The impact of globalization, macroeconomic variables, and financial development on economic growth: Evidence from ASEAN countries

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ABSTRACT

Globalization in the modern world is behind the formation of emerging market countries through the transition in economic growth. ASEAN is considered as the driving force of the world economy, including the emerging market countries that grow within it. However, economic growth in ASEAN emerging market countries still has to face many challenges. In macro analysis, the parameter of economic growth is GDP. Over time economists have highlighted that there are many other indicators, one of which is globalization, macroeconomic performance and financial development. The aim of this research is to analyze the impact of globalization, inflation, public spending, human capital and financial development on economic growth. This research is relevant because it relates to factors that affect economic growth amid increasingly complex global challenges by providing a comprehensive view of the relationship between variables. This type of quantitative research is based on secondary data. The sampling procedure employed is purposive sampling, which was applied to 5 countries. Data analysis using the PVECM or panel VECM method. The results showed that in the long run globalization, inflation, physical capital, and financial development affect economic growth, but government spending has no effect. While in the short term both lag 1 and 2 all variables affect economic growth. The implication of the study that government to prioritize the effective allocation of public spending, ensuring that funds are directed toward productive sectors such as infrastructure, education, and health.

1. Introduction

Globalization represents one of the most complex contemporary developments, impacting all areas of society and involving processes that strengthen the connection between the modern world and its interpenetration. Along side globalization, change is also a crucial process. Developing economies are faced with the inevitable processes of globalization and change, moving from a planned to a market economy. Globalization drives the expansion and prosperity of open economies. It is from the transition to globalization that emerging market countries are formed. This transition from a planned economy to a market economy promotes economic growth in every country (Radulović & Kostić, 2024). By The Organization for Economic Co-operation and Development (OECD), The Association of Southeast Asian Nations (ASEAN) is considered a driver of world economic growth (Park, 2024). Developing countries are no exception, growing as areas of economic integration that are seen by the world as potential markets (Riyanto, 2020). The emerging market countries in ASEAN are Indonesia, the Philippines, Vietnam, Thailand, and Malaysia (Acclime, 2024).
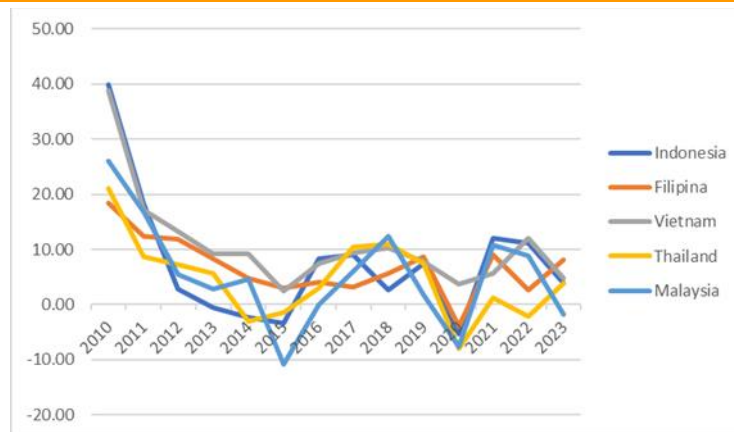
Figure 1. Economic growth of ASEAN emerging market countries 2010-2023.

Figure 1 shows economic growth of emerging market countries in ASEAN is very volatile, especially after the covid-19 pandemic the value has decreased significantly from 2019 to 2020, but the growth in the last two decades some countries have experienced a decline in growth rates and some have experienced a steady increase. In addition, developing countries in ASEAN must face challenges such as the global economic slowdown, financial tightening, and protectionist measures due to the Russian and Ukrainian wars. One of the parameters of economic growth in a country is the GDP (Gross National Product) (Solaymani & Montes, 2024). But over time, some economists highlighted that there are many methods and indicators used in measuring a country's economic growth, one of which is globalization, macroeconomic performance, and financial development (Elfaki & Ahmed, 2024). Globalization can encourage more effective allocation of domestic resources and factors of production, as well as increased application of technology (Meyer, 2020). As the "era of globalization" becomes more entrenched around the world, one of the positive impacts is that information and technology, especially those related to financial development, become more accessible, and international competition and efficiency increase (Wang & Ali, 2024). However, the failure of developing countries to fully utilize financial services to accelerate economic growth is the result of an underdeveloped financial sector and stagnant economies that have failed to create the demand necessary to develop the sector (Elfaki & Ahmed, 2024).

