

# **THE IMPACT OF MACROECONOMIC INDICATORS OF ECONOMIC GROWTH: AN EMPIRICAL ANALYSIS OF CENTRAL AND EASTERN EUROPEAN COUNTRIES**

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## **Abstract**

A primary factor in determining the well-being of the population is economic growth, as this indicator is used to evaluate the success of the development of an economy. This article investigates the effects of macroeconomic indicators on economic growth in Central and Eastern European countries in a panel for the period 2000 to 2022. At the same time, we want to highlight the most current studies in the field with reference to the evolution of macroeconomic indicators with an impact on economic growth, in a dynamic and unpredictable context of socio-economic turmoil, as if more significant in the last 3 (three) years. The set of macroeconomic indicators was subjected to least squares (OLS) regression to establish the degree of relationship between them and economic growth in the selected sample. The regression results show that a set of variables (inflation rate, real interest rates, domestic credit granted to the private sector, current account balance, respectively government spending) have a negative and significant impact on economic growth, while trade openness has a positive impact. These findings underline the need to implement sound macroeconomic policies that promote sustainable economic development.

## **Keywords**

Economic growth, macroeconomic indicators, regression (OLS) and autoregressive model.

## **JEL classification**

C33, E44, E60.

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## **Introduction**

The dynamics of the events of the last decades shaped both the behaviour and how we relate to and understand the economic phenomena happening at the global level. We live in an era of globalization where every country looks, thinks and reacts differently to socio-

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economic, political or any other phenomena. At the level of the countries of Central and Eastern Europe, economic development gives birth to various ways of approaching from the perspective of the evolution of events, which characterize the last decades. The consequences of global events are a serious threat to the economies of less developed countries and implicitly to the population. In this situation, we find the majority of countries, whose economy was severely tested, with the outbreak of the pandemic.

If this was not enough, the start of the military operation in Ukraine further amplified the existing situation, with a high level of spending in G.D.P. and with sometimes conjunctural decisions. On the other hand, efforts were made to reduce the ill effects of the SARS-CoV-2 virus, by accumulating loans, whose effect on the public debt will have to be well managed, taking into account the level of affordability of the economy.

Therefore, the study proposes a thorough analysis, which will highlight to what extent the events of the last decades (financial crisis, socio-economic kneading) and especially of the last years (pandemic, armed conflict and more recently an energy crisis) have determined a significant fluctuation of macroeconomic indicators, which reached less forecasted values, with a pronounced impact on economic growth. After all, the evolution of macroeconomic indicators shows the "state of health" in which the economy is at a given moment. With a pronounced impact, thanks also to the developments of the last year, 2022, the indicators are distinguished: *G.D.P. growth* (dependent variable), *Inflation consumer prices*, *Labor force participation rate*, Households and NPISHs final consumption expenditure, and Trade openness. For example, if for the period 2000 - 2021, the minimum level reached by G.D.P. growth was -15.13%, in 2022 it reached a value of -19.10%, in the case of Ukraine. Of course, the specialized literature highlights the difference in perception not only between growth and economic development, but it does not always manage to capture even the most sensitive changes in events with an impact on economic growth. In the end, their dynamics are also surprising due to the way they manifest and the unpredictability that characterizes them. The management of such events gives rise, first of all, to concern, and overcoming these situations requires carefully elaborated decisions. Most of the time, they are not always to the liking of investors, multinational companies and the population, and in this context, the role of the government is decisive, in finding the best solutions.

The objective of the study aims, on the one hand, to analyse the impact of macroeconomic indicators on economic growth, in a context of dynamic socio-economic crises and upheavals, characterised by an unpredictability recognised at the European level, and on the other hand, to find the most appropriate measures to development, based on sound economic policies, at the level of Central and Eastern European countries. At the same time, it is found that the reforms implemented, at the country level, need even more flexibility, which would give the business environment a period of adaptability to the new market requirements. Consequently, the theme has contributed to completing and at the same time updating the specialized literature in the field, enjoying a high degree of complexity. The current geopolitical context requires the governments of Central and

Eastern European countries to take prudent measures and at the same time requires an assumption of the decisions and measures taken.

### **1. Review of the scientific literature**

Economic development and growth are two essential factors for human society, received increased attention over the years, both from economists and policymakers. Most countries have as their objective the achievement of rapid and sustainable economic growth, but the achievement of this objective has periodically encountered various problems due to the fluctuation of macroeconomic indicators. The theory of economic growth has been widely debated since the 1950s by Robert Solow and Trevor Swan, who argue that this concept is the result of three main factors, namely increased labour productivity, capital accumulation and technological progress.

According to the literature, an economy has limited resources when it comes to labour and capital accumulation, but the contribution of technology to economic growth should have no limits. There are a variety of empirical and theoretical studies on economic growth and the indicators that characterize it, which are analysed from various perspectives.

In this context, the study: *The impact of key macroeconomic factors on the economic growth of Bangladesh: An autoregressive distributed lag bounds testing approach* (Jacob, T. et al, 2021) analyses the impact of these, macroeconomic indicators on economic growth in Bangladesh in the period 1990 - 2020. The analysis captured the relationship, both in the short term and in the long term, between the two key concepts of economic development. Following the analysis, the authors concluded that the inflation rate, exchange rate and trade transactions have a significant impact on economic development. On the other hand, they also claim that foreign direct investment has an insignificant impact on the economic growth of Bangladesh. Foreign direct investment is essential in the mechanism of stimulating, sustaining and establishing the degree of sustainability of the economy and its potential to face market challenges. However, the fluctuation and the way they are perceived, can create certain distortions, felt in the evolution of the economy from the point of view of the impact, but also of the contribution in achieving the G.D.P. In other words, the G.D.P. is essential in developing the best strategies. If it increases, the activity of the business environment can support the allocation of additional funds for research and development, innovation, etc. These, in turn, also lead to an increase in the standard of living, the security of stable incomes, sustainable expenses with the employment of people in the field of work. Their stated goal is to reduce the level of poverty, simultaneously with the creation of sustainable development conditions at the country level.

Another study: *The impact of macroeconomic indicators on economic growth in the United States and Indonesia: a cointegration test approach* (Antoni, A. 2019) analyses economic growth against three relevant indicators in the U.S. respectively Indonesia. The study finds that the G.D.P. has a particular impact on economic development. Fluctuations, due to the events of the last decades, were carefully monitored, finding that the impact of the world crisis had the worst possible effect on the economy of the analysed countries. The authors reported that there is a strong long-term relationship between

macroeconomic variables for both countries analysed. Thus, a more active macroeconomic policy is recommended in both countries, especially in Indonesia. Its government needs to do better management in the public sector to support macroeconomic policies. Economic growth in developing states such as Indonesia is relatively higher than in developed countries such as the United States because economic conditions are stable and almost all resources are optimally utilized. Similar results are also obtained by Imleesh et al. (2017).

