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ECONOMICS

Dynamic Linkages between Remittances, Domestic Expenditure, Exports, and Economic Growth in ASEAN Economies

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ABSTRACT

Purpose: This study examines the dynamic relationship between remittances, gross national expenditure, exports, and economic growth in selected ASEAN countries. It specifically investigates how these variables interact in the short and long run and their contribution to regional economic performance.

Method: A quantitative explanatory approach was employed using panel data from five ASEAN countries over the period 1999–2024, comprising 130 observations. Data were obtained from the World Development Indicators (WDI) database published by the World Bank. The analysis applied the Pooled Mean Group–Autoregressive Distributed Lag (PMG–ARDL) model to estimate both short-run and long-run relationships while accounting for cross-country heterogeneity.

Result: The findings reveal that remittances, gross national expenditure, and exports significantly promote economic growth in the long run. Remittances contribute by increasing household income and supporting consumption, while gross national expenditure strengthens domestic demand. Exports enhance growth through external market expansion and improved trade performance. However, the short-run effects are relatively limited, suggesting the presence of structural constraints and varying adjustment capacities across ASEAN economies.

Practical Implications for Economic Growth and Development: The results highlight the need for balanced growth strategies that integrate remittance management, domestic demand expansion, and export diversification. Strengthening institutional quality, financial inclusion, and fiscal discipline is essential to maximize the developmental impact of these growth drivers.

Originality/Value: This study offers updated empirical evidence on the determinants of long-run economic growth in ASEAN using a PMG–ARDL framework, providing insights into both regional integration and country-specific economic dynamics.

Keywords: *Remittances, Gross National Expenditure, Exports, Economic Growth*

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INTRODUCTION

Cross-border labor mobility in the ASEAN region has increased substantially over the past two decades, driven by deeper economic integration, wage disparities, demographic transitions, and sustained labor demand in migrant-receiving countries (Jamaluddin et al., 2025; Sari, 2025). The establishment of the ASEAN Economic Community (AEC) has further encouraged regional labor movement by reducing barriers to cross-border employment, particularly in low- and semi-skilled labor markets (Jintan et al., 2020). Consequently, international labor migration has become an important component of development strategies in several ASEAN economies. Migrant workers contribute not only to labor markets in destination countries but also to economic stability in their countries of origin through remittance inflows (Nirmala et al., 2022). In ASEAN, countries such as the Philippines, Indonesia, and Vietnam receive substantial remittances that support household income, strengthen foreign exchange reserves, and enhance macroeconomic resilience (Hordofa, 2023). In the case of Indonesia, remittances represent an important source of external income that complements export revenues and helps reduce economic vulnerability during periods of global uncertainty (Afriska et al., 2019).

The relationship between remittances and economic growth has been widely examined, yet empirical findings remain inconclusive. Adam and Pages (2005) found that remittances contribute to poverty reduction and stimulate aggregate demand. In contrast, Chami et al. (2003) argued that remittances may have limited effects on long-term economic growth because they are often used for consumption rather than productive investment and may create disincentives for labor participation. Giuliano and Ruiz-Arranz (2009) further emphasized that the growth effect of remittances depends on the level of financial development, suggesting that remittances may substitute for limited access to formal credit in less developed financial systems. Within the ASEAN context, Awad and Sirag (2018) reported an insignificant relationship between remittances and economic growth, whereas Afriska et al. (2019), Hordofa (2023), and Delessa et al. (2024) found positive and significant effects. Other studies, including Mangkompunt (2021) and Romlin (2020), indicate that the effectiveness of remittances varies across countries depending on institutional quality, fiscal policy, and financial market development. More recent evidence from Jamaluddin et al. (2025) and Muharromi (2023) also suggests that remittances tend to generate stronger growth effects when supported by exports and foreign direct investment (FDI).

Based on these mixed findings, this study offers a comprehensive and integrative analysis of the dynamic relationship among remittances, gross national expenditure, exports, and economic growth in ASEAN countries. Unlike previous studies that mainly focus on single-country cases or limited macroeconomic variables, this research employs a panel dataset covering selected ASEAN countries over the period 1999–2024. Methodologically, the study applies the Pooled Mean Group–Autoregressive Distributed Lag (PMG–ARDL) model, which enables the estimation of both short-run and long-run relationships while accounting for cross-country heterogeneity. This approach provides a more robust framework for understanding how remittances interact with key macroeconomic variables and how their effects differ across ASEAN economies.