Another macro factor that affects economic growth is inflation (Malec et al., 2024). Inflation occurs when the economy of a country shows an upward trend in the general price level (Andriansyah et al., 2023). The increase in prices caused by mild inflation will encourage business units to expand production because of the profit factor, the expansion of production carried out will also have a positive impact in the form of expansion of new jobs. However, if the inflation rate is high and unstable, it tends to negatively influence the socio-economic conditions of the community which ultimately disrupts the economic, social, political, defense and security stability of a country (Béland et al., 2024). Problems related to the negative impact of inflation will be overcome properly if supported by capital that is utilized appropriately (Aydın et al., 2016). Investment in assets such as stocks and real estate that provide higher returns can reduce the negative impact of inflation (McKinsey, 2022). According to Keynesian, national income growth can also be determined by the amount of government consumption expenditure. Expenditures made will affect various sectors in the economy either directly or indirectly, especially the production of goods and services (Dorman, 2014).

Several studies have been conducted by Elfaki & Ahmed (2024) shows significant and beneficial positive globalization on economic growth while Virgan & Yanuar (2022) states economic growth is not strongly influenced by globalization.. Research Malec et al (2024) states inflation has a negative relationship with economic growth while Andriansyah et al (2023) argued inflation has no significant effect on economic growth. Research Opadeji et al (2023) states that gross capital formation does not have a statistically significant effect on economic development while Aslan & Altinoz (2021) found that gross capital formation has a negative impact on economic growth. Furthermore Nyasha & Odhiambo (2019) states that government spending has no effect on economic growth while Anindyntha (2023) states that government spending is found to have a positive effect on economic growth. Millah & Wibowo (2021) indicates that financial development and economic growth are positively correlated while Bui (2020) states that domestic credit has detrimental impact on economic growth. Based on the background and some inconsistent previous research, the researcher seeks to

develop by using several different aspects, namely from 2010-2023 and researchers use coverage development, namely emerging market countries in ASEAN as well as using research development using panel data, which combines cross section and time series data.

This research offers the novelty by integrating an analytical approach using the panel VAR / VECM method to analyze short-term and long-term relationships, most of which are still rarely used by some previous researchers. In addition, this study integrates globalization, inflation, government spending, physical capital, and financial development to analyze their impact on economic growth in emerging ASEAN countries. The combination of diverse variables and this approach is rarely found in previous studies, especially in the ASEAN context. The Impulse Response and Variance Decomposition tests provide in-depth insights into the short and long run contributions of each variable. This study also fills the gap of previous studies that generally only focus on one variable or do not pay attention to the complexity of interactions between variables. This study also emphasizes on many variables that are still influencing factors where in previous studies only tend to focus on one variable only. Furthermore, the purpose of this study is to examine how financial development, macroeconomic performance, and globalization affect economic growth in ASEAN emerging market nations between 2010 and 2023.

2. Literature Review

The endogenous growth model of Grossman & Helpman (1991) and Romer (1986) examines the relationship between international trade and economic growth, in which international trade volume is associated with the economic entry of new technologies and products. According to the international trade framework, the theory of comparative advantage include products that are easier or less expensive for a certain nation to manufacture that those produced in other nations. Comparative advantage theory states that nations would trade with one another by offering items in which there are comparatively better. According to Schumpeter's theory of financial intermediation, financial development which encompasses the facilitation of transactions and the mobilization of savings promotes economic expansion. In their early research on economic development, economists have given little consideration to the role trade and financial openness play in economy expansion. Schumpeter was one of the first economists to think that domestic credit is crucial for fostering economic expansion by providing funding for manufacturing investment. According to Irving Fisher's theory on velocity of money is a concept used to calculate transactions of money supply (M) in relation to the price level (P) and total output (Y) (Mendoza, 2010). The velocity of money (V) is defined as the average number of transactions made using a unit of currency every year to buy all of the goods and services generated in the economy. The velocity money, in other words, may reveal how frequently money moves over a certain time frame. The usefulness of modern quantity theory depends on the stability and predictability of velocity. Small changes in the velocity of money that are unpredictable can undermine the ability of the equation of exchange to predict nominal GDP (Andriansyah et al., 2023). Keynes' theory highlights how important spending and services in determining the level of economic activity. one of them is related to the aggregate demand for consumption expenditure, in the calculation of national income by means of expenditure shows how important government spending is in determining economic growth (McConnel et al., 2012).

