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The Influence of Monetary Policy on the Economic Growth in European Union Countries

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Abstract: Currently, economic growth (EG) is the major concern for countries around the globe due to the uncertainty of economic and financial conditions, and this aspect needs researchers' attention. Hence, the present article examines the impact of monetary policy such as money supply, repo rate, exchange rate, and inflation on the EG of European Union (EU) countries. The article has also used industrialization as the control variable to predict economic growth. The study has taken the secondary data from central banks of EU countries and World Bank Indicators (WDI) from 2011 to 2020. The study has employed the Methods of Moments-Quantile-Regression (MMQR) statistical technique to check the association among variables. The results exposed that the money supply, repo rate, exchange rate, inflation, and industrialization have a significant and positive influence on the EGof EU countries. The study provides the guidelines to the regulators in establishing regulations regarding improving EG using effective outcomes of well-monitored monetary policy.

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1. Introduction

Economic growth is highly important in this changing world since they inform us about a country's economic health and status. In general, EG refers to an increase in a country's capacity to create products and services from one period to the next. GDP, which quantifies the value of all final products and services produced inside the local country in one year, is a growth indicator (Gumbau-Albert & Maudos, 2022). The EG of any country decides the future of the country. The countries adopt different measures to bring prosperity to their economies (Dima, 2021), but there are certain limitations that act as a hurdle to EG like 1) Inequalities: economic development does not always alleviate relative poverty; it is dependent on income distribution. Economic progress may skip the weakest members of society (Bogoviz, Lobova, & Alekseev, 2022), 2) Negative externalities: economic expansion can result in negative externalities like pollution, increased crime rates, and traffic congestion, all of which lower living standards, 3) Environmental issues: global warming is being caused by increased carbon output. Economic expansion may provide benefits in the short term, but it will cost in the long run; 4) The Soviet Union had tremendous rates of economic development, but this was often achieved by creating a lot of useless steel and pig iron (Ridley & Llaugel, 2022), 5) Inflation, a current account imbalance, and boom and bust can result from overly fast expansion (I. Khan, Hou, Irfan, Zakari, & Le, 2021), 6) according to theories of hedonistic relativism, increasing productivity has no impact on improving life quality or enjoyment (beyond a certain point). Although there is a number of limitation but the most important is monetary factors like money supply and demand, inflation, stock exchange, imports, and exports (Chugunov, Pasichnyi, Koroviy, Kaneva, & Nikitishin, 2021).

The European economy, which includes 42 economies, is estimated to be worth $23.4 trillion in nominal terms in 2021, $2.6 trillion higher than in 2020 (Dauti & Elezi, 2022). Europe's GDP is $1 trillion higher than the GDP of the United States, the world's largest economy. Europe has the world's third-biggest economy, accounting for 24.73 percent of global GDP in nominal terms. Europe is the second largest continental economy after Asia, accounting for 21.73 percent of world wealth. Western Europe has the continent's largest GDP ($10.1 trillion). Eastern Europe was the world's greatest economy in 1970, but it is present near the bottom. Western Europe accounts for 43.22 percent of European GDP, Northern Europe accounts for 23.62 percent, Southern Europe accounts for 18.30 percent, and Eastern Europe accounts for 14.86 percent (Nazarko, Žemaitis, Wróblewski, Šuhajda, & Zajączkowska, 2022). The aggregate GDP of the European Union's 27 member nations was around 14.45 trillion Euros in 2021 (Vavoura & Vavouras, 2022). The UK likewise suffered more than the other major economies during the late-2000s crisis, leaving France as the continent's second-largest economy for some time following. Throughout this 38-year period, Spain's economy was consistently the fifth-largest in Europe, and it has been valued at more than one trillion Euros since 2004. The GDP of the European Union top ten countries is given in Figure 1.

