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PREREQUISITES FOR BUSINESS DEVELOPMENT IN SOUTH-EASTERN EUROPE IN THE CONDITIONS OF POLYCRISIS AND DIGITAL TRANSFORMATION

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Original article

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ABSTRACT

Purpose: The purpose of the present study is to identify prerequisites for business development in the conditions of polycrisis in the EU member states of South-Eastern Europe. In the context of digital transformation and the low-carbon transition, this can have an impact on changing their economic policy.

Design/Methodology/Approach: The object of research are selected macroeconomic performance indicators of selected EU member states from Southeast Europe (Bulgaria, Romania, Croatia), which are key their business development. The subject is the determination for the business development in conditions of polycrisis and digital transformation. Methodology is mainly based on descriptive analysis and statistical analysis. The main hypothesis proves the statement that in the conditions of polycrisis in the studied period between 2018 and 2022, the three SEE countries (Bulgaria, Romania and Croatia), underestimate the significance of business development in the field of investments and innovations, reforms and institutional environment, and fiscal policy efficiency.

Findings: Identifying key determinants that respond to exogenous shocks in specific regions of the EU may be useful for changing its fiscal policy and also help countries take measures to create the conditions for business development. Also, it can lead to optimization of corporate management and investment processes.

Keywords: *Polycrisis, Exogenous Shocks, Covid-19*

1. INTRODUCTION

Business in Southeast Europe was put to serious tests. After the global crisis of 2008, the economies of EU member states are increasingly subject to exogenous shocks (the COVID-19 pandemic, the war in Ukraine). The two crises affected a number of enterprises and business in general, not only in Europe, but also throughout the world. Governments have taken a number of measures to support businesses and mitigate the negative effects that have arisen either expectedly or unexpectedly. A significant financial resource was committed, which helped the business to some extent, but despite this, there was a deterioration in the supply chains of a number of resources and products.

COVID-19 has rather affected the supply of certain food and medical products, while the war in Ukraine has led to a shortage of energy resources, resulting in a rise in their prices, leading

to an increase in general inflation. Europe, being extremely dependent on Russian resources, found itself in a most curious situation. Digital transformation and artificial intelligence are particularly relevant topics in recent times, therefore the prerequisites for business development in this study will be examined not only from an economic and financial point of view, but also from the point of view of the actions of governments regarding the promotion of investment and innovation and reforms on these issues.

According to Zeitlin, Nicoli & Laffan (2019), the term "polycrisis" was first used in 2016. by Jean Claude Juncker President of the European Commission. This term refers to the many challenges that the European Union has to deal with at the same time in this time period. These are: the financial, economic and social crisis, the migration pressure, the geopolitical risk of new wars, BREXIT. All these challenges interact and have a strong cumulative effect, draining the EU's resources, preventing it from addressing them. In this context, a polycrisis is a collection of single crises of different nature, and therefore there is no easy solution to deal with it.

Meissner & Schoeller (2020) examine the possibilities of EU public institutions to cope in polycrisis conditions. They also use the term "polycrisis" in the context of a collection of multiple single crises. The state of polycrisis, according to them, leads to the transfer of powers from one public body to another and the formation of ever-changing coalitions of different economic and political players. Ágh (2017), analyses populism that develops in an environment of polycrisis. It suggests the creation of tools to deal with this polycrisis effect.

Von Homeyer, Oberthür & Jordan (2021), examines the appropriateness of undertaking ambitious policies, such as those related to tackling climate problems and transforming energy in polycrisis conditions. In these conditions, the economy is weakened, the incomes of the population have suffered, and the implementation of reforms that have long-term goals can be difficult. And in this publication, the term "polycrisis" is used in the context of multiple single crises that interact and create a complex environment for the development of economic, environmental and social policies.

The other major publication that defines the term "polycrisis" in the present context is by Lawrence et al. (2024). There, the "polycrisis" is defined as a state of multiple global threats, including the COVID-19 pandemic, climate change, and the war in Ukraine, the effects of which are interconnected, devastating, and not well understood. The authors believe that it is a combination of shocks and events, some of which are developing very quickly and aggressively in an environment of other threats that are developing slowly, but against which there is no clear countermeasure. Thus, synchronized crises occur, although they individually develop at different speeds. In this way, they can push even the global economic system out of its established equilibrium and place it in a complex situation of disequilibrium. According to them, although by 2024 there is still no established definition of "polycrisis", this term is gaining popularity in scientific publications. Its importance is associated with causal relationships and interactions between single crises that develop in the same time period and cause a general and cumulative effect.

Seabrooke & Tsingou (2019) examine the totality of the multiple crises facing the European Union and conclude that they are not only different in nature but also developing at different speeds. And if not countered in a strategic way against the totality of these crises, they can threaten the European project.

Uvalic (2012) concludes that the countries of South-Eastern Europe have a lower progress in the transition to a market economy than the countries of Central and Eastern Europe. Therefore, the region of Southeast Europe is more interesting for research, especially in the context of EU integration. The comparison is made on the basis of various classic macroeconomic indicators.

