

Determinants of E-Money Transactions in ASEAN and G20 Countries: A Panel Data Analysis

(Faktor-Faktor Penentu Transaksi Uang Elektronik di Negara-Negara ASEAN dan G20: Analisis Data Panel)

Fischa Syafira Ayu¹, Nairobi², Arivina Ratih Taher³

University of Lampung¹²³

fischasyafiraayu3@gmail.com¹, Nairobi@feb.unila.ac.id², arivinaratih@gmail.com³



Article Revision History:

Received on 6 January 2026

1st Revision on 15 January 2026

2nd Revision on 20 January 2026

3rd Revision on 25 January 2026

Accepted on 31 January 2026

Doi :

<https://doi.org/10.61597/jbe-ogzrp.v4i1.181>

Ciptaan disebarluaskan dibawah :



[Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/)

Abstract:

Objective : ASEAN and the G20 are two international cooperation forums that differ in their institutional structures and scopes of roles, yet both hold significant importance in maintaining economic and political stability.

Methodology : ASEAN emphasizes the strengthening of regional integration in Southeast Asia through consensus-based decision-making mechanisms and the principle of non-intervention, whereas the G20 serves as a platform for global economic coordination without a permanent secretariat.

Research results : This study aims to examine the similarities and differences between the two forums, particularly with regard to their formation, operational mechanisms, and contributions to economic stability. The study employs a descriptive qualitative approach using a literature review method. The findings indicate that ASEAN's effectiveness is largely grounded in normative consistency and the formation of regional identity, while the G20's performance is strongly influenced by macroeconomic policy coordination and the speed of its response to global crises. This study is expected to contribute to and enrich the literature on multilateral economic governance.

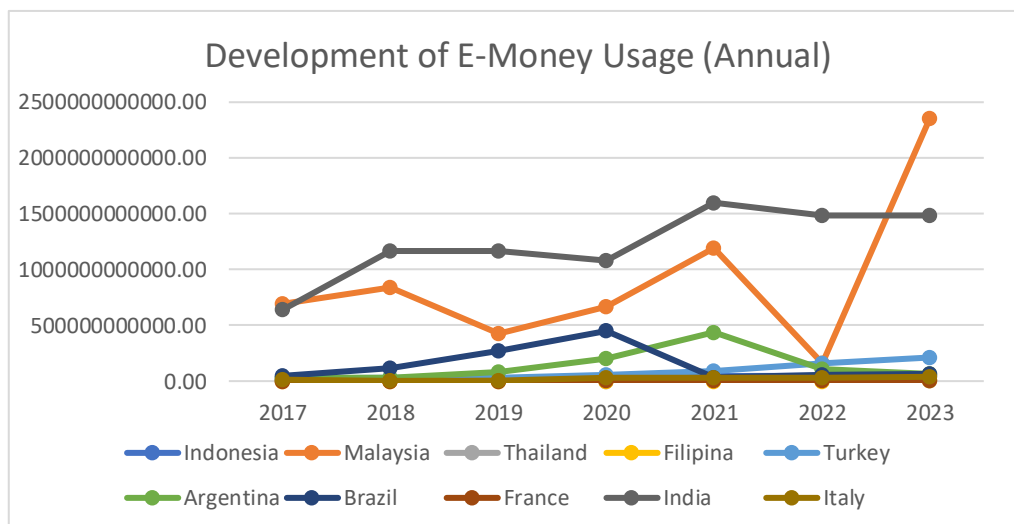
Keyword: Asean, G20, Economic Governance, Economic Stability.

1. Introduction

International cooperation constitutes a strategic instrument for addressing the increasing complexity of global economic and political challenges. ASEAN, established through the Bangkok Declaration on 8 August 1967, upholds the principles of consensus and non-intervention as the primary foundations for maintaining stability in the Southeast Asian region, while also promoting stronger economic, social, and political cooperation among its member states. Although this approach has been considered effective in fostering sustainable regional stability, numerous studies indicate limitations in ASEAN's capacity to generate swift and binding policy responses, particularly in addressing cross-border economic dynamics.