The main objective of this study is to examine the effect of remittances on per capita economic growth in ASEAN countries, with particular attention to Indonesia. Specifically, this research seeks to analyze the short-run and long-run impacts of remittance inflows, identify countries that utilize remittances more effectively, and evaluate how variations in economic structure, fiscal policy, and financial development influence the role of remittances in promoting sustainable and inclusive economic growth. Through this analysis, the study is expected to contribute to the literature on migration, remittances, and macroeconomic development in ASEAN, while also providing policy-relevant insights for improving the developmental impact of remittance inflows.

Hypotheses Development

Remittances on Economic Growth

Remittances constitute an important source of external income received by households from migrant workers abroad. An increase in remittance inflows enhances household disposable income, which subsequently stimulates consumption and aggregate demand in the domestic economy (Thapa & Acharya, 2017). As consumption increases, domestic production activities are encouraged to expand in order to meet higher demand, thereby contributing to economic growth. Beyond their consumption effect, remittances may also be directed toward productive uses, such as investment in education, health, entrepreneurship, and small-scale business activities. These allocations can improve human capital, strengthen household productivity, and support long-term economic performance (Maneechavakajorn, 2023; Hochstein, 2017).

The theoretical foundation of this relationship can be explained through Keynesian Consumption Theory, which emphasizes that an increase in income leads to higher consumption and, consequently, greater aggregate demand and output. In this context, remittances function as an income-enhancing mechanism that strengthens household purchasing power and stimulates economic activity. In addition, the Harrod–Domar Growth Model suggests that economic growth is influenced by the availability of savings and investment. Remittances, as additional financial resources, may reduce capital constraints and increase the capacity for productive investment, thereby promoting higher economic growth (Hochstein, 2017). Accordingly, this study proposes the following hypothesis:

H1: Remittances have a positive effect on economic growth

Gross National Expenditure on Economic Growth

Gross national expenditure represents total domestic spending within an economy, comprising household consumption, investment, and government expenditure. An increase in gross national expenditure reflects stronger domestic demand, which encourages firms to expand production capacity and increase investment activities (Maulid et al., 2021). This expansion stimulates higher output, creates employment opportunities, and increases household income, thereby contributing to economic growth. In this regard, gross national expenditure serves as an important macroeconomic indicator that captures the role of domestic demand in supporting overall economic performance.

The theoretical basis of this relationship is rooted in Keynesian Aggregate Demand Theory, which argues that economic output is largely determined by the level of total spending in the economy. When consumption, investment, and government expenditure increase, aggregate demand rises, leading to higher production and income. This argument is also consistent with the National Income Identity Framework, expressed as $Y = C + I + G + (X - M)$, where consumption (C), investment (I), and government spending (G) directly contribute to national output (Rafiy et al., 2018; Long et al., 2025). Therefore, higher gross national expenditure is expected to strengthen domestic economic activity and promote economic growth. Accordingly, this study proposes the following hypothesis:

H2: Gross national expenditure has a positive effect on economic growth

Exports on Economic Growth

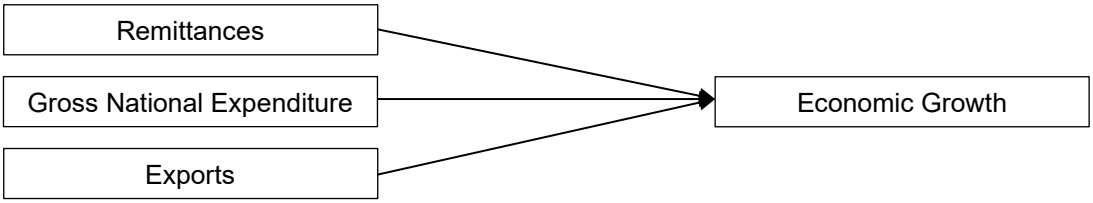
Exports represent a key component of external demand, enabling countries to expand the market for domestic goods and services beyond national boundaries. An increase in exports stimulates higher production levels, improves capacity utilization, and encourages firms to achieve greater economies of scale. Through export expansion, domestic industries are also encouraged to improve product quality, efficiency, and competitiveness in order to meet international market standards. In addition, exports generate foreign exchange earnings that can be used to finance imports of capital goods, intermediate inputs, and advanced

technology, thereby enhancing productivity and supporting economic growth (Handoyo et al., 2024).

