South Asian Journal of Tourism and Hospitality
DOI: https://doi.org/10.4038/sajth.v6i1.109
Journal homepage: https://sajth.sljol.info/
Faculty of Management Studies, Sabaragamuwa University of Sri Lanka

The Nexus Between Tourism and Economic Growth in Sri Lanka: Evidence from an ARDL Bounds Testing Approach

Ravinthirakumaran Navaratnam[1*], Dhanushi Thennakoon[2]
[1,2]*Department of Business Economics, University of Vavuniya, Sri Lanka*

Abstract

This study investigates the nexus between tourism and economic growth in Sri Lanka from 1990 to 2021 using the Autoregressive Distributed Lag bounds testing approach. GDP growth is used as the dependent variable, while tourism receipts, labour force participation, gross capital formation, and inflation are treated as explanatory variables. Unit root properties are examined through the Augmented Dickey-Fuller test, and multicollinearity is assessed via the Variance Inflation Factor. The Bounds Test confirms a long-run relationship among the variables, while the Error Correction Model captures short-run dynamics. Empirical findings reveal that tourism receipts, labour force participation, and gross capital formation exert positive long-run effects on economic growth, whereas inflation negatively influences growth. Short-run estimates suggest that labour force participation and gross capital formation stimulate growth, though tourism shows a limited immediate impact. Importantly, Granger causality tests demonstrate bidirectional causality between tourism and economic growth, validating both the tourism-led growth hypothesis and the economic-driven tourism hypothesis. Additionally, investment and labour force participation are identified as key transmission mechanisms linking tourism with broader macroeconomic performance. The results highlight the strategic role of tourism in driving sustainable growth in Sri Lanka, underscoring the need for policies that strengthen infrastructure, investment, and labour market participation.

Keywords: Tourism, Economic Growth, Sri Lanka, ARDL Bound Test, Time Series Analysis

Received 05 January 2026
Revised 07 February 2026
Accepted 10 April 2026

South Asian Journal of Tourism and Hospitality

ISSN: 2756-911X

*Corresponding author: navaraviecon@vau.ac.lk
ORCHID: https://orcid.org/0000-0002-8885-1015

INTRODUCTION

Tourism has long been recognised as a catalyst for economic growth, employment generation, and foreign exchange earnings in developing economies (Balaguer & Cantavella-Jordá, 2002; Sequeira & Campos, 2007). Sri Lanka, with its rich cultural heritage, diverse natural attractions, and strategic location, has leveraged tourism as a key pillar in its economic structure, contributing approximately 12–15% to its Gross Domestic Product and accounting for around 40% of all service exports (Sri Lanka Tourism Development Authority, 2019; UNWTO, 2013). The sector has consistently shown growth, with international tourist arrivals peaking at 2.3 million in 2018, driving foreign direct investment into infrastructure, hospitality, and related services, thereby supporting broader economic transformation in the country (World Travel & Tourism Council (WTTC), 2019). The tourism sector has also significantly contributed to employment generation, supporting over 500,000 direct and indirect jobs, and enhancing rural livelihoods through eco-tourism and community-based tourism initiatives.

The existing literature on the tourism-growth nexus provides evidence of a positive relationship between tourism and economic growth across various regions. Studies such as Dritsakis (2004) and Lee & Chang (2008) have found that tourism development contributes to GDP growth through foreign exchange earnings, infrastructure investment, and employment generation. Similarly, Brida et al. (2016) argue that tourism stimulates growth by enhancing capital formation and increasing demand for goods and services across multiple sectors. In the South Asian context, studies by Katircioglu (2009a) and Suresh & Senthilnathan (2014) indicate that tourism expansion positively impacts economic growth, with spillover effects on trade, investment, and employment.

Despite these contributions, there is limited empirical research on Sri Lanka that uses robust econometric techniques to quantify the dynamic relationship between tourism and economic growth, while incorporating

relevant macroeconomic variables such as labour force participation, gross capital formation, and inflation. Previous studies on Sri Lanka have primarily been descriptive or methodologically limited, failing to capture the short- and long-run interactions between tourism and growth using advanced time-series techniques (Jayathilake, 2013; Perera, 2015). Additionally, while global studies often highlight the importance of FDI and tourism revenue in driving growth, the specific transmission mechanisms and the tourism sector's resilience within Sri Lanka's unique post-conflict and macroeconomic environment remain underexplored.

This research gap underscores the need for a comprehensive, quantitative analysis to understand how tourism influences economic growth in Sri Lanka, particularly in the context of its evolving macroeconomic dynamics between 1990 and 2023. It is essential to explore how tourism receipts interact with labour force participation, capital formation, and inflation in shaping the country's GDP growth trajectory. Such an analysis will provide policymakers with evidence-based insights to design tourism-led growth strategies while ensuring macroeconomic stability and sustainable development.

The primary objective of this study is to empirically investigate the relationship between tourism and economic growth in Sri Lanka using annual time-series data from 1990 to 2023. Specifically, the study aims to:

- Quantify the short-run and long-run impacts of tourism receipts on GDP growth.
- Examine the interactions between tourism and key macroeconomic variables, including labour force participation, gross capital formation, and inflation.
- Evaluate the resilience and contribution of the tourism sector to Sri Lanka's economic transformation during periods of macroeconomic volatility.

To achieve these objectives, the study employs the Autoregressive Distributed Lag (ARDL) bounds testing approach, which is well-suited for analysing time-series data with mixed orders of integration and provides robust estimates of both short-run and long-run dynamics. The ARDL model allows for the inclusion of relevant macroeconomic control variables, enabling a comprehensive analysis of the tourism-growth nexus within Sri Lanka's economic structure.

The contribution of this research is fourfold. First, it provides the first comprehensive application of the ARDL technique to examine the tourism-growth relationship in Sri Lanka, filling a methodological gap in the country-specific literature. Second, it integrates macroeconomic variables such as labour force participation, capital formation, and inflation into the analysis, offering a holistic perspective on how tourism interacts with broader economic dynamics. Third, it generates empirical evidence on the short- and long-run effects of tourism on economic growth, which can guide policymakers in designing strategies to leverage tourism for sustainable economic development while managing macroeconomic stability. Fourth, it contributes to the global literature on the tourism-growth nexus by providing insights from Sri Lanka, a developing economy with a tourism-dependent growth strategy, thereby enriching comparative studies in the South Asian and broader developing-country contexts.

Overall, by systematically analysing the intricate relationship between tourism and economic growth in Sri Lanka, this study aims to provide a clear, evidence-based foundation to enhance tourism's role in the country's development strategy. The findings are expected to guide tourism development policies that not only boost GDP growth but also support employment generation, rural development, and foreign exchange stability, contributing to the sustainable and inclusive growth of Sri Lanka's economy.

The remainder of this paper is organised as follows. Section Two reviews the theoretical and empirical literature on the tourism–growth nexus, highlighting key international and Sri Lankan evidence while identifying research gaps. Section Three explains the econometric methodology, including data sources, variable selection, and the analytical framework. Particular attention is given to the ARDL bounds testing approach, which examines both short- and long-run dynamics and includes diagnostic checks for robustness. Section Four presents the study's conclusions and policy recommendations, emphasising tourism's role in fostering sustainable economic growth and providing insights for policymakers in Sri Lanka.

LITERATURE REVIEW

Theoretical Literature

The relationship between tourism and economic growth has been explored through various theoretical frameworks, each providing unique insights into how tourism influences a nation's economy. Key among these frameworks are the Keynesian Multiplier Theory, the Tourism-Led Growth Hypothesis (TLGH), endogenous growth models, and dynamic development models, which collectively inform the understanding of tourism's impact on economic development.

The Keynesian Multiplier Theory posits that tourism acts as an exogenous component of aggregate demand, stimulating economic activity through a multiplier effect (Keynes, 1936). Tourist expenditures on accommodation, transportation, and entertainment inject income into the economy, leading to increased consumption and further economic activity across sectors (Fletcher, 1989). However, this theory primarily captures short-term impacts and does not fully address the structural and long-term development effects of sustained tourism growth (Lowenstein, 2005).

