Inbound Versus Domestic Tourism Expenditure on National Income in Malaysia

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ABSTRACT

The study aims to evaluate whether inbound tourism and domestic tourism expenditure contributes to national income for a developing economy like Malaysia based on Tourism-Led Growth Hypothesis. The dependent variable is GDP; meanwhile, inbound tourism expenditure, domestic tourism expenditure, inflation and exchange rate are the independent variables. The ARDL method was employed on secondary time series data from 1994 to 2024, to determine whether there is a relationship between these independent variables with the dependent variables in the short term and long term. The result revealed that inbound was significantly negative in the short term and long term. Domestic tourism expenditure revealed a significantly positive relationship with GDP, both in the short term and long term. Similarly, inflation also exhibits a significantly positive relationship in the short term and long term. Contrary, the exchange rate revealed an insignificant relationship both in the short term and long term. Therefore, it can be concluded that there is a significant economic leakage from the inbound tourism. Thus, strategic measures need to be taken to enhance the value of the local supply chain to reduce economic leakages.

Keyword: inbound tourism; domestic tourism; Tourism-Led Growth Hypothesis; developing economics; Malaysia.

INTRODUCTION

There are different forms of tourism, domestic tourism, inbound tourism, outbound tourism and international tourism. Domestic tourism refers to residents traveling within a country of reference meanwhile inbound tourism refers to non-residents visiting the country of reference. Both, domestic tourism and inbound tourism are categorized as internal tourism. When domestic tourism is grouped together with outbound, it is classified as outbound tourism. As for international tourism that deals with cross border tourism activities anywhere, it comprises of inbound and outbound. The classification on the various forms of tourism plays a crucial role in the economic perspectives. They have differentiated spending patterns, leakages, sectoral linkages and spatial distribution. (OECD, 2018; Allan et al., 2022). (Refer to Table 1).

TABLE 1 indicates the key economic differences in domestic and inbound tourism.

Dimension	Domestic Tourism Expenditure	Inbound Tourism Expenditure
Source of Income	Internal redistribution	External income outflow Positive Foreign Exchange earnings
Foreign Exchange	No foreign exchange gain	Higher import due to foreign operators
Leakage	Lower	Higher per capita and concentrated

Spending pattern	More dispersed local	Lower
Price Sensitivity	High	Lower
Stability	More resilient during crises	Highly volatile
Local multiplier	Often higher	Often Lower

Source: Derived by the Author (2026).

Table 1 exhibits the classification of tourism into domestic and inbound tourism based on internationally recognised definitions by OECD (2018) and the United Nations World Tourism Organization (2022). The classification used in Table 1 is considered fundamental for analysing tourism demand, as each type of tourism represents a distinct flow of tourists and expenditure with different economic implications. Expenditure generated by domestic tourism represents internal redistribution of income within the national economy and it is often characterized as lower leakages as spending is more likely to benefit the local businesses, small, and medium- scale enterprises, and local communities.

Inbound tourism expenditure constitutes an external injection of income into the domestic economy and contributes directly to foreign exchange earnings. However, the economic impact of inbound tourism may be moderated by higher levels of leakage due to imports of foreign ownership of tourism facilities and profit repatriation. (Mazumder, et al., 2009). Despite this, inbound tourism typically generates higher per capita spending and plays a significant role in enhancing national income and international visibility. The collective positive impact of both domestic tourism and inbound tourism is the increase in consumer expenditure, investment in tourism related economic infrastructure, employment, transfer of skills through training and the export of services. All these indicators are referred as injection to the economy that can increase economic growth.

