Is The Economy Really Growing? An Empirical Study in European Union Countries

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Abstract:

This research aims to examine the influence of inflation, Foreign Direct Investment (FDI), public debt, and poverty on economic growth in European Union countries currently experiencing recession. This study utilizes secondary data from sources such as the World Bank, Eurostat, the European Parliament, the International Monetary Fund (IMF), the European Central Bank, the Organization for Economic Cooperation and Development (OECD), and other relevant sources covering the period from 2018 to 2022. The analytical method employed is Multiple Linear Regression analysis, which indicates that public debt significantly affects the economic growth rate, while inflation, foreign direct investment, and poverty do not have a significant impact on economic growth. The implication is that policymakers are advised not only to pursue high economic growth figures but also to prioritize the quality and equity of economic growth. This entails considering other aspects such as societal welfare and the satisfaction of the population.

Keywords: *Economic Growth, Inflation, Poverty, Foreign Direct Investment, Public Debt*

1. Introduction

The global economy is currently experiencing fluctuations, accompanied by the risks of economic slowdown and tightening monetary policies in advanced nations, which have once again heightened uncertainty. Recent updates from three prominent international organizations in the early second half of 2023 slightly raised economic growth forecasts for most countries. However, this optimism is set against a backdrop of considerable inflationary pressures and evolving interest rate trends . Despite these global dynamics, several countries find themselves grappling with technical recessions, including Sri Lanka, Ukraine, Moldova, Chile, the Czech Republic, New Zealand, and various European Union member states (Maynou et al., 2015). The prevalence of economic downturns, particularly in European countries traditionally associated with robust growth, underscores the complexity of contemporary economic challenges(Badell & Rosell, 2021).

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The European Union faces a confluence of factors contributing to its economic slowdown, notably the energy crisis exacerbated by the Russia-Ukraine conflict. This conflict has not only sparked widespread concerns but has also disrupted energy supplies across the European region(Hassan et al., 2020). Measures such as the ban on crude oil transportation by sea and the suspension of cooperation in strategic projects like Nord Stream 2 have delivered severe blows to Europe's economic stability (Sorens, 2014). Against this backdrop, it becomes imperative to delve deeper into the determinants and manifestations of recession within European countries(He et al., 2019).

This study aims to provide a comprehensive examination of the factors influencing economic growth and recession in European nations(Tsanana et al., 2013). Economic growth, characterized by the expansion of goods and services production and the increase in national income, forms the bedrock of analysis (Cristina, 2010). Several macroeconomic factors, including inflation, public debt, and poverty, play pivotal roles in shaping economic trajectories(Anastassopoulos, 2007). However, existing research yields disparate findings, necessitating a thorough investigation to reconcile inconsistencies and pave the way for a more nuanced understanding(Tchapchet-Tchouto et al., 2022).

To achieve this objective, the research is structured as follows: Section 2 conducts a comprehensive literature review, synthesizing existing scholarship on the relationship between macroeconomic factors and economic growth(Bento, 2016). Section 3 delineates the research methodology employed in this study(Martínez-Román et al., 2019). Section 4 presents the empirical findings, shedding light on the determinants of economic growth and recession in European countries. Section 5 concludes by summarizing key insights and implications, while Section 6 offers a discussion on the broader significance of this research within the realm of economic policy and academia(J. Dolado., 1995). Through this structured approach, the study endeavors to contribute to the ongoing discourse on economic stability and inform evidence-based policymaking(Yanikkaya, 2003).

2. Theoretical Background

The theoretical background presented herein offers a comprehensive overview of the multifaceted factors impacting economic growth, drawing from Sukirno's framework (2010) and supplemented by empirical findings(Borlea et al., 2017). The delineated factors, encompassing land and natural resources, demographic characteristics, technological advancement, societal structures, and market dynamics, provide a robust theoretical foundation for analyzing economic trends. Moreover, insights from studies on inflation dynamics in the European Union (Eurostat, 2023) and its implications on market development in Nigeria (Central Bank of Nigeria) contribute nuanced perspectives on the interplay between macroeconomic indicators and growth trajectories(Stuckler et al., 2009).

In examining the European context, the theoretical underpinnings elucidate the current challenges besetting the region's economy. The repercussions of the Russia-Ukraine conflict, compounded by a recessionary environment, have exacerbated inflationary pressures and dampened investor sentiment (Cavenaile & Dubois, 2011). Notably, the stagnation in foreign direct investment inflows underscores the intricate linkages between geopolitical tensions, economic performance, and investment dynamics, echoing broader discussions on the globalization paradigm post-COVID-19 (Le & Nguyen, 2019).