The Tourism-Led Growth Hypothesis (TLGH) posits that tourism can catalyse long-term economic growth by generating foreign exchange earnings,

stimulating infrastructure investment, and creating employment (Balaguer & Cantavella-Jordá, 2002; Lee & Chang, 2008). TLGH aligns with the export-led growth hypothesis, suggesting that tourism functions similarly to exports in promoting economic performance (McKinnon, 1964). As tourism expands, it increases demand for complementary goods and services, fostering sectoral linkages and investment in human capital and public infrastructure (Sequeira & Campos, 2007). Nevertheless, TLGH has been criticised for oversimplifying tourism's role by not fully accounting for potential negative externalities, such as environmental degradation and cultural erosion, associated with mass tourism (Lee & Chang, 2008).

Endogenous Growth Theory introduces a more dynamic understanding of tourism's role by emphasising the importance of human capital, technological innovation, and knowledge spillovers in promoting sustained growth (Romer, 1986; Lucas, 1988). In the context of tourism, this theory suggests that tourism development can drive improvements in education, skills development, and the adoption of technology within local economies, thereby enhancing productivity and long-term growth (Croes & Rivera, 2017). Tourism often necessitates skilled labour and improved infrastructure, which can generate positive spillover effects across sectors, fostering innovation and enhancing the economy's capacity for sustained growth (Krugman, 1991).

The Post-Keynesian and Harrod-Domar Growth Models further contextualise tourism within investment-driven growth frameworks. These models assert that increased tourism demand can lead to higher investment in the tourism sector, driving economic expansion (Harrod, 1939; Domar, 1946). Tourism acts as a conduit for foreign direct investment, particularly in developing countries, contributing to capital accumulation and income generation (Sinclair, 1998). However, critics argue that these models may overlook the uneven distribution of tourism benefits and potential constraints on capital productivity (Lowenstein, 2005).

Lastly, Dynamic Development Models, such as Hazari's (1995) approach, provide a comprehensive perspective on tourism's long-term impacts in small open economies. Hazari's model posits that rising tourism demand can lead to structural changes, sectoral diversification, and productivity improvements, thereby catalysing sustainable economic transformation (Hazari & Sgro, 1995). This perspective is particularly relevant for economies like Sri Lanka, where tourism accounts for a significant share of GDP and plays a critical role in employment generation and foreign exchange stability.

Together, these theoretical frameworks offer a multidimensional understanding of how tourism can drive economic growth through short-term demand stimulation, investment and capital accumulation, human capital development, and structural economic transformation. By applying these theories to Sri Lanka, this study aims to capture both the immediate and long-term dynamics of tourism's contribution to economic growth, addressing a gap in the literature by employing a robust econometric approach to quantify these relationships in the Sri Lankan context.

Empirical Literature Review

The relationship between tourism and economic growth has been a widely researched topic in economics, with studies typically falling into four main hypotheses: the Tourism-Led Growth Hypothesis (TLGH), the Conservation Hypothesis, the Feedback Hypothesis, and the Neutrality Hypothesis. Each hypothesis offers a different perspective on the causality and strength of the tourism-growth nexus.

The Tourism-Led Growth Hypothesis (TLGH) asserts that tourism is a primary driver of economic growth by generating foreign exchange, stimulating employment, and encouraging investment in infrastructure and complementary sectors. Empirical studies provide robust evidence supporting this hypothesis in various countries. For instance, Khan et al. (1995) demonstrated that, for Pakistan (1970–1993), tourism significantly enhances economic growth

through its multiplier effects on sectors such as construction and retail. Similarly, Durbarry (2004) found that tourism was a key contributor to Mauritius's economic diversification and growth between 1976 and 2000. Lee and Chang (2008) observed a strong positive, bidirectional relationship in Taiwan from 1975 to 2003, indicating that tourism both drives and benefits from economic growth. This bidirectional finding, however, still falls broadly under the TLGH umbrella as tourism actively stimulates economic performance. Other studies affirming the TLGH include Narayan and Narayan (2010) in Fiji, Aslan (2013) in Mediterranean countries, and Mihailidis and Sotiropoulos (2015) in Greece, all of which highlight tourism's positive direct and indirect economic impacts. Additionally, Bakar and Kamil (2016) in Malaysia and Zhang and Fu (2017) in China, employing ARDL and dynamic panel techniques respectively, reinforce tourism's role as a significant growth engine.

Recent empirical studies on the tourism–growth nexus provide mixed but largely supportive evidence for the tourism-led growth hypothesis, particularly in developing and emerging economies. The study by Bhattarai and Karmacharya (2021) on Nepal, using the ARDL approach with data from 1976–2020, finds no significant relationship between tourism and economic growth in both the short and long run, thereby rejecting the tourism-led growth hypothesis. Instead, other macroeconomic factors such as trade and foreign aid were found to be more influential determinants of economic growth. In contrast, Umurzakov et al. (2022) provide strong cross-country evidence from Belt and Road Initiative (BRI) nations, showing that tourism has a positive, statistically significant impact on economic growth, underscoring its role as a driver of sustainable development across a large group of economies. Similarly, Soylu et al. (2023), using panel data for 29 upper-middle-income countries, confirm that tourism indicators such as receipts, arrivals, and expenditures significantly contribute to economic growth, reinforcing the importance of tourism as a

macroeconomic growth factor. For Pakistan, Ullah et al. (2023) employ the ARDL model and find that tourism significantly enhances long-run economic growth by contributing to employment generation, investment, and foreign exchange earnings. Expanding the scope, Aman and Umer (2025) analyse both developing and developed countries using panel data and conclude that tourism receipts and expenditures have a significant positive effect on GDP. However, the impact of some tourism variables (e.g., tourist arrivals) may vary across country groups. Finally, Mazhar et al. (2025) introduce a more advanced non-linear framework (NARDL) for Pakistan and find that tourism revenues positively influence economic growth. However, the relationship is asymmetric, meaning positive and negative shocks in tourism affect growth differently. These findings collectively underscore tourism's capacity to catalyse economic expansion, especially in countries where tourism forms a major sector of the economy.

By contrast, the Conservation Hypothesis argues that economic growth is the main driver of tourism development, with tourism expanding as a natural consequence of rising incomes, infrastructure improvements, and broader economic advancement, rather than acting as an engine of growth itself. Several studies support this view. Chiang and Yang (2003) in Taiwan and Chi-Ok Oh (2005) in Korea found that economic growth spurred tourism demand, with tourism not significantly impacting economic growth. Katircioglu (2009a) reported similar findings for Turkey using ARDL bounds testing. Narayan (2010) further showed that in Pacific Island countries, economic growth underpinned tourism expansion by improving infrastructural and income conditions. Payne and Mervar (2010) in Croatia, and Sinha and Mehta (2013) in India, similarly documented unidirectional causality running from economic growth to tourism. Studies from Latin America (Bojanic & Losada, 2014) and Sri Lanka (Suresh & Senthilnathan, 2014) echo this pattern, suggesting that policymakers should prioritise economic growth to foster tourism development.

Further, Ghimire and Sapkota (2023) and Jan et al. (2025) provide empirical evidence supporting the conservation hypothesis, emphasising the role of economic growth in driving tourism development. Specifically, Ghimire and Sapkota (2023), using ARDL bounds testing and Granger causality analysis for Nepal over the period 1987–2020, find a long-run relationship between tourism receipts and GDP but no significant short-run impact of tourism on economic growth. Their causality results reveal a unidirectional relationship running from GDP to tourism earnings, indicating that economic expansion stimulates tourism, not the reverse. Similarly, Jan et al. (2025), examining India from 1991 to 2020 through an ARDL framework, identify both short- and long-run relationships among economic growth, employment, and tourism demand, with results showing that economic growth significantly enhances tourism demand. Together, these studies suggest that improvements in macroeconomic conditions -such as income levels, infrastructure, and employment - play a crucial role in fostering tourism development, highlighting the importance of growth-led strategies in strengthening the tourism sector. This body of work highlights the notion that tourism benefits from macroeconomic health rather than driving it independently.