In Malaysia's development planning, tourism was expected to serve multiple economic, and social objectives, not just to generate revenue. Tourism was expected to diversify the Malaysian economy away from excessive reliance on manufacturing and commodities. Since commodities like palm oil, oil and gas belong to a perfectly competitive market, the price volatility creates uncertainty in the flow of income for the country as a whole and the owners of commodities specifically. Manufacturing was considered a rescue for income stability. Manufactured goods were deemed less elastic to changes in price. This is because the raw materials were converted to end products through manufacturing, which eventually increases the value of the goods through the extension of the supply chain. In addition, manufacturing was supported by the inflow of foreign direct investment. No doubt foreign direct investment provides employment and creates export of services but the profit repatriation resulted in a deficit in the balance of payment. This was one of the key factors that depreciates our currency. Overdependence on the manufacturing sector was also seen as a threat when major trading partners like Malaysia changed the external trading policies. Unfortunately, Malaysia also faces severe competition from neighbouring countries like Indonesia and China. These countries can anytime outperform Malaysia due to its ability to produce goods more cheaply, innovate valuable goods due to its high human capital skills and a large market demand potential due to its large population size.

The sensitivity of both the commodity sector and the manufacturing sector led Malaysia to diversify into tourism. Tourism in Malaysia was expected to contribute to economic diversification, employment creation, regional development, and foreign exchange earnings. However, tourism is also a highly sensitive sector, as the demand is strongly influenced by external shocks such as global economic conditions, health crises, and environmental risk. This sensitivity raises concerns regarding over-reliance on inbound tourism and underscores the importance of strengthening tourism to enhance economic resilience. The expected role of inbound tourism is growth, foreign exchange, and export earnings, while for domestic tourism is stability, resilience, and internal demand. From the economic and national accounting perspective, not all tourism forms contribute to an increase in national income. Therefore, a study needs to be conducted to determine the tourism forms and their economic impact on the national income of the country.

Problem Statement

Tourism has long been identified as a strategic sector that can contribute to economic development, especially in terms of national income, employment, and export earnings. In particular, inbound tourism is a key source for foreign exchange earnings, while domestic tourism plays its role in sustaining aggregate demand that supports local businesses. However, heavy reliance on tourism as a growth engine has raise concern based on its economic vulnerability, revenue volatility, and unequal distribution of benefits. This was quite obvious during COVID 19, where a pandemic caused a global disruption that created an adverse effect on the national income and employment. This was due to heavy reliance on inbound tourism. Although domestic tourism had greater resilience during the international mobility restriction, its role in stabilizing the adverse effects of Covid 19 is still under-examined and under-prioritize in policy discourse. The imbalance in the focus might heighten the risk associated in resource planning at the macro level that undermines long-term sustainability.

Furthermore, existing studies dwells around tourism expenditure at the aggregate level but fail to distinguish tourism expenditure between domestic and inbound tourism expenditure. As a result, policymakers face difficulties in designing targeted strategic policies that can balance growth resilience, and inclusive development. Therefore, a systematic analysis was carried out to determine how domestic and inbound tourism expenditure contribute differently to the national income and economic stability.

Addressing this gap is crucial for tourism development under the Rancangan Malaysia framework especially, in the context of building economic resilience, reducing vulnerability to economic shocks, and promoting sustainable and inclusive growth.

Research Objective

The overall research objective is to examine the impact of inbound and domestic tourism expenditure on Malaysia's economic growth, as measured by GDP, while accounting for key macroeconomic factors such as inflation and exchange rate movements. The specific objectives of the study are as follows:

To analyse the effect of inbound tourism expenditure on Malaysia's GDP in the short term and long term**,** highlighting the role of tourism as a source of foreign exchange and export-led growth. (SDG 8 and SDG 17)

To examine the contribution of domestic tourism expenditure to GDP in the short term and long term**,** with particular emphasis on its role in stimulating internal demand and enhancing economic resilience. (SDG 8 and SDG 10)

To assess the influence of inflation on GDP in the short term and long term**,** in order to capture the effect of price stability on economic performance. (SDG 8 and SDG 1)

To evaluate the impact of exchange rate movements on GDP in the short term and long term, especially through tourism competitiveness and international demand channels. (SDG 8 and SDG 9)

To compare the relative importance of inbound and domestic tourism expenditure in contributing to Malaysia's GDP in the short term and long term**,** providing insights for balanced and sustainable tourism policy formulation. (SDG 8 and SDG 12)