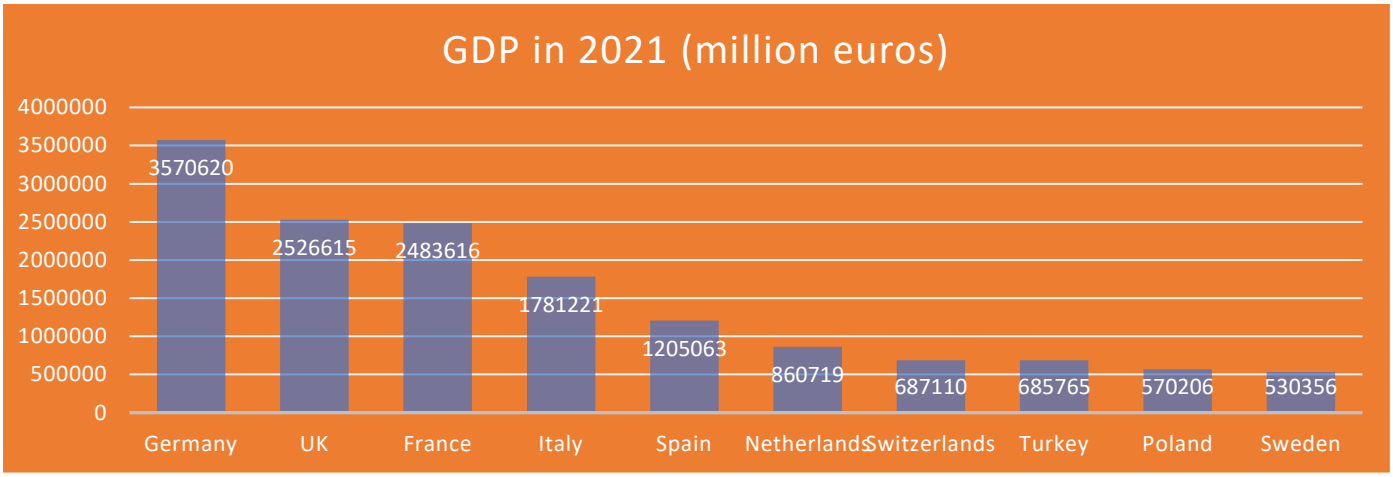

Figure 1: GDP of European Union countries

Likewise, with other studies, the present study will also attempt to address gaps that exist in the past literature, like 1) the economic conditions of any country decide the future of the country. Economies all around the globe use multiple ways to bring stability as well as sustainability to their economic growth. Although there is a number of factors that affect economic growth, one important is monetary factors like inflation, money supply, demand, and stock exchange. The EG in monetary factors perspective researched although but still lot of worked need to be done due to rapid changes, 2) Tien (2021) and Adaramola and Dada (2020), investigated the weather Inflation has any effect on the economic growth, whereas the present study will also check the effect of money supply, repo rate and industrialization in European Union Countries with fresh data set, 3) the equation consists of economic growth, money supply, repo rate, inflation, exchange rate and industrialization particularly in European Union Countries is not tested before with fresh data set in recent time, 4) Ariyanti (2020) and Misra (2019), investigated the relationship between repo rate and inflation, whereas the present study will check it with EG with fresh data set particularly in European Union Countries, 5) Tiryaki, Ceylan, and Erdoğan (2019) and Samargandi, Kutan, Sohag, and Algahtani (2020), checked the effect of money supply on exchange rate, whereas the present study will check its effect on EG by adding inflation, repo rate and industrialization,6) Mujtaba and Jena (2022), investigated whether industrialization effect the economic growth, whereas the present study will employ it as controlled variables. The present study also pertains significance from a theoretical and practical point of view like 1) will highlight the importance of monetary factors like inflation, exchange rate for the EG of European Union Countries, and 2) it will help the government as well as private sector economy related professional to review, upgrade their policies to bring prosperity in selected economies, 3) it will also help the researchers to explore more aspects of EG as well as monetary factors particular in European Union Countries.

The structure of the study is divided into different phases. The first chapter of the study will present the introduction to the

overall study, particularly about economic growth, including the study gap and significance. In the second phase of the study, the evidence about economic growth, money supply, repo rate, inflation, exchange rate, and industrialization in connection with past studies will be discussed. The third chapter of the study details the methodology, i.e., the collection of data about economic growth, money supply, repo rate, inflation, exchange rate, and industrialization will be presented, and then the data validity will be analyzed. The fourth chapter of the study will present the results received after data analysis. The fifth chapter of the study will present the conclusion with implications as well as recommendations for future scholars.

