

Tourism Development and Economic Growth Nexus in Bangladesh: Evidence from ARDL and Content Analysis Approach

Mazharul Haque Jubaed ^{1*}, Md Mustak Ahmed ², Aishi Dhar ²

Abstract

Research purpose: This main aim to examine the relationship between tourism development and economic growth in Bangladesh and identify the structural factors that limit tourism's contribution to the national economy.

Type of study/research method/approach: This is a mixed-method study with annual data from 1991 to 2024. A quantitative analysis is performed by implementing the Autoregressive Distributed Lag (ARDL) bounds testing approach to calculate the short-term and long-term relationships among the variables: Nominal GDP, Tourism receipts, Foreign Direct Investment (FDI), Exchange rate, and inflation. The Granger causality test is also applied, and the qualitative content analysis is employed to identify structural and policy problems in the tourism industry.

Findings: These findings indicate that the ARDL bounds test confirms the presence of a long-run relationship between the variables and also that the long-run impact of tourism receipts on economic growth is not significant. This weak long-run impact appears to be associated with sectoral infrastructural and structural limitations like poor marketing capacities, bad governance, poor infrastructure, and missing investment linkages. In the short run, tourism has a positive but delayed effect on GDP. Moreover, the results of the Granger causality indicate that there exists a unidirectional causality from economic growth to tourism.

Originality/value: The uniqueness of the research is providing econometric evidence of ARDL and content analysis to explain the positive and negative impact of tourism on the growth of Bangladesh and why the long-run impact is restricted.

Practical implications: The research also suggests that policymakers should enhance the tourism infrastructure, improve the governance structure, refine marketing approaches, and foster interconnection with investments to increase the contribution of tourism to sustainable economic growth in Bangladesh.

Limitations: The study mainly focuses on national level data and does not include regional or primary survey data from tourism stakeholders.

Keywords: Tourism development, Economic growth, Tourism receipts, Auto regressive distributed lag model (ARDL), Granger causality

¹ Department of Accounting, Kishoreganj University, Kishoreganj 2300, Bangladesh

² Department of Business Administration, Shahjalal University of Science and Technology, Sylhet, Bangladesh

* Corresponding author's email: jubaed.sust57@gmail.com

1. Introduction

1.1 Background of the Study

The tourism industry has become one of the most vibrant economic sectors worldwide, contributing significantly to income generation, job creation, foreign exchange earnings, and infrastructure development in both developed and developing economies. The World Tourism Organization states that in most parts of the world, international tourism contributes approximately 10% to the global GDP and accounts for around 10 out of every 10 working positions globally (UNWTO, 2023). Tourism is commonly advanced as a measure to diversify economies, alleviate poverty, and develop regions in the developing world, where industrial capacity may be limited.

The concept that forms the theoretical basis of tourism-led development is more or less contained by the Tourism-Led Growth Hypothesis (TLGH), which posits that tourism industry growth can cause economic growth by creating an effect of increased demand, and injection of increased amounts of investments and multiplier effects in the related sectors (Balaguer & Cantavella-Jordá, 2002; Dritsakis, 2004). This hypothesis has been supported by empirical evidence in both developed and developing countries, such as in Spain, Greece, and in a number of Sub-Saharan African and Asian countries (Fayissa et al., 2011; Tang & Tan, 2015). However, the scope and delivery modes of tourism are of great difference in different countries depending on the quality of institutions, investment trends, and policy practice.

Bangladesh has a significant tourism potential due to its natural resources, its cultural heritage and historical places, especially Cox's Bazar, Sundarbans, Paharpur, Saint Martin Island, and Chattogram Hill Tracts. The tourism contribution to the economy of Bangladesh, however, has been relatively low based on the comparison with other regional countries like Thailand, Vietnam, and Sri Lanka (World Bank, 2023). The level of tourism receipts and international arrivals is fairly poor, and tourism has not yet turned out to be a strong growth driver of the macroeconomic system.

More recent macroeconomic statistics also indicate that the impact of tourism in Bangladesh might be an indirect effect and not a direct one. Even though there is an upward trend of tourist arrivals and tourism receipts with time, the trend in an empirical approach to analysis suggests that FDI has a stronger influence on the determination of GDP growth. The issue of observation sets a key policy concern that the tourism sector may be structurally situated in Bangladesh to convert tourism activity to sustainable economic growth, or rather, whether the sector requires strategic redesign to increase the investment linkages, productivity, and value creation.