Analysis The impact of macroeconomic indicators on economic growth in Indonesia, Malaysia and Singapore (Imleesh, R. M. et al.2017) supports the idea that economic growth is one of the indicators used to evaluate the success of the development. The purpose of this research is to analyze the relationship between inflation and interest rate with economic growth. Moreover, an economic comparison with other developing countries such as Malaysia and Singapore are also desired. According to the studies presented, we can state that the relationship between economic growth and macroeconomic indicators is complex, as they play an important role in shaping economic performance. For example, one of the indicators that raises big problems at the level of all states and that arouses interest in finding the best solution to overcome this period is represented by the inflation rate.

In the specialized literature, we find a multitude of studies that analyse the relationship between the inflation rate and economic growth (Wollie, G. et al. 2018; Ahmad, T. 2022; Olamide, E. et al. 2022; Stievany and Jalunggono, 2022) and which concludes that higher and more volatile inflation is bad for any economy. In this sense, a low and stable inflation rate is a promoter of any economy. In this situation, the question clearly arises: *At what level is the inflation rate harmful to economic growth?* (Imleesh, R. M. et al. 2017) argue that an inflation rate below 10% has a positive impact on an economy in that it is able to encourage employers to increase and expand production, due to increasing prices and obtaining profit. Other authors (Salian and Gopakumar, 2011) investigated the relationship between the inflation rate and economic growth in India, finding a negative relationship. The authors conclude that a high rate of inflation affects India's economic growth. Another macroeconomic indicator of crucial importance is public debt, which is widely analysed globally. Following the studies carried out, a mutual consensus was found regarding the relationship between public debt and economic growth, as the relationship can be positive, negative or non-linear (Rahman, N. H.A. et al, 2019).

In this context of economic growth, the specialized literature states that it is very important that the funds from loans are redirected to those sectors of activity that aim to increase productivity through concrete investments in technology, stimulating consumption whose purpose is to represent the optimal repayment of the debt, and interest costs do not affect economic activity. The crises that have unfolded in recent years have imposed various measures aimed at increasing taxes and fees, affecting, much more visibly, the economies of developing countries. However, we are of the opinion that they had a greater need for strategies to reduce the arbitrary use of public finances and a more "assumed" management of the public debt. This objective could be implemented by better

and more realistic stimulation of the economy and not by a policy that is focused on reducing the public debt. According to the same source, it was also observed that whenever public debt increased, the cost of debt sometimes decreased, as governments replaced debt borrowed from second-tier banks with debt borrowed from the International Monetary Fund (IMF). Last but not least, the authors emphasize the fact that corruption is closely correlated with the economic growth of a country.

In the study: Public Debt and real G.D.P. Revisiting the impact (Constance, S. et al. 2022), the authors provide evidence of the impact of an unforeseen change in public debt on G.D.P. The study analyses the data on the gross public debt for 178 countries between 1995 and 2020, where it is found that the impact of an unforeseen increase in public debt on the level of G.D.P. it is generally negative and varies according to several fundamental characteristics. Thus, an unanticipated increase in the public debt / G.D.P. ratio. affects the level of GDP for countries that have a high level of debt. On the contrary, an unexpected increase in public debt increases G.D.P. for countries that have a low-income level or have completed the H.I.P.C. debt reduction initiative. If the increase in public debt is used for public investment, it is likely to increase "subsequent growth" (Furceri et al., 2018). However, the increase in public debt can be channelled to other uses, such as tax cuts or other fiscal spending. These channels can also be affected by other factors such as governance or corruption. In these cases, the impact of an increase in public debt on G.D.P. may not be the same. The results of the study prescribe various policy implications. First, low-income countries can benefit from an increase in the public debt / GDP ratio. Second, lowering initial debt levels or maintaining a downward debt trajectory increases countries' potential benefit from additional borrowing. And finally, participation in the H.I.P.C. initiative. it increases the potential for countries to gain from additional borrowing, which can be a positive experience and should be considered for other debt reduction initiatives.

The dynamics of events in recent decades have shown how important stability in the region is for sustainable economic development. In this context, the main pillar, as suggested by specialist studies, is represented by economic growth. In fact, most of the countries in Central and Eastern Europe are characterized by a similar degree of development and understanding of the globalization phenomenon. The financial world as it is perceived has its effect on the allocation and especially the management of funds capable of adding value to the economic environment. The economic reality, as perceived by analysts and reported in various specialist studies, is not necessarily encouraging from the point of view of the measures and policies implemented by the state. However, there are also exceptions related to the governments of countries (Slovenia, Romania, Bulgaria, Croatia) that managed to maintain an upward trend regarding the proposed medium and long-term objectives. In all this amalgam of socio-economic events, the harmful impact generated by the COVID-19 pandemic, which managed to stop any economic activity bringing income to the state budget, should not be neglected. Currently, financial support from European institutions has not been slow to appear to reduce the ill effects of the pandemic and the armed conflict between Russia and Ukraine, together with their allies. In this context, the governments of the countries have the obligation to implement various

viable measures, to recover their economies. The economic situation during the economic crisis, the uncertainty regarding the evolution of the pandemic, and the armed conflict pushed the governments of the states of Central and Eastern Europe to certain concessions. These concerns, on the one hand, are the protection of the population with all that this measure entails, and on the other hand the support of the economic environment and the management with even more accuracy of unforeseen situations to reduce the negative effects, simultaneously with the reduction of the deficit that has reached levels worrying in most countries.

## 2. Research methodology

The purpose of this paper is to provide empirical evidence on the relationship between economic growth and macroeconomic indicators, showing how the variation of these indicators can affect economic performance. This paper fills the gap in the specialized literature by examining the fluctuations at the level of the states that are part of Central and Eastern Europe during the period 2000 - 2022. Our sample contains data on thirteen states in the CEE region: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia, Ukraine and Hungary. In this context, our analysis includes 16 indicators, and the data were obtained from four available sources: the World Development Indicators (WDI) database [<https://datacatalog.worldbank.org/home>], the European Commission (Eurostat) [<https://ec.europa.eu/eurostat>], the International Monetary Fund (IMF) database [<https://www.imf.org/en/Data>] and the International Financial Statistics (IFS) database [<https://data.imf.org>]. In econometric models, the dependent variable is economic growth, represented by G.D.P. growth.

We also used a set of independent variables that help evaluate the relationship between macroeconomic indicators and their influence on economic growth.