According to the concept of international trade in goods that a given country can produce more easily or at a lower price, increased production efficiency and value creation contributes to the expansion and prosperity of an open economy, which has a positive impact on a country's economic development (Dorman, 2014). Economic growth can be positively influenced by policies that encourage globalization. Productivity in various sectors is boosted by technological advances, resulting in increased production, goods and services for consumption and export, and more jobs. This can lead to greater efficiency, lower costs and greater competitiveness on national and international markets (Byaro & Rwezaula, 2024). According to Fisher's theory, the velocity of money plays an important role in understanding the long-run relationship between inflation and economic growth (Andriansyah et al., 2023). If the velocity of money is unstable or difficult to predict, then inflation can cause distortions in the economy, especially in investment and consumption. Consumers are buying fewer goods and services for the same money, due to higher prices for goods and services (Malec et al., 2024). Reduced purchasing power can lead to a drop in consumer spending, which is the main driver of economic growth (Byaro & Rwezaula, 2024). Inflation has essential role's on economic growth to capture the volatility of domestic prices. Kurniawan & Prawoto (2014) states inflation reduces economic growth through lower investment which can lead to lower productivity

in the long run. Keynes saw that the government could play a role as an economic stimulator through public works (Ali & Munir, 2016). By stimulating demand through additional spending so that there is an increase in production, there will be economic recovery and an increase in national income. In the short term, government consumption expenditure, including spending on employee salaries, education, and subsidies, has a negative impact on short-term economic growth because it focuses more on consumption than on creating new added value. Private sector confidence can be undermined by expansionary public spending policies that mobilize excessive funds through borrowing, since it is inevitable to raise taxes to pay down the national debt, which undermines productivity and economic growth (Abdelli et al., 2024). Health is known to contribute positively to economic growth by increasing labor productivity, boosting private sector investment, reducing production costs, and increasing the country's hidden economic resources (e.g., the quality of human capital and transportation efficiency) when spent on education in the long run (Shaddady, 2022).

The amount of new value created that is invested rather than consumed in the economy is measured by gross capital formation which shows how the government can influence the direction of other investments by encouraging investment in the desired direction (Opadeji et al., 2023). Capital formation can strengthen productivity and efficiency across different sectors of the economy through increased direct output, greater and sustainable development of economic capacity. Capital contributes to long-term stimulus growth, capital accumulation triggers investment and increased production of goods and services, which can improve people's living standards and drive economic expansion. According to Harrod Domar's theory, capital formation serves to create sustainable growth which becomes a multiplier effect (Aslan & Altinoz, 2021). According to Schumpeter, domestic credit plays an important role in driving economic growth through financing investment and manufacturing (Bui, 2020). Easy access to finance is able to encourage people to be productive which will affect economic movement, allowing businesses to expand, innovate, create jobs, and generate income, thereby accelerating economic growth (Millah & Wibowo, 2021). Access to credit can stimulate economic growth by enabling individuals and businesses to invest, innovate, and increase productivity, thereby driving overall economic activity and development. Improved access to credit allows businesses to expand, innovate, create jobs, and generate income, thereby accelerating economic growth through the productive cycle. The development of the banking sector is important for long-term economic growth because banks support capital allocation, provide credit to businesses, and increase investment, which then encourages sustainable economic activity and strengthens economic stability (Elfaki & Ahmed, 2024).

3. Method

The research methodology employed in this study is a quantitative approach with a descriptive, whereby the phenomena under investigation are elucidated through a detailed interpretation or through the presentation of numerical or statistical data (Wulandari & Fitriyah, 2024). The object of the study on Association of Southeast Asian Nations (ASEAN), and the sampling technique employed is purposive sampling. This study employs a sample comprising five countries, namely the emerging market-5 in ASEAN (Indonesia, Philippines, Vietnam, Thailand, and Malaysia). The number of samples (n) of annual panel data (combined time series and cross-sectional data) during the period 2010-2023 is 70 samples. The data were sourced from secondary sources, including the World Bank, the International Monetary Fund (IMF), and the China Economic Information Database (CEIC).