The Feedback Hypothesis captures a middle ground, proposing a mutually reinforcing bidirectional relationship between tourism and economic growth. In this framework, tourism stimulates growth while economic growth simultaneously fosters tourism development, creating a virtuous cycle. Empirical evidence abounds for this hypothesis as well. Dritsakis (2004) in Greece used VAR models to demonstrate that tourism and growth significantly influence each other. Demiroz (2005) and Ozdemir and Sargin (2016) found similar bidirectional causality in Turkey, emphasising the cyclical benefits of tourism and growth. Taiwan's studies by Kim et al. (2006) and Lee and Chien (2008) also support this, as do findings from China (Wang & Chen, 2009), South Korea (Yoo & Kwak, 2010; Liu & Park, 2011), Tunisia (Ajmi et al.,

2015), and a multi-country panel analysis by Seghir (2015). Sundararajan and Srinivasan (2015) further reinforced this for India, demonstrating tourism's role in job creation and foreign exchange earnings, which feed back into economic growth. This feedback dynamic suggests integrated policy approaches to foster tourism and broader economic development simultaneously.

Recent evidence from Çinar (2024) for Türkiye, based on quarterly data from 2003Q1 to 2023Q2 and applying cointegration and the Toda-Yamamoto causality approach, identifies a stable long-run relationship between tourism expenditures and economic growth. The study further reports bidirectional causality between the two variables, indicating that tourism and economic growth mutually reinforce one another, thereby supporting the feedback hypothesis. In a similar vein, Sadekin (2025), using VECM and Granger causality analysis for Bangladesh over the period 1998–2019, also confirms a bidirectional causal relationship between tourism expenditure and GDP. The findings suggest that tourism contributes to economic growth while economic growth simultaneously stimulates tourism development. Collectively, these studies demonstrate that the tourism–growth relationship in developing economies is mutually reinforcing, implying that policy measures targeting either the tourism sector or broader economic performance can generate reciprocal benefits for both.

Finally, the Neutrality Hypothesis posits no significant causal linkage between tourism and economic growth, indicating that the two variables evolve independently. Studies supporting this view often point to contextual factors such as political instability or structural economic issues that prevent tourism from substantially influencing economic performance. Katircioglu (2009b) and Acaravci and Ozturk (2010) found no significant long-run relationship in Turkey. Akinboade and Braimoh (2010) reported neutrality in South Africa, while Apergis and Payne (2010) found similar results across 14 European countries. Ozturk (2010), Huseynov and Yildirim (2012) in Azerbaijan, and

Yucel and Akin (2015) also concluded that tourism and economic growth do not causally affect each other in their respective contexts. These findings suggest that tourism's economic significance varies widely and may be overshadowed by other economic or political factors in some countries.

The empirical literature considered in this study is summarised in Table 1, which presents an overview of key research on the relationship between tourism and economic growth across various countries, methodologies, and time periods. The table emphasises the econometric techniques employed and the principal findings, providing a clear comparative perspective. This summary not only consolidates existing evidence but also highlights patterns, inconsistencies, and gaps in the literature, which inform and justify the analytical approach adopted in the present study.

Table 1: Summary of Empirical Studies on Tourism and Economic Growth

	Authors, Year, Country/Region, Period)	Methodology	Key Findings
Tourism-Led Growth	Khan et al. (1995). Pakistan, 1970 –1993	Cointegration, ECM	Tourism drives economic growth, with positive multiplier effects
	Durbarry (2004) Mauritius, 1976–2000	Bivariate causality test	Tourism is significant for export earnings, diversification
	Lee & Chang (2008). Taiwan, 1975–2003	Cointegration, ECM	Bidirectional causality: tourism drives growth
	Narayan & Narayan (2010). Fiji, 1970–2007	Toda-Yamamoto causality	Unidirectional from tourism to growth
	Aslan (2013) Mediterranean countries 1995–2010	Panel Granger causality	Tourism positively affects economic growth
	Surugiu (2013) Romania, 1988–2009	Cointegration, VECM	Bidirectional causality between tourism and growth
	Hossein (2014) Turkey, 1970–2011	Time-varying parameters, Kalman filter	Tourism significantly drives growth
	Mihailidis & Sotiropoulos (2015). Greece, 1990–2011	Panel data	Tourism promotes GDP and infrastructure investment
	Bakar & Kamil (2016).	ARDL	Tourism impacts short- and

	Malaysia, 1990–2014		long-term economic growth
	Ozturk (2016) Turkey, 1990–2014	Granger causality, VAR	Bidirectional causality
	Zhang & Fu (2017). China, 1997–2014	Dynamic panel data	Tourism contributes to growth and sector spillovers
	Bhattarai & Karmacharya (2021). Nepal (1976–2020)	ARDL	Tourism has no significant impact → TLGH rejected
	Umurzakov et al. (2022). BRI Countries (2000–2018).	GMM	Tourism has a positive and significant effect on economic growth
	Soylu et al. (2023) 29 Upper-middle-income countries (2010–2019)	Static & Dynamic Panel	Tourism indicators significantly drive economic growth
	Ullah et al. (2023). Pakistan (1995–2019)	ARDL	Tourism receipts positively affect GDP in the long run
	Aman & Umer (2025) 10 developing & 10 developed countries (2010–2023)	Panel Data	Tourism receipts and expenditures significantly impact GDP
	Mazhar et al. (2025). Pakistan (1960–2020)	NARDL	Tourism revenues positively affect economic growth
Conservation Hypothesis	Chiang & Yang (2003) Taiwan, 1970–2001	Granger causality, cointegration	Economic growth drives tourism
	Chi-Ok Oh (2005). Korea, 1975–2001	VAR, Engle-Granger	Economic growth leads to tourism growth
	Katircioglu (2009a) Turkey	ARDL	Economic growth drives tourism; no tourism-led growth
	Narayan (2010) Pacific Islands, 1988–2004	Panel cointegration	Growth fosters tourism
	Payne & Mervar (2010). Croatia	Toda-Yamamoto causality	Economic growth drives tourism
	Sinha & Mehta (2013). India	Cointegration, Granger causality	Economic growth drives tourism
	Bojanic & Losada (2014) Latin America	Panel data	Economic growth drives tourism
	Suresh & Senthilnathan (2014). Sri Lanka, 1977–2012	Granger causality	Growth leads to tourism earnings
Feedback Hypothesis	Dritsakis (2004) Greece, 1960–2000	VAR	Bidirectional causality
	Demiroz (2005) Turkey, 1980–2004	Cointegration, Granger causality	Bidirectional causality
	Kim et al. (2006). Taiwan, 1971–2003	Granger causality, cointegration	Bidirectional causality
	Lee & Chien (2008). Taiwan, 1959–2003	Unit root, cointegration	Bidirectional causality
	Wang & Chen (2009).	Granger causality,	Bidirectional causality

	China, 1980–2006	cointegration	
	Yoo & Kwak (2010) South Korea, (1970)–2007	VAR	Bidirectional causality
	Liu & Park (2011). South Korea, 1965–2008	Granger causality, cointegration	Bidirectional causality
	Ajmi et al. (2015). Tunisia, 1980–2013	Cointegration, Granger causality	Bidirectional causality
	Seghir (2015) 49 countries, 1988–2012	Panel cointegration, Granger causality	Bidirectional causality
	Sundararajan & Srinivasan (2015). India, 1990–2013	VECM, Granger causality	Bidirectional causality
	Ozdemir & Sargin (2016) Turkey,1960–2014	Granger causality, cointegration	Bidirectional causality
Neutrality Hypothesis	Katircioglu (2009b) Turkey,1960–2006	ARDL	No significant long-run relationship
	Acaravci & Ozturk (2010). Turkey, 1960–2006	Granger causality, cointegration	No long-term causality
	Akinboade & Braimoh (2010). South Africa, 1980–2005	VAR	No significant relationship
	Apergis & Payne (2010) 14 European countries, 1995–2007	Panel data	No significant long-run relationship
	Ozturk (2010) Turkey, 1970–2007	Granger causality	No causality between tourism and growth
	Huseynov & Yildirim (2012). Azerbaijan, 1995–2011	Cointegration, Granger causality	No causal relationship
	Yucel & Akin (2015). Turkey, 1990–2013	Granger causality	No significant causality

Source: Authors' own

ECONOMETRICS METHODOLOGY AND EMPIRICAL FINDINGS

Data and Analytical Framework

This study uses annual time-series data from 1990 to 2023 to investigate the relationship between tourism and economic growth in Sri Lanka. The variables considered include GDP growth (GDPG), tourism receipts (TR), labour force participation rate (LFPR), gross capital formation (GCF), and inflation (INF). The GDP growth rate is used as the dependent variable, and tourism receipts serve as the primary independent variable. The labour force participation rate, gross capital formation, and inflation are included as control variables in the model. All the data for these variables are sourced from reliable

and authoritative databases, including the official World Bank database (World Bank, 2024), the Central Bank of Sri Lanka's annual report (2024), the annual statistical reports from the Sri Lanka Tourism Development Authority (2024), and the World Tourism Organisation report (UNWTO, 2024). These sources ensure the data's credibility and accuracy.