The theoretical foundation of this relationship is derived from Export-Led Growth Theory, which argues that export expansion can serve as a major driver of economic growth. According to this theory, exports promote growth by increasing production efficiency, encouraging technological progress, strengthening international competitiveness, and integrating domestic economies into global markets (Mkabané & Kongo, 2025). Furthermore, export-oriented activities may create spillover effects through knowledge transfer, industrial upgrading, and employment creation. Therefore, countries with stronger export performance are expected to experience higher levels of economic growth. Accordingly, this study proposes the following hypothesis:

H3: Exports have a positive effect on economic growth

Figure 1. Research Framework



Source: Developed by the authors (2026)

METHOD

This study adopts a quantitative explanatory research design to examine the short-run and long-run effects of remittances, gross national expenditure, and exports on economic growth in selected ASEAN countries. The sample consists of Indonesia, Malaysia, Thailand, Vietnam, and the Philippines. These countries were selected because they provide consistent long-term macroeconomic and remittance data. The study uses annual panel data covering the period 1999 to 2024.

The data were obtained from the World Development Indicators (WDI) database published by the World Bank. The variables used in this study include Gross Domestic Product (GDP), personal remittances received, gross national expenditure (GNE), and exports of goods and services. All variables were transformed into natural logarithms to stabilize variance, reduce potential heteroskedasticity, and enable elasticity-based interpretation. The baseline model is specified as follows:

$$LnGDP_{it} = \alpha + \beta_1 LnREMIT_{it} + \beta_2 LnGNE_{it} + \beta_3 LnEXP_{it} + e_{it}$$

Where $LnGDP$ represents economic growth, $LnREMIT$ represents personal remittances received, $LnGNE$ represents gross national expenditure, and $LnEXP$ represents exports of goods and services. The subscript i denotes country, while t denotes year.

This study applies a dynamic panel estimation approach using the Autoregressive Distributed Lag (ARDL) model with the Pooled Mean Group (PMG) estimator. The PMG-ARDL approach was selected because it can accommodate variables integrated at different orders, namely I(0) and I(1). It also allows short-run coefficients to vary across countries while constraining the long-run coefficients to remain homogeneous across the panel.

Before estimating the ARDL model, the study conducted unit root testing using the Augmented Dickey-Fuller (ADF) panel test with intercept and trend specifications. The results show that $LnGDP$, $LnGNE$, and $LnEXP$ are stationary at first difference or I(1), while

$LnREMIT$ is stationary at level or I(0). These findings confirm that the variables meet the basic requirement for ARDL estimation.

The study then applied the Kao Residual Cointegration Test to examine the existence of a long-run relationship among the variables. The test produced a probability value of 0.0000, which is lower than the 1 percent significance level. This result indicates the presence of cointegration and confirms that the variables move together in the long run. The general form of the panel ARDL model is expressed as follows:

$$Y_{it} = \lambda Y_{it-1} + \sum \delta X_{it-j} + \mu_i + \varepsilon_{it}$$

After substituting the variables, the empirical model becomes:

$$LnGDP_{it} = \lambda LnGDP_{it-1} + \sum \delta_1 LnREMIT_{it-j} + \sum \delta_2 LnGNE_{it-j} + \sum \delta_3 LnEXP_{it-j} + \mu_i + \varepsilon_{it}$$

Since the cointegration test confirms a long-run relationship, the study estimates an Error Correction Model (ECM) to capture the short-run adjustment process toward long-run equilibrium. The ECM specification is written as follows:

$$\Delta LnGDP_{it} = \phi ECT_{it-1} + \sum \gamma_1 \Delta LnREMIT_{it-j} + \sum \gamma_2 \Delta LnGNE_{it-j} + \sum \gamma_3 \Delta LnEXP_{it-j} + \mu_i + \varepsilon_{it}$$

The coefficient of the error correction term, ECT_{it-1}, is expected to be negative and statistically significant. A negative and significant coefficient indicates that deviations from short-run disequilibrium are corrected toward the long-run equilibrium path. Model selection within the ARDL framework was based on the lowest Akaike Information Criterion (AIC) and Schwarz Criterion (SC). All statistical procedures, including unit root testing, cointegration testing, and PMG-ARDL estimation, were conducted using EViews software.