Meanwhile, the G20 emerged as a forum for global economic coordination in the aftermath of the 1997–1999 Asian financial crisis and gained increasing relevance following the 2008 global financial crisis. A number of studies have highlighted the role of the G20 in facilitating macroeconomic policy coordination during periods of crisis; however, assessments of the sustainability of its effectiveness remain relatively limited, given its non-permanent institutional character and the absence of formal policy enforcement mechanisms ([Indrawati et al. 2020](#)).

To date, existing empirical studies have tended to examine ASEAN and the G20 separately, either within regional or global contexts. The limited number of comparative studies that systematically analyze the similarities and differences between the two forums from the perspectives of institutional arrangements, decision-making mechanisms, and their contributions to economic stability indicates the presence of a significant research gap. This study seeks to address this gap by presenting a comparative analysis aimed at enhancing understanding of multilateral economic governance ([Popovska-Kamnar 2014](#); [Yaqin and Safuan 2023](#)).



Source: Worldbank, data processed, 2025

Figure 1. Development of E-Money Usage

The figure illustrates the movement of e-money transaction values in ten countries Indonesia, Malaysia, Thailand, the Philippines, Türkiye, Argentina, Brazil, France, India, and Italy over the period 2017 to 2023. A closer examination reveals significant cross-country differences. Malaysia exhibits a particularly sharp increase in 2023, positioning it as an extreme value relative to other countries. This trend may be attributed to the expansion of Malaysia’s QR-based payment system, as well as the implementation of the ASEAN QR cross-border payment framework, in addition to the rapid growth of e-commerce. These developments indicate that digital payments have become a key driver in accelerating digital economic growth in Malaysia.

India consistently records the highest e-money transaction values throughout the 2017–2023 period. This trend is in line with the implementation of the Unified Payments Interface (UPI), strong government policies promoting digitalization, high levels of internet adoption, and a large population base. The figure indicates that India possesses a robust digital infrastructure, within which e-money has become one of the primary instruments for retail transactions (Demirkale et al. 2025).

Both Argentina and Brazil exhibit upward trends in e-money transaction values, although at levels lower than those observed in India and Malaysia. The fluctuations in these data can be attributed to macroeconomic instability, high inflation particularly in Argentina and changes in fintech-related regulations. Türkiye also

demonstrates an increasing trend, albeit with more moderate nominal values, which is consistent with the steady growth of its fintech sector ([Indrawati et al. 2020](#); [Rahman and Santosa Sumiyarsih Rina Dwiarti 2023](#)).

Several ASEAN countries, including Indonesia, Thailand, and the Philippines, experience growth in e-money transactions, albeit at a gradual pace. Indonesia shows an increasing trend from 2017, reaching a peak in 2021, followed by a tendency toward stagnation during 2022–2023. This pattern can be attributed to the nationwide adoption of the QRIS payment system, which accelerated the use of e-money across various sectors particularly MSMEs and transportation as well as rapid e-commerce growth and reduced physical mobility during the COVID-19 pandemic (2020–2021), which further stimulated e-payment usage. In Thailand and the Philippines, e-money transaction growth remains relatively moderate and stable, reflecting a systemic expansion in line with the broader development of digital payment infrastructure ([Noman et al. 2023](#)).

In the developed countries examined in this study namely France and Italy digital payment systems are already well established and predominantly based on debit and credit card usage; consequently, e-money does not dominate retail payment methods. The figure shows that e-money transaction values in these countries are relatively low and exhibit limited fluctuation, reinforcing the view that e-money is not a primary payment instrument in these economies, in contrast to many Asian countries ([Popovska-Kamnar 2014](#); [Tran and Wang 2023](#)).

2. Literature Review

2.1 The Theory of Money Demand

Classical monetary theory concerns the supply and demand for money and the interaction between the two. This theory focuses on the relationship between the money supply, the quantity of money in circulation, and the value of money or the price level. The relationship between these variables is explained through the concept of money demand. Changes in the quantity of money in circulation, or the

money supply, interact with money demand and ultimately determine the value of money (Mankiw 2012).