1.2 Problem Statement

Tourism is often mentioned in the national development agenda of Bangladesh, but the empirical relationship between tourism and economic growth is yet to be found. The available literature will focus on amplifying the prospects of the sector, but has not managed to substantially measure its effects on the macro economy using long-time series data. In addition to this, the mainstream methodological strategies of the discipline are descriptive or conceptual, and provide shallow information on how tourism can trigger economic growth.

At the same time, qualitative assessments and policy reviews name the structural barriers that still prevent the tourism industry in the nation, including inadequate infrastructure, poor destination management, limited investment in private capital, bureaucracy, the frailty of the environment, and insufficient connection with the country's economic strategy. The contrast of tranquil quantitative metrics and structural constraints that have been properly documented points to the fact that there is a deeper issue with the system that cannot be measured using econometric techniques.

As such, the research problem in this project is as follows: (i) to what degree does tourism play a significant role in the economic growth of Bangladesh, and (ii) to what extent has this role not been fully achieved, despite the growing intensity of tourism activity. To answer this question, a mixed-method paradigm, which integrates quantitative economic evaluation with qualitative content analysis of tourism policy documents, strategic frameworks, and institutional mechanisms, is required.

1.3 Research Aim and Objectives

The primary objective of this research is to analyze the effects of tourism on the economic growth of the country, Bangladesh, and to find out the strategic issues faced by the tourism industry which needed to be reshaped structurally. In particular, the study aims to explore the effects of the tourism indicators on economic growth by means of an empirical analysis with a dynamic time-series econometric approach. Furthermore, the study reveals constraints faced by the tourism industry based on content analysis in terms of structural, institutional, and policy issues and offers strategic recommendations for enhancing the role of the industry in sustainable and long-term economic development.

1.4 Significance of the Study

The results of this study have major implications for policymakers, development planners, and investors. Defining the direct impact of tourism, constrained by its vagaries on economic growth and the essential role of investment and institutional quality, the study provides empirically-based suggestions on how to reshape tourism policy to be more focused on higher value-added, investment-driven, and sustainable tourism.

Academically, the research has added to the tourism-growth body of literature because it offers one of the few mixed-methods studies based on Bangladesh. It is an enrichment of literature that survives to date since it combines the econometric evidence with the qualitative understanding, covering the results as well as the structural predispositions.

The contribution of this study is the incorporation of dynamic evidence from ARDL with content analysis of institutions. It helps the paper to go beyond a linear measure of the impact of tourism on growth, and the reason why tourism receipts do not do a lot to account for the long-run macroeconomic contribution in Bangladesh.

The rest of this paper is structured as follows. The theoretical and empirical literature is reviewed in Section 2. The data, model specification, and analytical techniques are explained in Section 3. The quantitative and qualitative findings are presented in Section 4, and policy implications, limitations, and future research are discussed in Section 5.

2. Literature Review

This chapter critically examines theoretical and empirical literature on the relationship between tourism and overall economic growth, specifically in developing economies and the Bangladesh contexts. The review has been arranged in three main parts. To begin with, it establishes the theoretical backgrounds of the current study, which are the Tourism-Led Growth Hypothesis (TLGH) and the Multi-Factor theory of economic growth. Second, it generalizes empirical evidence worldwide that relates to the association between tourism and economic development. Third, it offers a critical review of the available literature on the tourism industry in Bangladesh and generates the research gap that acts as the catalyst for the study under review.

2.1 Theoretical Framework

The main theoretical concept that will be used to examine the nexus of tourism and growth of economic is the TLGH. The TLGH relies on the theory of export-led growth, which assumes that tourism is one kind of invisible export that creates external demand, foreign-exchange receipts, and jobs, and thus improves the overall performance of the economic environment. The hypothesis suggests that an increase in tourism activity intensifies income inflows to the domestic economy, enhances the development of infrastructure, and triggers the multiplier effects on the other ancillary sectors such as transportation, accommodation, retail trade, and financial services (Balaguer & Cantavella-Jordá, 2002). By these processes, tourism is anticipated to have a positive, possibly long-term effect on total economic growth.