To provide policy-relevant recommendations on how Malaysia can optimise tourism-led growth by balancing inbound and domestic tourism development under the Rancangan Malaysia framework. (SDG 11, SDG 12 and SDG 13)

LITERATURE REVIEW

Underlying theory

The foundational theory that connects tourism with economic growth is Tourism-Led Growth Hypothesis (TLGH), where tourism acts as a driver for economic growth in a similar manner, and tradeable exports. Under

this framework, tourism receipts (both inbound and domestic) are the component of aggregate demand, stimulating output through multiplier effects, generate employment and contribute to foreign exchange earnings for an open economy. The theoretical underpinning is an extended Keynesian aggregate demand model, and the Solow growth fundamentals for service sectors (Tang & Tan, 2015; Mazumder, et al., 2009, Rashidah binti Abdullah, 2012). The empirical model in this study has GDP as the dependent variable and tourism expenditure as the independent variable.

In the Malaysian context, researchers have adopted ARDL, and cointegration techniques to test the hypothesis that tourism expansion can positively contribute to economic output. The model confirms that tourism and GDP are cointegrated, indicating a long run equilibrium relationship in which tourism receipts influence national economic performance. Tourism also Granger causes economic growth both in the short term and long term. Their study confirms the tourism-led growth hypothesis within the Malaysian setting, implying that policies promoting tourism may be effective for long term income growth.

Panel evidence from ASEAN countries, including Malaysia shows that international tourism receipts (inbound tourism) is positively related to economic growth, with causality running from tourism to GDP. Such studies confirm the role played by inbound tourism towards economic growth (Norsiah Kadir & Mohd Zaini Abd Karim, 2012). All these findings justify that total tourism receipts have a positively significant relationship with national income. Therefore, it supports the conceptual framework where tourism expenditure is treated as an independent variable influencing national output.

Although most of the earlier empirical tourism growth studies focused on total tourism receipts or international tourism, recent research highlights the importance of distinguishing subcomponents such as inbound and domestic tourism because they contribute to national income through different channels and mechanism. In Malaysia, Tourism Satellite Account data show both inbound tourism expenditure (foreign visitors) and domestic tourism expenditure (resident spending) are significant contributors towards domestic consumption. In 2024, inbound tourism reached RM107 billion while domestic tourism accounted for RM98.4 billion, together forming a substantial amount and share (15.1%) of the tourism sector's contribution to GDP (Tourism Satellite Account, 2025).

Empirical evidence from Previous Studies.

Several studies provide empirical evidence that tourism contributes positively to Malaysia's economic growth. Puah et al. conducted an Autoregressive Distribution Lag (ARDL) analysis for Malaysia from 1996 to 2016, stressed that tourism receipts significantly contribute to economic growth, supporting the Tourism-Led Growth Hypothesis. Similarly, Tang and Tan (2015) investigated the link between tourism activity and economic growth using cointegration. The result revealed the relationship between tourism and GDP is cointegrated indicating long term relationship. There is also a Granger cause with GDP in the short term and long term. This highlights that tourism influences GDP in generational and structural transformation.

Some researchers used input-output analysis in Malaysia to show that increases in tourist expenditure (particularly from inbound tourists) generate higher demand for goods and services across sectors such as accommodation, transport, food and beverage, and wholesale and retail, thus contributing positively to national income and tax revenue. (Norlida Hanim Mohd Salleh, Redzuan Othman & Abdul Hamid Jaafar, 2011).

Early studies intended to focus on the aggregate tourism receipts, recent research emphasises the importance of disaggregating tourism expenditure into inbound and domestic components due to their different economic roles. Inbound is a primary source of foreign exchange earnings and directly contributes to GDP through the export of services. Malaysia's Tourism Satellite Account (TSA) data show that inbound expenditure grew strongly by 41.1% in 2024, reflecting international demand and the country's attractiveness as a global destination.

In contrast, domestic tourism contributes indirectly to national income by stimulating internal consumption and supporting local industries such as retail, food and beverage, and transport. Domestic tourism also demonstrated resilience during global shocks such as the Covid 19 pandemic, when international visitors were severely restricted. (Nasir et al., 2020). Historical TSA data indicate that domestic tourism once dominated internal

tourism consumption (63.9% in 2022), emphasizing its role in its contribution to national income. (Tourism Satellite Account, 2023).