2.1.1 Simple Quantity Theory of Money

This theory was proposed by who addressed the issue of the value of money by establishing a direct relationship between the quantity of money and the prices of goods. Ricardo concluded that the quantity of money and the value of money are inversely related. When this argument is expressed in terms of prices, it implies that if the quantity of money doubles, prices will also double, and vice versa.

$$M = k \cdot p \text{ or } P = \frac{1}{k}$$

M = Amount of money in circulation

P = Price level

K = It is a constant proportional factor

This theory states that the amount of money and the price level have a proportional relationship, as expressed by the following formula:

$$P = f(M)$$

If M, representing the money supply, increases, prices will rise proportionally. Therefore, maintaining price stability requires policies aimed at stabilizing the quantity of money in circulation. The quantity theory in this simple form is considered rudimentary, as it does not take into account the factors influencing the velocity of money (denoted as V). Consequently, this theory does not fully reflect the actual economic conditions observed in society.

2.1.2 Transaction Equation

It states that the value of money is determined by three factors, namely:

- a. The quantity of money in circulation (M)
- b. The rapid circulation of money (V)
- c. The number of goods traded or the volume of goods traded (T)

The Formula Fisher, *transaction equation* is:

$$MV = PT \text{ atau } P =$$

2.1.3 Cambridge Equation of Exchange

(Pigou 1920) *The Economics of Welfare* argues that market mechanisms are not always capable of achieving efficient resource allocation. Pigou emphasizes the gap between social costs and private costs, which causes market failure. This condition arises mainly due to externalities, both positive and negative, which are not reflected in market prices. The concepts of Pigouvian tax and Pigouvian subsidy are policy instruments to correct market distortions. Pigouvian taxes are imposed on economic activities that generate negative externalities in order to align private costs with social costs, while Pigouvian subsidies are provided to encourage activities with positive externalities. It is based on the function of money as a general medium of exchange. Classical theories argue that the demand for money in society arises from the need for a liquid medium for transactions. The difference between this theory and the theory proposed by (Fisher 1911) lies mainly in the behavior of individuals who allocate their wealth in various forms, one of which is money. This behavior is influenced by considerations of profit and loss for money holders.

The Cambridge theory places greater emphasis on the factors influencing individual behavior particularly cost-benefit considerations by linking the demand for money to the planned volume of transactions. In addition to transaction volume and existing institutional arrangements, the Cambridge theory posits that money demand is also influenced by interest rates, the level of wealth held by society, and expectations regarding future economic conditions. In the short run, the Cambridge approach assumes that transaction volume, total wealth, and national income maintain a proportional and constant relationship. Under the ceteris paribus assumption, the theory holds that the demand for money in society is proportional to national income.

Thus, under the ceteris paribus assumption, changes in the price level (P) vary proportionally with changes in the volume of transactions. This theory does not

differ substantially from Fisher's formulation, except for the explicit inclusion of the ceteris paribus condition, which assumes that variables such as the price level, interest rates, real prices, and expectations remain constant. The importance of this distinction, even in the short run, lies in the possibility that factors such as interest rates and expectations may change within the Cambridge framework. When these factors change, the parameter kkk will also vary. The Cambridge theory suggests that when interest rates increase, individuals tend to reduce the amount of money they hold, even if their planned transaction volume remains unchanged. Similarly, expectations that influence future interest rates may lead individuals to adjust their asset holdings; for instance, when interest rates rise implying a decline in the value of securities or bonds individuals may reduce their holdings of such securities and increase their cash balances, which in turn affects the value of k in the short run ([Rahman and Santosa Sumiyarsih Rina Dwiarti 2023](#)).

2.1.4 The Keynesian

([Keynes 1936](#)) the monetarist view regarding the relationship between the money supply and prices. Within the Keynesian paradigm, changes in the money supply and price levels do not exhibit a direct or proportional relationship; instead, they operate through the intermediary of interest rates. The strength of Keynesian theory lies in its ability to integrate monetary theory with theories of production and employment via the interest rate mechanism. In the Keynesian framework, an increase in the money supply leads to a reduction in interest rates, thereby stimulating higher investment and aggregate demand. Consequently, this process results in increased output and employment opportunities. Fundamentally, the Keynesian stance recognizes the complex interaction between the monetary sector and the real sector of the economy, reflecting an equilibrium between goods markets and financial markets. According to Keynesian doctrine, as long as unemployment persists, an expansion in the money supply will encourage higher production and employment without affecting prices. However, once full

employment is reached, further increases in the money supply will lead to proportional adjustments in prices.