Apostolov (2013) analyses the state of enterprises in transition economies from South-Eastern Europe, focusing on the Western Balkans. Indicators are used for effective corporate governance and interaction with local financial institutions and markets. The study found that there is a need for significant improvement in corporate governance in these countries with economies in transition.

However, Kragulj & Bulajić (2018) analysed the economic development of the countries of Southeast Europe by using the I-distance technique – a multivariate statistical method for ranking entities. The authors claim that this method is more appropriate than the methods used by the United Nations (Human Development Index) and the World Bank. The researched period is 2007-2012.

Allen (2020) examines the process of the Balkan countries and Turkey accession to the EU. He evaluates the impact of COVID-19 pandemic over the development of economic and social policies, as well as over the process of international cooperation.

Gürkan & Brack (2020) evaluate the impact of polycrisis over the integration process in EU. They analyze the differences between both the polycrises during the last enlargement of the European Union with East-European Countries and the polycrises before this period.

Czarzasty, (2024) examines the development of the industrial relations in the Central and East Europe after the EU enlargement, dated since 2004. The main conclusion of their article is that the convergence of the newly accessed member-states to the EU has not happened in accordance with expectations and this convergence is strongly slowed down. According to the authors, this fact is due to the fragmentation of the industrial relations and the national economy's transformations very often do not lead to convergence.

The purpose of the present study is to identify the prerequisites for business development in the conditions of polycrisis in the EU member states of South-Eastern Europe. This analysis can be useful in the transition of these countries to a market economy and the achievement of high economic integration in the EU.

2. METHODS

Descriptive and statistical analysis were used. A descriptive analysis was carried out of EU member states from South-Eastern Europe that had a planned economy before their accession (Bulgaria, Romania and Croatia). In this way, the transformation of these countries from a planned to a market economy was also covered. They were compared according to various criteria with representative EU member states with a developed market economy (Germany and France). One representative country that has already reached a developed market economy after transformation from a planned economy (Estonia), which is not located in Central Europe and has a small territory and population, was also selected.

The selected period 2018-2022 aims to capture the "polycrisis" that was affecting the EU (the COVID-19 pandemic, the war in Ukraine, migrant pressure, etc.).

The analysis will be implemented through three groups of indicators: investments and innovations, reforms and institutional environment, efficiency of fiscal policy. The idea of an analysis based on these three groups of indicators comes from a working document of the European Commission (2018). In 2023, the Bulgarian Industrial Association made an analysis based on these three groups of indicators, with one of the authors of the present publication (S. Nozharov) being a key expert of the team (BIA, 2023). The methodology of the cited BIA analysis was developed by the author of the current article.

But this analysis is based on too many indicators and to some extent is not focused enough. In the present analysis, indicators are used that are different from those proposed by the Euro-

pean Commission (2016) and they have the task of making focused conclusions related to the purpose of the study. The idea for „virtuous triangle of economic policy" is described in the document and this idea includes the three pillars: "Boosting investment", "Pursuing structural reforms", "Ensuring responsible fiscal policies". However, in the present research different indicators, examining the three pillars, are used.

Statistical analysis was also used. By means of the one-factor linear regression method, the correlation of the selected macroeconomic indicators with the GDP per capita for the region of South-Eastern Europe was verified. In this way, it was determined which of them have the biggest impact on the development of business in the conditions of polycrisis in this region.

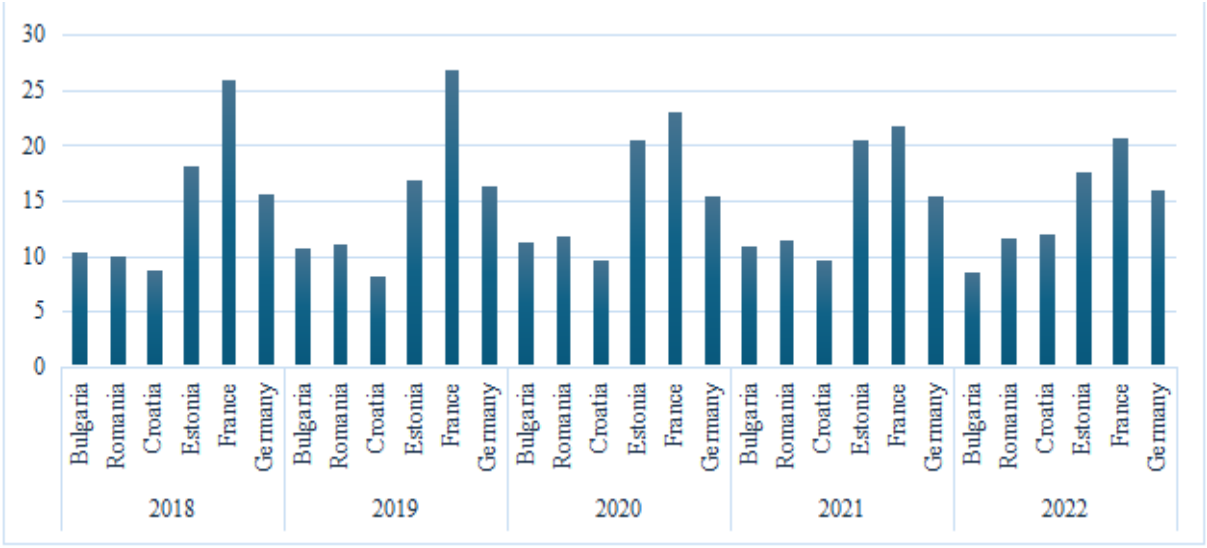
3. RESULTS AND DISCUSSION

The results of the descriptive and statistical analysis will be presented and discussed in three groups that are related to each other.