### Data description

The description of the variables we used in our work, as well as the data source, is represented in Table no. 1.

**Table no. 1 Description of variables**

Variables	Specifications	Sources of data
<i>Dependent variable</i>		
<b>GDP_g</b>	Gross domestic product growth, annual %	The World Bank
<i>Independent variable</i>		
<b>INF</b>	Inflation consumer prices, annual, annual %	The World Bank
<b>RIR</b>	Real interest rate (%)	The World Bank
<b>CAB</b>	Current account balance, % of GDP	The World Bank
<b>DCPS</b>	Domestic credit to private sector, % of GDP	The World Bank
<b>LIR</b>	Lending interest rate (%)	The World Bank

<b>Priv_invest</b>	Gross Fixed Capital Formation (GFCF), was used as an indicator of private investment	International Financial Statistics
<b>Gov_exp</b>	Government expenditure, % of GDP	International Monetary Fund
<b>UNEMP</b>	Unemployment, total (% of the total labour force)	The World Bank
<b>LFPR</b>	Labour force participation rate, total (% of total population ages 15-64)	The World Bank
<b>WSW</b>	Wage and salaried workers, total (% of total)	The World Bank
<b>HFCE</b>	Households and NPISHs final consumption expenditure, % of GDP	The World Bank
<b>FDI_inf</b>	Foreign direct investment, net inflows (% of GDP)	The World Bank
<b>TO</b>	Trade openness (share of exports and imports in GDP)	The Global Economy

*Source:* the representation of the authors

### Empirical results

Table no. 2 presents the descriptive statistics of the variables used.

**Table no. 2 Descriptive statistics**

Variable	Obs.	Mean	Str. Dev.	Min	Max
GDP_g	286	3.050631	3.712185	-15.13647	13.0722
INF	280	4.925057	8.927986	-1.58410	95.00523
RIR	228	3.851668	5.476904	-25.67959	20.03346
CAB	279	-3.874905	5.165437	-25.74000	10.28114
DCPS	228	45.86602	15.91463	0.18616	87.34998
LIR	230	10.72794	8.894373	1.47096	78.7
Priv_invest	283	22.97293	4.607811	12.20161	38.07025
Gov_exp	270	40.47064	6.551553	28.22910	60.26724
Unemp	286	12.73357	7.927257	2.01000	37.32
LFPR	260	65.62019	4.864416	51.52000	76.8600
WSW	260	76.01581	12.75785	35.89000	92.10
HFCE	283	64.22048	11.27163	45.33228	101.08
FDI_inf	279	5.442813	9.719384	-40.0866	106.6026
TO	260	105.3685	32.07182	22.49218	190.5436

*Source:* the authors' calculations

Table no. 3 presents the descriptive statistics, minimum and maximum, of the variables used and at the same time significant changes are noted for some indicators, as follows:

Table no. 3 Descriptive statistics (comparison: 2000-2021 / 2022)

Variable	Obs.	Min	Max	Min (2022)	Max (2022)
<i>GDP_g</i>	299	<b>-29.1000</b>	13.0722	-29.100	6.331
<i>INF</i>	294	-1.58410	95.00523	6.725	20.183
<i>RIR</i>	286	-25.67959	20.03346	-11.696	-2.893
<i>CAB</i>	292	-25.74000	10.28114	-9.287	4.897
<i>DCPS</i>	286	0.18616	87.34998	23.488	66.926
<i>LIR</i>	282	1.47096	78.7	3.360	18.609
<i>Priv_invest</i>	283	12.20161	38.07025	-	-
<i>Gov_exp</i>	270	28.22910	60.26724	-	-
<i>Unemp</i>	299	2.01000	37.320	2.370	15.081
<i>LFPR</i>	286	<b>49.632</b>	76.8600	49.632	61.752
<i>WSW</i>	260	35.89000	92.10	-	-
<i>HFCE</i>	296	<b>-26,104</b>	<b>8.922</b>	-26,104	8.922
<i>FDI_inf</i>	292	-40.0866	106.6026	-7.822	7.633
<i>TO</i>	286	22.49218	<b>203.89</b>	85.31	203.89

Source: the representation of the authors

The fluctuating trend of the indicators highlights both the impact of the various socio-economic phenomena that have marked these decades (the financial crisis, the COVID-19 pandemic, the military operation launched by Russia in Ukraine), as well as the recovery of economies in the face of such unforeseen situations. In this context, the values of the dependent variable vary between a minimum of - 29.100 at the level of Ukraine in 2022, and at the opposite pole is Croatia with a maximum value of 13.071, recorded in 2021. For the year 2022, the latter country, records a value of 6.331, the highest among those analysed at the C.E.E. level. In this context, the strongest impact on the entire economy was represented by the evolution of inflation. In this case, inflation is between a minimum of -1.58 recorded in the case of Bosnia and Herzegovina in 2016 and a maximum of 95,005 recorded by the economy of Serbia in 2001.

Regarding the last year, of the analysis, sprinkled with less harsh values of the pandemic, but with an armed conflict that fundamentally affects the stability in the area, the evolution of inflation, a scourge that gives trouble to any government falls between 6,725, the case of Albania. and 20.183 as expected, in the case of Ukraine, severely affected by the above-mentioned event. The effect of this indicator affects prices, purchasing power, creating imbalances in countries with a less solid economy, such as Romania, Bulgaria, etc. The economy of these countries was not far from the maximum, negative threshold of this indicator. with a pronounced impact on economic growth. From a broader perspective, inflation can be analysed using a more comprehensive index, the "G.D.P. deflator." which according to data provided by financial institutions (the World Bank),



Ukraine's economy has the highest level of approx. 34.32%, while the Czech economy recorded the lowest level of only -1,452 in 2010. Also, a very important pawn in terms of the state's economic policy is the unemployment rate where, throughout the analysed period, it was marked by a significant fluctuation, indicating a minimum value of 2.01%, recorded by the Czech Republic in 2003 and a value maximum of 37.32% recorded in Macedonia in 2005. Unemployment is a primary element that must be taken into account for the sustainable development of the countries in the region. Moreover, the Czech Republic, which in 2003 recorded the lowest value, returns to the "top of the ranking" in 2022 with a value of 2.37%, but closely followed by Poland with a value of 2,602%. In addition, we can see that there is a large dispersion within the sample regarding the level of foreign direct investment: the lowest level of foreign direct investment was registered in Hungary in 2018, and the highest level was registered in the same country in the year 2020. Finally, the data presented revealed the existence of significant variations for all the variables used in the analysis during the examined period.