Distinguishing between these two forms of tourism expenditure enables a more nuanced analysis of tourism's contribution to national income and addresses the research gaps in understanding how different demand sources affect GDP differently.

Macroeconomic Control Variables: Inflation and Exchange rate.

Economic impacts of tourism on GDP are also moderated by broader macroeconomic conditions. Inflation affects price competitiveness, and real purchasing power, which can influence both inbound, and domestic spending. Meanwhile, exchange rate fluctuation can significantly affect international tourism demand by altering relative prices, affecting inbound visitor flows, and the competitiveness of the tourism sector. (Rovinashinee Arumugam & Muhammad Zuber Abd Majid, 2023). Studies in tourism economics often include these control variables for model specification and isolate the specific contribution of tourism receipts to national income.

In summary, the literature confirms the usage of Tourism-Led Growth Hypothesis as the theory behind the conceptual framework of the study. The empirical findings also link tourism with GDP. There is a positively significant relationship with GDP. Disaggregating tourism into inbound and domestic tourism expenditure provides further insights into their distinctive role. The inclusion of the macroeconomic controls, such as inflation, and exchange rate further strengthens the analytical framework.

METHODOLOGY

a. Research Design

The design involves quantitative analysis using a time-series analysis. This study used annual data points for a thirty-one-year period, 1994 to 2024. This longitudinal approach captures economic trends, cycles, and shocks. It allows this study to observe how relationships between variables behave over time. The design specifically chooses the Autoregressive Distributed Lag bounds testing approach as the primary estimation method (Pesaran et al., 2001). This choice is deliberate. The ARDL method is appropriate for data where variables are integrated of different orders, such as I(0) or I(1). It provides a unified framework for testing cointegration and estimating dynamic models. This method directly addresses the research objective to analyse both short-run and long-run effects.

The dependent variable is economic growth, measured by real Gross Domestic Product in constant prices (Real GDP). The independent variables are domestic tourism expenditure and inbound tourism expenditure, both measured in RM millions. The design includes two control variables, the exchange rate (RM per USD) and the inflation rate (annual CPI percentage). All the variables are transformed into log. The data are sourced from official public institutions, the Department of Statistics Malaysia (DOSM), Bank Negara Malaysia (BNM), and the World Bank.

The research design follows a sequential analytical procedure. Begin with data preparation and descriptive analysis. Then test each variable for stationarity using unit root tests. This step prevents spurious regression results. Next, apply the ARDL bounds test to determine if a long-run cointegrating relationship exists among the variables. If cointegration is present, estimate two models. The first model provides the long-run coefficients. The second model is an Error Correction Model that captures short-run dynamics and the speed of adjustment to equilibrium. Finally, conduct four diagnostic tests to validate the model's statistical assumptions. b. Research Framework

The research framework in Figure 1, is primarily grounded in the Tourism-Led Growth hypothesis, which posits that tourism activity contributes to economic growth by stimulating aggregate demand , generating employment, and increasing income through multiplier effects. Within the framework, tourism expenditure is treated as engine of growth that enhances national income by expanding consumption, investment and government revenue.

In this study, GDP is employed as the independent variables to reflect different sources of tourism demand. This distinction is important because inbound and domestic operate through different economic transmission mechanisms and may exert heterogeneous effects on economic growth. Inbound tourism expenditure represents external demand and foreign exchange inflows, which according to TLGH can stimulate GDP through increased export earnings and capital inflows. However, the growth impact of inbound tourism is conditional on the degree of domestic value addition. Leakages arising from imported intermediate inputs, foreign ownership of tourism related enterprises and profit repatriation may reduce the extent to which inbound tourism expenditure is retained within the domestic economy. Moreover, sustained growth in inbound tourism may exert upward pressure on the real exchange rate, potentially reducing the competitiveness of tradable sectors. These structural factors suggest that the relationship between inbound tourism expenditure and GDP may not be uniformly positive.