Empirical research findings of the TLGH reveal, tourism can reduce balance-of-payments, induce capital accumulation and productivity, particularly in countries that have a limited industrial base (Dritsakis, 2004). However, this hypothesis does not assume that tourism industry is the source of overall economic growth of an economy. Rather, its effectiveness depends on the structural features of the host economy, including the level of domestic value addition, the ability to absorb investment, and the strength of institutional settings (Balaguer & Cantavella-Jordá, 2002). The projected growth results under TLGH might be subdued in circumstances where tourism-based incomes are channeled to other countries, either via imports or foreign ownership.

Together with TLGH, the Multi-Factor Theory of economic growth posits that economic performance is a product of the interaction of multiple growth-promoting determinants and not the performance in a single sector (Brida et al., 2014). This school of thought upholds that development is a product of a complicated combination of accumulation of capital, technological advancements, macroeconomic certainty, standard of institutions, and sector interdependencies (Barro, 1991). In this paradigm, tourism is a component of the overall growth system, and its impact is tempered by complementary determinants, including foreign direct investment, inflationary stability, exchange rate, and coordinated policy.

The Multi-Factor Framework provides a particularly relevant prism with which to understand why tourism can be deprived of some direct impacts on economic growth in specific empirical contexts. Increased tourism may stimulate increased economic activity, but without productive investment, development of skills, and structural change, it will fail to result in sustainability (Pérez-Rodríguez et al., 2021). Tourism, therefore, has indirect impacts

on growth via the mediating variables, namely investment inflows, infrastructural development, and institutional capacity. This theoretical position coincides with the empirical evidence that highlights the importance of FDI as one of the key channels that ensure a direct connection between tourism activity and output of macro-economic growth (Brida et al., 2014).

2.2 Global Evidence on Tourism and Economic Growth

The nexus of tourism and economic development has been studied through a considerable amount of foreign literature encompassing time-series, panel, and causality-based studies. The empirical evidence in many studies is in support of the TLGH, especially in the middle-income economies and emerging economies. A causal relationship has been established by Balaguer & Cantavella-Jordá (2002) in the long-run between tourism receipts and economic growth in Spain, and they argue that tourism played a role as a source of foreign demand. Similarly, Dritsakis (2004) established a two-way causality between tourism and growth of economic in Greece, which goes a long way in supporting the suggestion that tourism can simultaneously be a cause and an effect of economic growth.

The tourism effect on growth that is evident in developing countries is further supported by the growth-supportive side of tourism, though with certain critical limitations. A study by Fayissa et al. (2011) established that tourism receipts played a major impact in the economic development of the countries in Latin American states as well as Sub-Saharan Africa by improving productivity and capital formation. However, as the authors stated, the intensity of the effects of tourism significantly differed among countries due to the dissimilarity between the efficiency of investment and institutional quality. Tang & Tan (2015) noted that although there is a tourism-led growth, this is heterogeneous across its source markets, indicating that not all the tourism demand has the same impact on growth.

On the other hand, there are several studies that indicate either poor or conditional tourism impacts. Tourism activities enhanced growth, particularly in middle and high-income developing nations, but had little effect in low-income economies, which is discovered by Eugenio-Martín et al. (2004). These results signal the significance of structural and macroeconomic environments in determining the growth outcomes of tourism. The literature on tourism across the world collectively indicates that tourism has the potential to stimulate economic development, but it is only possible through co-worker projects like investment, policy coherence, and economic diversification.

There is comparative evidence from South Asia that also suggests that growth is not automatic with tourism. Economies like Sri Lanka and Nepal would have had a heavier reliance on tourism services, and Bangladesh's growth structure would still be closer to the manufacturing exports, remittances, and investment flows. However, tourism cannot be a source of growth without a strengthening of domestic value-chain linkages, effective governance, and a good level of competitiveness of the destination. Moreover, tourism-growth effects are heterogeneous depending on the country and methods, requiring country-specific dynamic analysis (Pérez-Rodríguez et al., 2021; Rashid, 2023).