2. Literature Review

EG gives critical data to the government, financial backers, global networks, and associations, both administrative and nongovernmental. This information incorporates the size of the economy, its pace of development, GDP per capita, and so on. To that end, researchers and analysts have left in following the connection between economic development and the elements that fuel its prosperity or otherwise. One of these variables is the money supply. The connection between money supply and economic development has hypothetical support. Accordingly, Dingela and Khobai (2017) checked whether the money supply affects economic growth. The study was conducted in South Africa for the data set of 36 years, from 1980 to 2016. The data was analyzed with the help of the ARDL testing method. The results proposed that the money supply affects EG in a positive way. Furthermore, Samargandi et al. (2020) also investigated the effect of money supply effect on EG by employing the ARD approach at the data set of 20 years from 200 to 2020. The results proposed that the increase in the money supply is negatively associated with the EG of the country. In the case of Sri Lanka, the relationship was not tested econometrically. Money supply and exchange rate were regarded as independent variables, with the gross domestic product acting as the dependent variable. Further,

Aslam (2016) investigated the effects of Sri Lanka's money supply on economic growth; the multivariate econometric technique was employed. The calculated model's R-squared was 92 percent, which suggested that the model was desired. These statistics, therefore, showed that serial correlation was not a problem for the calculated model. The analytical findings indicate that Sri Lanka's economic development has continued to be positively impacted by the money supply at a considerable level of 1 percent.

Monetary factors are considered very important for the stability as well as the sustainability of the country's economy. One of the major monetary factors is the money supply. There is numerous reason for the increase or decrease in money supply in the country. In any case, the money supply affects economic growth. Thus, Precious and Makhetha-Kosi (2018) checked whether the monetary policy affects the EG of the country. The study was conducted in South Africa at the data set of 10 years ranging from 2000 to 2020. The ADFPP unit root test was employed for the analysis of the data. The results proposed that the factors like money supply along with exchange and repo rate affect the EG of South Africa. Further, the most influencing factor is inflation. Similarly, In this context, Cheng (2017) also examined the effect of monetary policy on the exchange rate. The study was conducted in Kenya on the data set of 18 years, from 1997 to 2015.

The results proposed that an exogenous increase in the short-term interest rate will, in general, be trailed by a decrease in costs and appreciation in the nominal exchange rate yet irrelevantly affects yield. Further, it found that variations in the short-term interest rate represent critical changes in the ostensible exchange rate and costs while accounting little for output fluctuations. Iran is witnessing rapid changes in the economy due to different factors like war, oil prices, and political instability. In Iran, there is a significant association between monetary policy and EG from 1997 to 2018. Further, the Iranian government must balance its money supply and demand according to the requirement by avoiding excessive supply (Sean, 2019).

Inflation influences growth by changing the labor supply and demand and, in this manner, reducing aggregate employment in the area that is likely to expand returns. The decrease in the degree of employment will diminish the minimal efficiency of capital. Like a few different nations, both industrialized and non-industrialized, one of the central goals of macroeconomic strategies in developing countries is to elevate EG and keep inflation at a low level. Many times, the effect of one factor on other varies according to the country's size. Like in developing countries, the results of inflationary factors may differ from developed countries. One of the reasons is how the economy is strong. The economy of a developed country can absorb the more adverse effect of inflation as compared to a developing one.

Consequently, Kasidi and Mwakanemela (2017) checked the association between inflation and EG in Tanzania. The data set of 21 years from 1990 to 2011 were collected and tested by employing coefficient versatility. The results proposed that the increase in inflation has an adverse effect on the EG of Tanzania. Inflation is one of the factors that have a direct effect on not only the economy but also on the daily life of the people. The increase in inflation affects the commodities prices, which further affect the common man. Thus, Madurapperuma (2016) checked whether inflation in both the long and short run effect the country's economic growth. The study was conducted in Sri Lanka for a data set of 27 years, from 1988 to 2015. The data was analyzed with the help of the EC model. The results of the study proposed that the relationship between both the factors is stronger in the long as compared to the short run.