The analytical framework of this study is developed to investigate the impact of tourism on economic growth in Sri Lanka, while incorporating key macroeconomic control variables. The functional form of the model can be expressed as:

$$GDPG_t = f(TR_t, LFPR_t, GCF_t, INF_t)$$

(Eq.1)

Where:

- $GDPG_t$ = GDP growth rate (dependent variable)
- TR_t = Tourism receipts (primary independent variable)
- $LFPR_t$ = Labor force participation rate
- GCF = Gross capital formation
- INF_t = Inflation

The linear specification of the model is:

$$GDPG_t = \alpha_0 + \alpha_1 TR_t + \alpha_2 LFPR_t + \alpha_3 GCF_t + \alpha_4 INF_t + \varepsilon_t$$

(Eq.2)

Where:

- α_0= Constant term
- $\alpha_1,\ \alpha_2,\ \alpha_3,\ \alpha_4$ = Coefficients to be estimated
- ε_t = Error term

Empirical Strategy

Following the presentation of the data and analytical framework, the empirical analysis proceeds through a systematic series of steps to ensure robust and reliable estimation of the relationship between tourism and economic

growth in Sri Lanka. First, a multicollinearity test using the Variance Inflation Factor (VIF) is conducted to confirm that the independent variables are not highly correlated, thereby ensuring unbiased and precise coefficient estimates.

Next, the unit root test is applied to determine the stationarity properties of each variable and to identify their order of integration. Once stationarity is confirmed, the ARDL bounds test is employed to examine the existence of a long-run relationship among the variables. If a stable long-run relationship is established, the study estimates both the long-run coefficients and the short-run dynamics using the Error Correction Model (ECM), which captures how deviations from long-run equilibrium are corrected over time. Additionally, a causality test is conducted to determine the direction of influence between tourism and economic growth, providing insights into whether tourism drives growth, growth stimulates tourism, or a bidirectional relationship exists.

Finally, a series of diagnostic tests is performed to validate the reliability of the estimated models, including checks for serial correlation, heteroskedasticity, and functional form. The CUSUM and CUSUMSQ tests are also applied to assess the stability of model coefficients over the sample period. Collectively, these steps ensure that the results are statistically robust and economically meaningful, offering a solid foundation for policy recommendations regarding tourism and economic growth in Sri Lanka.

Multicollinearity test

Multicollinearity is a concern in time-series datasets because explanatory variables often exhibit similar patterns or trends over time, leading to high intercorrelations among them. When multicollinearity is present, it can inflate the standard errors of coefficient estimates, reduce their statistical significance, and impede the reliable interpretation of each variable's unique impact on economic growth. Testing for multicollinearity - commonly via the Variance Inflation Factor (VIF) - helps ensure the reliability and robustness of estimated ARDL models. A VIF quantifies how much the variance of a

regression coefficient is inflated by collinearity; values exceeding thresholds, such as 10, signal potentially serious multicollinearity issues. In this study, multicollinearity among tourism receipts, labour force participation, gross capital formation, and inflation was examined using VIF. The results of the multicollinearity test are reported in Table 2, which presents the VIF values for the explanatory variables included in the ARDL model.

Table 2: Multicollinearity test results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
GDPg	0.024	6.290	1.418
INF	0.009	7.307	1.536
LFPR	0.082	1725.728	2.359
TR	4.01E-19	15.367	8.584
TR(-1)	3.09E-19	11.838	6.694
C	206.542	1680.939	NA

Source: World Bank. (2024), Central Bank of Sri Lanka's annual report (2024), Sri Lanka Tourism Development Authority annual statistical report (2024), World Tourism Organisation report (2024).

The centred VIF values indicate that all variables fall well below the conventional threshold of 10, confirming the absence of serious multicollinearity. Specifically, GDPG, INF, and LFPR record low VIF values of 1.42, 1.54, and 2.36, respectively, suggesting no significant correlation with other regressors. Tourism receipts display relatively higher VIF values of 6.69. However, this value remains within the acceptable limit, indicating that multicollinearity does not pose a major concern. Thus, the explanatory variables provide distinct and reliable information for the model estimation, ensuring the robustness of the ARDL results.

Unit Root Test

The analytical model in this study is estimated using the Autoregressive Distributed Lag (ARDL) approach, as developed by Pesaran et al. (2001). The

ARDL method is particularly useful because it can accommodate variables that are purely I(0), I(1), or a combination of both, making it flexible for time series analysis. Prior to estimation, a unit root test is conducted to determine whether each variable is stationary or non-stationary. Stationary variables maintain a constant mean, variance, and autocorrelation over time, whereas non-stationary variables exhibit trends or time-dependent patterns. Performing unit root tests is essential to avoid spurious regression, which can arise when non-stationary variables are regressed on each other, leading to misleading statistical significance. In addition, identifying the integration order of variables ensures that the selected estimation technique - such as ARDL, cointegration, or the Error Correction Model (ECM) - is valid. This step also facilitates the separation of long-run equilibrium relationships from short-run dynamics, which is critical for interpreting the results of the ARDL bounds testing procedure.

The unit root test results, presented in Table 3, indicate that all variables are stationary at levels, except labour force participation and gross capital formation. However, both variables become stationary after first differencing, confirming their integration of order one (I(1). This justifies the application of the bounds test approach in our analysis.

Table 3: Unit root tests

Variables	Level		First Difference		I(d)
	t - statistics	p - value	t - statistics	p - value	
GDPg	-3.59	0.04	-	-	I(0)
TR	-3.71	0.03	-	-	I(0)
LFPR	-3.37	0.07	-7.88	0.00	I(1)
GCF	-2.29	0.42	-5.17	0.00	I(1)
INF	-4.89	0.00	-	-	I(0)

Source: World Bank. (2024)

ARDL bounds test

Once stationarity is confirmed, we proceed with the ARDL bounds test to examine the presence of a long-run relationship among the variables. The bounds testing procedure, introduced by Pesaran et al. (2001), involves estimating an unrestricted error-correction model (UECM) and performing an F-test on the joint significance of the lagged level variables. The null hypothesis (H_0) of no cointegration is tested against the alternative hypothesis (H_1) of a long-run relationship. The computed F-statistic is then compared with the critical values provided by Pesaran et al. (2001). If the F-statistic exceeds the upper bound, we reject the null hypothesis, confirming the existence of a long-run relationship. If the F-statistic falls below the lower bound, we fail to reject the null hypothesis, indicating no cointegration. If the F-statistic lies between the lower and upper bounds, the result is inconclusive, and further investigation is required.

The results of the bounds test, presented in Table 4, reveal that the calculated F-statistic (6.73) exceeds the upper bound critical value of 4.37, as specified in Narayan (2004, Tables, Case II model, p. 28). This finding provides strong evidence of a long-term equilibrium relationship among the variables under consideration.

Table 4: Bound F-Test Results

Country	F-statistic value	Lag Length	Significance Level	Bound Critical Values	
				I(0)	I(1)
Sri Lanka	6.73	2	1%	3.29	4.37
			5%	2.56	3.49
			10%	2.2	3.09

Source: World Bank. (2024), Central Bank of Sri Lanka's annual report (2024), Sri Lanka Tourism Development Authority annual statistical report (2024), World Tourism Organisation report (2024).