Table 1: Methodological Comparison of Selected Tourism-Growth Studies

Study	Country/ Context	Method	Main Relevance to Current Study
Balaguer & Cantavella-Jordá (2002)	Spain	Cointegration/causality	Shows tourism can support long-run growth in structurally stronger tourism markets.
Dritsakis (2004)	Greece	Causality analysis	Finds feedback effects between tourism and economic growth.
Tang & Tan (2015)	Malaysia	Regime-shift cointegration	Shows tourism-growth effects may vary across periods and source markets.
Pérez-Rodríguez et al. (2021)	Cross-country panel	Fractionally integrated heterogeneous panel analysis	Confirms that tourism-growth effects are heterogeneous and context dependent.
Current study	Bangladesh	ARDL bounds test, Granger causality and content analysis	Combines dynamic time-series evidence with institutional explanation of weak long-run tourism impact.

Note: The methodological gap presented in the table has been addressed by the present study by using ARDL estimation, causality testing, and qualitative content analysis.

2.3 Tourism and Economic Growth in Bangladesh

In Bangladesh, empirical literature is limited and methodologically constrained. Existing studies focus on descriptive assessment of tourism impact and sectoral challenges (Chandra Roy & Roy, 2015; Chowdhury, 2020). Other studies highlight natural and cultural resources, but they do not test tourism's macroeconomic impact on economic growth. Islam and Akter (2021) discuss employment and sectoral prospects, but they do not show a statistical relation between tourism indicators and national GDP. As a result, the core question of whether tourism makes a significant contribution to Bangladesh's economic growth remains unclear. Qualitative research identifies several structural problems in the tourism sector. These include insufficient infrastructure, poor marketing strategy, improper governance, safety issues, and environmental problems (Rahman et al., 2010; Sarkar, 2021; Rashid, 2023). These structural issues limit tourism's ability to attract productive investments. Few studies integrate these issues into formal econometric modeling.

More critically, in Bangladesh's tourism contexts, a clear methodological gap exists. Most of the research is based on static OLS regression, correlation analysis, or descriptive statistics. Such approaches assume contemporaneous relationship and ignore dynamic adjustments, lag structures, and the integration properties of macroeconomic time series data. Recent tourism growth research increasingly implements dynamic time series techniques, like ARDL bounds testing and error correction models, to identify the short-run and long-run relationship (Tang & Tan, 2015). In Bangladesh, the application of dynamic econometric models over annual data remains limited.

Furthermore, few studies use macroeconomic control variables such as FDI and inflation within a unified dynamic framework. Bangladesh's economic growth has historically been

investment- and export-based, excluding these macroeconomic channels, which risks misinterpreting tourism's true contribution (World Bank, 2023). Without controlling for capital accumulation and macroeconomic stability, tourism's impact may be overstated and understated.

As a result, there are three interrelated gaps in the Bangladesh literature. First, there is an empirical gap, as there are few studies that offer dynamic evidence about the impact of tourism receipts on national economic performance. Second, there is a structural gap in the sense that institutional constraints are rarely connected to econometric results. Third, the methodological gap is that few Bangladesh-specific studies use dynamic time-series models, which make a distinction between the short-run adjustment and the long-run equilibrium. It is important to tackle these gaps to establish whether tourism is a success multiplier for the growth of Bangladesh or is structurally constrained.

This study responds to these limitations by applying a dynamic ARDL framework that integrates tourism growth indicators with macroeconomic stability variables while simultaneously contextualizing quantitative findings within documented institutional challenges.

3. Research Methodology

This section provides detailed explanation of the methodology of this study with the fundamental and general model of the current study.

3.1 Data Source and Data Collection

This research uses only the secondary data. The quantitative data include time-series data (on an annual basis) between 1991 and 2024. These data were sourced from authoritative sources, including the Bangladesh Tourism Corporation, the World Bank(WB), and World Development Indicators, as well as other official statistical sources. The use of secondary macroeconomic data helps ensure consistency, comparability, and reliability throughout the study period.

The period 1991-2024 is chosen because it is the longest continuous annual series relevant to core macroeconomic and tourism variables used in the study. It also includes relevant stages of Bangladesh's tourism development – the early sectoral boom, the post-2015 boom period, the COVID-19 period, and the post-pandemic recovery.