Table 1. Operational Variables

Variable	Definition	Measurement	Source
GDP	Economic growth measured by Gross Domestic Product	Natural logarithm of GDP (current USD)	World Development Indicators (WDI)
Remittances	Financial transfers sent by migrant workers to home countries	Ln of personal remittances received (current USD)	
Gross National Expenditure (GNE)	Total domestic spending including consumption, investment, and government expenditure	Ln of GNE (current USD)	
Exports	Goods & services exported to international markets	Ln of exports of goods and services (current USD)	

Source: Jamaluddin et al. (2025)

RESULT AND DISCUSSION

Descriptive Statistics

Descriptive statistical analysis was conducted to provide an initial overview of the characteristics of the data used in this study. The analysis covers Gross Domestic Product (GDP), Gross National Expenditure (GNE), Exports (EXP), and Remittances (REMIT), with

all variables measured in United States dollars (USD). The descriptive statistics include the mean, median, maximum value, minimum value, and standard deviation. In addition, skewness, kurtosis, and the Jarque–Bera test were used to examine the distributional properties and normality of the data. The results of the descriptive statistical analysis are presented in Table 2.

Table 2. Descriptive Statistics of Research Variables

Statistic	GDP	GNE	EXP	REMIT
Mean	352.00	342.00	164.00	8.89
Median	298.00	281.00	152.00	6.76
Maximum	1,400.00	1,320.00	386.00	40.30
Minimum	28.70	29.60	14.30	0.323
Std. Dev.	291.00	285.00	99.40	9.60
Skewness	2.00	2.00	0.00	2.00
Kurtosis	6.00	5.00	2.00	5.00
Jarque-Bera	110.00	88.00	8.00	92.00
Probability	0.000	0.000	0.000	0.000
Sum	45,800.00	44,500.00	21,400.00	1,160.00
Observations	130	130	130	130

Note: GDP, GNE, EXP, and REMIT are measured in USD billion.

Source: Processed data (2026)

Based on Table 2, the mean GDP value of USD 352 billion indicates that the selected ASEAN countries recorded a relatively high level of economic output during the study period. GNE has a mean value of USD 342 billion, suggesting that national expenditure is broadly aligned with aggregate economic output. Exports show an average value of USD 164 billion, which reflects the important role of external trade in supporting economic activity. Meanwhile, remittances record an average value of USD 8.89 billion. This figure indicates a meaningful inflow of funds from migrant workers, although its magnitude remains smaller than GDP, GNE, and exports. The descriptive statistics also show substantial variation across the panel data. The wide gap between the maximum and minimum values indicates differences in macroeconomic scale across countries and over time. This pattern is further supported by the high standard deviation values, particularly for GDP and GNE. These results suggest that the selected countries have heterogeneous economic structures, production capacities, expenditure levels, and external sector performance. In terms of distribution, GDP, GNE, and REMIT show positive skewness values. This indicates that the data are right-skewed, meaning that most observations are concentrated below the mean, while a smaller number of observations have very high values. By contrast, EXP has a skewness value close to zero, indicating a more symmetrical distribution. The kurtosis values of GDP, GNE, and REMIT are greater than 3, which indicates a leptokurtic distribution with a sharper peak and heavier tails than a normal distribution. Meanwhile, EXP has a kurtosis value below 3, suggesting a relatively flatter distribution. The Jarque-Bera test results show probability values below 0.05 for all variables. Therefore, the null hypothesis of normal distribution is rejected. This finding indicates that the variables are not normally distributed. However, this condition is commonly found in macroeconomic panel data and does not invalidate the analysis, since the PMG-ARDL approach focuses on stationarity, cointegration, and dynamic relationships rather than strict normality of the variables.

Stationarity Test

The stationarity test was performed to examine whether the variables used in the model exhibit stationary properties. This step is essential because the presence of a unit root may lead to biased and spurious estimation results. The Augmented Dickey–Fuller (ADF) test was

employed under two model specifications, namely intercept only and intercept with trend. The results of the unit root test are summarized in Table 3.

Table 3. Results of Unit Root Test Using the Augmented Dickey–Fuller (ADF) Method

Variables	Level I(0) Intercept	Level I(0) Intercept and Trend	First Difference I(1) Intercept	First Difference I(1) Intercept and Trend
LnGDP	0.5395	10.000	0.0053***	0.0006***
LnRemit	0.0004***	0.7206	0.0002***	0.0000***
LnGNE	0.3084	10.000	0.0052***	0.0005***
LnExp	0.8589	0.9726	0.0000***	0.0000***

*Note: *, *, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Source: Processed data (2026)