2.1.5 The Neo-Keynesian

The neo-Keynesian theoretical framework encompasses an analysis of aggregate demand and aggregate supply, integrating Keynesian principles in the short run with classical principles in the long run. This approach examines changes in government expenditure or the nominal money supply under the assumption that expected inflation is zero. Consequently, when aggregate demand exceeds the equilibrium level of real money balances, it leads to adjustments in the price level. Neo-Keynesian theory emphasizes the importance of productivity, as declines in productivity can trigger inflationary pressures and widen the output gap. From a neo-Keynesian perspective, fluctuations in government spending or the nominal money supply affect productivity and price stability and carry important implications for economic policy aimed at controlling inflation and enhancing output.

3. Research Methodology

This study employs both quantitative and qualitative approaches to explain the relationships among secondary data, with an emphasis on theory testing through the statistical measurement of variables. The analysis aims to examine the effect of the independent variable e-money transaction value on the dependent variables, namely GDP growth, imports of goods and services, foreign direct investment net inflows, final consumption expenditure, individuals using the Internet, population growth, and industry (including construction value added).

In this study, data were collected through a literature review of various sources, including academic journals, online databases, and relevant literature, using a library research approach. The secondary data were obtained from official sources, particularly the World Bank and the Bank for International Settlements (BIS), which also compile data from the central banks of the ten countries examined: Indonesia

(Bank of Indonesia), Malaysia (Bank Negara Malaysia), Thailand (Bank of Thailand), the Philippines (Bangko Sentral ng Pilipinas), Türkiye (Central Bank of the Republic of Türkiye CBRT), Argentina (Banco Central de la República Argentina BCRA), Brazil (Banco Central do Brasil BCB), France (Banque de France), India (Reserve Bank of India RBI), and Italy (Banca d'Italia).

This study employs secondary data sourced from the World Bank and the Bank for International Settlements (BIS), accessed through the official websites of the central banks of ten ASEAN and G20 countries, namely Indonesia, Malaysia, Thailand, the Philippines, Türkiye, Argentina, Brazil, France, India, and Italy. The research utilizes panel data covering the period from 2017 to 2023.

Table 1. Research Variable

Variable	Unit	Symbol	Source
E-Money Value Transaction	US\$	EM	BIS
GDP Growth	%	GDPG	WorldBank
Import of Goods and services	%	IMP	WorldBank
Foreign Direct Investment	US\$	FDI	WorldBank
Final Consumption Expenditure	%	FINALCONSUM	WorldBank
Individual using Internet	%	INTERNET	WorldBank
Population Growth	%	PG	WorldBank
Industry	%	INDSTRY	WorldBank

Source : data processed, 2025

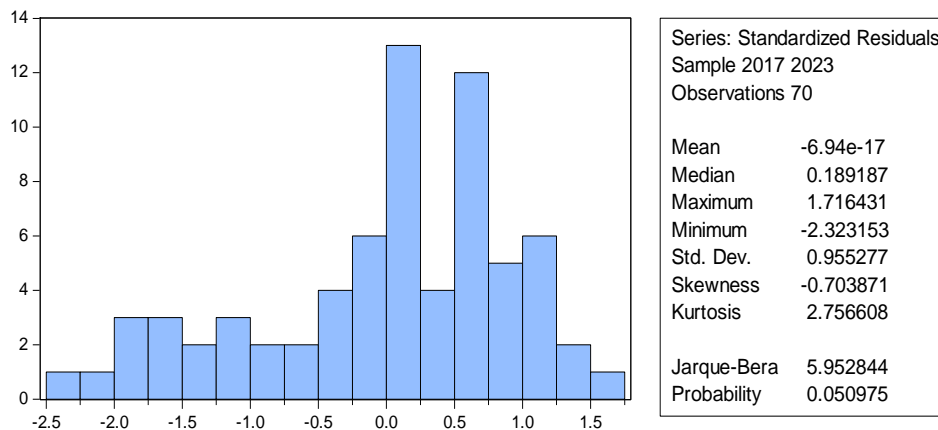
4. Research Results and Discussion

The results of the panel data regression analysis, conducted using two model selection tests namely the Chow Test and the Hausman Test culminated in the identification of the optimal model for implementation in this study. Based on the regression findings, the Fixed Effects Model (FEM) was selected as the most appropriate specification.