3. 1. INVESTMENTS AND INNOVATIONS

The use of the indicator "high-tech exports" aims to capture the result of the output of the economic system. In many cases, indicators are used that analyse the input - the invested funds for scientific research activity, which, according to the authors, does not give a clear picture in the countries of South-Eastern Europe. This is because it does not capture the shadow economy, corruption, heavy bureaucracy and inefficiency of public policies.

Figure 1. High-technology exports-% of manufactured export (2018-2022)



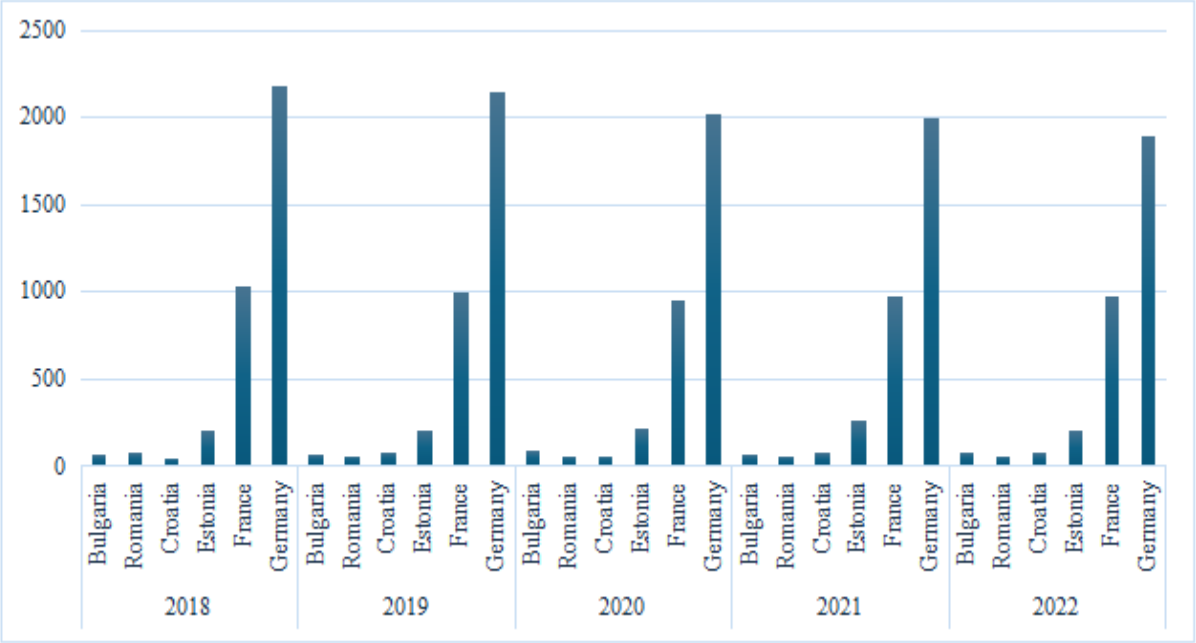
Source: World Bank (2024a)

The data shows that the three countries of South-Eastern Europe (Bulgaria, Romania and Croatia) have comparable and lower indicators during the research period (2018-2022) with 5-10% compared to developed EU member states. While Estonia's indicators are between those of Germany and France. This shows that EU Member States from South-East Europe have slowed down the transformation of their economies, including the digital transformation. The second indicator and applications for patents per one million people of the population. In this way, individual countries can be compared without distortions related to differences in their population or territory. This indicator also shows what comes out of the economic system as a scientific result.

Statistical assessment:

As can be seen from the results of a one-factor regression analysis, the relationship between High-tech export (Y) and Real GDP per capita (X) is moderately strong, which is also confirmed by the value of the correlation coefficient (Multiple R) – 0.69 and the dependence is linear and directly proportional. Significance F= 0,0000230272058997584, which means it is lower than α (0.05) and allows the relationship to be interpreted. R Square= 0.48 (the coefficient of determination) shows that approximately 48% of the change in the value of the indicator Real GDP per capita can be explained by the change in the value of High-tech export.

