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THE IMPACT OF STOCK, MARKET. ON ECONOMIC. GROWTH: EVIDENCE FROM DEVELOPED EUROPEAN.COUNTRIES

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ABSTRACT

The purpose of the study is to investigate the impact of stock market development on economic growth for nine developed European countries.

In many countries, the stock market (SM), is considered. one of the crucial elements for promoting sustainable economic growth and development. By analysing data from nine developed European countries over 21 years, from 2000 to 2020, including Germany, the United Kingdom, France, Italy, Spain, the Netherlands, Switzerland, Turkey, and Poland, this study seeks to determine the effect of the stock. market. on economic growth. The years 2021 and 2022 are not included due to the lack of data, mainly as a result of the pandemic period. The dataset, extracted from the World Bank database, is used to generate results by applying different econometric models such as OLS, OLS Robust, Fixed, and the Random Effect, which turned out to be more suitable in this study. According to research, macroeconomic factors such as stock. market development (SMD), and inflation (INF), have a significant positive impact while, domestic credit to the private sector (DC), has a negative significant impact on economic growth, in respective periods and countries. Therefore, new research on this topic could help better understand the stock market's impact on economic growth, and new conclusions might greatly benefit developed European countries.

Key words: Stock market, economic growth, developed European countries, panel data, Random Effect.

INTRODUCTION

The stock market (SM) is a key factor in economic development and growth, and is seen as a key mechanism for accelerating economic growth? However, before analysing how the stock market affects economic growth, it is important to focus on and comprehend the process that propels economic growth. The fundamental forces behind the economy of many countries are consumption and investment. The stock market largely has an impact on consumer confidence and financial conditions, which in turn affect GDP. Moreover, the stock market (SM) can affect a country's economy in many ways, including the movements of the stock prices, considering that the stock market (SM) has a volatile character. Changes in stock prices can have an impact on several economic factors, including consumer and company confidence, and these changes can either have a positive or negative impact on the economy as a whole.

Changes in stock prices can have an impact on several economic factors, including consumer and company confidence, and these changes can either have a positive or negative impact on the economy as a whole. The ‘consumption and wealth’ effect is another method, which demonstrates how a person's spending habits are influenced by a change in income and ultimately helps the economy grow. Therefore, one way is through the direct impact of stock prices on consumer and business confidence. When stock prices rise, it can lead to optimism about the economy, which can encourage consumers to spend more and businesses to invest in expansion. This increased economic activity can contribute to overall economic growth.

In developing countries, the financial markets are more compact and simpler, so the stock markets (SM) are completely absent. While, developed countries, stock markets (SM) are more complex and characterized by multiple financial instruments and stock markets. The development of the stock market (SM) makes it easier for investors to obtain financial resources and encourages the efficient use of those resources, increasing both domestic and foreign investments. Capital markets of most economies are segregated into the primary market for new issues and the secondary market for the transaction of already existing shares, mostly through the stock market (Dabwor et al., 2022).

Additionally, it's crucial to comprehend the interaction between the stock market (SM), the real economy, and the channels through which financial markets drive economic growth (Pan 2018). The open market has influenced the stock market to be the focus of scholars and policymakers because of its perceived benefits to the economy. Research on the relationship between the growth of the stock market (SM) and the expansion of the economy is becoming more and more prevalent (Vazakidis 2009; Levine 1998; Adjasi et al., 2006; Haque 2011; Agarwal 2001).

There are many stock markets (SM) in developed countries in Europe and the performance of these markets varies widely depending on several factors such as economic conditions, company-specific factors, and global economic trends. Stock markets (SM) in developed countries in Europe include the London Stock Exchange, Deutsche Bores, SIX Swiss Exchange, NASDAQ OMX Nordic, etc.

Further, the summary of this study is as follows: Section 2 presents the literature review, and Section 3 shows the methodology. While, Section 4, contains the results and discussions, to go up with Section 5 respectively, conclusions and the last section is the literature.

LITERATURE REVIEW

Economic growth is a priority for both developed and developing countries (Bostan et al., 2023). According to (Datta et al., 2021) the stock market (SM) is one of the crucial elements of the development of an economy. Further, some of the key papers and studies that have investigated this topic include Levine (1998) who was one of the pioneers in posing the query of whether stock markets are essential for economic growth and examining this issue empirically by finding a positive and significant correlation between SMD and growth in the long term. Mauro (2000) concluded that the stock market (SM) effectively predicts economic growth in emerging economies. Furthermore, some additional studies reveal a positive relationship between stock market development (SMD) and economic growth (Enisan 2009; Beck 2004; Mian et al., 2010). According to other studies, the relationship between stock market development (SMD) and economic growth are negatively correlated (Hassapis 2000; Stiglitz 1993).

Adjasi (2006), based on the level of economic development and stock market capitalization shows that the positive impact of stock market development on economic growth is significant for countries classified as middle-income economies.