First, data transformation which aims to change the measurement scale of the original data into another form so that the data can fulfill the assumptions underlying the analysis of variance (Lu et al., 2014). Second, stationarity test that needs to be done to see whether there is a unit root so that the relationship between variables becomes valid. Tests are carried out on three types, namely level, first difference, and second difference (Retnasih & Herdianti, 2023). Third, the optimum lag test is used to determine the length of time a variable responds to its past variables and to other endogenous variables (Sulistiana et al., 2017). Fourth, the data stability test, the modulus value in the AR root table shows whether all AR root values are less than one, which means the system is considered stable (Achsani et al., 2023). Fifth, the cointegration test if there is cointegration using the VECM method, but if there is none, the method used is VAR (Sulistiana et al., 2017). Sixth, the VAR VECM test, which aims to see the influence between variables in both the long and short term (Achsani et al., 2023). Seventh, the Impulse Response Function test , which is used to see the impact of changes in variables in a system on changes in other variables dynamically (Abrigo & Love, 2016) and the Variance

Decomposition test, can be seen to determine the strength and weakness of each variable affecting other variables over a long period of time (Achsani et al., 2023).

Table 1. Variable List

No	Variable	Measurement	Data Source
1	Gross Domestic Product (GDP)	GDP per capita (US$ constant 2015)	World Bank, CEIC & IMF (2024)
2	Physical Capital (K)	Fixed capital formation (% of GDP)	World Bank, CEIC & IMF (2024)
3	Financial Development (DC)	Domestic private sector credit (% of GDP)	World Bank, CEIC & IMF (2024)
4	Government Expenditures (GOV)	Final government consumption expenditure (% of GDP)	World Bank, CEIC & IMF (2024)
5	Inflation (INF)	Inflation, consumer prices (Annual %)	World Bank, CEIC & IMF (2024)
6	Globalization (KOF)	Globalization index, average of de facto and de jure indices	World Bank, (2024)

Source: World Bank, IMF and CEIC data.

The arrangement of the PVAR equation from Table 1 based on Ekananda (2022) as follows:

$$dGDP_{it} = \beta_{10} + \beta_{11}dGDP_{it-1} + \beta_{12}dK_{it-1} + \beta_{13}dDC_{it-1} + \beta_{14}dGOV_{it-1}$$
$$+ \beta_{15}dINF_{it-1} + \beta_{16}dKOF_{it-1} + \varepsilon_{it} \tag{1}$$

$$dK_{it} = \beta_{20} + \beta_{21}dK_{it-1} + \beta_{22}dGDP_{it-1} + \beta_{23}dDC_{it-1} + \beta_{24}dGOV_{it-1}$$
$$+ \beta_{25}dINF_{it-1} + \beta_{26}dKOF_{it-1} + \varepsilon_{it}$$

$$\dots$$

$$dKOF_{it} = \beta_{60} + \beta_{61}dKOF_{it-1} + \beta_{62}dK_{it-1} + \beta_{63}dDC_{it-1} + \beta_{64}dGOV_{it-1}$$
$$+ \beta_{65}dINF_{it-1} + \beta_{66}dGDP_{it-1} + \varepsilon_{it}$$

Where dEG_{it} and dEG_{it-1} are vector, the dimension is $[T - (m + 2) + 1]Nx1$. Matrix equation as follows:

$$dGDP_{it} = \begin{bmatrix} dGDP_{1,m+2} \\ \dots \\ dGDP_{N,m+2} \\ dGDP_{1,m+2} \\ \dots \\ dGDP_{N,m+3} \\ \dots \\ dGDP_{1,T} \\ dGDP_{N,T} \end{bmatrix}, dEG_{it-1} = \begin{bmatrix} dGDP_{1,m+1} \\ \dots \\ dGDP_{N,m+1} \\ dGDP_{1,m+2} \\ \dots \\ dGDP_{N,m+2} \\ \dots \\ dGDP_{1,T-1} \\ dGDP_{N,T-1} \end{bmatrix} \tag{2}$$

The variabel $dGD\{_{it}$ is arrange as first coloumn and as vector consist of the first individual to N individual in the m+1 year and all vector has dimensions $[T - (m + 2) + 1]Nx1$. Variable of $dGDP_{it-1}$ has the same way as $dGDP_{it}$ and data starts from time m+1 to T-1. All variables in m notation is the desired amount of lag.