As qualitative sources are used in this paper, the peer-reviewed academic journals, official tourism reports released by the Bangladesh Tourism Corporation, national tourism policy documents and development plans, and relevant news articles addressing the problem of tourism development in Bangladesh are used as the sources of all this qualitative evidence. These sources have been chosen based on their credibility and relevance in the achievement of the institutional, strategic, and structural aspects of the tourism industry (Creswell, 2023).

3.2 Measurement of the variables

The dependent variable of the ARDL model is the natural logarithm of nominal GDP (logNGDP), which is a measure of economic growth. The primary explanatory variable is the natural logarithms of the tourism receipts (logTR), which denotes the revenue produced by the

tourism sector. The control variables are the natural logarithm of foreign direct investment (logFDI), foreign exchange rate (FE), and inflation (INF). The variables are selected to represent effects from investment, external competitiveness, and macroeconomic stability, which are important channels in the multi-factor growth framework. Any variables present are reviewed for consistency and completeness prior to estimation.

3.3 Model Specification

To test the dynamic relationship between tourism growth and growth of economy, the following fundamental ARDL model is specified:

$$\log NGDP_t = f(\log TR_t, \log FDI_t, FE_t, INF_t) \dots \dots \dots (1)$$

The following general model arrived from fundamental model-

$$\log NGDP_t = \alpha_0 + \sum_{i=1}^p \alpha_i \log NGDP_{t-i} + \sum_{j=0}^{q_1} \beta_j \log TR_{t-j} + \sum_{k=1}^{q_2} \gamma_k \log FDI_{t-k} + \sum_{m=1}^{q_3} \rho_m FE_{t-m} + \sum_{n=1}^{q_4} \delta_n INF_{t-n} + \varepsilon_t \dots \dots \dots (2)$$

Here, logNGDP is the natural logarithmic value of nominal GDP, logTR is the natural logarithmic value of tourism receipts, logFDI is the natural logarithmic value of foreign direct investment, FE is the foreign exchange rate, INF is the inflation, and ε is the error term.

To further examine the direction of causality between tourism and economic growth, a multivariate Granger causality test is conducted within a dynamic framework. Unlike pairwise causality tests, the multivariate approach controls for the other macroeconomic variables, thereby avoiding omitted bias and ensuring consistency with the multifactor growth framework (Wu et al., 2020). The following system of equation is estimated:

$$\log NGDP_t = \alpha_0 + \sum_{i=1}^p \alpha_i \log NGDP_{t-i} + \sum_{j=0}^q \beta_j \log TR_{t-j} + \sum_{k=1}^r \gamma_k \log FDI_{t-k} + \sum_{n=1}^s \alpha_n FE_{t-n} + \sum_{m=1}^u \delta_m INF_{t-m} + \varepsilon_t \dots \dots \dots (3)$$

$$\log TR_t = \theta_0 + \sum_{i=1}^p \theta_i \log NGDP_{t-i} + \sum_{j=0}^q \phi_j \log TR_{t-j} + \sum_{k=1}^r \varphi_k \log FDI_{t-k} + \sum_{n=1}^s \sigma_n FE_{t-n} + \sum_{m=1}^v \omega_m INF_{t-m} + \mu_t \dots \dots \dots (4)$$

The Granger causality test is implemented for joint significance of lagged coefficients. To test whether tourism Granger-causes economic growth, the null hypothesis is:

$$H_0: \beta_1 = \beta_2 = \dots = \beta_q = 0 \dots \dots \dots (5)$$

Rejection of null hypothesis indicates that lagged values of Tourist Receipt Growth jointly predict GDP growth, implying tourism-led growth dynamics.

In same way, to test reverse causality from GDP growth to tourism, the null hypothesis can be:

$$H_0 = \phi_1 = \phi_2 = \dots = \phi_q = 0 \dots \dots \dots (6)$$

Null hypothesis rejection implies growth driven tourism effect. Overall, the current model specification conforms to the TLGH, which views a multi-factor designation into growth establishment based on the effect of investment and macroeconomic stability (Dritsakis, 2004; Fayissa et al., 2011).