Figure 2. Patent applications per million inhabitants (2018-2022)



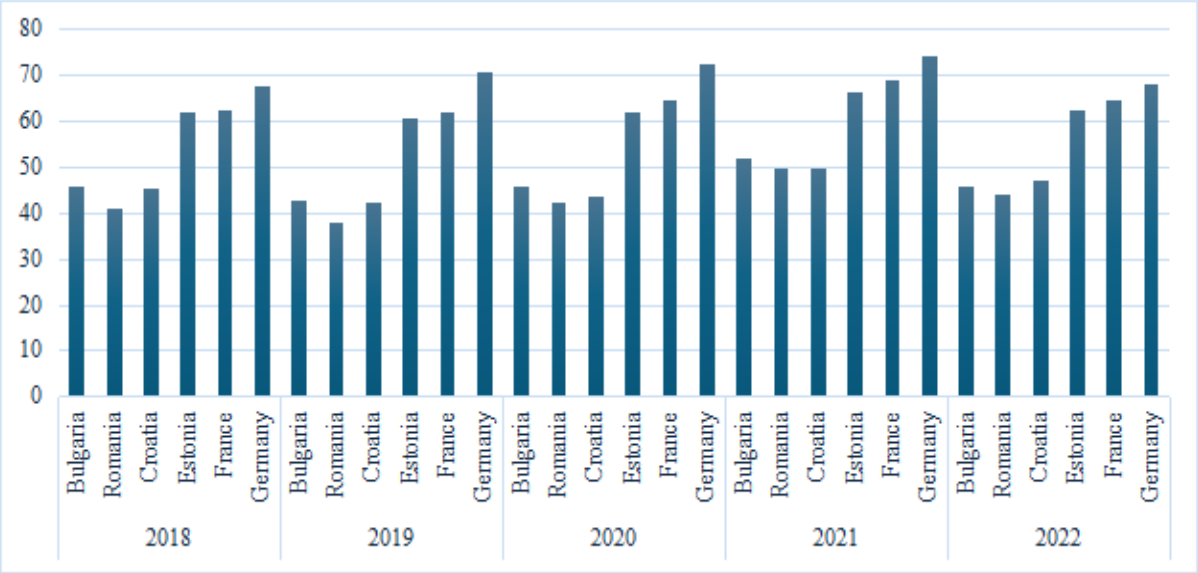
Source: World Intellectual Property Organization 2024, EUROSTAT 2024a, own analysis.

The data shows that the three countries of South-Eastern Europe (Bulgaria, Romania and Croatia) have comparable and low indicators during the research period (2018-2022), which are 10-15 times lower than the developed EU member states. One explanation is that scientific research in these countries is still mostly concentrated in state institutions, which is a remnant of the planned economy. And business is not sufficiently stimulated to create strong private innovation units. The third indicator is related to the opportunities to create, attract, develop and retain talent. In the digital economy, patents and innovations are created by talent. They are a valuable asset to any economy.

Statistical assessment:

As can be seen from the results of a one-factor regression analysis, the relationship between Patents applications per million inhabitants (Y) and Real GDP per capita (X) is strong, which is also confirmed by the value of the correlation coefficient (Multiple R) – 0.92, and the dependence is linear and inversely proportional. Significance F= 0,000000000000073538201772, which means that it is significantly lower than α (0.05) and allows the dependence to be interpreted. R Square= 0.85 (the coefficient of determination) shows that approximately 85% of the change in the value of the indicator Real GDP per capita can be explained by the change in the value of Patents applications per million inhabitants.

Figure 3. Global Talent Competitive Index (2018-2022)



Source: INSEAD (2024)

The data shows that the three countries of South-Eastern Europe (Bulgaria, Romania and Croatia) have comparable and low indicators during the research period (2018-2022), which are lower compared to developed EU member states such as Germany and France. incl. and Estonia. One explanation is that incomes in these countries are still low and the public infrastructure is not good enough (incl. health care, education, etc.).

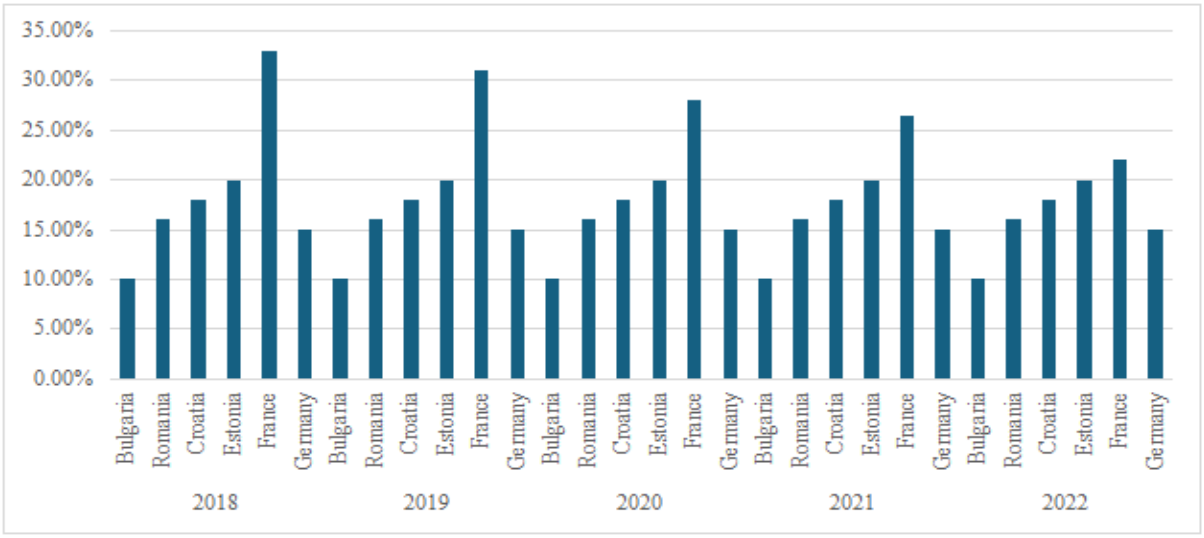
Statistical evaluation:

As can be seen from the results of a one-factor regression analysis, the relationship between the Global talent competitiveness index (Y) and Real GDP per capita (X) is strong, which is also confirmed by the value of the correlation coefficient (Multiple R) – 0.91. and the dependence is linear and directly proportional. Significance F= 0,00000000000618, which means that it is significantly lower than α (0.05) and allows the dependence to be interpreted. R Square= 0.82 (the coefficient of determination) shows that approximately 82% of the change in the value of the Real GDP per capita indicator can be explained by the change in the value of the Global talent competitiveness index.

3. 2. REFORMS AND INSTITUTIONAL ENVIRONMENT

Reforms and the institutional environment are prerequisites for a good business climate or creating conditions for accelerated digital transformation. First of all, the level of corporate tax will be considered.

Figure 4. Corporate tax rates (2018-2022)



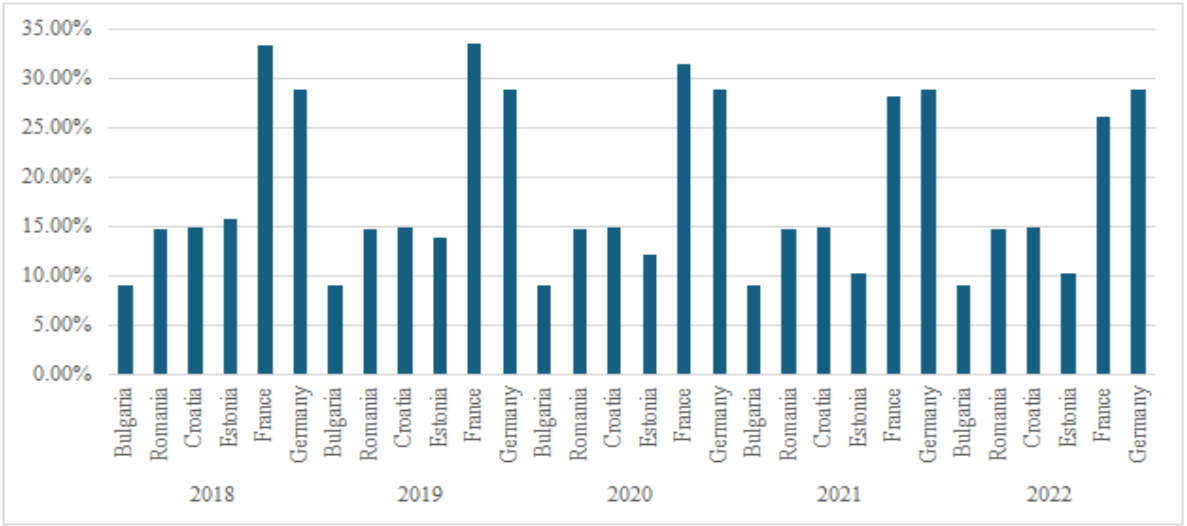
Source: European Commission (2024)

At first sight, the level of corporate tax in the EU Member States of South-Eastern Europe is lower than that of the developed economies in the EU. The lowest levels of corporate tax are in Bulgaria - 10% for the studied period, and the highest in France between 20 and 32.5%. But in order to find out whether this has a positive effect on the business environment, one should look at the indicator - the level of effective corporate tax.

Statistical evaluation:

As can be seen from the results obtained when conducting a one-factor regression analysis, the relationship between Corporate tax rate (Y) and Real GDP per capita (X) is weak, which is also confirmed by the value of the correlation coefficient (Multiple R) – 0.45, and the dependence is linear and directly proportional. Significance F= 0.012568, which means it is lower than α (0.05) and allows the dependence to be interpreted. R Square= 0.20 (the coefficient of determination) shows that approximately 20% of the change in the value of the indicator Real GDP per capita can be explained by the change in the value of the Corporate tax rate. The explanation for the weak relationship is that the resulting magnitude would be better explained by the Effective tax rates indicator. Therefore, this indicator will also be considered.