Domestic tourism expenditure, in contrast reflects internal demand circulation within the economy. Spending by domestic tourists is more likely to be retained within the local supply chain, strengthening backward linkages and supporting small and medium-sized enterprises. As such domestic tourism may contribute to economic growth by stabilizing demand particularly during periods of external shocks, and by reducing dependence on foreign markets. This implies that domestic tourism expenditure may have a more stable and potentially stronger relationship with GDP compared to inbound tourism.

In addition to the tourism variables, inflation and exchange rate are incorporated as control variables to account for broader macroeconomic conditions that influence both tourism activity and economic growth. Inflation affects real purchasing power, production costs, and investment decisions, which can constrain output growth when price level rise persistently. The exchange rate influences international price competitiveness, tourism demand and real value of tourism receipts, thereby shaping the transmission of tourism expenditure into economic growth.

Accordingly, the research framework conceptualizes GDP as a function of tourism demand and macroeconomic stability, recognizing that the impact of tourism expenditure and incorporating key macroeconomic variables, the framework provides a more comprehensive assessment of the tourism-growth nexus beyond the tourism-led growth hypothesis.

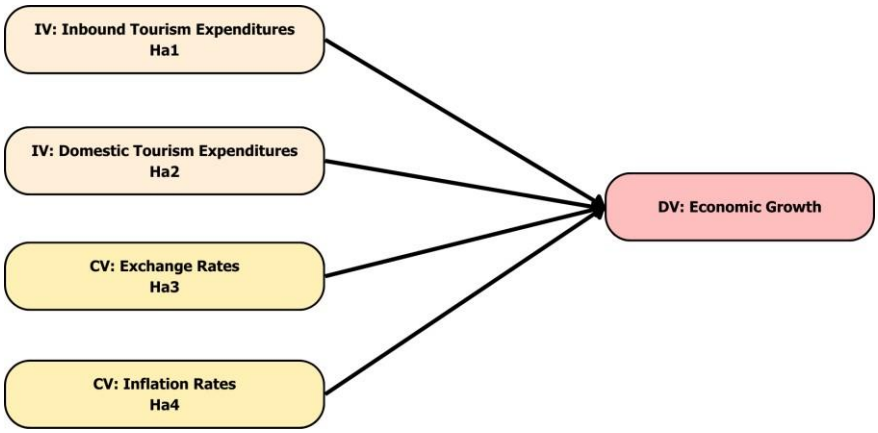

FIGURE 1 shows the research framework of the study**.**

c. Hypothesis Development

Based on the Tourism-Led Hypothesis, the following hypothesis was derived:

H_1: Inbound Tourism Expenditure has a significant relationship with GDP in the short term and long term in Malaysia.

H_2: Domestic Tourism Expenditure has a significant relationship with GDP in the short term and long term in Malaysia.

H_3: Inflation has a significant relationship with GDP in the short term and long term in Malaysia. H_4: Exchange rate has a significant relationship with GDP in the short term and long term in Malaysia. d. Model Formation

Following is the model from the above research framework.

$$\log(EG)_t = \alpha_0 + \alpha_1 \log(INBEXP)_t + \alpha_2 \log(DOMEXP)_t + \alpha_3 \log(EXCHR) + \alpha_4 \log(INF)_t + \epsilon_t$$

where GDP stands for national income; INBEXP is inbound expenditure; DOMEXP is domestic expenditure; EXCHR stands for exchange rate and INF is inflation rate and ϵt = the error term at time t d. Method of Analysis

The analysis begins with data preparation. A log transformation is applied to all variables. This transformation stabilizes variance and allows for the interpretation of coefficients as elasticities. The next step tests for stationarity. The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests are conducted. The null hypothesis (H_0) for each test states that the variable has a unit root and is non-stationary. The alternative hypothesis (Ha) states that the variable is stationary. A p-value below 0.05 leads to rejection of H_0, indicating stationarity. Non-stationary variables are differentiated to achieve stationarity.