A strong exchange rate can push down EG since exports are more costly, thusly fewer demands for exports. In comparison with exports, the imports are less expensive. Overall, this diminishes Aggregate Demand (AD). Subsequently, Adeniran, Yusuf, and Adeyemi (2014) checked whether the exchange rate has any association with the EG of the country. The data set of 27 years ranging from 1986 to 2013 were collected and tested. The data source was the Central Bank of Nigeria. The data was tested by employing the OLS technique. The results proposed that in 1986 the monetary power was moved to an adaptable exchange system from the fixed exchange in 2013. Moreover, the results proposed that the exchange rate influences the country's EG by having major reliance on agriculture. In the case of inflation, there is a negative association with the exchange rate.

Thus, it is recommended that the administration ought to energize the product advancement strategies to keep an excess harmony between exchange and furthermore favorable climate, sufficient security, successful financial and monetary, as well as infrastructural offices ought to be given so that foreign investors will be drawn to put resources into Nigeria. The exchange rate is distinguished as an element of the turning vector of the EG of nations which was observationally affirmed by a few related investigations (Aslam, 2016). Furthermore, M. F. H. Khan (2021) also checked the inflation effect on the EG of Bangladesh. The data set of 30 years, from 1990 to 2020, was collected and tested by employing the DFPP unit rot testing. The Ordinary Least Squares strategy was applied to check the connection between the reliant variable and autonomous factors. The outcomes uncovered that the exchange rate and foreign direct investment have altogether impacted the country's economic growth. Inflation and other monetary

factors like exchange rate have a positive effect, though surprising occasions like Covid-19, catastrophic events, and so forth adversely influence the economic advancement of Bangladesh. The study can be useful for the policy creators to recognize, figure out and execute the impact approaches for the EG of the country.

Industrialization adds to EG by enhancing productive capacity, work creation, development, and ideal asset use. Exchange receptiveness improves foreign direct investment (FDI), worldwide market incorporation, mechanical progression, and countries' productive capacity. The desire for comprehensive growth in Nigeria is at the very front of most open talk inferable from the rising degree of disparity, destitution, and unemployment in the country. Given the monoculture idea of the Nigerian economy and the instability in the crude oil market, this study contends for industrialization as a guide to comprehensive growth in Nigeria. It was found that times of low modern results relate to times of high unemployment and low pay per head in Nigeria. Exact discoveries uncovered that GDP per capita is probably going to increment by 0.38% while the unemployment rate decreased by 0.03% for each 1% increment in the modern result.

Therefore the public authority ought to set out on favorable modern strategies, for example, reviving the modern area through an enormous investment in mechanical advancement and modern frameworks, advancing inter-sectoral linkages, working with the private-public organization, and working in a generally closed economy (Afolabi & Ogunjimi, 2020). A momentous differentiation between the growth experienced in the Asian and the African economies. The association between industrialization and economy may vary from region to region (Opoku & Yan, 2019). Further, Adewale (2017) also investigated whether industrialization has any effect on economic growth. Different methodologies and mediations are applied all the while, yet the results are dependably unique. It researches the significance of import replacement industrialization (ISI) on the economic execution of the nations in BRICS. The industrialization significant influence the EG of the country.

3. Research Methods

The article examines the impact of money supply, repo rate, exchange rate, industrialization, and inflation on the EG of EU countries. The study has taken the secondary data from central banks of EU countries and WDI from 2011 to 2020. The article has established the equation with understudy constructs given as under:

$$EG_{it} = \alpha_0 + \beta_1 MS_{it} + \beta_2 RR_{it} + \beta_3 INF_{it} + \beta_4 ER_{it} + \beta_5 IND_{it} + e_{it} \quad \textbf{(1)}$$

Where;

EG	=	Economic Growth
t	=	Time Period
i	=	Countries
MS	=	Money Supply
RR	=	Repo Rate
INF	=	Inflation
ER	=	Exchange Rate
IND	=	Industrialization

The study used EG as the predictive construct and measured GDP growth (annual percentage). Moreover, the study has taken monetary policy as the predictor construct and measured the money supply with M3, repo rate, exchange rate, and consumer price (annual percentage). Finally, the study also used the control variable named industrialization and measured as Industry value added (% of GDP). These measurements are mentioned in Table 1.