4. Results and Discussion

The stationarity test that needs to be done to see whether there is a unit root so that the relationship between variables becomes valid. Tests are carried out on three types, namely level, first difference, and second difference. The results of the technical statistical test show that the values of the economic variables used, such as economic growth, globalization, inflation, public spending, physical capital, and financial development, are relatively small. This is reflected in the average values of each variable, which are very close to the minimum values. In addition, as the means and variances of the individual variables are close, the dispersion of the data is also relatively low.

Table 2. Result of Stationery Test

Variables	Level	First Difference
GDP	-3.184***	-4.824***
K	-1.869**	-2.192**
DC	4.035	-1.703**
GOV	1.298	-3.254***
INF	-0.316	-6.718***
KOF	1.457	-5.020***

Source: data processed

Table 2 shows the stationarity test performed using the Fisher-PP method indicate that only two variables at the level in question are stationary. Consequently, all other variables are classified as non-stationary. Conversely, the data is fully stationary when subjected to the first-difference test. This is evidenced by the probability value of less than 5% (0.05). Based on stationery test, all the variables is absence of unit root problem.

Table 3. Result of Optimum Lag

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-380.1104	NA	1.142527	17.16046	17.40135*	17.25026*
1	-353.4169	45.08226	1.754356	17.57409	19.26030	18.20269
2	-301.2010	74.26267*	0.930243*	16.85338	19.98493	18.02079
3	-267.1354	39.36471	1.284205	16.93935	21.51623	18.64556
4	-228.7366	34.13220	1.925890	16.83274*	22.85495	19.07776

Source: data processed

Table 3 shows that lag optimum used in this study at second lag based on Log Likehood Ratio (LR) and Final Prediction Error (FPE). Determination of the lag in the model to be able to estimate the short and long term of the model. Furthermore, with lag 2 in the model, it is necessary to test the stability of the model and Achsani et al (2023) states the data stability test uses the modulus value in the AR root table shows whether all AR root values are less than one, which means the system is considered stable.

Table 4. Result of Stability Test

Root	Modulus
0.484702 - 0.561421i	0.741707
0.484702 + 0.561421i	0.741707
-0.357554 - 0.601485i	0.699735
-0.357554 + 0.601485i	0.699735
0.692490	0.692490
-0.685164	0.685164
0.196278 - 0.615405i	0.645947
0.196278 + 0.615405i	0.645947
0.031014 - 0.502918i	0.503873
0.031014 + 0.502918i	0.503873
-0.267096	0.267096
0.187015	0.187015

Source: data processed

Table 4 shows the data used in this study stable on second lag, because the modulus value is not greater than or equal to one. The application of polynomial tests in the VECM and PVECM model provides advantages in capturing more complex long-term relationships, improving model accuracy, and providing deeper insights into the dynamics between variables in the analyzed time series data (Wooldridge, 2010). Panel VECM provides advantages in capturing more complex and dynamic long-run relationships among variables across units, improving estimation efficiency, and providing deeper insights into inter-unit differences as well as time dynamics (Retnasih & Herdianti, 2023). Figure 2 shows the IRF test of the PVECM estimator, which is used to identify the impact of a one standard deviation change in a variable on the variable itself and other variables. The response of economic growth to shocks during the period under consideration can be seen in the graph through the results of the IRF test. The results of the IRF test show how economic growth rates have changed over the 20