The Autoregressive Distributed Lag (ARDL) bounds testing approach is then employed to test for cointegration. This method is suitable for variables integrated of order zero I(0) or one I(1). The test examines the existence of a long-run equilibrium relationship among the variables. The null hypothesis (H_0) states that there is no cointegration. The alternative hypothesis (Ha) states that there is a cointegrating relationship exists. If the calculated F-statistic exceeds the upper critical bound, H_0 is rejected, confirming a long-run relationship. If cointegration is established, the long-run coefficients are estimated. Subsequently, an Error Correction Model (ECM) is derived from the ARDL model. The ECM captures short-run dynamics and the speed of adjustment back to the long-run equilibrium. The coefficient of the error correction term (ECT) must be negative and statistically significant to confirm a stable long-run relationship. Diagnostic tests ensure the model's robustness. The Variance Inflation Factor (VIF) test checks for multicollinearity. A VIF value above 5 indicates high multicollinearity. The Breusch-Godfrey Lagrange Multiplier (LM) test detects serial, correlation. The null hypothesis (H_0) is no serial correlation. The Breusch-Pagan-Godfrey test detects heteroscedasticity. The null hypothesis (H_0) is that there is homoscedasticity. The Jarque-Bera test checks the normality of residuals. The null hypothesis (H_0) is the normal distribution. The stability of the model is verified using the Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) test.

FINDINGS

a.Descriptive Analysis.

Table 2 summarizes the basic statistical properties of all variables in natural logarithmic form over the period 1994 to 2024. The data revealed moderate variability across variables, with domestic expenditure displaying the highest standard deviation. Meanwhile, the distribution for inbound tourism expenditure is notably left skewed and highly leptokurtic, with Jarque-Bera strongly rejecting normality (p=0000). This suggests the presence of outliers possibly corresponding to economic and health crises. In contrast, the other variables including, the GDP, domestic tourism expenditure, exchange rate, and inflation, do not significantly deviate from normality, as indicated by Jarque-Bera probabilities well above 0.05. These characteristics support proceeding with the chosen ARDL modelling approach, which is robust to moderate departure from normality.

TABLE 2 shows the descriptive statistics of the variables

	Domestic Tourism Expenditure	Inbound Tourism Expenditure	GDP	Inflation	Exchange Rate
Mean	9.957149	10.39861	13.33942	1.524428	1.281761
Median	9.980587	10.53404	13.36854	1.488643	1.335001
Maximum	11.49727	11.58085	14.31647	3.387846	1.520919

Minimum	7.696213	6.154646	11.92975	-1.07808	0.918051
Std Deviation	1.175105	1.067658	0.777816	1.107834	0.166822
Skewness	-0.64444	-2.03423	-0.46653	-0.5472	-0.72136
Kurtosis	2.311365	8.951259	1.906578	2.830182	2.705275
Jarque Bera	2.758273	67.12765	2.668827	1.584311	2.80072
Probability	0.251796	0.000000	0.263313	0.452868	0.246508
Sum	308.6716	322.357	413.5221	47.25727	39.73459
Sum Sq Dev	41.42614	34.19678	18.14995	36.8189	0.834888
Observation	31	31	31	31	31

Source: Derived by the Author (2026).

b. Unit Root Test.

The results of the Augmented Dickey Fuller (ADF) unit root test are presented in Table 3. Among the five variables analysed, inbound tourism expenditure, and inflation rate are stationary at level with 5% and 1% significance threshold respectively. These variables exhibit p-values of 0.0389 and 0.0056 when tested with trend and intercept, confirming their stationary properties. (Refer to Table 3). In contrast, GDP, domestic tourism expenditure, and exchange rate are identified as non-stationary at the level, as their respective p-values are 0.8252, 0.4288 and 0.6260 respectively. These exceed the 5% significance level, indicating the presence of unit roots within the data series. However, when tested with the intercept only, GDP shows stationarity (p=0.0000), suggesting different deterministic components across specifications. (Refer to Table 3).