It is also worth noting the evolution of the Trade openness indicator (share of exports and imports in G.D.P.), whose evolution, at least in the last year of the analysis, exceeds the maximum level reached in the period 2000 - 2021. Its value for the year 2022 is 203, 89 and characterizes the economy of Slovakia, a country with a real potential for development in the coming years. As has been observed, the volatility of the indicators gives rise to instability, and insecurity, amplified by the government's assurance of a deficit as small as possible, at the budget level. Moreover, covering it, or limiting its effects, imposes certain restrictions that are often not on the entrepreneurs' plan. At the level of the countries studied, the economic data of the profile institutions that monitor the economic-financial activity, in the region, capture a minimum level, for the year 2022 of approx. 3% in the case of Slovenia and approx. 16% in the case of Ukraine. In this context of dynamic socio-economic kneading, fuelled by political and military instability, Romania's neighbour ranks first as a negative influence and impact on the economy, in the ranking of Central and Eastern European countries. In another vein, it is found that the influence of the military operation launched by Russia in Ukraine has devastating consequences on social and budgetary expenses, which have thus reached a less anticipated level, in a context of various turmoil. At the same time, the way the governments of the countries in the region have understood the management of such risk-generating situations is reflected in the fluctuating evolution of the indicators whose configuration and impact on economic growth is perceived as directly as possible by the investment environment. The latter represents the pillar of economic growth, and such a materialization of investments is best reflected in a sustainable, harmonious development. Even if there is a different understanding and interpretation of the notion of "sustainability" in relation to "durability", both are indispensable for economic development. The strategies thought out, to be put into practice, must be built to be sustainable, and their impact on the economy should generate sustainable growth, for long-term development.

Table no. 4 illustrates the correlations between the dependent variables and the independent variables of our econometric model. The coefficients of the correlation

matrix recorded quite small values because econometric studies suggest that the correlation between regressors should be below the 0.8 level, and this aspect indicates that multicollinearity is unlikely to be a problem in our estimates.

To investigate the impact of macroeconomic indicators on economic growth, we used least squares (OLS) regression. For the empirical analysis, the Hausman test was applied to decide between the fixed-effects and the random-effects model. The test results suggested that the appropriate model is the fixed effects (FE) model. Also, the Wald test for group heteroscedasticity in the residuals of a fixed-effect regression model had zero values.

Table no. 4. Correlation matrix - Pearson coefficients

	GDP_g	INF	RIR	CAB	DCPS	LIR	Priv_i~t	Gov_exp	UNEMP	LFPR	WSW	HFCE	FDI_inf	TO
<b>GDP_g</b>	1.0000													
<b>INF</b>	0.064	1.0000												
<b>RIR</b>	-0.084	-0.445*	1.0000											
<b>CAB</b>	-0.182*	-0.098	-0.063	1.0000										
<b>DCPS</b>	-0.407*	-0.2*	0.184*	0.136*	1.0000									
<b>LIR</b>	0.095	0.739*	0.158*	-0.011	-0.156*	1.0000								
<b>Priv_invest</b>	0.244*	-0.22*	0.285*	-0.469*	-0.034	-0.192*	1.0000							
<b>Gov_exp</b>	-0.251*	-0.037	-0.194*	0.378*	0.294*	-0.101	0.252*	1.0000						
<b>UNEMP</b>	0.03	-0.066	0.197*	-0.313*	0.026	-0.052	0.011	-0.396*	1.0000					
<b>LFPR</b>	-0.009	-0.030	-0.094	0.515*	0.038	0.006	0.02	0.230*	-0.634*	1.0000				
<b>WSW</b>	-0.126*	-0.120	-0.206*	0.42*	0.363*	-0.218*	0.334*	0.604*	-0.299*	0.289*	1.0000			
<b>HFCE</b>	0.073	0.138*	0.142*	-0.579*	0.092	0.184*	0.052	-0.644*	0.714*	-0.732*	-0.655*	1.0000		
<b>FDI_inf</b>	0.013	-0.031	-0.143*	-0.196*	0.083	-0.111	0.141*	0.032	-0.069	-0.068	0.007	-0.044	1.0000	
<b>TO</b>	-0.04	-0.251*	-0.084	0.382*	0.295*	-0.382*	-0.053	0.355*	-0.31*	0.466*	0.612*	-0.592*	0.054	1.0000

Note: \* indicates significance at the 0.05 level

Source: the authors' calculations

### 3. Results and discussions

The following table (Table no. 5) shows the main empirical results where we estimated our model specification using Pooled OLS estimation, panel data models with fixed effects and random effects. In this context, the first column reports the results for the ordinary least squares (OLS) regression model, and the third column reports the results for the fixed effects model.

**Table no. 5. The main empirical results**

Independent variable	Dependent variable - GDP_g		
	Pooled OLS	RandomEffect	FixedEffect
INF	-.36406*** (.0810)	-.36406*** (.0810)	-.31616*** (.0835)
RIR	-.38258*** (.1003)	-.38258*** (.1003)	-.33524** (.1128)
CAB	-.24708** (.0798)	-.24708** (.0798)	-.27912** (.0979)
DCPS	-.11948*** (.0185)	-.11948*** (.0185)	-.15649*** (.0245)
LIR	.29196*** (.0861)	.29196*** (.0861)	.19604 (.1120)
Priv_invest	.11021 (.0967)	.11021 (.0967)	.15958 (.1175)
Gov_exp	-.06654 (.0561)	-.06654 (.0561)	-.26587* (.1336)
UNEMP	.07195 (.0591)	.07195 (.0591)	.096998 (.1204)
LFPR	.04863 (.0784)	.04863 (.0784)	-.04595 (.1237)
WSW	.06226 (.0324)	.06226 (.0324)	-.11731 (.1287)
HFCE	.01029 (.0777)	.01029 (.0777)	-.09800 (.1384)
FDI_inf	-.00676 (.0234)	-.00676 (.0234)	-.01115 (.0222)
TO	.02426* (.0118)	.02426* (.0118)	.07664** (.0232)
cons	-4.5533 (12.484)	-4.5533 (12.484)	25.3344 (18.898)

Hausman			0.0000
N	143	146	143
R <sup>2</sup>	0.5276	0.5084	0.5617

*Source:* the authors' calculations

The contingency between economic growth and the inflation rate is one of the most controversial discussions and disputes presented in the specialized literature, with a significant body of research being developed over time. This is due to the fact that there are two different currents of opinion regarding the influence of the inflation rate on economic growth, one claiming a positive influence and the other a negative one. According to the results, we can observe a negative and significant relationship between economic growth and inflation rate.