Based on the results presented in Table 3, the Augmented Dickey–Fuller (ADF) test indicates that LnGDP, LnGNE, and LnExp are non-stationary at the level form, I(0), as their probability values exceed the 5% significance level under both the intercept and intercept-and-trend specifications. However, after first differencing, the probability values of these variables decline substantially and become statistically significant at the 1% level. This finding confirms that LnGDP, LnGNE, and LnExp are stationary at first difference, or integrated of order one, I(1). The LnRemit variable exhibits a slightly different pattern. Under the intercept-only specification, LnRemit is stationary at level, as indicated by its probability value of 0.0004, which is statistically significant at the 1% level. Nevertheless, when a trend component is included, the variable is not stationary at level, as reflected by a probability value of 0.7206. After first differencing, LnRemit becomes statistically significant under both specifications at the 1% level, suggesting that the stationarity of the variable is robust after transformation. Overall, the findings suggest that the variables used in the model have a mixed order of integration, consisting of both I(0) and I(1) variables. This condition provides empirical justification for the application of the Autoregressive Distributed Lag (ARDL) approach, as the ARDL framework is suitable for models involving variables integrated at level and first difference, provided that none of the variables is integrated of order two, I(2).

Cointegration Test

After establishing that the research variables are integrated at a mixed order, namely I(0) and I(1), the subsequent step is to examine the existence of a long-run equilibrium relationship among the variables. For this purpose, the Kao Residual Cointegration Test was employed. This test is a residual-based cointegration procedure designed for panel data and is commonly applied to verify long-run relationships in panel-based ARDL analysis. The results of the test are presented in Table 4.

Table 4. Kao Residual Cointegration Test Results

Test / Information	t-Statistic	Probability	Value
ADF	-4.111643	0.0000***	—
Residual variance	—	—	0.000663
HAC variance	—	—	0.000679

*Note: *, *, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Source: Processed data (2026)

Based on Table 4, the Kao Residual Cointegration Test produces an ADF t-statistic of -4.111643 with a probability value of 0.0000. Since the probability value is lower than the 1% significance level, the null hypothesis of no cointegration is rejected. This result provides strong empirical evidence that a statistically significant long-run relationship exists among Gross Domestic Product (GDP), remittances (REMIT), gross national expenditure (GNE), and exports (EXP) during the 1999–2024 observation period. Furthermore, the residual variance and HAC variance values of 0.000663 and 0.000679, respectively, indicate relatively low variation in the residuals. This suggests that the model demonstrates stability in the long run and supports the presence of a long-run equilibrium relationship among the variables. Therefore, although the variables may experience short-run fluctuations, they tend to move together over time through an adjustment mechanism toward long-run equilibrium. From an economic perspective, these findings imply that remittances, gross national expenditure, and exports are closely associated with economic growth in the long run. Changes in these explanatory variables are therefore expected to have persistent implications for GDP. In line with the cointegration framework proposed by Kao (1999), the existence of cointegration confirms that the variables share a stable long-term relationship and that further estimation using the ARDL approach is empirically justified.

Results of Long-Term and Short-Term PMG ARDL Estimation

After the Kao cointegration test confirmed the existence of a long-run relationship among the variables, the analysis was continued by estimating the Pooled Mean Group Autoregressive Distributed Lag (PMG-ARDL) model. This estimation was conducted to identify both the long-run and short-run effects of remittances, gross national expenditure, and exports on economic growth. The estimation results are presented in Table 5.

Table 5. Results of Long-Run and Short-Run PMG-ARDL Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long-Run Equation				
LN(REMIT)	0.171372	0.015944	1.074.833	0.0000***
LN(GNE)	0.647880	0.015572	4.160.497	0.0000***
LN(EKSPOR)	0.121589	0.027366	4.443.011	0.0000***
Short-Run Equation				
COINTEQ01	-0.406231	0.239040	-1.699427	0.0952*
ΔLN(GDP(-1))	-0.089514	0.273191	-0.327662	0.7445
ΔLN(REMIT)	0.000476	0.042512	0.011203	0.9911
ΔLN(REMIT(-1))	-0.077669	0.050117	-1.549756	0.1273
ΔLN(REMIT(-2))	-0.075841	0.075779	-1.000826	0.3215
ΔLN(REMIT(-3))	-0.019266	0.063459	-0.303592	0.7627
ΔLN(GNE)	0.417992	0.260776	1.602.876	0.1150
ΔLN(GNE(-1))	0.154532	0.335157	0.461074	0.6467
ΔLN(GNE(-2))	0.175331	0.111934	1.566.386	0.1233
ΔLN(GNE(-3))	0.008745	0.076358	0.114523	0.9093
ΔLN(EKSPOR)	0.087448	0.040384	2.165.422	0.0350**
ΔLN(EKSPOR(-1))	0.029865	0.080547	0.370776	0.7123
ΔLN(EKSPOR(-2))	-0.039854	0.091368	-0.436192	0.6645
ΔLN(EKSPOR(-3))	-0.028053	0.083359	-0.336539	0.7378
C	1.040.804	0.593198	1.754.562	0.0852*
Model Statistics				
Mean dependent var	0.082471	S.D. dependent var	0.081569	