After confirming cointegration, we estimate the long-run coefficients using the ARDL model. These coefficients are crucial as they quantify the long-term relationship between the dependent and independent variables, offering insights into how changes in explanatory variables influence the outcome variable over an extended period. The following equations outline the procedure for the long-run bounds test.

$$\Delta GDPG_t = \beta_0 + \alpha_1 GDPG_{t-1} + \alpha_2 TR_{t-1} + \alpha_3 LFRT_{t-1} + \alpha_4 GCF_{t-1} + \alpha_5 INF_{t-1} + \sum_{t=1}^{p} \beta_{1i}\, \Delta GDPG_{t-i} + \sum_{j=0}^{q_1} \beta_{2j}\, \Delta TR_{t-j} + \sum_{j=0}^{q_2} \beta_{3j}\, \Delta LFPR_{t-j} + \sum_{j=0}^{q_3} \beta_{4j}\, \Delta GCF_{t-j} + \sum_{j=0}^{q_4} \beta_{4j}\, \Delta INF_{t-j} + \varepsilon_t$$

(Eq. 3)

Table 3 presents the model's long-run results. Based on the model given in Equation (3), the long-run test statistics indicate that the coefficients on tourism receipts, the labour force participation rate, and gross capital formation are statistically significant at the 1% level. Additionally, inflation exhibits a negative impact on economic growth in Sri Lanka, with its coefficient being statistically significant at the 10% level.

Table 5: Long Run Estimation Results

Independent Variable	Coefficient	Std-Error	t-statistics	prob
TR	0.42	0.16	2.59	0.01
LFPR	0.09	0.02	4.09	0.00
GCF	0.13	0.03	3.87	0.01
INF	-0.19	0.10	-1.81	0.08

Source: World Bank. (2024), Central Bank of Sri Lanka's annual report (2024), Sri Lanka Tourism Development Authority annual statistical report (2024), World Tourism Organisation report (2024).

Error Correction Model

In the next step, we obtain the short-run dynamic parameters by estimating an Error Correction Model (ECM) associated with the long-run estimates. The error-correction model is particularly applicable when variables are cointegrated, meaning they share a stable long-run equilibrium. The ECM expresses the change in a dependent variable as a function of short-run changes in explanatory variables and the error correction term (ECT), which measures deviations from long-run equilibrium. A significant and negative coefficient of the ECT indicates that any short-term disequilibrium is corrected over time. ECMs are widely used in ARDL frameworks to link short-run adjustments with long-run relationships. This is specified as follows:

$$\Delta GDPG_t = \beta_0 + \delta\mu_{t-1} + \sum_{i=1}^{p} \beta_{1i}\,\Delta GDPG_{t-1} + \sum_{j=0}^{q_1} \beta_{2j}\,\Delta TR_{t-j} + \sum_{j=0}^{q_2} \beta_{3j}\,\Delta LFPR_{t-j} + \sum_{j=0}^{q_3} \beta_{4j}\,\Delta GCF_{t-j} + \sum_{j=0}^{q_4} \beta_{5j}\,\Delta INF_{t-j} + \varepsilon_t$$

(Eq. 4)

where βs are the short-run dynamic coefficients of the model's convergence to equilibrium, δ is the speed of adjustment parameter and $\mu_{t-1}$is the error correction term that is derived from the estimated equilibrium relationship of Equation (4). The results of short-run dynamic coefficients associated with the long-run relationships obtained from the ARDL–ECM Equation (4) are presented in Table 6.

Table 6: Error Correction Model results

Variable	Coefficient	Std-Error	t-statistics	prob
ΔTR	0.45	0.19	2.28	0.03
ΔGCF	0.63	0.11	5.46	0.00
ΔGCF(-1)	0.55	0.17	3.25	0.00

ΔINF	-0.06	0.05	-1.28	0.21
ECM(-1)	-0.97	0.13	-7.10	0.00
R-squared	0.82			
Adjusted R- squared	0.80			
S.E. of regression	1.33			

Source: World Bank. (2024), Central Bank of Sri Lanka's annual report (2024), Sri Lanka Tourism Development Authority annual statistical report (2024), World Tourism Organisation report (2024).

The findings indicate that the estimated error correction coefficient is negative and statistically significant at the 1% level, confirming that the adjustment process from short-run deviations is relatively slow. The coefficient suggests that the system returns to equilibrium at a rate of 97%. Furthermore, the estimated coefficient for tourism receipts (TR) is positive and statistically significant at the 1% level, indicating a short-run positive effect of tourism on economic growth in Sri Lanka.

Causality Test

The causality test is applied in this study to determine the direction of influence between tourism and economic growth in Sri Lanka. Its importance lies in distinguishing which of the four competing hypotheses holds in the Sri Lankan context. If causality runs from tourism to economic growth, it supports the Tourism-Led Growth Hypothesis, emphasising tourism as a key driver of development. If the direction is from growth to tourism, it validates the Conservation Hypothesis, suggesting that tourism expands only when the economy grows. Evidence of bidirectional causality is consistent with the Feedback Hypothesis, implying mutual reinforcement between the two sectors. Conversely, if no causality is found, the Neutrality Hypothesis is confirmed, indicating that tourism and growth evolve independently. Thus, causality testing is critical to identifying the true nature of the tourism–growth nexus and guiding policy in Sri Lanka.

Table 7: Causality test results

	GDPg	TR	LFPR	GCF	INF
GDPg	-	7.860 (0.009)	0.699 (0.562)	0.881 (0.466)	0.707 (0.407)
TR	5.302 (0.028)	-	0.651 (0.590)	5.422 (0.026)	5.220 (0.030)
LFPR	2.901 (0.057)	5.152 (0.031)	-	5.956 (0.021)	5.768 (0.023)
GCF	4.956 (0.034)	4.292 (0.038)	1.470 (0.249)	-	0.957 (0.430)
INF	0.316 (0.578)	0.668 (0.580)	5.090 (0.032)	0.975 (0.422)	-

Source: World Bank. (2024), Central Bank of Sri Lanka's annual report (2024), Sri Lanka Tourism Development Authority annual statistical report (2024), World Tourism Organisation report (2024).

The Granger causality results presented in Table 7 reveal important dynamic interactions among tourism, economic growth, and other macroeconomic variables in Sri Lanka. The findings confirm a bidirectional causal relationship between tourism (TR) and economic growth (GDP). This result provides strong support for both the tourism-led growth hypothesis and the economic-driven tourism hypothesis, suggesting that tourism expansion contributes to GDP growth. At the same time, higher economic performance further stimulates tourism development. Beyond this nexus, tourism is also found to significantly influence gross capital formation and inflation, highlighting the sector's role in stimulating investment and affecting price stability. Labour force participation rate emerges as another critical driver, exerting significant causal effects on tourism, gross capital formation, and inflation, while its effect on economic growth is marginally significant. This underscores the importance of human capital dynamics in shaping tourism performance, investment activity, and macroeconomic stability. Similarly, gross capital formation exhibits significant causal effects on economic growth and tourism, confirming the growth-enhancing role of investment in the Sri Lankan economy. Inflation, however, shows limited causal influence, except

for its significant effect on labour force participation. Overall, the results suggest that tourism and economic growth reinforce each other, while investment and labour participation act as key transmission mechanisms linking tourism with broader macroeconomic performance.

Diagnostic tests

Diagnostic tests for serial correlation, normality, and heteroskedasticity are considered in this study. The serial correlation LM test is crucial in time-series regression analysis because it helps determine whether the model's residuals (error terms) are independent over time. If serial correlation is present, it indicates that past errors influence future errors, potentially leading to biased standard errors and inefficient estimators. This could result in misleading statistical inferences. Since the test confirms the absence of serial correlation, the model's estimates are more reliable, ensuring that the regression results accurately reflect the true relationships among the variables.

The results of the serial correlation LM test are presented in Table 8. The findings indicate that the p-value for the LM test is 0.81, which exceeds the 0.05 significance level. As a result, the null hypothesis of no serial correlation cannot be rejected, indicating no evidence of serial correlation among the variables.

Table 8: Summary of Serial Correlation LM Test

F-statistic	0.20	Pro.F(2,18)	0.81
Obs*R-squared	0.67	Pro.chi-square(2)	0.71

Source: World Bank. (2024), Central Bank of Sri Lanka's annual report (2024), Sri Lanka Tourism Development Authority annual statistical report (2024), World Tourism Organisation report (2024).