This aspect means that a 1% increase in inflation produces a decrease in economic growth by 0.31616 units. The rate of inflation creates uncertainty about the price of goods and services, so a lower rate of inflation increases investor confidence in investing. In this context, increased attention is needed from policy-making bodies to target macroeconomic policies that will ensure the path to a sustainable economy.

The results of the analysis are consistent with other studies of the specialized literature, (Wollie, G. et al. 2018; Ahmad, T. 2022; Olamide, E. et al. 2022; Stievany and Jalunggono, 2022) but analysed from the perspective of the events, at least from the last two or three years, they present a fragile "validity", fuelled by an increased unpredictability, in the context of the pandemic, of the military operation in Ukraine and more recently of the conflict that broke out in the Middle East. In other words, the short-term decisions, less well-argued regarding the allocation of resources, are also reflected in the fluctuation of the most important macroeconomic indicators. As can be seen, a significant fluctuation of inflation with a rate that is difficult to stabilize at the level of the country, and then at the level of the region, denotes a government incapable of managing the country's finances. In other words, the inflation rate is a very important indicator of macroeconomic stability in a dynamic economy, characterized by political decisions that are required to be much more responsible, assumed. In this context, we observe an inverse and significant relationship between the real interest rate and our dependent variable, indicating that a 1% increase in the interest rate leads to a decrease in economic growth by 0.33524 units.

This negative relationship is explained by the fact that once interest rates are high, they lead to a decrease in investment, thus slowing down economic growth. Similar results were also obtained by Zaman, M. J. (1998) in the study *Correlations between real interest rates and output in a dynamic international model: Evidence from G 7 Countries*. The current account balance is one of the most critical indicators of economic health within a country, as it measures the difference between total exports and imports. As is known, when a country earns more than it spends it records a positive account balance, otherwise, it will record a negative balance leading to a trade deficit. Although at first glance we can say that a trade deficit may seem like a minor problem, it has a significant impact on economic growth, because a country facing such an event will borrow money from other

countries to finance itself consumption, thus leading to an increase in public debt. In addition to this, a trade deficit can lead to a decrease in domestic investment, as a result of borrowing to finance consumption. The results of the study show an inverse and significant relationship between the current account balance and our dependent variable. Although, according to the results, there is a negative relationship between the two concepts, this connection is not always simple. For example, in the case of developed economies, they can sustain a trade deficit for a long period of time without having negative repercussions on economic growth. Conversely, developing economies could suffer some potentially devastating macroeconomic consequences, as they are heavily dependent on imports.

The economic literature comes and confirms, once again, the results of the analysis reinforcing the idea that economic growth rates differ from one country to another due to different balance of payments constraints (Thirlwall, A. P. 1979). Moreover, the negative progress recorded by the current account balance can weaken the development of the financial sector of a country, in an environment where events follow each other with precision, and the response from the authorities is not at the level of expectations. And this time there is evidence that supports this analysed hypothesis, in a current context (Cetin, et al, 2023) and confirms that there is a very direct relationship between the current account balance and economic growth. Currently, the literature reveals different versions of the relationship between government spending and economic growth. This is booming, continuing to attract the attention of researchers and academics especially in the context of the recent global crisis, being a complex subject. Over the years, there have been numerous theoretical and empirical analyses of the relationship between spending and economic growth, and how they affect economic development. This aspect differs depending on the types of government spending as well as the degree of development of a country. Most countries are concerned with the relationship between the two concepts, especially since corruption plays a major role in driving the impact of government spending on economic growth.

The current geopolitical context, more visible at the level of developing countries, is prone to corruption and at the same time the idea is accepted that it prevents economic growth. The authors Gupta, S et al, 2002, respectively Tanzi, V. et al 1998, are of the same opinion, who analyse, in their studies, the implications of this phenomenon. In this mentioned context, it is necessary for the states of Central and Eastern Europe to update their growth strategies, through those policies corresponding to the limitation of corruption and the waste of public money, to improve economic growth sustainably.

Broadly speaking, the empirical evidence on the relationship between the mentioned indicators can be classified into two groups, depending on the results obtained. In the case of inflation, which in the last year, 2022, presented some of the most unexpected variations, with values far above those forecast, and expenses experienced an upward trend. It is true that the latter were fuelled by socio-economic events, but also by more or less responsible political decisions. On the one hand, there are specialists, Barro, R. J., 1990, Afonso, A et al, 2005, who argue that between government spending and economic

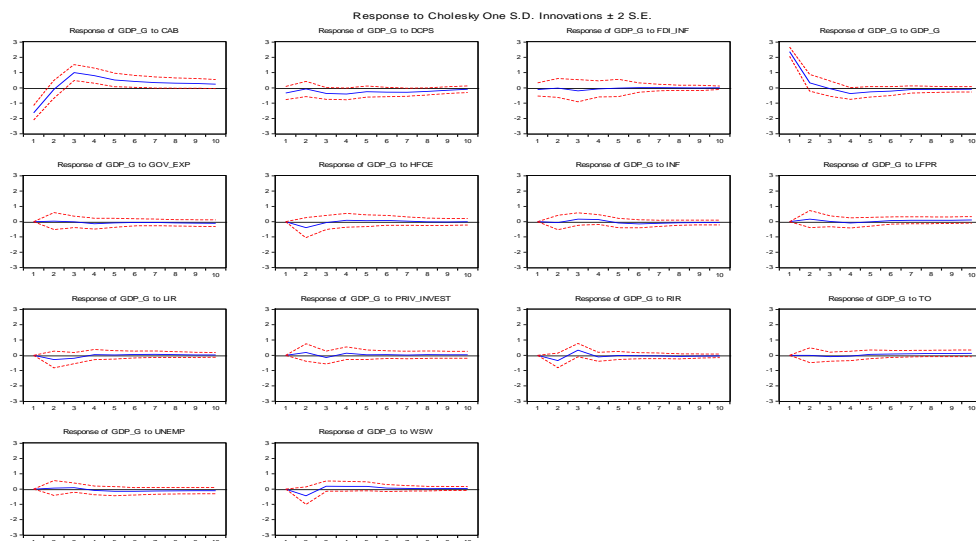
growth, there is a negative relationship as a result of the role that public spending has in exacerbating pressures inflationary effects of the crowding-out effect. In economics, the crowding-out effect occurs when the increase in public sector spending leads to a decrease or even excludes private sector spending. On the other hand, there are studies, empirical analyses that found a positive correlation between the analysed indicators (Gupta, S. et al, 2002). Proponents of this approach extol the critical role of government spending in harmonizing conflicts between social and private interests, providing the optimal social direction for development and growth. As a result, those expenditures on education, health, and infrastructure are assumed to increase labour productivity, increase latent national economic resources (e.g., transportation efficiency), and increase public sector investment, contributing positively to economic growth. The results of the analysis highlight an inverse and significant relationship between government spending, our study falling within the first set of empirical analyses. The negative impact of these is explained by the inefficient use of government spending that reduces the quality of public services and can inhibit private investment. Given the important role that government spending plays in the allocation of resources in an economy, economic growth can be negatively or positively affected depending on the size of the spending. Likewise, the influence of spending on economic growth may also depend on analytical methods. Events that have taken place in recent years require a resettlement and harmonization of policies to support efforts to support the economic environment for sustainable development in the countries of Central and Eastern Europe. Future research can help policymakers better understand how to manage the indicators used in our analysis to promote economic growth and prosperity.