Figure 5. Effective tax rates (2018-2022)



Source: European Commission (2024)

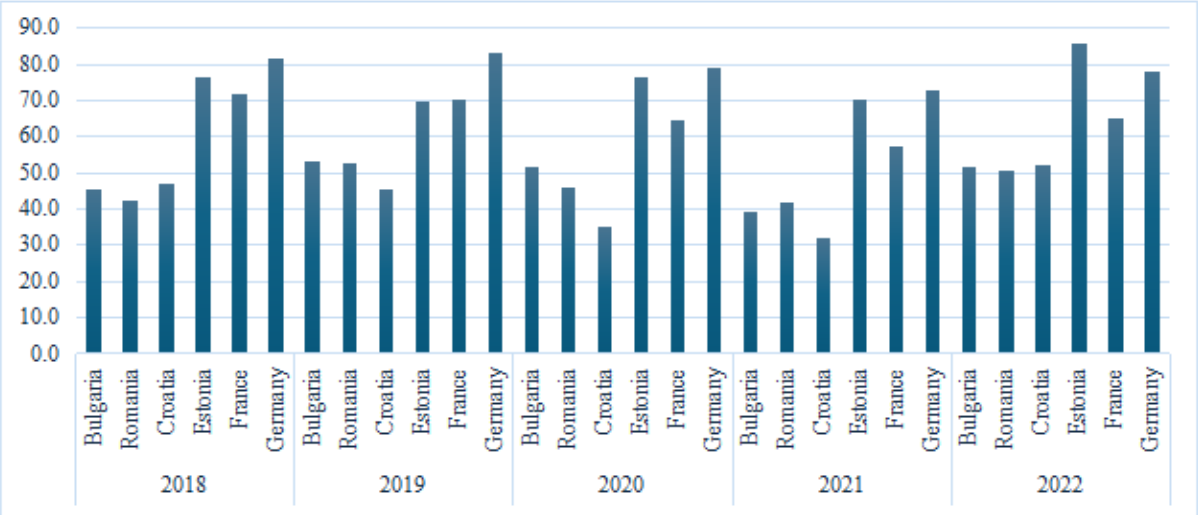
Figure 5 shows that the effective corporate tax rate in Estonia is 10.20% for 2022, while for the same year in Bulgaria it is 9%, Romania 14.7% and Croatia 14.8%. That is, although the nominal corporate tax rate in Figure 4, for example, in Bulgaria is 10% for 2023, and in Estonia for the same year it is 20%, this difference is only apparent. The effective difference is only 1% between the effective corporate tax of Bulgaria and Estonia, which does not give Bulgaria the opportunity to attract investors in this way. Provided that the rule of law and digitalization of public services in Estonia are at a much higher level.

Statistical evaluation:

As can be seen from the results of a one-factor regression analysis, the relationship between Effective tax rate (Y) and Real GDP per capita (X) is strong, which is also confirmed by the value of the correlation coefficient (Multiple R) – 0.88, and the dependence is linear and directly proportional. Significance F= 0,00000000015466498 23, which means that it is well below α (0.05) and allows the dependence to be interpreted. R Square= 0.77 (the coefficient of determination) shows that approximately 77% of the change in the value of the indicator Real GDP per capita can be explained by the change in the value of the Effective tax rate.

The "Future Readiness" factor represents the basis for the digital transformation of business and public authorities.

Figure 6. World Digital Competitiveness Ranking – Future readiness (2018-2022)



Source: IMD (2024)

The data shows that the three countries of South-Eastern Europe (Bulgaria, Romania and Croatia) have comparable and low indicators during the research period (2018-2022), which are lower compared to developed EU member states such as Germany and France incl. and Estonia. On the other hand, these countries do not have enough funds, incl. and in the private sector for investment in accelerated digital transformation.

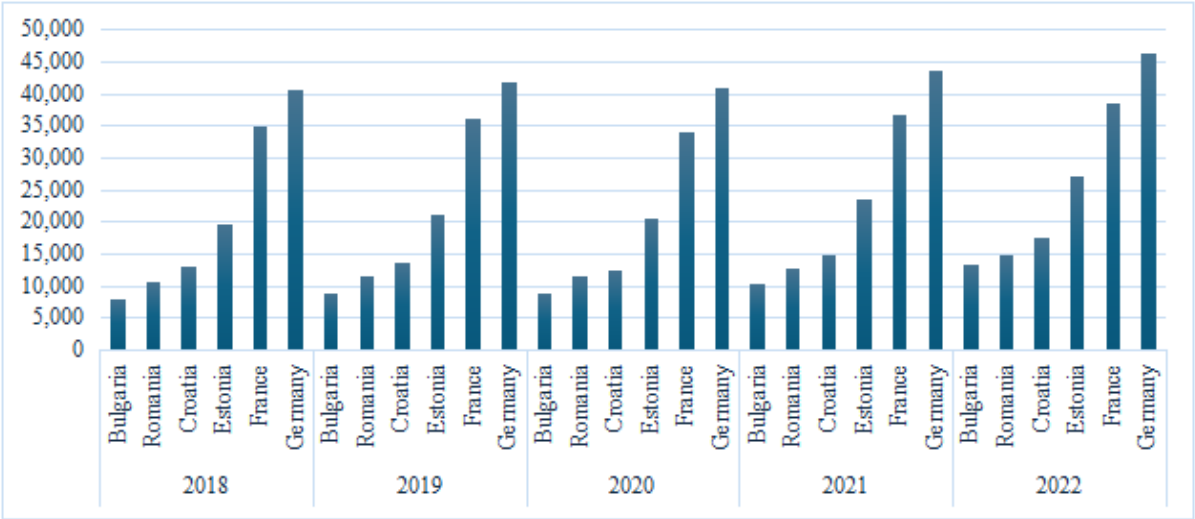
Statistical evaluation:

As can be seen from the results obtained when conducting a one-factor regression analysis, the relationship between World digital competitiveness ranking (future readiness) (Y) and Real GDP per capita (X) is strong, which is also confirmed by the value of the correlation coefficient (Multiple R) – 0.77, and the dependence – linear and directly proportional. Significance F= 0,00000056381857, which means that it is well below α (0.05) and allows the dependence to be interpreted. R Square= 0.597 (the coefficient of determination) shows that approximately 60% of the change in the value of the indicator Real GDP per capita can be explained by the change in the value of the World digital competitiveness ranking (future readiness).

3. 3. FISCAL POLICY EFFECTIVENESS

The effectiveness of the fiscal policy is also very important for the business environment and the opportunities to realize investments related to digital transformation and new technologies. As the first indicator here, GDP per capita in current prices (euro) will be considered. In this way, an effective comparison will be made between the selected countries regardless of the difference in their population or territory.

Figure 7. Real GDP per Capita - EUR (2018-2022)

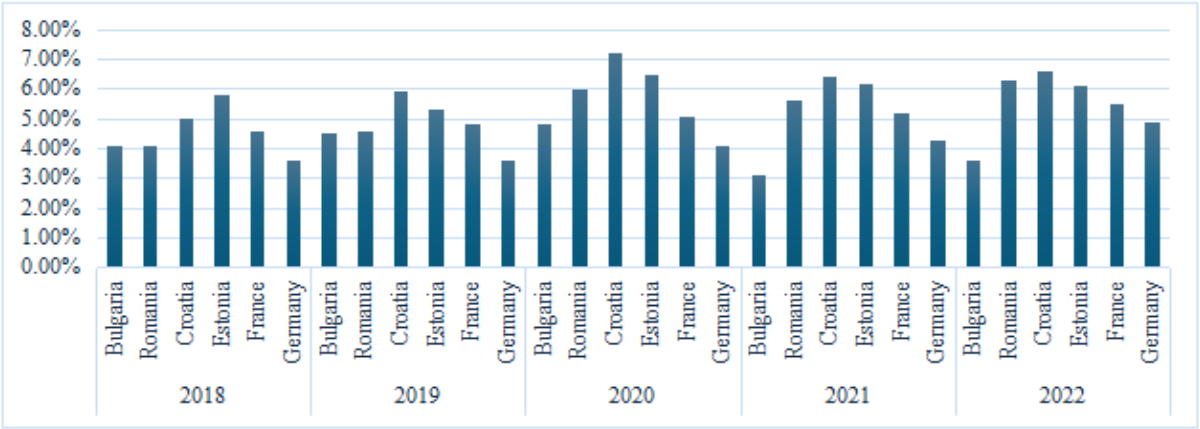


Source: EUROSTAT (2024b)

The data shows that the three countries of South-Eastern Europe (Bulgaria, Romania and Croatia) have comparable and low indicators during the research period (2018-2022), which are lower compared to developed EU member states such as Germany and France incl. Estonia. A possible explanation for this is that they have not yet transformed their economies by not carrying out all the necessary reforms. Of these, only Croatia is a member of the Eurozone, but this event occurred outside the studied period - in 2023 and as it is of very recent date, its effects cannot yet be caught.

Capital expenditures will be considered as the next indicator. They show the level of funds that the state allocates for building infrastructure, which significantly affects the conditions for business investments. More developed public infrastructure tends to stimulate investment. This is the resulting magnitude of the regression analysis; the data is from Eurostat.

Figure 8. Capital expenditures (2018-2022)



Source: European Central Bank (2024)