The Breusch-Pagan-Godfrey test is important in time series analysis because it tests for heteroscedasticity, meaning that the error terms exhibit varying variances across observations. If heteroscedasticity is present, it can lead to inefficient estimates and biased statistical inference. Since the test

confirms the absence of heteroscedasticity in this model, the results are more reliable, with consistent error terms across observations. The results of the heteroscedasticity test are shown in Table 9.

Table 9: Summary of Heteroscedasticity Test

F-statistic	1.08	Pro.F(9,20)	0.41
Obs*R-squared	9.85	Pro. chi-square (9)	0.36
Scaled explained ss	2.03	Pro. chi-square (9)	0.99

Source: World Bank. (2024), Central Bank of Sri Lanka's annual report (2024), Sri Lanka Tourism Development Authority annual statistical report (2024), World Tourism Organisation report (2024).

The p-value for the test is 0.41, which is greater than the 0.05 significance level. Therefore, the null hypothesis of no heteroscedasticity cannot be rejected, indicating that there is no evidence of heteroscedasticity in this model. This suggests that the variance of the error terms is constant, which is a key assumption for reliable estimation in linear regression models.

The normality test is crucial for the ARDL model, as it ensures valid statistical inference. Non-normal residuals can distort t-tests and F-tests, leading to incorrect conclusions regarding the relationships between variables. The assumption of normality also aids in calculating accurate confidence intervals and enhances the efficiency of coefficient estimates by minimising variance. While ARDL estimators remain unbiased irrespective of normality, the assumption of normality improves prediction precision. Therefore, normality testing is essential for ensuring the reliability and accuracy of the model's predictions and inferences. Figure 1 below presents the histogram and the results of the normality test.

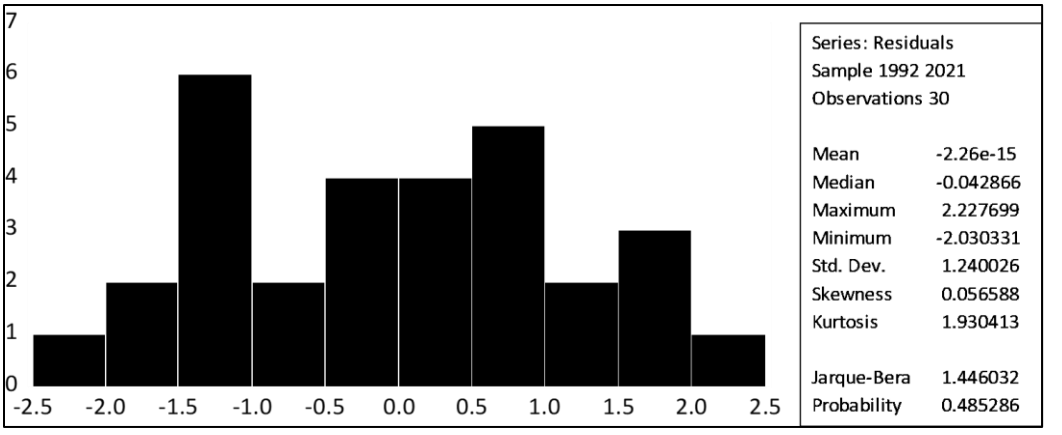

Figure 1: Normality test
Source: Authors' own

The p-value for the normality test is 0.48, which exceeds the 0.05 significance level, indicating that the residuals are normally distributed. Additionally, the Jarque-Bera test statistic is 1.44, further confirming that the residuals are normally distributed.

Stability tests

The CUSUM and CUSUMSQ tests are essential to the ARDL approach, as they assess the model's stability over time. These tests assess whether the model's coefficients remain consistent, helping identify structural breaks or shifts in the relationships between variables. Instability revealed by these tests suggests that the model may not accurately capture the long-run or short-run dynamics, necessitating re-estimation or adjustments. For policy analysis, model stability is crucial to ensure reliable, long-term findings. Overall, these tests strengthen the robustness and reliability of the ARDL model's results. Figures 2 and 3 present the graphical outcomes of the CUSUM and CUSUMSQ tests, respectively. Both graphs show that the statistics for the CUSUM and CUSUMSQ tests remain within the 5% confidence interval bands. These results suggest no evidence of structural instability in the residuals of the economic growth equation, indicating that the model is stable over time.

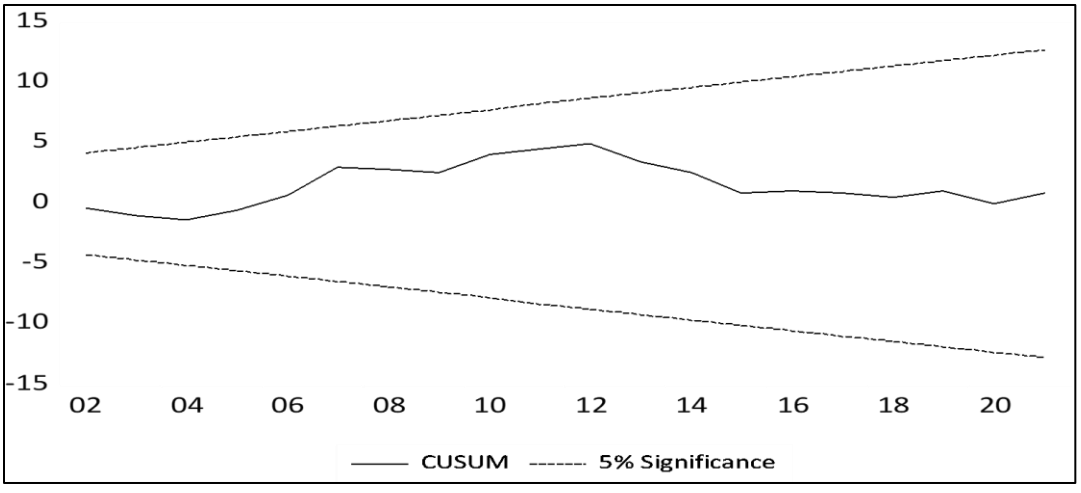

Figure 2: CUSUM Test
Source: Authors' own

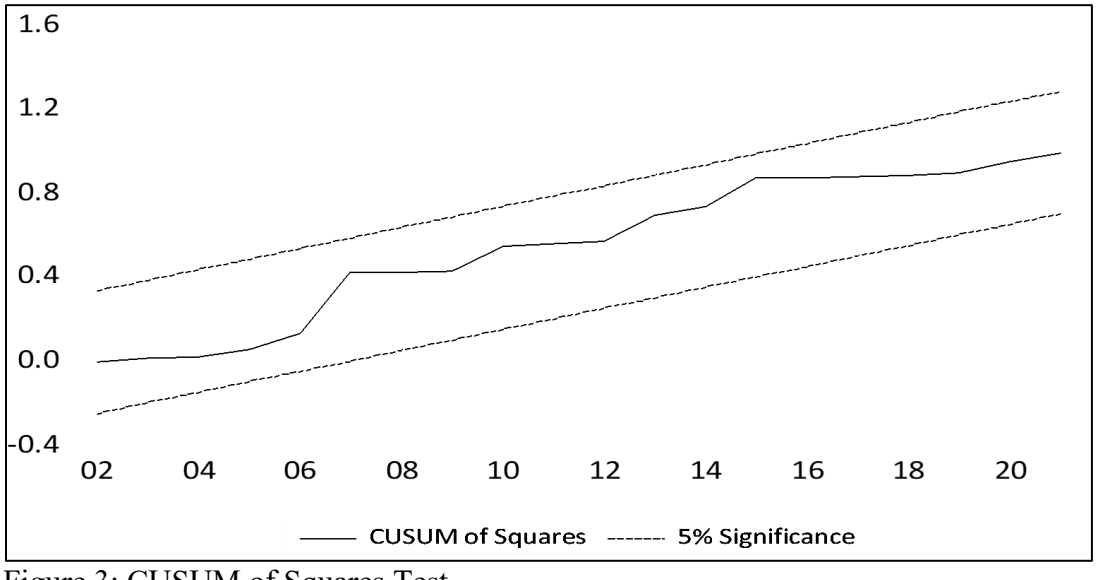

Figure 3: CUSUM of Squares Test
Source: Authors' own

CONCLUSION

This study examined the nexus between tourism and economic growth in Sri Lanka from 1990 to 2023, employing the ARDL bounds testing approach, causality analysis, and robustness checks. The results of the unit root and bounds tests confirm the appropriateness of the ARDL model and reveal

the presence of a long-run equilibrium relationship among tourism receipts, economic growth, labour force participation, gross capital formation, and inflation.