study periods. First, the KOF variable showed a positive response in the first period of 0.000, a negative response in the second period of -0.030, and a negative response until the 20th period of -0.020, and then a positive response from the second period of 0.00 to the second period of -0.011, a negative response in the third period of -0.013, and ending with a positive response of 0.004 in the 20th period. Third, the GOV variable responds positively in the first period of 0.000, stable until the end of the 20th period of -0.02. Fourth, the K variable responds negatively by -0.23 in the first period which continues to respond negatively until the 20th period of -0.35. Fifth, the DC variable response in the first period is negative at -1.05 in the following years fluctuates to respond negatively and positively until the 20th period of -0.66.
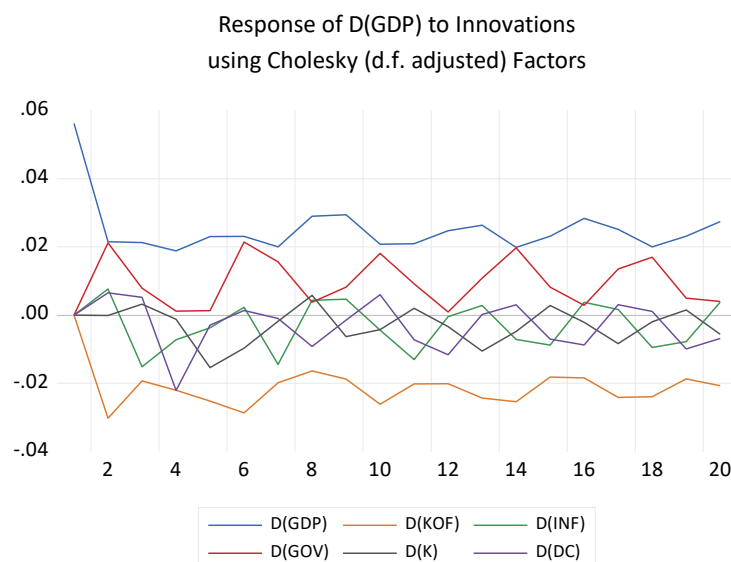
Figure 2. Impulse Response Function (IRF) of PVECM

Based on the PVECM results, model estimation can be obtained as follows:

$$
\begin{aligned}
(GDP, 2) = &-0.2583 * (GDP(-1)) + 0.1195 * (KOF(-1)) + 0.0555 * (K(-1)) \\
&- 0.0366 * (GOV(-1)) + 0.0343 * (PHYS(-1)) + 0.0093 \\
&* (DC(-1)) - 0.0819 + 0.0377 * (GDP(-1),2) - 0.0788 \\
&* (GDP(-2),2) + 0.0108 * (KOF(-1),2) + 0.0003 * (KOF(-2),2) \\
&+ 0.0194 * (INF(-1),2) + 0.0110 * (INF(-2),2) + 0.0378 \\
&* (GOV(-1),2) - 0.0080 * (GOV(-2),2) + 0.009 * (K(-1),2) \\
&+ 0.004 * (K(-2),2) + 0.0032 * D(DC(-1),2) + 0.002 \\
&* (DC(-2),2) + 9.8936
\end{aligned}
$$

Based on PVECM result shows globalization had a significant benefical effect on economic growth. This suggests that economic growth rises in tandem with increase globalization. Furthermore, globalization contributes the most in the long term, indicating that it exerts a particularly robust influence on economic growth. These findings align with those of previous research Elfaki & Ahmed (2024) states that international capital flows will entail the establishment or expansion of companies in the destination country of investment by means of technology transfers that will enhance the expertise of the local workforce and facilitate global market access, thereby accelerating the growth of productive sectors in the local economy. Radulović & Kostić (2024) argued economic globalization encompasses the ramifications of trade, foreign direct investment (FDI) flows, and financial assets, enabling a favorable response to economic growth. This research also lends support to the theory of comparative advantage put forth by David Ricardo. The diversification of economic activity in international trade will serve to reinforce and encourage exports, with the concentration of resources on profitable industries (McConnel et al., 2012). Countries such as Indonesia and Vietnam experienced a surge in exports and the manufacturing sector, especially in industries that utilize cheap labor. In addition, the opening of international markets will provide local companies with the opportunity to improve the competitiveness of the country through increased innovation adapted from

developed countries which then ultimately improves the quality of domestic products which will increase excellence and then increase productivity (Virgan & Yanuar, 2022).

ASEAN emerging market countries are similarly engaged in international cooperation, exemplified by their role as a forum within the ASEAN Economic Community (AEC). This initiative is designed to facilitate economic integration, eliminate trade barriers, and expand international market access. Indonesia, the Philippines, Malaysia, Thailand, and Vietnam are members of a regional and multilateral cooperation forum, one of which is APEC (Asia-Pacific Economic Cooperation), which includes numerous other member countries. It is evident that the aforementioned developments will provide opportunities, particularly for emerging market countries, to accelerate their development through trade, including import and export activities, and to promote investment $. However, it seems that globalization may have a somewhat negative impact in the face of external shocks. This suggests that there may still be structural vulnerabilities, such as a reliance on certain exports that are particularly susceptible to price fluctuations. Additionally, global market volatility related to the withdrawal of foreign investment could potentially lead to economic instability. Furthermore, there may be a lack of economic diversification (Dix-Carneiro et al., 2023). This is due to global uncertainty, especially related to the Russian and Ukrainian trade wars. Countries in ASEAN still depend on commodities there. In addition, imbalances in the distribution of benefits are also still evident, with more economically diversified countries such as Malaysia tending to benefit more than countries with less developed manufacturing sectors. which could have a direct impact.