### **Trends of the analysed indicators for the next period**

The economic analysis, at the level of Central and Eastern European countries, for the period 2000-2022 highlighted the impact of the socio-economic events of the last two decades. Thus, it could be observed that their fluctuation, of the indicators, causes oscillating evolutions of the incomes received by the population, decisions laden with a high degree of uncertainty on the part of investors and, last but not least, instability and uncertainty regarding the management of public finances. We believe that one of the factors that influence economic growth, as a pillar of sustainable development, is given by the poor management of resources. Simultaneously with the need to reduce the public deficit, a much more pertinent analysis of the public debt is being considered in most countries, with an impact on a sustainable economic development at the country and regional levels. To respond to the new challenges, it is necessary, to take into account the accuracy of the available data, the evaluation of their impact, of the indicators, in relation to the economic growth for the next period.

In this sense, on the basis of the "impulse - response function" we analysed the shock of each indicator to G.D.P. (dependent variable) for a more accurate and realistic analysis of the business environment that defines economic growth as a pillar of sustainable development at the country and regional level. Thus, Chart no. 1, shows the evolution of the analyzed indicators for the following period (10 years):

## Chart no. 1 Impulse-response function



Source: the authors' calculations (EViews)

According to the analysis, it can be observed: Regarding the reaction of economic growth to a shock on the CAB (current account balance), there is an increase in the G.D.P. indicator, reaching a maximum in the third period, an effect that diminishes, more and more, until the end of the forecasted period. Even if the evolution of the mentioned events did not necessarily have a positive impact, for the next period, forecasted, a dynamic can be observed that encourages the business environment regarding the allocation of the necessary resources for development. At the same time, the analysis of the evolution of the indicators demonstrates the fact that there is also a more constant trend in terms of the ratio between G.D.P. and the following indicators: The ratio between G.D.P. (dependent variable) and *FD\_inf* (foreign direct investment, net inflows) shows a constant evolution for most of the period, but also with a negative effect, for a very short period of time, around the - the third period. Regarding the ratio between G.D.P. and *GOV\_EXP* (government expenditure) it is found that the share is explained by its evolution, manifesting itself through a constant variation throughout the forecasted period. Moreover, in the case of the ratio between G.D.P. and *LFPR* (labour force participation rate, total) a more neutral effect is observed, since the impact of the analysed indicator (*LFPR*) is not so significant, regarding the variation of the dependent variable. At the same time, we find the same effect, more constantly, in terms of the ratio between G.D.P. and *TO* (trade openness).

The fluctuation of macroeconomic indicators is also presented as a negative influence about G.D.P. Thus, with regard to the impact of *DCPS* (domestic credit to private sector), it is found that this negative effect is significant in the second period, to be mitigated



along the way, until the end of the analysed period. The same negative effect is also found in the case of the HFCE (households and NPISHs final consumption expenditure) indicator, which is more pronounced starting from the second period, but for an average period of time, to be mitigated along the way. Moreover, the influence of the LIR (lending interest rate) indicators, respectively Priv\_invest Gross (fixed capital formation (GFCF), was used as an indicator of private investment) can also be found as a negative effect. The latter, with an oscillating effect, can also be explained by the nature of the investments, which depend a lot on the economic environment and the real growth prospects. As can be seen, not only from the analysis carried out, the evolution of the indicators is sensitive to the variation of the market, not necessarily of the stock market, but in a much wider context, which involves loans, their related interests and last but not least the ability of governments to support, in the medium and short term, these commitments. It should be noted that in all this evolution of the events of the last decades, materialized by the fluctuation of the indicators, there is also an inverse effect, regarding their trends in relation to the dependent variable (G.D.P) In other words, in the case of the INF indicator (inflation rate change), the effect on G.D.P is neutral in the first 2 periods, following that in periods 3 and 4, respectively, it registers an increasing trend. In the following periods, more of the opposite effect is observed. The RIR (real interest rate) shock on G.D.P. causes an oscillating reaction of the latter, reaching a negative minimum in the second period and a positive maximum in the third period.

Effect that becomes neutral, visible, starting from the fifth period. The UNEMP unemployment rate (Unemployment, total) has a neutral impact in the first period, slightly positive in the second period, in the "2 - 3" interval, observing an inverse effect starting from the third period that persists until the end of the estimated period. Regarding the WSW (wage and salaried workers, total) indicator, a decrease is observed in the first three periods, and then an opposite/inverse effect is recorded starting from the next period, which lasts until the sixth period. Until the end of the forecast period, the effect is one, more, constant. All this evolution of the indicators cannot be entirely attributed to the socio-economic turmoil, the pandemic or, more recently, the military operation launched by Russia in Ukraine. We believe that their fluctuation is also determined by political decisions, by internal/external factors specific to each country. Due to this aspect, each government is directly responsible for the way it manages its resources, human and financial, so that the evolution of future phenomena does not take the population and implicitly the business environment by surprise. In this sense, special attention must be paid to public finances, especially at the level of developing countries, so that the effects of the pandemic crisis or the military operation are greatly diminished, and the nature of social spending follows a downward trend with direct effect and positive on economic growth. In all this development of events, the support from the international financial institutions was not slow to appear, but at the same time, the efforts of the governments must continue in a direction that ensures the development of the economic environment.

The cycle of phenomena determines various episodes of well-being, based on the credits that can be accessed or the non-reimbursable funds that can be called upon. That is why it is very important for the banking system to support those strategic sectors, for

continuous development by granting loans that are based on a much more realistic assessment, in the current market conditions. On the other hand, the nature and complexity of the events made countries' governments resort to borrowing, thus increasing the level of public debt.