The long-run findings indicate that tourism receipts, labour force participation, and gross capital formation significantly and positively influence economic growth, while inflation exerts a negative impact. In the short run, the error correction term is negative and highly significant, suggesting that deviations from long-run equilibrium are corrected at a rate of 97%. However, the adjustment process remains relatively slow. Importantly, tourism receipts demonstrate a positive and significant short-run effect on GDP growth.

The Granger causality analysis further strengthens these results by confirming a bidirectional causal relationship between tourism and economic growth, thereby supporting both the tourism-led growth and the economy-driven tourism hypotheses. Additionally, tourism was found to influence gross capital formation and inflation, while labour force participation and investment served as critical transmission mechanisms linking tourism to broader macroeconomic performance. Diagnostic tests confirmed the absence of serial correlation, heteroscedasticity, and non-normality, while stability tests verified the robustness of the model over the sample period.

POLICY RECOMMENDATIONS

Based on the findings of this study, several policy measures are recommended to strengthen the nexus between tourism and economic growth in Sri Lanka. First, given the bidirectional causality between tourism and GDP, policies should promote tourism development while aligning broader economic strategies to reinforce tourism demand. Sustainable tourism initiatives, such as eco-tourism, cultural tourism, and community-based tourism, should be prioritised to ensure long-term economic and environmental benefits. Enhancing human capital through targeted training and capacity-building programs is essential, as labour force participation significantly influences

tourism performance and investment outcomes. Investment in infrastructure, including transport, hospitality, and digital facilities, can improve accessibility, enhance visitor experiences, and stimulate private sector participation. Managing inflationary pressures through prudent monetary and fiscal policies is also crucial to maintain macroeconomic stability and competitiveness. Finally, tourism development should be leveraged for inclusive growth by integrating local communities into tourism value chains, thereby expanding employment opportunities and reducing regional disparities. Collectively, these measures can maximise the economic potential of tourism while promoting sustainable and inclusive growth in Sri Lanka.

FURTHER RESEARCH DIRECTIONS

While this study provides strong evidence on the tourism-growth nexus in Sri Lanka, several avenues for future research remain. First, further studies could incorporate post-2023 data to assess the impact of recent global economic changes and recovery patterns in the tourism sector. Second, future research may disaggregate tourism into segments, such as leisure, business, and eco-tourism, to better understand their individual contributions to economic growth. Third, the use of advanced nonlinear and structural break models could provide deeper insights into how shocks such as pandemics, financial crises, or political instability affect the tourism-growth relationship. Additionally, comparative studies across South Asian economies could help identify regional similarities and differences in tourism-led growth dynamics. Finally, incorporating sustainability indicators such as environmental degradation, carbon emissions, and social welfare would provide a more holistic understanding of tourism's role in sustainable development.

Overall, the findings demonstrate that tourism plays a pivotal role in Sri Lanka's economic performance, not only as a direct driver of GDP growth but also as a catalyst for investment and labour market dynamics. Strengthening these interconnections through targeted policies will be crucial

for harnessing tourism as a long-term engine of sustainable development.

REFERENCES

Acaravci, A., & Ozturk, I. (2010). Tourism and economic growth: A panel data analysis. *Economics Bulletin, 30*(3), 2045-2053.

Ajmi, A. N., Hammami, S., & Al-Mulali, U. (2015). The causal relationship between tourism and economic growth: Evidence from Tunisia. *Tourism Economics, 21*(3), 607–624.

Akinboade, O. A., & Braimoh, L. A. (2010). The relationship between tourism earnings and economic growth in South Africa. *International Journal of Tourism Research, 12*(4), 321–336.

Aman, A., & Umer, S. M. (2025). Impact of the tourism sector on the GDP growth of developing and developed countries. *Social Science Review Archives*, 3(1), 2945–2960. https://doi.org/10.70670/sra.v3i1.1095

Apergis, N., & Payne, J. E. (2010). The tourism-economic growth nexus: Evidence from 14 European countries. *Tourism Economics, 16*(2), 209–218.

Aslan, A. (2013). The relationship between tourism and economic growth: Evidence from Mediterranean countries. *Tourism Management, 34*, 174–182.

Balaguer, J., & Cantavella-Jorda, M. (2002). Tourism as a long-run economic growth factor: The Spanish case. *Tourism Economics, 8*(3), 407–416.

Bakar, N. A., & Kamil, A. M. (2016). The impact of tourism on economic growth: Empirical evidence from Malaysia. *Asian Economic Policy Review, 11*(2), 365–378.

Bhattarai, K., & Karmacharya, R. (2021). Impact of tourism on economic growth of Nepal: Is the tourism-led growth hypothesis valid for Nepal? *The Gaze Journal of Tourism and Hospitality*, 13(1), 93–110. https://doi.org/10.3126/gaze.v13i1.42081

Bojanic, D. C., & Losada, J. M. (2014). Tourism and economic growth in Latin American countries: A panel data approach. *Tourism Economics*, 20(4), 833–851.

Brida, J. G., Cortés-Jiménez, I., & Pulina, M. (2016). Has the tourism-led growth hypothesis been validated? A literature review. *Current Issues in Tourism*, 19(5), 394–430. https://doi.org/10.1080/13683500.2013.868414.

Central Bank of Sri Lanka. (2024). Annual Report. Retrieved from http://www.cbsl.gov.lk/en/publications/economic-reports

Chi-Ok Oh, C. (2005). The contribution of tourism development to economic growth in the Korean economy. *Tourism Management, 26*(1), 39–44. https://doi.org/10.1016/j.tourman.2003.11.003

Chiang, C. H., & Yang, C. F. (2003). Economic growth and tourism development: The case of Taiwan. *Tourism Management, 24*(4), 379–389.

Çinar, S. (2024). The effects of the tourism sector on economic growth: The case of Türkiye. Sinop Üniversitesi Sosyal Bilimler Dergisi. https://doi.org/10.30561/sinopusd.1463074

Croes, R., & Rivera, M. (2017). Tourism-led growth and foreign direct investment in Latin America. *Tourism Review*, 72(4), 463–479. https://doi.org/10.1108/TR-06-2017-0106.

Demiroz, M. (2005). Tourism and economic growth in Turkey: An empirical analysis. *Tourism Management, 26*(3), 589–595.

Domar, E. D. (1946). Capital expansion, rate of growth, and employment. *Econometrica, 14*(2), 137–147.

Durbarry, R. (2004). Tourism and economic growth: The case of Mauritius. *Tourism Economics, 10*(4), 359–361.

Dritsakis, N. (2004). Tourism as a long-run economic growth factor: An empirical investigation for Greece. *Tourism Economics, 10*(3), 305–316.

Fletcher, J. E. (1989). Input-output analysis and tourism impact studies. *Annals of Tourism Research*, 16(4), 514–529.

Ghimire, R., & Sapkota, P. (2023). Empirical study on international tourism receipts and GDP of Nepal: An ARDL bounds testing approach. *IOSR Journal of Humanities and Social Science*, 28(7), 15–25. https://doi.org/10.9790/0837-2807071525

Harrod, R. (1939). An essay in dynamic theory. *The Economic Journal, 49*(193), 14–33.

Hazari, B. R. (1995). The economics of tourism in small economies. *International Economic Journal, 9*(4), 95–111.

Hazari, B. R., & Sgro, P. M. (1995). Tourism and growth in a dynamic trade model. *Journal of International Trade & Economic Development*, 4(2), 243–252.

Hossein Panahi, M. (2014). The effect of tourism on economic growth: Evidence from Turkey. *Tourism Economics, 20*(3), 525-545.

Huseynov, F., & Yildirim, J. (2012). Tourism and economic growth in Azerbaijan: A cointegration and causality analysis. *Tourism Economics, 18*(4), 931–943.