Variable	Coefficient	Std. Error	t-Statistic	Prob.
S.E. of regression	0.016516	Akaike info criterion	-4.40173	
Sum squared resid	0.014185	Schwarz criterion	-2.68121	
Log likelihood	3.641.125	Hannan-Quinn criter.	-3.702625	

*Note: *, *, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Source: Processed data (2026)

The long-term estimation results indicate that all independent variables have a positive and statistically significant effect on economic growth (GDP). The coefficient of LN(GNE), 0.6479 ($p < 0.01$), shows that a 1% increase in gross national expenditure is associated with a 0.65% increase in GDP, highlighting the primary role of domestic demand in driving economic activity. The coefficient of LN(REMIT), 0.1714 ($p < 0.01$), indicates that a 1% increase in remittances leads to a 0.17% increase in GDP. This finding confirms the contribution of remittances to consumption and investment, thereby supporting economic growth. Meanwhile, the coefficient of LN(EXPORT), 0.1216 ($p < 0.01$), shows that exports also significantly promote economic growth, although their elasticity is relatively smaller than that of GNE.

Short-Term Result Interpretation

In the short-term equation, the Error Correction Term (COINTEQ01) has a coefficient of -0.4062 and is statistically significant at the 10% level ($p = 0.0952$). The negative sign indicates the presence of an adjustment mechanism toward long-term equilibrium, with approximately 40.6% of disequilibrium corrected in each period. This means that when a deviation from the long-term equilibrium occurs, about 40% of the imbalance is corrected in the following period. In addition, the change in exports variable, ΔLN(EXPORT), has a positive and statistically significant effect at the 5% level ($p = 0.035$), with a coefficient of 0.0874. This indicates that short-term increases in exports have a direct positive impact on GDP growth.

Meanwhile, short-term changes in remittances and gross national expenditure (GNE) do not show statistically significant effects. This suggests that their impact is more likely to emerge in the long term through economic adjustment mechanisms. The constant term, C = 1.0408, which is significant at the 10% level, indicates that other factors outside the model may also influence economic growth within statistically acceptable limits. Several model performance indicators also show satisfactory results. The Akaike Information Criterion (AIC = -4.40173) and Schwarz Criterion (SC = -2.68121) suggest that the model is efficient. The Standard Error of Regression, 0.0165, and the low Sum of Squared Residuals, 0.0142, indicate that the model has a low prediction error and effectively captures variations in the data. Therefore, the estimated ARDL model is stable and appropriate for explaining the dynamic relationship between remittances, gross national expenditure, exports, and economic growth in the sample countries during the study period.

Table 6. Comparison of Short-Run and Long-Run PMG-ARDL Estimation Results across Indonesia, Malaysia, Thailand, Vietnam, and the Philippines

Country	Variable	Coefficient	Prob.
Indonesia	ECT	-0.4807	0.0001***
	ΔLnRemit	-0.09226	0.0000***
	ΔLnGNE	0.25993	0.0009***
	ΔLnExp	0.229017	0.0000***
	Constant	1.284.662	0.0006***

Country	Variable	Coefficient	Prob.
Malaysia	ECT	-113.531	0.0002***
	ΔLnRemit	-0.04062	0.0002***
	ΔLnGNE	-0.41704	0.0009***
	ΔLnExp	0.119342	0.0000***
	Constant	29.442	0.0001***
Thailand	ECT	-0.37408	0.0004***
	ΔLnRemit	0.123121	0.0000***
	ΔLnGNE	0.685392	0.0000***
	ΔLnExp	0.019126	0.0667*
	Constant	0.897028	0.0070***
Vietnam	ECT	0.37135	0.0026***
	ΔLnRemit	0.079392	0.0002***
	ΔLnGNE	1.170.069	0.0012***
	ΔLnExp	0.008777	0.5312
	Constant	-0.77563	0.0107**
Philippines	ECT	-0.41241	0.0000***
	ΔLnRemit	-0.06725	0.0125**
	ΔLnGNE	0.391614	0.0001***
	ΔLnExp	0.060976	0.0003***
	Constant	0.853713	0.0012***