The inflation has been demonstrated to have a noteworthy benefical effect on economic growth over the long and short terms. In other words, the pace of economic growth increases in tandem with increases in inflation. This outcome is in line with the perspectives of the early Philips curve model and Keynes, who believed that inflation and economic growth might be benefical if inflationary pressure stimulated aggregate demand, which in turn increased output. This research is in line with Qabaja & Tenekeci (2024) that inflation has the impact to economic growth due to high production of domestic goods, increased demand for credit which is related to interest rates which then leads to increased consumption. Razia et al (2023) states effective regulation of market prices or price control mechanisms can improve macroeconomic conditions, boost investor confidence and promote economic growth. Ultimately, this can ensure the sustainability and growth of the economy by producing more goods at lower unit prices. Additionally, inflation represents a trade-off for economic growth. When economic growth increases, there is often a risk of encouraging inflation. This is because production and consumption activities tend to increase, causing demand pressure for goods and services, which then increases prices. The response of inflation to economic growth shocks demonstrates a tendency to fluctuate positively and negatively in the subsequent periods. This indicates that unstable economic growth can give rise to a range of inflationary pressures, which are contingent upon the efficacy of monetary policy in controlling inflationary pressures related to interest rates.

Government spending has a negative affect on economic growth in ASEAN countries on the short-run. Nguyen & Bui (2022) if government consumption is directed at unproductive, it will hinder economic productivity and will be inefficient in short term. While government consumption in the short term at lag -2 has a negative impact on economic growth. Government consumption here becomes one of the components in increasing aggregate demand, as well as a multiplier effect that creates a chain effect or cycle in the economy (Shaddady, 2022). Figure 2 shows the response to government spending shocks (IRF), it shows that it is stable and positive in the long run, meaning that even though there are shocks to economic growth, if spending is directed to sectors that increase economic efficiency and productivity, such as infrastructure, education and health, which play a crucial role, especially in the quality of human resources and the opportunity to extend life expectancy related to increased access to health services, which will support long-term economic growth.

Based on PVECM result that both in the short and long term, physical capital has been demonstrated to significantly boost economic growth. this suggests that economic growth is boosted by any increase in physical capital. Elfaki & Ahmed (2024) argued Creating capital and optimizing human resources will be crucial to maximizing long-term profits and fostering sustainable economic growth. Aslan & Altinoz (2021) states optimally allocated capital, especially to sustainable natural resources here, leads to increased productivity which encourages economic growth. Government capital expenditure in the form of direct projects that have an impact on the welfare of the community will increase economic development. Based on IRF test (Figure 2) The shock response is negative, indicating that when economic growth experiences shocks, physical capital will decline. This is due

to the fact that during periods of uncertain economic growth, investment in physical capital will decline as it is associated with investor confidence and credit restrictions, which ultimately result in delays and cancellations of large investment projects. In ASEAN emerging market countries, physical capital makes the least significant contribution to economic growth. Many of these countries have developed other sectors, such as technology and services, which have led to the emergence of creative industries. These include skills and labour education, which are more resistant and stable to fluctuations and tend to be the drivers of productivity and economic growth.