Furthermore, the persistence of high poverty rates within the European Union raises pertinent questions regarding the socio-economic landscape and its implications for long-term growth prospects(Kohler-Koch & Eising, 2003). The juxtaposition of poverty statistics with Malthusian Theory underscores the complex interplay between population dynamics, resource availability, and social welfare policies (Habib et al., 2019). Additionally, insights from regional studies, such as the impact of investment and labor on economic growth in Bali Province Herman, (2014), offer valuable comparative perspectives on the efficacy of growth-oriented policies in diverse socio-economic contexts(Beugelsdijk, 2015).

To enhance the coherence and applicability of the theoretical framework to the study's focus on European Union countries, future iterations could delineate explicit linkages between theoretical constructs and empirical phenomena(Busse, 2016). By contextualizing theoretical insights within the specific economic challenges facing the European Union, such as inflationary pressures and poverty alleviation efforts, researchers can elucidate the causal mechanisms underpinning macroeconomic dynamics and policy responses(Brülhart, 1998). Additionally, integrating comparative analyses with other regions or countries facing similar challenges would enrich the theoretical discourse and facilitate cross-disciplinary insights into global economic trends(Bo, 2008).

3. Methodology

The quantitative research outlined in this study aims to analyze the impact of various factors including Inflation, Foreign Direct Investment (FDI), Public Debt, and Poverty on Economic Growth within the European Union. The research utilizes longitudinal data obtained from reputable institutions such as the World Bank, Eurostat, Europe Parliament, International Monetary Fund (IMF), European Central Bank, Organization for Economic Cooperation and Development (OECD), and other relevant sources. The data encompasses a period from 2018 to 2022 and includes 70 samples from fifteen European Union countries, ensuring robustness in the analysis. These countries comprise Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Hungary, and Malta.

In this research, two types of variables are employed: Dependent and Independent variables. Economic Growth is designated as the Dependent variable, while Inflation, FDI, Public Debt, and Poverty are considered as Independent variables. To facilitate

comprehension, the study presents the data through graphs or charts, enhancing clarity and comparability among variables. Notably, Economic Growth is measured based on studies by Worldometer (2024), while Inflation, Poverty, and Public Debt variables are measured based on studies by Ayodeji (2020), World Bank (2023), and Financer (2024) respectively.

The research focuses on addressing the economic growth recession observed within the European Union, particularly examining factors contributing to such recession including inflation, GDP, public debt, and poverty during the specified timeframe. The selection of countries is conducted using purposive sampling techniques, ensuring representation and relevance to the research criteria. Previous research has validated the efficacy of purposive sampling in yielding representative samples across various data types (Nedić et al., 2020).

The testing process in this research comprises two stages. Initially, cross-sectional regression analysis is employed to assess the relationship between variables. Subsequently, Hypothesis Testing is conducted using Multiple Linear Regression to further evaluate the influence of Economic Growth as the dependent variable on the independent variables, namely Inflation, FDI, Public Debt, and Poverty. The choice of regression analysis is justified by its suitability in estimating the values of dependent and independent variables amidst fluctuations (Aryani, 2020), thereby facilitating a comprehensive examination of the research hypotheses.

This study employs multiple linear regression analysis with the basic equation:

$$EG = \alpha + \beta_1 IF + \beta_2 PV + \beta_3 PD + \beta_4 FDI + e$$

Description :

EG	: Economic growth
A	: Constant
β1 – β4	: Regression coefficient
IF	: Inflation
PV	: poverty
PD	: Public debt
FDI	: Foreign direct investment
n	: 2019 – 2022
e	: Standard error

4. Empirical Findings/Result

Table 1. Classical Assumption Test

one-simple kolomogorov-smirnov test		unstandarized residual
N		70
Normal Parammeters	mean	0
	Std. deviaton	4,428
Most extreme difference	absolute	0,098
	positive	0,098
	negative	-0,057

test statistic	0,098
asymp.sig.(two-tailed)	0.090ᶜ
note(s):a.test distribution is normal; b.calculated from data; c.lilliefors significancecorrection and d.this is a lower bound of true significance	