Note: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Source: Processed data (2026)

The estimation results of the Pooled Mean Group Autoregressive Distributed Lag (PMG-ARDL) model reveal distinct short-run and long-run dynamics among ASEAN countries in explaining the relationship between Gross Domestic Product (GDP), remittances, Gross National Expenditure (GNE), and exports. The error correction term (ECT), which is negative and statistically significant in almost all countries except Vietnam, indicates the presence of an adjustment mechanism toward long-run equilibrium. The largest ECT magnitude is observed in Malaysia (-1.1353), suggesting a rapid correction process, although the coefficient exceeding -1 may indicate an overshooting adjustment toward equilibrium. Meanwhile, Indonesia (-0.4807), Thailand (-0.3740), and the Philippines (-0.4124) demonstrate stable convergence, with adjustment speeds ranging from approximately 37% to 48% per period. In contrast, the positive ECT value in Vietnam (0.3713) suggests the absence of convergence toward long-run equilibrium, which may reflect structural differences in its economy compared with other ASEAN countries. In the short run, the remittance variable, ΔLnRemit, exhibits heterogeneous effects. In Indonesia, Malaysia, and the Philippines, the remittance coefficients are negative and statistically significant, indicating that remittance inflows may be largely used for non-productive consumption and have not yet contributed optimally to economic growth. Conversely, in Thailand and Vietnam, remittances have a positive effect on GDP, suggesting that remittance inflows in these countries may be more effectively directed toward productive economic activities and domestic investment.

The Gross National Expenditure variable, ΔLnGNE, generally has a positive and statistically significant effect on economic growth in most countries, with the strongest effects observed in Vietnam (1.1700) and Thailand (0.6853). These findings underscore the importance of domestic demand as a key driver of economic growth. However, in Malaysia, GNE has a negative effect (-0.4170), suggesting possible inefficiencies in expenditure allocation or potential crowding-out effects on the private sector. Meanwhile, the export variable, ΔLnExp, has a positive and statistically significant influence on GDP in Indonesia, Malaysia, Thailand, and the Philippines, reaffirming the important role of the export sector in supporting economic growth in these countries. However, the effect is relatively weak in Thailand, as it is only significant at the 10% level. In Vietnam, exports show a positive but statistically insignificant

effect, which may be attributed to a high dependence on imported inputs or broader diversification of production sectors.

Overall, the estimation results indicate that long-term stability, productive utilization of remittances, strengthening of domestic demand, and export sector performance are essential for fostering sustainable economic growth across the ASEAN region. The variation in the direction and significance of the variables across countries also reflects differences in structural characteristics and economic policies, implying that effective growth strategies should be tailored to the domestic context of each country.

Hypotheses Testing

This section presents the results of hypothesis testing based on the long-run and short-run estimations of the PMG-ARDL model. First, the estimation results show that remittances, LN(REMIT), have a positive coefficient of 0.171372 and are statistically significant at the 1% level (p-value = 0.0000). This indicates that an increase in remittance inflows significantly contributes to economic growth in the long run. Therefore, H1, which states that remittances have a positive effect on economic growth, is accepted. However, in the short run, remittances do not show a statistically significant effect, suggesting that their impact on economic growth requires time to materialize through economic adjustment mechanisms.

Second, gross national expenditure, LN(GNE), shows a positive and highly significant coefficient of 0.647880 (p-value = 0.0000). This result implies that domestic expenditure is the most dominant factor influencing economic growth among the variables examined. Thus, H2 is accepted. Nevertheless, similar to remittances, gross national expenditure does not exhibit a significant effect in the short run, indicating that its contribution to growth is more evident in the long term.

Third, exports, LN(EXPORT), also have a positive coefficient of 0.121589 and are statistically significant at the 1% level (p-value = 0.0000). This finding confirms that export activities play an important role in promoting economic growth. Therefore, H3 is accepted. In contrast to the other variables, exports also show a positive and statistically significant effect in the short run (p-value = 0.035), indicating that export growth has both immediate and long-term impacts on economic performance.