3.4 Data Analysis Techniques

A mixed-method approach, which involved the combination of quantitative and qualitative analysis, is used in this research paper. The quantitative analysis is conducted by using Microsoft Excel and EViews. The data are first organized, cleaned, and structured in MS Excel to ensure consistency and accuracy. Econometrics analysis is then performed using EViews software. First, trend analysis is done using MS Excel to understand the behavior and variability of Tourist Arrivals and Tourist Receipt over time. EViews use for stationary checking of the variables using the Augmented Dickey-Fuller (ADF) unit root test to determine their order of integration. Next, the dynamic relationship between tourism and economic growth measures using ARDL model, with optimal lag length Bahmani-Oskooee & Nasir, 2004). Moreover, long run test and error correction form test are applied to identify the long-run and short-run relationship among the variables. In addition, Granger causality test is conducted to assess the direction of influence between tourism growth and GDP growth while controlling lagged FDI growth and Inflation. Finally, diagnostic tests, including serial correlation, heteroscedasticity, stability, CUSUM, and CUSUMsq test are performed to ensure the robustness and reliability of the estimated model (Gujarati & Porter, 2009).

Qualitative analysis is carried out based on the content analysis of peer-reviewed journal articles, official tourism reports, policy documents, and relevant news sources. The documents are chosen considering relevance to Bangladesh's tourism sector, institutional problems, infrastructure, governance, safety, marketing, environmental risks, and tourism policy. Relevant themes are identified from nine core documentary sources, categorized into structural, institutional, governance, market, environmental, and inclusion. These themes are subsequently applied to account for the quantitative findings of limited long-run tourism's economic growth contribution (Krippendorff, 2019).

4. Result and Discussion

4.1 Trend Analysis

4.1.1 Trend analysis of tourist arrivals

The period 1991-2024 analysis of international tourist arrivals in Bangladesh shows that the trend is very unstable, but the long-term trend is positive.

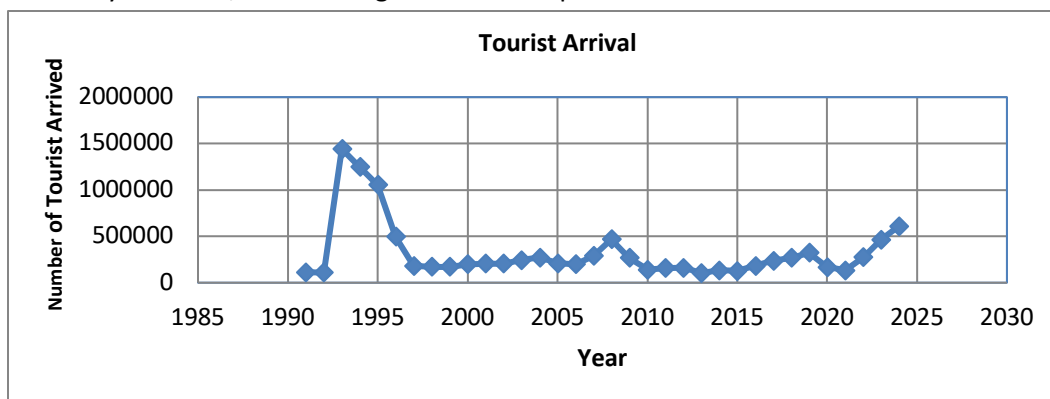


Figure 1: Tourist arrival from 1991 to 2024 (Source: Authors' construction)

The trend of tourist arrivals in Bangladesh from 1991 to 2024 demonstrates considerable fluctuation, but overall, a long-term upward trend. In the early 1990s, arrivals were relatively low, followed by a sharp and unusual spike in 1993. The following year, after the last spikes, tourist arrivals significantly declined. During the early to mid-2000s, tourist arrivals remained modest with a gradual increase that indicates slow sectoral expansion. A small rise occurred between 2007 and 2008, followed by a decline between 2009 and 2012, which reflects global economic uncertainty and domestic structural limitations. From 2015 show an upward trend, suggesting renewed growth in the tourism sector. However, a sharp contraction is observed in 2020-2021 due to the COVID-19 pandemic, which disrupted global tourism (UNWTO, 2023). The post pandemic shows a strong recovery, with tourist arrivals reaching their highest levels in 2024. Overall, the pattern shows that Bangladesh's tourism sector possesses growth potential, but it remains highly sensitive to external shocks and structural challenges.