Financial development significantly boosts economic growth over the long and short terms. This implies that economic growth rises in tandem with financial development. Fengju & Wubishet (2024) states The hypothesis is that banking is a valuable tool for increasing a country's productivity, and that financial services or products can promote economic growth. Consequently, when the long-term real economy expands, there will be an increase in savings flowing into the financial system, which in turn allows the financial system to provide new loans. Ekanayake & Thaver (2021) argued efficient allocation of financial resources in conjunction with effective banking system regulation. A robust banking system fosters confidence among depositors, enabling the effective mobilization of resources to enhance economic productivity. In Vietnam, the MSME sector is experiencing a period of rapid growth, largely due to the ease of access to financial technology (fintech) services. This has the potential to accelerate the circulation of money in the economy. The contribution to economic growth in ASEAN emerging markets is also quite low, despite the sector's great potential to accelerate economic growth, because emerging markets are still unable to properly use and develop the financial system, with limited access to finance and a financial infrastructure that has not been able to fully support the real sector. In addition, emerging markets still face challenges in increasing financial inclusion, as the penetration rate of fintech services and the digitisation of financial services is still limited, especially in areas outside large cities that do not have full access to banking and investment services. This will be an obstacle to optimising support for long-term economic growth.
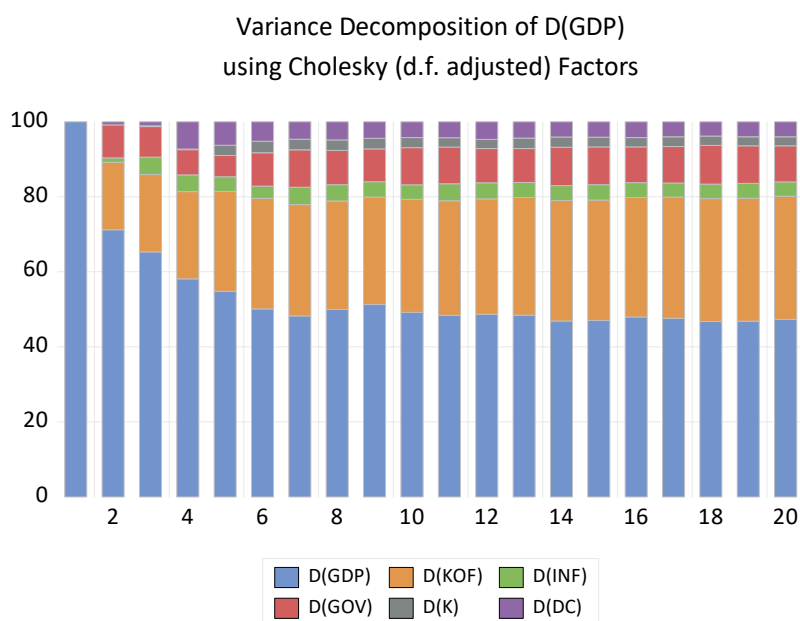
Figure 3. Forecast Error of Variance Decomposition (FEVD) of PVECM

Figure 3 shows the GDP variable is determined by the change in the variable itself. First, the contribution rate of the KOF variable is fixed at 0% in the first period and 32.81% at the end of the period. Second, the contribution rate of the INF variable is 0% in the first period, increases by 4.607% by the third period, and fluctuates and stabilizes at 3.82% by the 20th period. Third, the contribution rate of the GOV variable is 8.82% in the second period, and this value fluctuates until the end of the period, with a contribution rate of 9.59%. Fourth, the contribution rate of variable K is 0.00027%, and this contribution rate tends to remain relatively the same until the 20th period, i.e. 2.418%. Fifth, the DC variable is 0.835 percent, which is constant until the end of the period, or 4.009 percent. In general, the conclusion that can be drawn from the results of the variance decomposition test is that in the short term, that is, in the first period, the most significant contributor is the variable itself, that is, GDP, and in the long term, that is, in the 20th period, the most significant contributor is the KOF variable or globalization.

5. Conclusion

This study integrates globalization, inflation, government spending, physical capital, and financial development to analyze their impact on economic growth in emerging ASEAN countries. Examining the impact of globalization makes it possible to understand how the openness of international markets affects a country's economic growth. This could include increased international trade, capital flows, as well as technology transfer, all of which can accelerate economic growth and A developed financial sector allows countries to be more resilient to global economic crises. Countries with strong and diversified financial systems can more easily manage international economic turmoil caused by globalization tensions. One of the potential positive impacts of globalization and financial sector development is the reduction of economic inequality, both between and within countries.

The results indicate that globalization short- and long-term economic growth is positively influenced by this. Increasing globalization is linked to the arrival of technology transfer and innovation, as well as foreign direct investment, which has a beneficial effect on productivity. The rate of economic growth is beneficial in both the short and long term due to its positive impact. Consequently, any increase in inflation will have an impact on increasing company profits due to the encouragement of aggregate demand. Meanwhile, physical capital has a positive short-term and long-term effect on economic growth. This indicates that the increase in investment in gross capital will accelerate and encourage access to domestic production and facilitate interaction between producers and consumers. The implication of study maximize the opportunities by expanding international collaboration and adopting advanced technologies to enhance efficiency in capturing the opportunities of globalization and financial sector development.

Declarations

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