Additionally, several authors, including (Bayar et al., 2014; Araoye et al., 2018; Adjasi et al., 2006; and Vazakidis 2009) concluded that economic growth has a positive effect on stock market development (SMD). given the negative effect of interest rates on stock market development and economic growth. The study by (Borteye 2022), concludes that there is a mixed relationship between stock market developments on economic growth in Ghana, this relationship is not statistically significant. Demigurc Kunt (1996), demonstrated this relationship namely, the stock market and economic growth, and their focus consists mainly of the stock market indicator. Nowbutsing (2009), a time series analysis based on two crucial stock market indicators—size and liquidity, also, applied a long-term and short-term positive correlation between the variables. Levine (2000) recognized that the exogenous components of financial intermediary development are positively related to economic growth. Ake (2010) examined the connection between the stock

market and economic growth, research findings identified a positive relationship between the stock market (SM) and economic growth in the countries where it is a liquid and vibrant market. However, the causality association is disproved for nations with tiny and inefficient stock markets.

Evidence that stock market (SM) cause economic growth in Belgium was found in the study made by (Nieuwerburgh et al., 2006), for the period 1873 and 1935. Highlighting the fact that this connection is time-varying and that institutional changes impacting the stock exchange can explain this.

Notably, there haven't been any studies that take into account the same variables in the relevant countries and periods in the literature up to this point. Therefore, the paper tends to fill the current gap in the literature. Consequently, the results generated for specific counties, using a specific methodological approach result in a positive relationship between the stock market development and economic growth. Additionally, these findings may influence the current policies formulated by policymakers in the respective countries.

ECONOMETRIC, METHODOLOGY, AND DATA

In this study, we have used secondary data, extracted from the World Bank Database. The data were analysed by using econometric methods such as Pooled Least Squares (OLS), Pooled Least Squares Robust (OLSR), Fix Effect Model (FEM), and Random Effect Model (REM). Further, the results proceed through the STATA program. By seeing the connection of the variables with the respective topic, panel data were obtained for economic growth (EG) is measured by the GDP Growth (annual %), which represents the nominal growth of the Gross Domestic Product (GDP), Stock market development (SMD), Domestic credit (DC), the Labor force (LF), and inflation (INF). Variables that are also used by other authors such as: (Bui, 2021). Moreover, the results of using the Hausman test encourage us to place more weight on the results produced by the Random Effects Model.

The data used are panel data, which covers a period of 21 years (2000-2020), data collected by the World Bank. The study includes 9 developed European in general, countries such as Germany, the United Kingdom, France, Italy, Spain, the Netherlands, Switzerland, Turkey and Poland are among the most important and developed countries in Europe. Further, all variables selected play a role in the development and performance of the stock market. Other factors, such

as changes in government policy, global economic conditions, company-specific factors, and so on, can also affect stock market performance.

Definition	Variable	The measure	Source
Economic growth	EG	GDP growth (annual %)	World Bank
Stock market development	SMD	Market capitalization (% of GDP)	World Bank
Domestic credit	DC	Domestic credit to the private sector (% of GDP)	World Bank
Labor force	LF	Growth of labour force (annual %)	World Bank
Inflation	INF	Consumer prices (annual %)	World Bank

Table 1: Description of research variables

ECONOMETRIC MODEL

When we substitute the variables, we used in our model, we create the following equation:

$$GDP = \beta_0 + \beta (EG) + \beta (SMD) + \beta (DC) + \beta (LF) + \beta (INF) + \mu_i$$

RESULTS AND DISCUSSION

Variables	Obs	Mean	Std. Dev.	Min	Max
EG	189	1.77	3.01	-10.82	11.20
SMD	172	80.06	60.67	13.62	283.13
DC	172	101.27	39.16	12.86	191.41
LF log	189	16.78	0.66	15.20	17.60
INF	189	3.26	6.87	-1.14	54.91

Source: STATA Author's Calculation; Data from the World Bank Database.

Table 2. Descriptive statistics of variables

The table above presents the descriptive statistics of the study variables for all nine countries for 21 years, a total of 189 observations. Further, the sample countries included in the study model have positive economic performance an average of 1.77%, the development of the stock market reaches an average of 80.06% of GDP, Domestic credit is 101.27%, and the labour

force takes an average of 16.78% while inflation for the countries of the study model has an average of 3.26 %.

	EG	SMD	DC	LF log	INF
EG	1.00				
SMD	0.005	1.00			
DC	-0.25	0.71	1.00		
LF log	-0.06	-0.66	-0.31	1.00	
INF	0.27	-0.38	-0.34	0.23	1.00

Source: STATA Author's Calculation; Data from the World Bank Database.

Table 3. Correlation Matrix Analysis

The correlation coefficient between variables is presented in the above table, where two variables namely, the stock market. development ($r=0.005$) and inflation. ($r=0.27$), have a positive relationship. with economic growth, while the other two variables, domestic credit, and labour force have a negative relationship. with economic growth.