Table 1: Measurements of Variables

S#	Variables	Measurement	Sources
01	Economic Growth	GDP growth (annual percentage)	WDI
02	Monetary Policy	Money supply measured with M3	WDI
		Repo rate	Central Banks
		Consumer price (annual percentage)	WDI
		Exchange rate	WDI
03	Industrialization	Industry value added (% of GDP)	WDI

The descriptive statistics have been applied to check the variables' detail that shows the mean, number of observations, maximum value, standard deviation, and minimum values. Moreover, the correlation matrix has also been applied to examine the directional linkage among the constructs. In addition, the variance inflation factor (VIF) has also been run to check the multicollinearity that may affect the study results. The VIF test equations are mentioned as under:

$$R^2_Y \longrightarrow Y_{it} = \alpha_0 + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + e_{it} \quad \textbf{(2)}$$

$$j = R^2_Y, R^2_{X1}, R^2_{X2,} R^2_{X3,} R^2_{X4,} R^2_{X5} \quad \textbf{(3)}$$

$$Tolrance = 1 - R^2_j VIF = \frac{1}{Tolerance} \quad \textbf{(4)}$$

The MMQR technique has been employed by the study to inspect the linkage between the variables. It is a novel technique introduced by Machado and Silva (2019) and has the characteristics of robust outlies. In addition, it also permits "conditional heterogeneous covariance effects" of EG to affect whole distribution in various panel quantile regression that allows shifting means (Adebayo, Akadiri, Adedapo, & Usman, 2022). Hence, the MMQR is a suitable approach that comprises nonlinear associations, all together controlling heterogeneity and endogeneity (Ike, Usman, & Sarkodie, 2020). Thus, the conditional quantile such as $Q\tau(\tau/X)$ for the "locational-scale alternate model" is established as under:

$$Y_{it} = \alpha_i + X_{it}\beta + (\delta_i + Z_{it}\lambda)U_{it} \quad \textbf{(5)}$$

Where, $P\{\delta_i + Z_{it}\lambda > 0\} = 1.$ presents the probability. While $\alpha, \beta, \lambda \; and \; \delta$ presents the parameters that need to be assessed. Additionally, α_i, δ_i i $= 1, \ldots\ldots,$ n presents a definite fixed effect, and z shows the k-vector of component X. Finally, the components are changed with component 1, that is given as under:

$$Zl = Zl\,(X), l = 1, \ldots\ldots, k \quad \textbf{(6)}$$

Where, U_{it} shows orthogonal to X_{it} and consistent with achieving the moment conditions that do not encompass stringent heterogeneity. Thus, in equation (5), the conditional quantile of Y is established as under:

$$Q\tau(\tau/X_{it}) = (\alpha_i + \delta_i q(\tau)) + X_{it}\beta + Z_{it}\,\lambda\, q(\tau) \quad \textbf{(7)}$$

Where, X_{it} presents the independent variables such as MS, RR, INF, EXR, and IND and Y_{it} is the dependent construct such as EG, which is conditional as X_{it} . Their heterogeneous effects are permissible for change across the quantiles of the predictive construct Y due to time invariants t. Hence, $Q(\tau)$ is established as under:

$$Min_q = \sum_t \sum_i p\tau\,(R_{it} - (\delta_i + Z_{it}\,\lambda\,)q) \quad \textbf{(8)}$$