Upon conducting the ADF unit root test at the first difference, the non-stationary variables exhibit stationarity, confirming the absence of unit roots. At this level, the p-values for GDP is 0.0001, domestic tourism expenditure is 0.0027, and exchange rate is 0.0102 when tested with trend and intercept, all the variables are significant at 5% significance level. The mixed integration order with inbound tourism expenditure and inflation are integrated of order zero I(0),, and GDP, domestic tourism expenditure, and exchange rate are integrated of order one I(1). These results validate that the data for these variables achieve stationarity at the first difference, thus meeting the prerequisites for subsequent statistical analysis using Autoregressive Distributed Lag (ARDL) bound testing approach. (Refer to Table 3).

TABLE 3 shows the results of unit root test

Variables	Test Specification	At level (pvalue)	First Difference (p-value)	Integration order
GDP	Intercept Trend and intercept	0.0000*** 0.8252	0.3856 0.0001***	I(1)

Inbound tourism expenditure	Intercept Trend and intercept	0.1892 0.0389**	0.9668 0.9916	I(0)
Domestic Tourism Expenditure	Intercept Trend and Intercept	0.5050 0.4288	0.0005*** 0.0027***	I(1)
Exchange rate	Intercept Trend and Intercept	0.4301 0.6260	0.0020*** 0.0102***	I(1)
Inflation rate	Intercept Trend and Intercept	0.0014*** 0.0056***	0.0000*** 0.0000***	I(0)

Note: ***, ** denote significance at 1% and 5% level respectively.

c. Autoregressive Distributed Lag (ARDL)

ARDL bound test.

The ARDL bound test rejects the null hypothesis of no long run relationship at the F statistic of 3.709 is higher than I(1) of 5% critical upper bound of 3.49, indicating cointegration among the variables and there is a long run relationship.

TABLE 4 shows the coefficients on the long run relationship and its significance

Variables	Coefficient (Elasticity)	p-value	Interpretation
Inbound Tourism Expenditure	-0.158	0.0432	Negatively significant at 5 percent significant level. 1% increase in Inbound tourism expenditure decreases GDP by 0.16%
Domestic Tourism Expenditure	0.760	0.000	Positively significant at 1% significance level. 1% increase in domestic tourism expenditure increases GDP by 0.76%
Exchange rate	-0.225	0.6073	Negatively insignificant
Inflation	0.097	0.0714	Positively significant at 10% significant level. 1% increase in inflation rate increases GDP by 0.097%

Source: Derived by the Author (2026)

Domestic tourism expenditure is a strong and positive driver of long term of GDP, supporting the TourismLed Hypothesis for the domestic market. Inbound tourism expenditure exhibits a negatively significant longterm

relationship with GDP, a counter intuitive result that may reflect high import leakage, exchange rate pressures or crowding out effects within the economic structure of the Malaysian economy. The exchange rate displays an insignificant relationship with GDP. The positive coefficient for inflation aligns with mild demand-pull inflation scenario in a growing economy influenced by tourism expansion.

ARD error correction regression.

The error correction term is negative and statistically significant (p=0.0000). The coefficient of error correction term is -0.323718 that implies 32% of the deviation for the long run equilibrium are corrected within one period. In the short run, inbound tourism expenditure (-0.114544, p=0.018487), domestic tourism expenditure (0.462644, p=-5.332676), GDP (-1) (-0.350997, p=-3.342624), and GDP(-2) (-0.249060, p = 2.281321) are significant. All other variables are found to be insignificant at 5% significance level.

Diagnostic Test

The Breusch-Godfrey Serial Correlation test revealed that both the F-statistics probability (0.4489) and Obs*R squared (0.2635) exceeds the 0.05 significant threshold that fail to reject the null hypothesis. This indicates that there is no significant evidence of serial correlation. Meanwhile the Breusch-PaganGodfrey heteroskedasticity test also shows the F-statistics (0.1584) and Chi-square (0.1665) probabilities exceeding 0.05 significance level. Therefore, the result shows it fails to reject null hypothesis, indicating that the residuals exhibit homoskedasticity. As for the CUSUM of Squares plot, the recursive residuals remain entirely within the 5% significance boundaries throughout the entire sample period (1994 to 2024). The result indicates that the null hypothesis of parameter stability cannot be rejected, confirming the model's robustness and reliability for both inference and forecasting. No structural breaks within the time period.