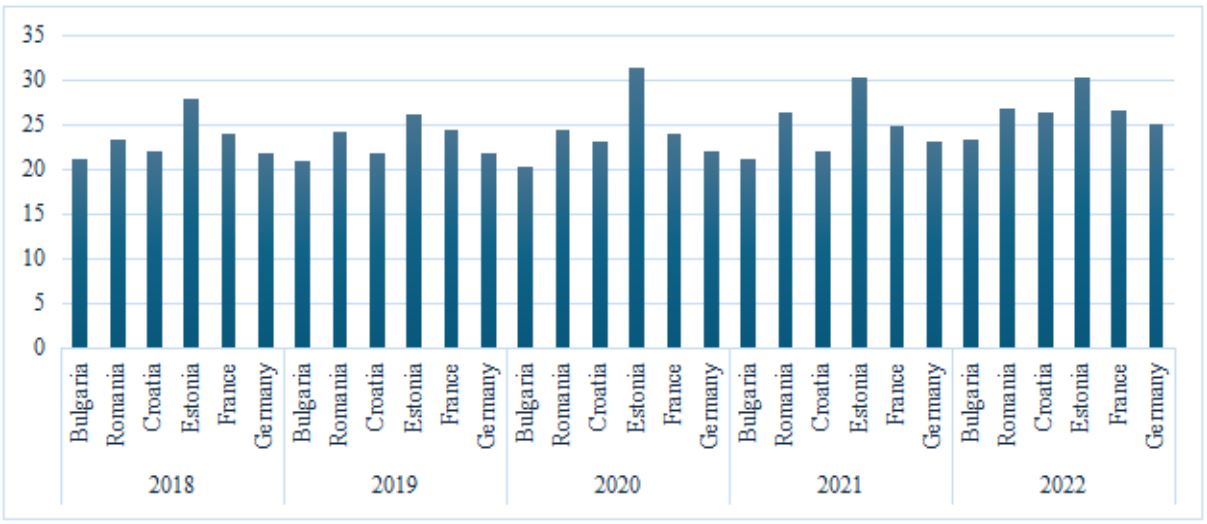
Although some of the countries of South-Eastern Europe during the studied period allocate comparable funds for capital expenditure as those of the developed EU member states, this is only apparent. In many cases, public capital expenditure in SEE countries is used as a countercyclical buffer. They are included in the budget but are not implemented. This is how the fictitious budget deficit is reduced or the budget appears to have a budget surplus at the end of the year. At the same time, their infrastructure remains in poor condition, hindering both digital transformation and the business environment for attracting investment.

Statistical evaluation:

As can be seen from the results obtained when conducting a one-factor regression analysis, the relationship between Capital expenditures (Y) and Real GDP per capita (X) is weak, Significance F= 0.247322, which means that the indicator is higher than α (0.05), does not a statistically significant relationship exist and does not allow dependence to be interpreted. This is also confirmed by the value of the coefficient of determination R Square = 0.047, which shows that almost no change in the value of the Real GDP per capita indicator can be explained by changes in the value of the Capital expenditures indicator. The correlation coefficient (Multiple R = 0.22) also shows an insignificant relationship between the two variables. This also corresponds to the conclusions of the descriptive analysis for this indicator.

The last indicator is private investments. Their level is determined to a high degree by the efficiency of the fiscal policy.

Figure 9. Gross fixed capital formation - % of GDP (2018-2022)



Source: World Bank (2024b)

The data shows that the three countries of South-Eastern Europe (Bulgaria, Romania and Croatia) have comparable and low indicators during the research period (2018-2022), which are lower compared to developed EU member states such as Germany and France. incl. and Estonia. This is not very normal, because they are catch-up economies, and as can be seen from the example of Estonia, their indicators should be even higher than those of Germany and France. They are the lowest in Bulgaria. The reasons are poor fiscal management, which is due to the non-application of program format budgeting, inefficient fiscal institutions, unreformed administration, etc.

Statistical evaluation:

As can be seen from the results obtained when conducting a one-factor regression analysis, the relationship between Gross capital formation (Y) and Real GDP per capita (X) is weak, Significance F= 0.244351, which means that the indicator is higher than α (0.05), no statistically

significant relationship exists and does not allow dependence to be interpreted. This is also confirmed by the value of the coefficient of determination R Square = 0.05, which shows that almost no change in the value of the indicator Real GDP per capita can be explained by changes in the value of the indicator Gross capital formation. The correlation coefficient (Multiple R = 0.22) also shows an insignificant relationship between the two variables. This also corresponds to the conclusions of the descriptive analysis for this indicator.

4. CONCLUSION

The selected period 2018-2022 covers the "polycrisis" that affected the EU (the COVID-19 pandemic, the war in Ukraine, migrant pressure, etc.). At the same time, an accelerated digital transformation in the EU also started during this period. The data analysis shows that the three selected EU Member States from South-Eastern Europe have not yet sufficiently transformed their economies in the transition from a planned economy to a market economy. In them, there is an insufficiently good relationship between investment and innovation. Their high-tech exports, patent applications, creation, attraction, development and retention of talent remain insufficiently effective. And the selected indicators are accurate enough because they show what is at the output of the economic system as a result. Unlike other analyses, which consider what is input to the economic system in the form of patent and innovation costs.

Also, reforms and the institutional environment do not sufficiently stimulate investment in digital transformation. The understanding of these countries that they can attract investment on the basis of low taxes without reforming their institutions (administration, judiciary, etc.) is ineffective. Investments go where reforms are successful, as shown by the example of Estonia.

The effectiveness of fiscal policy is also at a low level. Real public capital expenditure and private investment are low, resulting in low GDP per capita at current prices. This is also due to the lack of reforms that lead to an effective fiscal policy, such as the introduction of expanded program budgeting and others.

The conclusion of the analysis is that the indicators, chosen by the authors and presenting the three pillars: Investments and Innovations, Reforms and institutional environment, Fiscal policy effectiveness, are very important for the development of SEE countries' economies, especially in the conditions of polycrisis.

What prevents Bulgaria, Romania and Croatia are the unfinished reforms related to the rule of law, protection of property rights, modernization of the fiscal policy, completion of the administrative reform through digitalization of the public sector. The obtained results confirm the author's hypothesis. The statistical analysis in the study confirms this conclusion.

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