4.1 Classical Assumption Test

4.1.1 Normality Test

Based on the normality test results, the probability value (0.050975) exceeds the 0.05 significance level, indicating that the data are normally distributed.



Source: Eviews, data processed, 2025

Figure 2. Normality Test

4.1.2 Multicollinearity Test

The multicollinearity test is conducted to evaluate the presence of relationships among independent variables in a regression model. Based on the test results presented in Table 2, there is no high correlation among the independent variables, as the correlation coefficients remain below the threshold value of 0.85. This finding indicates that the model does not suffer from significant multicollinearity. The presence of multicollinearity can complicate the interpretation of regression results and lead to unstable parameter estimates. Therefore, assessing the reliability of the model constitutes an important step in the analysis.

Tabel 2. Multicollinearity Test

	IMP	INDSTRY	INTERNET	GDPG	FINAL CONSUM	FDI	PG
IMP	1.000	0.474	0.312	-0.302	-0.253	-0.348	0.157
INDSTRY	0.474	1.000	-0.125	-0.105	-0.630	-0.569	0.467
INTERNET	0.312	-0.125	1.000	0.174	0.205	-0.036	-0.259
GDPG	-0.302	-0.105	0.174	1.000	0.207	-0.146	-0.065
FINAL CONSUM	-0.253	-0.630	0.205	0.207	1.000	0.152	-0.164
FDI	-0.348	-0.569	-0.036	-0.146	0.152	1.000	-0.234
PG	0.157	0.467	-0.259	-0.065	-0.164	-0.234	1.000

Source: Eviews, data processed, 2025

4.1.3 Heteroscedasticity Test

Based on the Glejser test results, the probability values of the variables exceed 0.05, indicating that there is no evidence of heteroskedasticity in the model. Accordingly, the residual variance tends to be stable, suggesting homoskedasticity.

Tabel 3. Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.66851	6.795216	1.717166	0.0925
IMP	-0.004625	0.031475	-0.146950	0.8838
INDSTRY	-0.211742	0.134560	-1.573595	0.1223
INTERNET	0.015608	0.012816	1.217905	0.2293
GDPG	0.000435	0.008365	0.051956	0.9588
FINALCONSUM	-0.061540	0.057465	-1.070916	0.2897
FDI	-3.68E-12	6.44E-12	-0.571560	0.5703
PG	0.598054	0.467236	1.279983	0.2068

Source: data processed, 2025

4.1.4 Autocorrelation Test

This study produced values from the autocorrelation test that indicated no autocorrelation. It can be concluded that there was no autocorrelation in this model study.

4.1.5 Panel Data Regression Model

The regression model presented in this study reveals

$$Y = 49.60387 + 0.063891 * IMP - 0.517722 * Industry + 0.067509 * Internet + 0.003106 * GDPD - 0.276390 * Finalconsum - 1.58E-11 * FDI + 0.352813 * PG.$$

The analysis results indicate that, across the ten countries examined, imports have a positive and significant effect on the value of e-money transactions. This finding reflects that higher levels of imports are associated with increased consumption activities, which in turn stimulate the use of digital payment instruments such as e-money. Imported goods particularly in sectors such as e-commerce, technology, and retail are frequently purchased through online platforms that predominantly rely on cashless payment systems. Consequently, an increase in imports

contributes to the expansion of digital economic activities and encourages greater adoption of e-money in various economic transactions. Furthermore, the value of e-money transactions highlights a close relationship between economic openness and the digitalization of payment systems. The increasing trend of globalization and international trade openness has led to a growing demand for payment systems that are efficient, fast, and secure, for which e-money has become a preferred option. In contrast, the industrial sector exhibits a significant and negative effect on the value of e-money transactions.