4.1.2 Trend analysis of tourist receipts (\$)

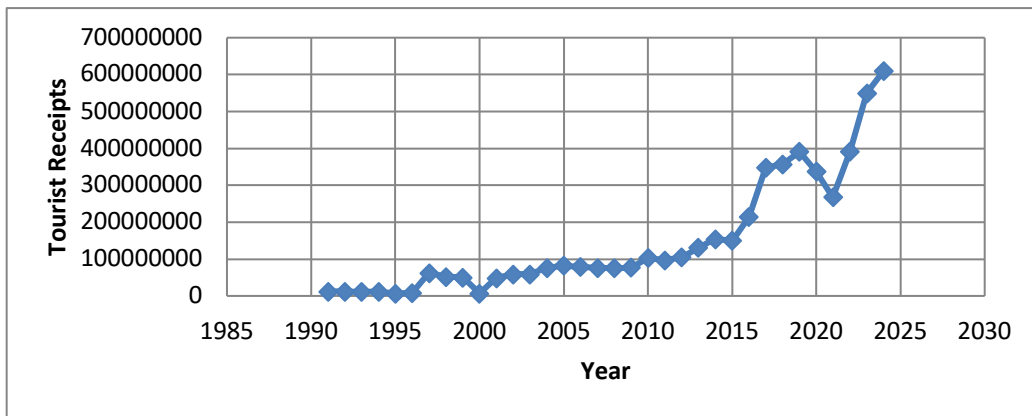


Figure 2: Tourist Receipts (\$) (Source: Authors' construction)

Tourism receipts trends of Bangladesh between the years 1991 and 2024 show a strong long-term positive trend that has been disrupted by intermittent fluctuations. The 1990s and early 2000s saw a slow growth in the tourism receipts, implying a small improvement in tourism activity and expenditure. The noticeable rise is recorded after 2015, but it reflects an increase in revenue generation through tourism, which may be explained by increased tourist expenditure and increased service capacity. It dropped sharply from 2020 to 2021, which is, of course, the period of the COVID-19 pandemic, which seriously disrupted international travel and revenues in the tourism sector all over the world (UNWTO, 2023). With this contraction, the tourism receipts have been recovering strongly since 2022, with a peak occurring in 2024. It can be concluded that, based on this trend, although the tourism industry in Bangladesh has managed to enhance its revenue-generating ability over the years, it is highly susceptible to external shocks, thus necessitating the need to adopt diversification and resilience-based tourism policies.

4.2 Quantitative Analysis

Table 2: Descriptive Statistics Analysis

Statistic	log NGDP	log TR	log FDI	FE	INF
Mean	11.025	7.887	8.515	66.871	6.381
Median	10.932	7.892	8.933	68.904	6.150
Maximum	11.663	8.785	9.452	115.604	11.395
Minimum	10.500	6.785	6.143	38.150	2.007
Std. Dev.	0.389	0.568	0.970	19.757	2.363
Skewness	0.346	-0.411	-1.147	0.312	0.090
Kurtosis	1.741	2.327	3.139	2.606	2.632

Descriptive statistics indicate that the logNGDP has an estimated average of 11.025 and a fairly small standard deviation of 0.389, thus depicting a steady and stable pattern of the growth of the nominal GDP over the duration that this data is observed. The average value of logTR is 7.887, and its variability is moderate (standard deviation = 0.568), which indicates slow changes in tourism receipts. logFDI captures an average of 8.515 but has a relatively higher variance with a 0.970 standard deviation, which is an indication of higher volatility in foreign investment inflows. The foreign exchange rate (FE) is very volatile in that the standard deviation of 19.757 is large, and its rate tends to fluctuate over the years considerably. The average value of inflation (INF) is 6.381 percent, and the variability (standard deviation = 2.363) is moderate, which is a clear indication that there are periodic price shocks. Regarding distributional properties, both logNGDP and FE have a mildly positive skewness, and logTR and logFDI exhibit a negative skewness, meaning that they have occasional negative values below the average. logFDI also demonstrates that the distribution is peaked with a Kurtosis of slightly higher than three (3.139), and other variables demonstrate kurtosis which is below three, meaning that they have flatter distributions. On the whole, the statistics indicate that the trends in GDP and tourism receipts are relatively stable in comparison with the trend in foreign direct investment and exchange rate movements, which have shown higher volatility over the sample period.