Also in this context, a high level of debt affects the degree of affordability of the economy and, respectively, its ability to honour its financial obligations. Due to this, mentioned aspect, it is necessary that the measures and policies implemented aim to maintain the debt at a level that ensures the continuation of the reforms and the development of a viable growth strategy in the medium and long term. In other words, the fluctuations of the economic indicators are closely related to both the capital market and the bonds issued by the states, with the aim of self-financing, whose interests arouse real interest. Also, this dynamic evolution of the indicators is also characterized by a high level of unpredictability not only at the European level, but also at the world level. Even the states of the USA or China, whose GDP holds supremacy, worldwide, faced unforeseen situations, not only in terms of managing the COVID-19 pandemic, but the measures and policies implemented needed adaptations and even corrections to support the economic environment in the sense of increasing its potential. Spending and how you manage your finances, as I said, play a very important role. In this sense, we believe that achieving a balanced budget, of revenues and expenses, could support economic development at the European level in the long term.

Overall, there is no valid universal trend regarding the future oscillations of the analysed indicators, but rather their fluctuation and implicitly the stationarity of the data, is directly proportional to the evolution of the phenomena, rather socio-political. These, in the last two decades, have demonstrated that they are capable of the most unpredictable variations, the management of which involves allocations of resources, far beyond those forecasts, and obviously affects economic growth.

### **Conclusions**

The current geopolitical context requires, above all, an in-depth analysis of the economic potential of each country. It must take into account the existing resources, the financial funds that can be called upon and last but not least the human factor.

As the results of the analysis support, through the manifestation of various events, and unforeseen situations, an important fluctuation is observed in terms of the evolution of macroeconomic indicators, which show the state of equilibrium in which an economy is found.

In this sense, the policies and measures undertaken aim to find the best solutions to ensure the continuation of the reforms, based on carefully developed strategies. The purpose of these actions is the well-being of the economy with a direct effect on the incomes of the population in the countries of Central and Eastern Europe. Also in this context, it is observed that the influence of the analysed indicators takes two forms. A positive one and in this sense the actions undertaken, at the level of the region, Central and Eastern Europe, must aim to allocate funds to those strategic sectors, such as research, innovation,

education and social cohesion in an environment that seems increasingly dependent on sources, renewable energies. On the other hand, there is also a negative effect, and in its management, it is necessary, first, to self-assess one's potential and the level of affordability of the economy. Thus, those practices learned and experiences acquired from periods of crisis, both economic-financial and socio-political, must contribute to the drafting and, above all, the implementation of the best actions that really help the economic environment. In the sense of what has been presented, we can also mention the factors that contribute to the stagnation or even decrease of the growth rate, forecasted. They refer to the financing of the budget deficit, the ever-increasing expenses in Central and Eastern Europe, of course, fuelled by the armed conflict, the effects of the pandemic and the socio-economic turmoil, with their harmful impact on the business environment. As it was possible to observe, these last events of the last three years weighed a lot in the development of income and expenditure budgets, the allocation of resources, social protection and last but not least, ensuring an optimal standard of living for the population. After the first year of the pandemic, the economy showed visible signs of recovery, with economic growth in the countries of Central and Eastern Europe, which was, on average, around 5% of GDP (year 2021). Forecasts for the next period were favourable, with growth rates of up to 4% for the following years, 2022-2024.

The political situation and the instability felt at the level of diplomatic relations, at the highest level, made the economy of the countries in the region perceive differently the operation launched in February by Russia. This was immediately felt at the level of the capital market, and the installed slide created disequilibrium, with less well-argued allocations of funds. It was precisely these that represented the triggering element, in a fragile context, and the consequences are far from being known. Governments have resorted to borrowing, and these weighs more and more heavily on the optimal management of the already accumulated public debt. Thus, viable measures capable of providing stability and predictability are required, and these refer primarily, we believe, to supporting strategic sectors with a real potential for development. In this sense, the financial-banking system plays a decisive role, and the decisions that need to be imposed must be thought of in a much more detailed, in-depth context. Of course, nothing can be achieved without a strategy, a very well-crafted plan, after a useful SWOT analysis, able to provide answers, but also real opportunities for growth. On the same note, mentioned the need to achieve a balanced budget of income and expenses. In other words, digitization represents a real asset that, depending on how it is implemented, can create a competitive advantage for a given economy in Central and Eastern Europe. This digitalization also has two kinds of manifestation, on the one hand, it "got us" into the crisis, and on the other hand, it is indispensable for recovery and resilience measures. Just as economic growth is the basic pillar of sustainable development, so investments are the central pillar for healthy economic growth, and in this sense firm measures are required from governments, embedded in viable support mechanisms. The management of public finances must ensure the transparent allocation of financial resources, intended for social cohesion, the improvement of the communication system and, last but not least, economic recovery and growth in accordance with the P.N.R.R. with RepowerEu s.a. Last but not least, the "rebalancing of power" is required, not necessarily the political one, but also the

economic one. Why? Because its importance derives from the influence of the political system, most of the time as a decision-making factor, regarding the management of economic crises, through adopted measures, analyses, strategies. Therefore, the way each government, from the level of the countries of Central and Eastern Europe, understands to interpret a given situation, an unforeseen event, makes a difference regarding the real prospects of economic development.

## References

- [1] Afonso, A., Schuknecht, L., Tanzi, V. (2010). Public sector efficiency: evidence for new EU member states and emerging markets. Taylor & Francis Online Applied economics, Vol. 42 (17), pp. 2147-2164. <https://doi.org/10.1080/00036840701765460>
- [2] Alshahrani, M. S. A., Alsadiq, M. A. J. (2014). Economic growth and government spending in Saudi Arabia: An empirical investigation. International Monetary Fund.
- [3] Antoni, A. (2019). The impact of macroeconomic indicators on economic growth in the United States and Indonesia: a cointegration test approach. Jurnal Menara Ekonomi, Vol 5 (3).
- [4] Barro R. J. (1995). Inflation and economic growth. National Bureau of Economic Research NBER Working Paper No. 5326.
- [5] Constance, S. Kawai, R., Wang, M. (2022). Public debt and real G.D.P. Revisiting the impact. International Monetary Fund. WP/22/76.
- [6] Daianu, D., Basevi, G., D'Adda, C., Kumar, R. (2016). The eurozone crisis and the future of Europe. Polirom Publishing House.
- [7] Daianu, D. (2021). The economy and the pandemic. What's next? Polirom Publishing House (Promo).
- [8] Fisher S. (1993). The role of macro economics factors in growth. Journal of Monetary Economics, Vol. 32, No. 2, pp. 485-512.
- [9] Gupta, S. Verhoeven, M. Tiongson, E. R. (2002). The effectiveness of government spending on education and health care in developing and transition economies. European Journal of Political Economy, Vol. 18 (4), pp. 717-737. [https://doi.org/10.1016/S0176-2680\(02\)00116-7](https://doi.org/10.1016/S0176-2680(02)00116-7)
- [10] Gylfason and, T., Herbertsson, T. T. (2001). Does Inflation matter for growth. Japan and World Economy, Vol. 13, No. 4, pp. 405 - 428. [https://doi.org/10.1016/S0922-1425\(01\)00073-1](https://doi.org/10.1016/S0922-1425(01)00073-1)
- [11] Hodge, A., Shankar, S., Rao, D. P., Duhs, A. (2011). Exploring the links between corruption and growth. Review of Development Economics, Vol. 15(3), pp. 474-490. <https://doi.org/10.1111/j.1467-9361.2011.00621.x>
- [12] Imleesh, R. M., H Yanto, Prajanti S. D. W. (2017). The impact of macroeconomic indicators on economic growth in Indonesia, Malaysia and Singapore. Journal of Economic Education, Vol. 6 No 1. pp. 19 - 28.
- [13] Jacob, T., Stebiya, M.V., Rincy, R. (2021). The impact of key macroeconomic factors on the economic growth of Bangladesh: An auto regressive distributed lag bounds testing approach. Journal of Smart Economic Growth, Vol. 6, pp 101-119;