This finding suggests that increased industrial activity is associated with a decline in the value of e-money transactions. The industrial sector continues to rely heavily on conventional payment methods, such as inter-firm bank transfers and credit-based payments, rather than e-money, which is more commonly used in individual consumption and service-related sectors. Industrial transactions typically involve large transaction values and are conducted through formal banking channels, rather than through e-money systems that are generally perceived as being more suitable for small-scale, retail, or individual transactions. Moreover, e-money transactions are predominantly utilized in the service, trade, and household consumption sectors, rather than in industrial production activities. In addition, digital transformation in the industrial sector may not be progressing as rapidly as in other sectors, resulting in suboptimal adoption of e-money.

Meanwhile, internet usage has a positive and significant effect on the value of e-money transactions. This finding indicates that broader and higher-quality internet access within a region is associated with increased e-money transaction values. Improved internet access enables individuals to utilize digital financial services more easily, quickly, and conveniently. As more people become connected to the internet, the potential use of e-money-based applications such as GoPay, OVO, Dana, and other digital wallets increases. Furthermore, advancements in digital infrastructure, particularly in remote areas, can enhance financial inclusion and promote the digitalization of transactions through the use of e-money.

The internet also supports a robust e-commerce ecosystem, which is closely associated with the use of e-money as a payment instrument. As the economy grows and overall economic conditions improve, individuals tend to increasingly rely on electronic transactions for purchasing goods and services as well as for other financial activities. This finding indicates a positive and significant relationship between economic growth and the adoption of digital payment technologies such as e-money. On the other hand, final consumption has a negative effect on the value of e-money transactions. This suggests that although overall household consumption increases, such consumption is not necessarily conducted using e-money. Instead, individuals continue to prefer cash payments or conventional banking instruments, resulting in e-money transaction values not rising in line with increases in final consumption.

Furthermore, Foreign Direct Investment (FDI) has a negative effect on the value of e-money transactions, indicating that increases in foreign investment have not significantly promoted the use of e-money in domestic transaction activities. Foreign investment tends to be concentrated in sectors that rely on traditional payment methods or have not yet adopted e-money. In addition, incoming FDI is primarily directed toward production activities or infrastructure development, which does not directly contribute to an increase in e-money transaction values among the general population. In contrast, population growth has a positive effect on the value of e-money transactions. This finding suggests that an increase in population size provides a larger potential market for the use of e-money. A growing population implies a higher number of potential users of digital payment technologies, thereby increasing e-money transaction activity. Moreover, population growth may facilitate greater technological penetration and adaptation to digital lifestyles, which in turn encourages cashless transactions and enhances the value of e-money transactions.

Based on the regression results, the constant term is estimated at 49.60387. This indicates that when the independent variables—namely imports, industry, internet usage, GDP growth, final consumption, Foreign Direct Investment (FDI),

and population growth are held constant, the value of electronic money (e-money) transactions in the ten countries examined is 49.60%.

The coefficient of the import (IMP) variable is positive, indicating that a 1% increase in imports leads to a 6.38% increase in the value of e-money transactions. In a log-linear (log-lin) model, such regression coefficients represent a semi-elastic relationship. The coefficient of the industry variable is negative, implying that a 1% increase in industrial activity reduces the value of e-money transactions by 51.77%. The coefficient of the internet variable is positive and statistically significant, indicating that a 1% increase in internet usage increases the value of e-money transactions by 6.75%. The coefficient of GDP growth (GDPG) is positive, suggesting that a 1% increase in GDP growth raises the value of e-money transactions by 31%. In contrast, the coefficient of final consumption is negative, indicating that a 1% increase in final consumption decreases the value of e-money transactions by 27.64%. Furthermore, the coefficient of Foreign Direct Investment (FDI) is negative and statistically significant, implying that a 1% increase in FDI reduces the value of e-money transactions by 1.58E-9%. Finally, the coefficient of population growth (PG) is positive and statistically significant, indicating that a 1% increase in population growth increases the value of e-money transactions by 35.28%. These findings are consistent with the theoretical interpretation of log-linear regression models.

4.1.6 Testing the Coefficient of Determination (R^2)

The R-squared value is 0.926214, indicating that the variables internet usage, final consumption, imports, GDP growth (GDPG), Foreign Direct Investment (FDI), and population growth (PG) jointly explain approximately 93% of the variation in the value of e-money transactions. The remaining 7% is explained by other factors not included in this study.