Discussion

The empirical results indicate that remittances have a positive and significant effect on economic growth in the long run, while their short-run effect is not statistically significant. This finding suggests that remittances do not immediately translate into economic expansion, as they require time to be effectively absorbed into the domestic economy. In the short run, remittances are often used primarily for household consumption, including basic needs, education, and health expenses. Although these expenditures improve household welfare, they may not directly generate productive economic activities in the immediate period (Thapa & Acharya, 2017). In the long run, however, remittances play a more substantial role in supporting economic growth. As households accumulate financial resources, a portion of remittance inflows may be allocated to productive investments, such as small business development, human capital formation, and asset accumulation. These activities gradually improve productivity and income-generating capacity, thereby contributing to economic growth. This pattern reflects an economic adjustment process in which consumption-based effects gradually evolve into investment-driven growth over time (Maneechavakajorn, 2023). This result is consistent with Keynesian Consumption Theory and the Harrod–Domar Growth Model, both of which emphasize that additional income and capital accumulation can stimulate aggregate demand and investment, thereby promoting economic growth. Therefore, remittances can be considered an important external source of finance that supports long-term economic development in ASEAN countries, particularly in labor-exporting economies such as Indonesia (Hochstein, 2017).

The findings also show that gross national expenditure has the strongest and most significant positive effect on economic growth in the long run, while its short-run effect is not statistically significant. This indicates that domestic expenditure is a primary driver of economic activity, although its impact becomes more evident over time rather than immediately (Maulid et al., 2021). The dominant role of gross national expenditure reflects the importance of domestic demand in sustaining economic growth. Higher levels of consumption, investment, and government spending increase aggregate demand, encourage firms to expand production capacity, create employment opportunities, and generate higher income levels. However, the absence of a significant short-run effect suggests that increases in expenditure may initially be constrained by inefficiencies, implementation delays, or structural limitations that reduce their immediate impact on economic output (Rafiy et al., 2018). In the long run, as economic adjustments take place and resources are allocated more efficiently, the effect of expenditure on growth becomes more pronounced. This finding aligns with Keynesian Aggregate Demand Theory and the National Income Identity Framework, which emphasize that economic growth is largely driven by total spending in the economy. Thus, strengthening domestic expenditure remains a key strategy for achieving sustainable economic growth in ASEAN countries (Long et al., 2025).

The results further reveal that exports have a positive and significant effect on economic growth in both the short run and the long run. This indicates that export activities not only contribute to long-term economic expansion but also provide an immediate stimulus to economic performance. Compared with remittances and gross national expenditure, exports are the only variable that shows a significant short-run impact, highlighting their role as a direct driver of economic growth (Bakari, 2017). In the short run, increases in exports directly raise production levels, as firms respond to higher external demand by expanding output. This process leads to greater resource utilization, higher employment, and immediate growth in GDP. In the long run, exports contribute to economic development through improved efficiency, technological advancement, and deeper integration into global markets. Export-oriented activities also generate foreign exchange earnings, which can be used to finance imports of capital goods and support further economic expansion (Handoyo et al., 2024). This finding is consistent with Export-Led Growth Theory, which argues that export expansion serves as a key engine of economic growth, particularly in developing and emerging economies. Therefore, strengthening export performance and diversification is essential for enhancing both short-term economic stability and long-term growth prospects in ASEAN countries (Mkabané & Kongo, 2025).

CONCLUSION

This study aims to examine the dynamic relationship between remittances, gross national expenditure (GNE), exports, and economic growth in ASEAN countries, with particular attention to differences in their short-run and long-run effects. It also focuses on the effectiveness of remittance utilization in promoting economic growth. The findings indicate that, in the long run, remittances, gross national expenditure, and exports have positive and statistically significant effects on economic growth. Gross national expenditure emerges as the most dominant factor, followed by remittances and exports. However, in the short run, only exports have a significant impact on economic growth, while remittances and domestic expenditure do not show statistically significant effects. This suggests that the contributions of remittances and domestic expenditure require time to be fully reflected in economic performance.

The practical implications of this study emphasize the importance of implementing integrated economic policies aimed at strengthening domestic demand, promoting export diversification, and managing remittance inflows more productively. In addition, improving institutional quality, expanding financial inclusion, and maintaining fiscal discipline are essential for maximizing the long-term benefits of these economic drivers. Future research is recommended to incorporate additional variables, such as foreign direct investment (FDI), macroeconomic stability, and institutional quality. Further studies may also apply different

methodological approaches or include a broader range of countries to obtain more comprehensive results and better understand cross-country differences in the utilization of remittances for economic growth.

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