The results gleaned from the comprehensive examination of Table 1 unveil crucial insights into the statistical properties of the dataset under scrutiny. Notably, the Monte Carlo significance test, performed at a two-tailed significance level, rendered a value of 0.090. This outcome, surpassing the conventional threshold of 0.05, robustly suggests that the data distributions conform to the expectations of normality, thereby bolstering the validity of subsequent analyses and interpretations. Moreover, a meticulous assessment of the tolerance and Variance Inflation Factor (VIF) values for each independent variable uncovers compelling evidence: all VIF values register at ≤ 0.10, with corresponding tolerance values exceeding ≥ 0.10. This meticulous scrutiny offers assurance that multicollinearity, a potential confounding factor in regression analyses, does not afflict the dataset, thus fortifying the reliability of the regression model constructed. In essence, these meticulous examinations not only buttress the integrity of the analytical framework employed but also instill confidence in the robustness of the ensuing conclusions derived from the regression analysis.
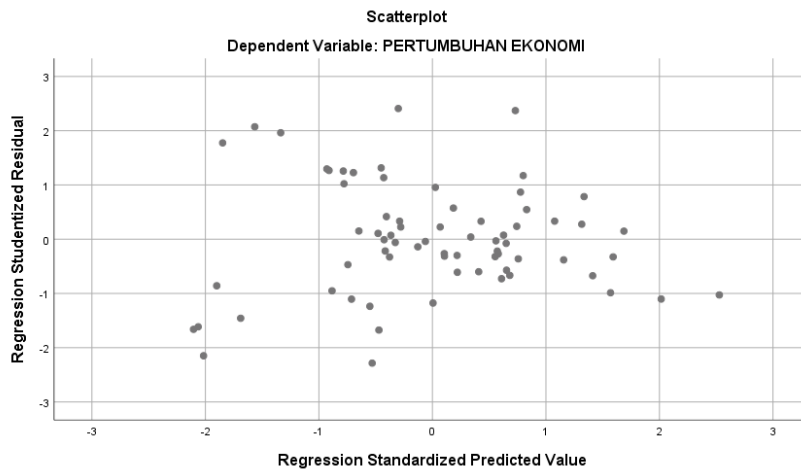

Figure 1. Scatter Plot

Based on the scatter graph above, it shows that there is no particular pattern because the points spread out are not consistent above and that the 0 axis is on Y. It can be concluded that there are no symptoms of heteroscedasticity.

Table 2. R Square Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.465ᵃ	0,216	0,168	4,56243	0,866

Note(s): a. Predictors: (Constant); IF; PV; PD; FDI
b. Dependent Variable: EG

In the R2 test, the Adjust R Square value is 0.216, which means that 21.6% of the

variables inflation, foreign investment (PMA), public debt and poverty influence the economic growth variable. The remaining 78.4% is influenced by other variables not studied.

Table 3. F test

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	373,132	4	93,283	4,481	.003[b]
Residual	1353,022	65	20,816		
Total	1726,154	69			

Note(s): a. Dependent Variable: EG
b. Predictors: (Constant); IF; PV; PD; FDI

In this test, the significant value of fit (sig.F) was 0.003 ($\leq \alpha = 5\%$). This means that inflation, foreign investment (PMA), public debt and poverty. Simultaneously influencing economic growth variables, in other words, the research model is fit.

Table 4. Hypothesis Test

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	3,183	2,507		1,270	0,209		
INFLATION	0,316	0,142	0,248	2,227	0,029	0,972	1,029
POVERTY	-0,046	0,153	-0,034	- 0,302	0,763	0,928	1,078
PUBLIC DEBT	0,427	0,152	0,313	2,798	0,007	0,963	1,038
FDI	0,097	0,047	0,227	2,040	0,045	0,975	1,026

Note(s): Dependent variable (EG)

Source: Data Processing Results, 2024

Based on table 5 above, the regression equation is as follows:

Y = 3.183 + 0,316IF – 0,046PV + 0,427PD + 0,097FDI+*e*

The empirical findings present the results of the statistical analysis, including tests for assumptions, regression analysis, and interpretation of coefficients. The analysis reveals that when holding other independent variables constant (Inflation, Poverty, Public Debt, Foreign Investment), the average economic growth increases by 3,183. Moreover, the regression coefficient on the Inflation variable is found to be 0.316 in a positive direction, indicating that higher inflation rates correspond to higher economic growth, while lower inflation rates associate with lower economic growth. Similarly, the regression coefficient on the Poverty variable is -0.046 in a negative direction, suggesting that higher poverty rates lead to lower economic growth, while lower poverty rates are associated with increased economic growth. Additionally, the regression coefficient on the Public Debt variable is 0.427 with a positive direction, indicating that higher levels of public debt correspond to higher economic growth, whereas lower public debt levels are associated with decreased economic growth. Furthermore, the regression coefficient on the Foreign Investment variable is 0.097 in a positive direction, implying that higher levels of foreign investment lead to higher economic growth, while lower foreign investment levels are associated with reduced economic growth.