5. Conclusion

Based on the discussion of the results and the objectives of this study, the following conclusions can be drawn in addressing the research problems and objectives.

1. **Imports** have a positive effect on the value of e-money transactions. This indicates that higher import levels particularly those facilitated through e-commerce and digital retail channels—are associated with greater use of e-money as a cashless payment instrument.
2. **Industrial activity** has a negative effect on e-money transactions. Industrial activities predominantly rely on conventional business-to-business (B2B) payment mechanisms, such as bank transfers and letters of credit, which do not promote the use of e-money that is more closely associated with retail and household consumption transactions.
3. **Internet usage** has a positive effect on e-money transactions. Broader internet penetration enhances public access to digital services and strengthens the e-commerce ecosystem, thereby increasing the adoption of e-money.
4. **GDP growth (GDPG)** has a positive effect, although on a relatively small scale. Economic growth expands household consumption activities and encourages the use of digital payment instruments, including e-money.
5. **Final consumption** has a negative effect on e-money transactions. This finding suggests that increases in overall consumption do not necessarily translate into higher e-money usage, as a substantial share of consumption is still conducted using cash or conventional banking instruments.
6. **Foreign Direct Investment (FDI)** has a negative effect. Foreign capital inflows are generally concentrated in capital-intensive sectors such as manufacturing, energy, and infrastructure which tend to rely on traditional payment systems rather than retail-oriented digital instruments like e-money.
7. **Population growth** has a positive effect on the value of e-money transactions. A larger population, particularly within the productive age group, generates a demographic dividend that expands the potential user base of e-money, driven by smartphone ownership, internet access, and the rapid growth of e-commerce.

6. Bibliography

- Demirkale, Ozge, Naime Irem Duran, Aysegül Han, and Onur Seyranlioglu. "FinTech, Financial Inclusion, and Green Growth in ASEAN-5 Countries: Evidence from Multidimensional Panel Analysis Methods." 11 (2025):1-21.
- Fisher, Irving. "The Purchasing Power of Money, Its and Relation to Credit, Interest and Crises". New York: *Liberty Fund* (1911).
- Indrawati, Yulia, Adhitya Wardhono, Ciplis Gema Qori, and M Abd Nasir. "The Impact of E-Money Diffusion on the Monetary Policy Effectiveness: Evidence from Indonesia." *Advances in Economics, Business and Management Research* 144 (2020): 237-241.
- Keynes, John Maynard. "The General Theory of Employment, Interest, and Money." London: *Palgrave Macmillan*. (1936).
- Mankiw, N. Gregory. "Principles of Microeconomics". Edited by Joseph Sabatino. 6th Edition. *CENGAGE Learning*. (2012).
- Noman, Muhammad, Alina Maydybura, Khalil Ahmed Channa, Wing-Keung Wong, and Bisharat Hussain Chang. "Impact of Cashless Bank Payments on Economic Growth: Evidence from G7 Countries." *Advances in Decision Sciences (ADS)* (2023): 1-22.
- Pigou, A.C. "The Economics of Welfare". London: *Macmillan*. (1920).
- Popovska-Kamnar, Neda. "The Use Of Electronic Money And Its Impact On Monetary Policy." *Faculty of Economics* 1 (2) (2014): 79–92.
- Rahman, Zainur, and Awan Santosa Sumiyarsih Rina Dwiarti. "Does Millennial Rational in Decision Making? The Impact of Self-Control and E-Money on Compulsive Buying: Reference Group as Moderating Variable." *Jurnal Aplikasi Manajemen* 21 (1) (2023): 14–24.
- Tran, Loan, and Wenfu Wang. "Cashless Payments Impact to Economic Growth: Evidence in G20 Countries and Vietnam—Vietnamese Government with a Policy to Support Cashless Payments." *American Journal of Industrial and Business Management* 13 (04) (2023): 247–269.
- Yaqin, Misbahol, and Sugiharso Safuan. "Digital Financial Inclusion and Implications for Developing Countries Economic Growth." *Journal of Developing Economies* 8 (1) (2023): 29–48.