DISCUSSION

Contrary to the wide accepted Tourism-Led Growth Hypothesis, which stipulated that inbound tourism expenditure influences the GDP but the influence is adverse. It also contradicts the study by Balaguer & Cantavella-Jorda (2002) and Tang (2011). The discrepancy might be explained by the structural weakness in Malaysia tourism economy, primarily due to high import leakage. A substantial portion of the expenditure by international tourists on imported goods, foreign owned hotel chains, international airlines and overseas tour operators that may immediately exit the domestic economy through profit expatriation. Evidence from Malaysia's input-output analysis reveals that part of tourism expenditure does not fully contribute to domestic

GDP due to import leakages. Specifically, the tourism import multiplier indicates that approximately RM0.22 of every RM1 spent by tourists leaves the country via imported inputs, signifying tangible leakage in the supply chain. (Mazumdar, et al., 2009). Additionally, dependency in foreign inputs and labour leads to income leakage, as indicated by relatively low-income multiplier for the sector, meaning that not all earnings are reinvested or spent domestically. Combined with the tourism economics theory that links foreign ownership and profit repatriation to reduce local retention, these findings substantiate a nuance view in which inbound tourism's net contribution to GDP can be constrained by structural factors in the value chain. (Mazumdar et al. 2009)

Furthermore, inbound tourism can induce exchange rate appreciation through increased foreign currency inflows, potentially harming the competitiveness of the other export sectors like manufacturing, a phenomenon known as Dutch Disease. These factors collectively can offset the direct income benefits from tourist spending. Resource crowding out where investment and labour are diverted from potentially more productive technology intensive sector to service orientated tourism. Moreover, the infrastructure for tourism often financed through debt, might impose long term fiscal burdens without proportional productive gains. In addition, the coefficient might have captured periods that experienced external shocks or internal policy inefficiencies, reflecting a correlation rather than a direct causal detriment. Eventually the sector's contribution integrated within the broader national economic framework.

In contrast, domestic tourism expenditure serves as a robust and significant driver of GDP, strongly aligning with the theory. The highly strong positive significance of domestic tourism expenditure illustrates the multiplier

in action. Spending by Malaysian residents for accommodation, food, transportation and leisure activities flows directly to local businesses and related domestic supply chains. This creates successive round of local income generation, investment, employment, amplifying the initial expenditure. (Norlida et al., 2021). This deems the need to design strategic tourism policies or promotion to nurture the domestic tourism market.

Contrary to conventional expectations that currency valuation influences economic performance insignificantly both in the short term and long term. Fluctuations in the exchange rate over the study period did not systematically influence the nation's economic performance trajectory. As for the relationship between inflation and GDP, Malaysia's tourism driven economy has significant influence both in the short term and long term. The positive association align with the demand-pull inflation, where raising prices are driven by increase in aggregate demand in a growing economy. In Malaysia's context, expansion in tourism expenditure both domestic and inbound expenditure stimulates consumption in multiple sectors like hospitality, retail, and transportation, potentially creating upward pressure on prices as demand out-spaces supply in the long term but not in the short term. In the context, threshold regression analysis indicates that inflation rate below 3. 89% is significantly positively associated to GDP implying that a moderate inflation can coincide with stronger economic activity and higher output. (Munir, Q. et al., 2009)

CONCLUSION

From the theoretical perspective, the findings contribute to the Tourism-Led Growth Hypothesis. Domestic tourism expenditure through the multiplier effect operates with minimal leakage and directly supports the core theory. However, the result challenge with an adverse effect for inbound tourism because of import leakages and structural dependency. Therefore, a more conditional model and mechanism need to be established where the country's income generation must be integrated based on destination level economic integration local sourcing capacity. Therefore, a strategic implication is to enhance local value chain integration, where hotels and tour operators to source food, goods and services locally.

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