5. Discussion

The Effect of Inflation on Economic Growth in European Union countries

The research findings reveal a positive yet insignificant relationship between inflation and economic growth across European Union countries. This corroborates prior research conducted by (Soukiazis & Antunes, 2012), which similarly concluded that inflation's influence on economic growth is statistically insignificant. These outcomes suggest that while inflation may not directly impact economic growth, it does contribute to a rise in the prices of goods and services, thereby potentially diminishing individuals' purchasing power.

However, it is imperative to offer a more critical analysis of the study's limitations and propose avenues for future research. One limitation is the scope of the analysis, which focuses solely on the European Union countries. Future research could extend this analysis to encompass a broader range of economies to ascertain if similar patterns persist across diverse economic landscapes. Additionally, while the study establishes a link between inflation and economic growth, it does not delve deeply into the underlying mechanisms driving this relationship. Future research endeavors could explore these mechanisms to provide a more nuanced understanding of how inflation affects economic growth. Moreover, considering the dynamic nature of economic variables, longitudinal studies could offer insights into how the relationship between inflation and economic growth evolves over time. By addressing these limitations and suggesting future research directions, scholars can further advance our understanding of the complex interplay between inflation and economic growth(Kiselakova et al., 2020).

The Effect of Poverty on Economic Growth in European Union countries

The research findings suggest that poverty exerts a negative yet statistically insignificant influence on economic growth within European Union (EU) countries. This outcome implies a relatively minor direct impact of poverty on economic growth. However, it is important to recognize that high poverty rates may indirectly impede economic development by increasing the costs associated with achieving it. This aligns with previous studies that have highlighted how elevated poverty levels can escalate the expenses required for fostering economic progress, thus acting as a hindrance to development (Fetahi-Vehapi et al., 2015).

While the results shed light on the relationship between poverty and economic growth in EU countries, there are certain limitations within the study that warrant consideration. A more critical analysis of these limitations would enhance the comprehensiveness of the discussion. Additionally, offering suggestions for future research directions could further enrich the scholarly discourse on this topic.

The Effect of Public Debt on Economic Growth in European Union countries

The research conducted indicates a positive relationship between Public Debt and economic growth in European Union countries. This aligns with previous findings by

Reinhart and Rogoff (2010), who observed a significant impact of debt on growth, particularly when the public debt ratio exceeds 90% of GDP. Similarly, Grigorescu et al., (2021) identified a threshold beyond which high levels of public debt negatively affect economic growth, emphasizing the significance of this relationship. These results underscore the importance of managing public debt levels within certain thresholds to support sustained economic growth.

However, while the findings contribute to the understanding of the debt-growth relationship, further critical analysis of the study's limitations is necessary. Future research could delve deeper into the mechanisms through which public debt influences economic growth, considering factors such as debt composition, institutional quality, and policy responses. Additionally, exploring the dynamics of debt sustainability and its implications for long-term growth could provide valuable insights for policymakers and researchers alike.

The influence of foreign investment (PMA) on economic growth in European Union countries

The research findings on the Influence of Foreign Direct Investment (FDI) on Economic Growth in Europe reveal a positive yet insignificant effect of FDI on economic growth, aligning with prior literature (Siyakiya, 2017). This suggests that while FDI may not directly impact economic growth, it stimulates increased investment, leading to heightened capital inflow and subsequent economic expansion through the production of goods and services.

6. Conclusions

This research indicates that inflation, Foreign Direct Investment (FDI), public debt, and poverty are among the indicators influencing economic growth rates in European Union countries. The research findings show that public debt significantly affects the economic growth rate, while inflation, FDI, and poverty do not have a significant impact on the economic growth rate. In the discussion section, the researchers found that the decrease in economic growth in Europe is caused by many factors other than the variables examined. Therefore, the researchers hope that future research on economic growth can use other indicators. The implication is that the researchers recommend that governments not only pursue high economic growth rates but also focus on quality and equitable economic growth. This entails considering other aspects such as societal welfare and the satisfaction of the population's livelihoods.

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