Jan, S., Nag, S., & Gull, S. H. (2025). Determinants of tourism demand in India: Analysing the role of economic growth and employment through ARDL bound testing approach: *Social Science & Humanities International,* 2(3), 97–119.

Jayathilake, P. M. B. (2013). Tourism and economic growth in Sri Lanka: Evidence from cointegration and causality analysis. Proceedings of the International Conference on Business Management, 10, 1–16.

Katircioglu, S. T. (2009a). Testing the tourism-led growth hypothesis: The case of Turkey. *International Journal of Applied Econometrics and Quantitative Studies, 6*(2), 55–78.

Katircioglu, S. T. (2009b). Do tourism receipts and real income cause each other? Evidence from Turkey. *Current Issues in Tourism, 12*(4), 319–334. https://doi.org/10.1080/13683500902763746

Keynes, J. M. (1936). *The General Theory of Employment, Interest, and Money*. Harcourt Brace.

Khan, A. H., Khan, S. U., & Siddique, M. (1995). The relationship between tourism and economic growth in Pakistan: An empirical analysis. *The Pakistan Development Review, 34*(4), 745–753.

Kim, H. J., Chen, M. H., & Jang, S. S. (2006). Tourism expansion and economic development: The case of Taiwan. *Tourism Management, 27*(5), 925–933.

Krugman, P. (1991). *Geography and Trade*. MIT Press.

Lee, C. C., & Chang, C. P. (2008). Tourism development and economic growth: A closer look at panels. *Tourism Management, 29*(3), 439–445.

Lee, C. C., & Chien, M. S. (2008). Tourism development and economic growth: Evidence from Taiwan. *Tourism Management, 29*(5), 1181–1187.

Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3–42.

Liu, X., & Park, D. (2011). The relationship between tourism and economic growth in South Korea: A cointegration analysis. *Tourism Economics, 17*(4), 833–854.

Lowenstein, W. (2005). Economic aspects of tourism: New paradigms in tourism and economic development. *Tourism Economics, 11*(1), 1–19.

Mazhar, M., Majeed, M. T., & Tufail, S. (2025). Tourism, tourism volatility and economic growth in Pakistan: New evidence from the NARDL approach. *Zagreb International Review of Economics and Business*, 28(1), 125–146. https://doi.org/10.2478/zireb-2025-0006

McKinnon, R. I. (1964). Foreign exchange and the open economy. *The Economic Journal, 74*(295), 645–669.

Mihailidis, A., & Sotiropoulos, D. (2015). Tourism and economic growth in Greece: Panel data evidence from 1990–2011. *Tourism Economics, 21*(4), 687–709.

Narayan, P. K. (2004). Reformulating critical values for the bounds F-statistics approach to cointegration: An application to the tourism demand model for Fiji. *Economics Bulletin, 3*(9), 1–18.

Narayan, P. K. (2010). The impact of economic growth on tourism in the Pacific Islands: Evidence from panel cointegration. *Pacific Economic Bulletin, 25*(2), 104–119.

Narayan, P. K., & Narayan, S. (2010). Does tourism affect economic growth? A panel data analysis for Pacific Island countries. *International Journal of Tourism Research, 12*(3), 249–262.

Ozdemir, O., & Sargin, F. (2016). Tourism and economic growth in Turkey: Evidence from Granger causality tests. *Tourism Economics, 22*(4), 802-815.

Ozturk, I. (2010). The relationship between tourism and economic growth in Turkey. *International Journal of Tourism Research, 12*(6), 534-548.

Ozturk, I. (2016). The relationship between tourism and economic growth: Evidence from Turkey. *International Journal of Tourism Research, 18*(5), 463-470.

Payne, J. E., & Mervar, A. (2010). The causal relationship between economic growth and tourism: Evidence from Croatia. *Tourism Economics, 16*(4), 989–1004.

Perera, K. R. R. (2015). Impact of tourism on Sri Lanka's economic growth. Journal of Tourism Economics and Applied Research, 1(1), 16–22.

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics, 16*(3), 289–326.

Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy, 94*(5), 1002–1037.

Sadekin, M. N. (2025). Relationship among tourism, FDI, and economic growth in Bangladesh. *Discover Sustainability*, 6(1). https://doi.org/10.1007/s43621-025-00874-x

Seghir, A. (2015). Tourism and economic growth: Evidence from 49 countries. *International Journal of Tourism Research, 17*(5), 451–459.

Sequeira, T. N., & Campos, C. (2007). International tourism and economic growth: A panel data approach. Applied Economics Letters, 14(10), 761–764. https://doi.org/10.1080/13504850600576818.

Sinclair, M. T. (1998). Tourism and economic development: A survey. *The Journal of Development Studies*, 34(5), 1–51. https://doi.org/10.1080/00220389808422535.

Sinha, P., & Mehta, S. (2013). The long-run relationship between tourism and economic growth in India: Evidence from cointegration and causality tests. *Tourism Economics, 19*(5), 1125–1138.

Soylu, Ö. B., Adeleye, B. N., Okur, F., & Emikönel, M. (2023). Tourism and FDI-growth nexus in upper-middle income countries: Evidence from static and dynamic panel analyses. *Tourism*, *An International Interdisciplinary Journal,* 71(1), 162–177. https://doi.org/10.37741/t.71.1.10

Sri Lanka Tourism Development Authority. (2019). *Annual Report on Tourism Statistics*. Retrieved from http://www.srilanka.travel.

Sri Lanka Tourism Development Authority. (2020). *Tourism Development and Socio-Economic Impacts in Sri Lanka*. Retrieved from http://www.srilanka.travel.

Sri Lanka Tourism Development Authority. (2024). Annual Statistical Report. Retrieved from http://www.srilanka.travel

Sundararajan, V., & Srinivasan, V. (2015). Tourism and economic growth in India: A vector error correction model analysis. *Tourism Economics, 21*(1), 103–115.

Suresh, J. & Senthilnathan, S. .(2014) Relationship Between Tourism and Economic Growth in Sri Lanka. Published as the 7th chapter of a Book Entitled "Economic Issues in Sri Lanka". p1-19. Available from: http//www.dx.doi.org/10.2139/ssrn.2373931

Surugiu, C. (2013). Tourism and economic growth in Romania: Evidence from co-integration and Granger causality tests. *Economia. Seria Management, 16*(1), 34–45.

Ullah, A., Jan, N., & Rehman, Z. U. (2023). The impact of the tourism industry on Pakistan's economic growth. *Journal of Humanities, Social and Management Sciences*, 4(2), 18–40. https://doi.org/10.47264/idea.jhsms/4.2.2

Umurzakov, U. P., Tosheva, S., & Salahodjaev, R. (2022). Tourism and sustainable economic development: Evidence from Belt and Road countries. *Journal of the Knowledge Economy*. https://doi.org/10.1007/s13132-021-00872-0

UNWTO (United Nations World Tourism Organisation). (2013). *Tourism and the Millennium Development Goals*. UNWTO.

UNWTO (United Nations World Tourism Organisation). (2024). Tourism Highlights. Retrieved from http://www.unwto.org.

Wang, Y., & Chen, C. H. (2009). The relationship between tourism and economic growth in China. *Tourism Management, 30*(4), 587–591.

World Bank. (2021). *Tourism and Economic Development: The Case of Sri Lanka*. World Bank.

World Travel & Tourism Council (WTTC). (2019). *Travel & Tourism Economic Impact 2019*. Retrieved from https://wttc.org.

World Bank. (2024). World Development Indicators. Retrieved from https://data.worldbank.org/indicator

Yoo, J. J., & Kwak, D. H. (2010). The causal relationship between tourism and economic growth in South Korea: Evidence from a vector autoregressive (VAR) model. *Tourism Economics, 16*(4), 755–773.

Yucel, M., & Akin, A. (2015). The relationship between tourism and economic growth in Turkey: Evidence from Granger causality tests. *International Journal of Economics and Financial Issues, 5*(4), 992–999.

Zhang, Y., & Fu, X. (2017). The impact of tourism on economic growth in China: Evidence from a dynamic panel data approach. *Tourism Management, 60*, 257–267.