The table below shows the results of four econometric models: OLS, OLS Robust, Fixed effect, and Random effect.

Variables	OLS Economic growth	OLS Robust Economic growth	FE Economic growth	RE Economic growth
SMD	0.0239***	0.0239***	0.0313**	0.0263**
t-stat	(3.56)	(4.69)	(2.91)	(3.27)
DC	-0.0334**	-0.0334**	-0.0245	-0.0241***
t-stat	(-4.56)	(-4.96)	(-1.78)	(-3.87)
LF log	0.203	0.204	-2.421	0.367
t-stat	(0.49)	(0.68)	(-0.57)	(0.60)
Inf	0.276***	0.276***	0.115	0.229*
t-stat	(3.54)	(2.62)	(0.89)	(2.36)
cons	-0.797	-0.798	42.16	-3.572
	(-0.11)	(-0.15)	(0.60)	(-0.34)
R-squared	0.18	0.20		
Observations	155	155	155	155
Hausman test=0.6197				
VIF = 2.31				

Notes: ***Statistically significant at 1% level, **statistically significant at 5% level, *statistically significant at 10% level

Source: author's calculation

Table 4. The econometric model

The table above shows the results of four econometric models. Moreover, the random effect seems to be more appropriate in this topic by taking into consideration the results of the Hausman test, based on the P value that is higher than 0.05, by means that the difference in the coefficient is not systematic although, the interpretation of the results.

The VIF test is presented to test the data for multicollinearity, according to the data, multicollinearity doesn't exist, since the average of the VIF is less than 5.

The respective study contains four independent variables three of which are significant and consistent with other empirical studies of the other authors as follows. Stock market development (SMD), has a positive impact on the economic growth of the respective countries included in the sample, with a coefficient of 0.0263, and is significant at 10% level of importance, these findings are consistent with the author (Adjasi 2006; Van Nieuwerburgh 2006; Ake 2010), etc. The stock market is a part of the wider capital market in the developed countries of Europe. The rise in the stock market may reflect increased investor confidence and the good performance of the economy. This can increase investor confidence and encourage more investment in various economic sectors. The findings from this study show that the stock market is considered an indicator of the economic performance of the nine developed European countries that were studied and is interpreted as an indicator of the strength of the economy and the confidence of investors in its prospects.⁴

Further, domestic credit (DC.) impacts economic growth⁴ with a coefficient of (-0.0241) and is significant⁵ at the 1% level of importance. The result shows that domestic credit (DC.), in developed European countries is negatively related to economic growth, so for every 1% increase in domestic credit, economic growth increases by 0.02%. Inflation has a positive impact on economic growth, with a coefficient of 0.229, and is significant at the 10% level of importance consistent with the authors (Bui 2021). Moderate inflation has a positive impact on economic growth and encourages investment, while high inflation can affect the decrease in the value of shares and lead to dissatisfaction and mistrust among investors, limiting investment and economic growth.

CONCLUSIONS AND POLICY RECOMMENDATIONS

The goal of the current study is to explain the impact of the stock market development (SMD) of economic growth in nine developed European countries namely, Germany, United Kingdom, France, Italy, Spain, Netherlands, Switzerland, Turkey, and Poland, for 21 years respectively, from 2000 to 2020.

The Stock market (SM) is part of the wider capital market in a developed European country. The rise in the SM may reflect an increase in investor confidence and the good performance of the economy. This can increase investor confidence and encourage more investment in various economic sectors. The positive correlation between the stock market (SM) and Economic Growth (EG) is a well-known empirical fact. When economies grow to a reasonable scale and capital accumulation levels are high, stock markets appear to arise and develop. To reach this objective, the Random Effect model has been adopted and results report that SMD positively impacts EG in nine European developed countries. The study also shows a significant impact of DC and INF on EG, while the LF log shows a positive impact on economic growth, but the coefficient is not statistically significant. However, this is consistent with classical economic theories.

Moreover, the study's findings indicate that macroeconomic variables such as (SMD), and (INF) have a significant positive impact while, (DC), has a negative significant effect on economic growth, in respective countries during this mentioned period. Therefore, new research on this topic could help to understand better the impact of the SM on EG, and fresh insights could be quite advantageous. The results generated show that there is a significant and economically significant impact between the SM and EG, for every 1% increase in the SMD, EG increases by an average of 0.02%.

The development of the stock market is a key precondition for achieving greater rates, and the extent of that development is measured by the values of the following indicators: market, capitalization, stock value exchanges, and other additional variables that will take place in our future study.

Additionally, governments and financial institutions must commit to developing sustainable capital and stock markets. Creating an advanced and liquid stock market is important for attracting investment and increasing economic activity. An open and transparent information environment is important for the effective functioning of the stock market. This helps increase confidence and ensure that share prices reflect the real value of companies. Being

aware of changes in markets and economic policies is crucial because stock markets are dynamic.

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