- [14] Kormendiand, R. C., Mequire, P. G. (1985). Macroeconomic determinants of growth: Cross country evidence. *Journal of Monetary Economics*, Vol. 16, No. 2, pp. 141-163. [https://doi.org/10.1016/0304-3932\(85\)90027-3](https://doi.org/10.1016/0304-3932(85)90027-3)
- [15] Lipsey, R., Chrystal, A. K. (1999). *The positive economy*. Economic Publishing House.
- [16] Mencinger, J., Aristovnik, A., Verbic, M. (2014). The impact of growing public debt on economic growth in the European Union. *Amfiteatru Economic Journal*, Vol. 16 (35), pp. 403-414. [aej-v16-i35-p0403.pdf](https://doi.org/10.1016/j.aej.2014.03.009)
- [17] Milesi-Ferretti, G. M., Razin, A. (1998). Sharp reductions in current account deficits an empirical analysis. *European Economic Review*, 42 (3-5), pp. 897-908. [https://doi.org/10.1016/S0014-2921\(97\)00124-4](https://doi.org/10.1016/S0014-2921(97)00124-4)
- [18] National Recovery and Resilience Plan, (2022). *Next Generation EU: Funds for modern and reformed Romania*.
- [19] Olamide, E., Ogujiuba, K., Maredza, A. (2022). Exchange rate volatility, inflation and economic growth in developing countries: Panel data approach for SADC. *Economies*, Vol. 10 (3), 67, <https://doi.org/10.3390/economies10030067>
- [20] Owusu A., S., Okafor, G., Chijoke, M., A. M., Ohalehi, P., Hasan, F. (2020). Internet adoption and financial development in sub-Saharan Africa. *Technological Forecasting and Social Change*, Vol. 161. <https://doi.org/10.1016/j.techfore.2020.120293>
- [21] Panizza, U., Presbitero, A. F. (2014). Public debt and economic growth: Is there a causal effect? *Journal of Macroeconomics*, Vol. 41, pp. 21-41. <https://doi.org/10.1016/j.jmacro.2014.03.009>
- [22] Pugno, M. (1998). The stability of Thirlwall's model of economic growth and the balance-of-payments constraint. *Taylor & Francis Online. Journal of Post Keynesian Economics*, Vol. 20(4), pp.559-581. <https://doi.org/10.1080/01603477.1998.11490168>
- [23] Rahman, N. H. A., Ismail, S., Ridzuan, A. R. (2019). How does public debt affect economic growth? A systematic review. *Taylor & Francis Online. Cogent Business & Management*, Vol. 6(1), <https://doi.org/10.1080/23311975.2019.1701339>
- [24] Shaukat, B., Zhu, Q., Khan, M. I. (2019). Real interest rate and economic growth: A statistical exploration for transitory economies. *Physica A: Statistical Mechanics and Its Applications*, Vol. 534. <https://doi.org/10.1016/j.physa.2019.122193>
- [25] Stievany, G. M. Jalunggono, G. (2022). Analysis of the effect of inflation, exports and imports on indonesia's economic growth. *Journal of management, accounting, general finance and international economic*. Volume 1 (3), pp. 1-14. <https://doi.org/10.55047/marginal.v1i3.140>
- [26] Stiglitz, J. E. (2017) - Euro. How the single currency threatens the future of Europe. *Publica Publishing House*.
- [27] Stockman, A. C. (1981). Anticipated inflation and the capital stock in a cash in-advance economy. *Journal of Monetary Economy*, Vol. 8, pp. 387-393. [https://doi.org/10.1016/0304-3932\(81\)90018-0](https://doi.org/10.1016/0304-3932(81)90018-0)
- [28] Tariq, A., (2022). A Case of Pakistan investigating the relationship between inflation and economic growth: A Case of Pakistan. *Acta Pedagogica Asiana*, 1(1), pp.1-8. <https://doi.org/10.53623/apga.v1i1.64>

- [29] Thi Thuy, D. P., Nguyen T. H. (2021). Impacts of openness on financial development in developing countries: Using a Bayesian model averaging approach. Taylor & Francis Cogent Economics & Finance, Vol. 9 (1). <https://doi.org/10.1080/23322039.2021.1937848>.
- [30] Thirlwall, A. P. (1979). The balance of payments Constraint as an explanation of international growth rate differences. BNL Quarterly Review, Banca Nazionale del Lavoro, Vol. 32(128), pp. 45-53.
- [31] Wollie, G. (2018). The relationship between inflation and economic growth in Ethiopia. Budapest International Research and Critics Institute-Journal (BIRCI-Journal), Vol.1, pp. 264-271.
- [32] Zaman, M. J. (1998). Correlations between real interest rates and output in a dynamic international model: Evidence from G-7 countries. International Monetary Fund.
- [33] Worldbank website; Available at: <https://www.worldbank.org>
- [34] Eurostat website; Available at: <https://ec.europa.eu>
- [35] OECD website; Available at: <http://oecd.org/>
- [36] Bucharest Academy of Economic Studies website; Available at: <http://www.ase.ro>
- [37] RePEc website; Available at: <http://repec.org/>
- [38] National Institute of Statistics website; Available at: <https://insse.ro>
- [39] Governance course, Freedom begins with understanding website; Available at: <https://cursdeguvernare.ro>
- [40] Trading Economics website; Available at: <https://tradingeconomics.com>
- [41] Economica, business per minut, website; Available at: <https://economica.net>