1. Research Findings

The descriptive statistics have been applied to check the variables' detail that shows the mean, number of observations, maximum value, standard deviation, and minimum values. The results indicated that the number of observations used in the study was 280 (28 countries x 10 years). In addition, the study results indicated that the EG mean value is 4.432 percent, while

the MS average value is 2.022 percent and the RR mean value is 3.092 percent. Moreover, the study findings indicated that the INF mean value is 3.902 percent, while the EXR average value is 15.275 percent and IND mean value is 3.902 percent. These statistics are mentioned in Table 2. Moreover, the correlation matrix has also been applied to examine the directional linkage among the constructs. The results exposed that the money supply, repo rate, exchange rate, inflation, and industrialization have a significant and positive influence on the EG of EU countries. These statistics are mentioned in Table 3.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
EG	280	4.432	1.056	1.092	9.762
MS	280	2.022	1.055	0.936	5.998
RR	280	3.092	1.034	1.927	5.009
INF	280	3.902	0.827	1.092	7.172
EXR	280	15.275	9.644	0.312	35.901
IND	280	3.902	2.102	1.298	6.106

Table 3: Matrix of Correlations

Variables	EG	MS	RR	INF	EXR	IND
EG	1.000					
MS	0.763	1.000				
RR	0.102	0.200	1.000			
INF	0.271	0.543	0.271	1.000		
EXR	0.642	0.763	0.782	0.382	1.000	
IND	0.392	0.299	0.234	-0.420	0.432	1.000

In addition, VIF has also been run to check the multicollinearity that may affect the study results. The results exposed that the VIF figures are lower than five and reciprocals are larger than 0.20, and exposed no multicollinearity exits. These statistics are mentioned in Table 4.

Table 4: Variance Inflation Factor

	VIF	1/VIF
MS	3.209	0.312
RR	3.102	0.322
INF	2.782	0.359
EXR	1.288	0.776
IND	1.025	0.976
Mean VIF	2.281	.

The MMQR results exposed that the money supply, repo rate, exchange rate, inflation, and industrialization have a significant and positive influence on the EG of EU countries. The results also indicated that MS significantly and positively impacts EG in quantiles 1 to 7. In addition, the findings also indicated that RR has a significant and positive impact on EG in quantiles 1 to 8. Moreover, the outcome also exposed that INF has a significant and positive impact on EG in quantiles 1 to 8. Furthermore, the results also indicated that EXR significantly and positively impacts EG in quantiles 1 to 5 and 7. Finally, the findings also indicated that IND significantly and positively impacts EG in quantiles 1 to 5, 7, and 9. These statistics are mentioned in Table 5.

Table 5: Panel Quartile Estimation (MMQR)

Variables	Method of Moments Quantile Regression (MMQR)										
	Location	Scale	Grid of Quartiles								
			0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MS	0.435***	0.553*	0.352**	0.662**	0.553*	0.764**	0.543*	0.673*	0.201*	0.201	0.111
RR	0.287**	0.205*	0.277**	0.434*	0.337*	0.722***	0.336**	0.377**	0.362**	0.377*	0.101
INF	0.663***	0.399**	0.647**	0.277**	0.387*	0.392*	0.128*	0.399*	0.222*	0.354**	0.210
EXR	0.372*	0.720**	0.611*	0.743*	0.884**	0.200*	0.126*	0.293	0.182*	0.101	0.100
IND	0.195*	0.388**	0.382*	0.287**	0.563***	0.288*	0.327*	0.110	0.283*	0.023	0.419*

***, **, and * represent significant level at 1%, 5%, and 10%, respectively

2. Discussions

The results showed that money supply, the component of monetary policy, has a positive relation to economic growth. These results are supported by Twinoburyo and Odhiambo (2018), which highlights that EG is based on the productivity of products and services from different economic sectors, and when there is a huge investment in these sectors because of the large money supply, the total production of the goods and services increases, and the economy can have high growth rate. These results are also supported by Wen, Min, Zhang, and Yang (2019), which states that the increase in the money supply in the market encourages investment and gives rise to constructive and developmental activities. So, there is an activity in the economy and an increase in the annual GDP growth rate. The results showed that the repo rate, the component of monetary policy, has a positive relation to economic growth. These results are supported by Shaheen (2020), which states that when a favorable monetary policy is formed for the repo rate, a sufficient amount of money can be allowed to circulate in the economy. In this situation, the business organizations do not feel run short of money to make investments, and the productivity of capital invested is also improved. Hence, there is an increase in the EG of the country. These results are also in line with Olamide and Maredza (2019), which reveals that with the effective repo rate policy, the value of the money in the market can be maintained. The maintained value of the investment brings more profits and improves productivity contributing to economic growth.

