	.000	Significant
It offers huge employment opportunities.	32.36 ^a	8	.000	Significant
It encourages investment and employment in supply chain management.	7.543 ^a	4	.101	No Significant

Inference: There is an association between Source of Investment and FDI has greater impact over Indian retailing, Favourable government policies support FDI for easy entry into retailing, It understands customer's choice and serves according to their changing life styles, It offers best management practices and IT friendly techniques and It offers huge employment opportunities

OPPORTUNITIES AVAILABLE TO ORGANIZED RETAILERS DUE TO EMERGENCE OF FDI IN INDIAN RETAILING

Table 9: Cross tabulation between Source of Investment and Opportunities Available To Organized Retailers

Variables		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
Upgrading their technology and renovating their stores according to global retailers.	Own Investment	2	3	8	0	0	13
	Bank loan	24	44	12	0	0	80
	Corporate investment	0	3	4	0	0	7
Total		26	50	24	0	0	100
Progressing with additional branded product lines	Own Investment	1	6	6	0	0	13
	Bank loan	40	31	3	0	6	80
	Corporate investment	3	4	0	0	0	7
Total		44	41	9	0	6	100
Effective global advertisement enhances the sales of their products	Own Investment	7	1	0	3	2	13
	Bank loan	0	6	2	52	20	80
	Corporate investment	0	4	0	3	0	7
Total		7	11	2	58	22	100
It started serving both modern and	Own Investment	4	8	1	0	0	13
	Bank loan	31	27	8	4	10	80

traditional products.	Corporate investment	3	4	0	0	0	7
Total		38	39	9	4	10	100
Improved support by various financing institutions.	Own Investment	4	2	4	3	0	13
	Bank loan	49	20	0	1	10	80
	Corporate investment	0	3	4	0	0	7
Total		53	25	8	4	10	100

Inference: The majority of the retailers agreed towards Upgrading their technology and renovating their stores according to global retailers.

The majority of the retailers Strongly agreed towards Progressing with additional branded product lines , it started serving both modern and traditional products and Improved support by various financing institutions.

The majority of the retailers disagreed towards the effective global advertisement enhances the sales of their products

Hypothesis framed

H0:There is no Association between Source of Investment and Opportunities Available to Organized Retailers

H2:There is an Association between Source of Investment and Opportunities Available to Organized Retailers

Table 10: Chi Square Test: Association between Source of Investment and Opportunities Available to Organized Retailers

	Pearson Chi-Square	df	Asymp. Sig. (2-sided)	Results
Upgrading their technology and renovating their stores according to global retailers.	13.456 ^a	4	.006	Significant
Progressing with additional branded product lines	34.876 ^a	8	.000	Significant
It started serving both modern and traditional products.	12.254 ^a	8	.104	No Significant
Improved support by various financing institutions.	54.437 ^a	8	.000	Significant

Inference: There is an association between Source of Investment and Upgrading their technology and renovating their stores according to global retailers, Progressing with additional branded product lines, Effective global advertisement enhances the sales of their products and Improved support by various financing institutions.

Conclusion

From this research the researcher identified that , Majority of Indian retailers those who invested through the Bank loan faced major problem during Covid 19 lockdown period. There is no Association between Source of Investment like own capital or bank loan or corporate investment and Challenges Faced by Organized Retailers due to Dropping off loyal customer and Labour shortage. The actual impact of COVID-19 on Foreign Direct Investment in the Organized retail sector will depend on the period of the crisis and the resulting extent of behavior change.

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