The results indicated that inflation, the component of monetary policy, has a positive relation to economic growth. These results are supported by Mishchenko, Naumenkova, Mishchenko, and Ivanov (2018), which posits that the policy for the control of price level prevailed within the marketing determines the profitability and productivity of businesses. If the policy increases the price level to a favorable level, it increases profitability and motivates the producers to be more active in their work. Therefore, it can lead the economy towards growth. The results also agree with Van (2019), which states that the favorable policy regarding inflation control can facilitate the producers and enhance the total production. An increase in a country's GDP means an increase in economic growth. The results showed that the exchange rate, the component of monetary policy, has a positive relation to economic growth. These results are in line with Kong, Peng, Ni, Jiang, and Wang (2021). According to this study, the effective monetary policy determines the suitable exchange rate both at the time of receipts and payments. It reduces the financial risks and improves the performance of economic operations. So, it leads to higher economic growth. The results showed that industrialization has a positive relation to economic growth. These results are in line with Batrancea, Rathnaswamy, and Batrancea (2022), which reveals that the industrial sector is significantly linked to the EG of the country. When there is an increase in industrial activities, the production of finished products and services increases, and the economy is likely to grow at a higher rate.

3. Implications

The current article has theoretical as well as empirical implications. Since the present article does not simply examine the monetary policy impacts on accelerating EG but examines

the four different components of monetary policy like money supply, repo rate, inflation, and exchange rate, along with industrialization in economic growth, it presents theoretical guidelines for future authors. Similarly, it opens avenues for the authors by analyzing the influences of monetary policy on the money supply, repo rate, inflation, and exchange rate, along with industrialization on EG in European Union countries. The current study also has much empirical significance in emerging states like European Union countries as it addresses EG. The study provides the guidelines to the regulators in establishing regulations regarding improving EG using effective outcomes of well-monitored monetary policy. This study has a set of guidelines for the central bank of any country that they must take some precautions while giving formulating monetary policy or making amendments to it, the precautions which can ensure economic growth. The study suggests that monetary policy should be formulated in such a manner that it can control the money supply, repo rate, inflation, and exchange rate, keeping pace with industrialization for accelerating economic growth.

4. Conclusions and Limitations

The aim of the study is to check how effective is the monetary policy regarding the money supply, repo rate, inflation, and exchange rate along with industrialization in accelerating economic growth. The data for the monetary policy components like the money supply, repo rate, inflation, exchange rate, industrialization, and EG from European Union countries. The results based on the empirical data showed a positive relationship between the money supply, repo rate, inflation, and exchange rate, along with industrialization and accelerating economic growth. The results showed that with an effective monetary policy, the increase in the money supply in the market encourages investment in economic activities and enhances productivity leading to an increase in economic growth. The results stated that with the effective repo rate policy, the supply and value of the money in the market could be maintained. Sufficient investment and productivity enhance economic growth. Similarly, the suitable monetary policy for inflation control encourages the producers for better functioning and increases total production determining a higher EG rate. A suitable exchange rate protects the economy against risks and increases its performance. So, there is a higher EG rate.

The study also has many limitations, and it is expected those future authors to overcome these limitations. First, the current study examines only the impacts of monetary policy components like the money supply, repo rate, inflation, and exchange on economic growth. The factors like fiscal policy, technological advancement, and financial development can also influence economic growth. For improved comprehensiveness, the authors should also consider these factors for economic growth. The European Union countries are included in the sample for the analysis of the role of monetary policy regarding money supply, repo rate, inflation, exchange rate, and industrialization in increasing economic growth. The selection of a specific region of the world cannot give enough evidence for generalizable research. So, in the future, studies should be conducted for the nexus among similar factors with evidence from multiple countries.

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