Table 3: Stationary Test

Variable Name	At level	At 1st difference	Order of Integration
log NGDP	0.4816	0.0063	I(1)
log TR	0.5126	0.0000	I(1)
log FDI	0.9974	0.0000	I(1)
FE	0.0792	0.0066	I(1)
INF	0.0029		I(0)

The ADF unit-root test is used to examine the stationarity properties of the variables. The findings indicate that the logNGDP, logTR, logFDI, and FE are all non-stationary at the level, with p-values at level (0.4816, 0.5126, 0.9974, and 0.0792, respectively) all bigger than the conventional 5 percent level of significance. Nevertheless, p -values become statistically significant (0.0063, 0.0000, 0.0000, 0.0066, respectively) after first differencing, meaning that these variables reach stationarity at first difference. Therefore, logNGDP, logTR, logFDI, and FE

are integrated of order one, $I(1)$. Conversely, inflation (INF) is stationary at a level with a p-value (0.0029), the p-value is less than the 5% level, which implies the order of zero $I(0)$ is integrated into it. On the whole, the results show that the order of integration is mixed, as most of the variables are $I(1)$ and inflation is $I(0)$, which justifies the use of the ARDL approach in further analysis (Alimi, 2014).

Table 4: ARDL Bound Test

F-Bound Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Level of Significance	$I(0)$	$I(1)$
			Asymptotic: n = 1000	
F-statistic	3.8399	10 %	2.2	3.09
k	4	5 %	2.56	3.49
		2.50 %	2.88	3.87
		1 %	3.29	4.37

Akaike Information Criteria (top 20 models)

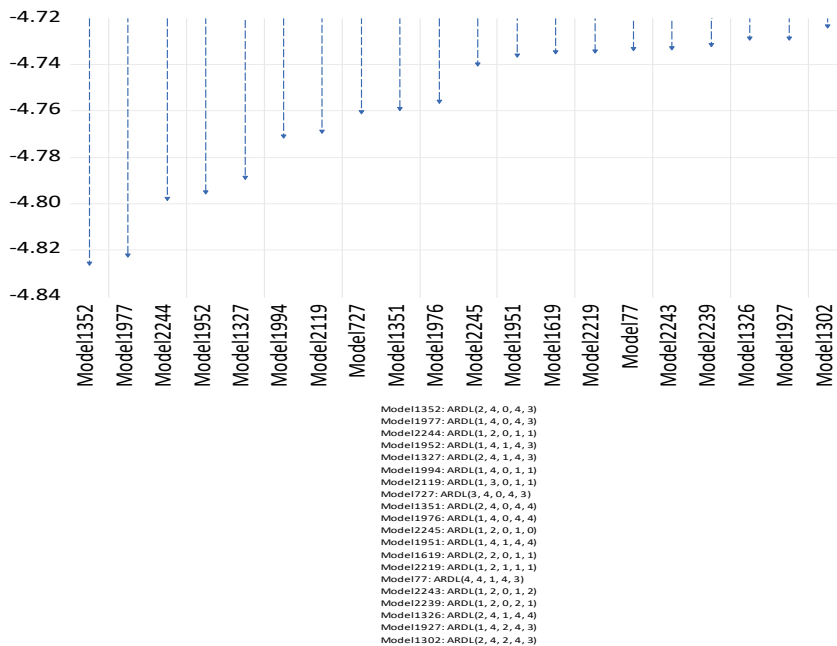


Figure 3: Akaike Information Criteria (Source: EViews output based on the ARDL lag-selection procedure).

The ARDL Bounds test result shows that the calculated F-statistic value (3.8399) is greater than the critical value at the 10% (3.09), 5% (3.49) significance level, but slightly smaller than at the 2.5% (3.87) and 1% (4.37) significance level. However, the F-statistics exceeds the conventional 5% significance level, which means the null hypothesis “no level relationship” is rejected. This result suggests that a long-run relationship exists among the variables included in the model. The selected lag structure (2, 4, 0, 4, 3) contains dynamic adjustments that indicate both short-run dynamics and long-run relationships. Overall, the Bounds test confirms the presence of cointegration among Nominal GDP, tourism receipts, FDI, exchange rate, and inflation in the long run.

Table 5: Long-Run Result

Variable Name	(Coefficient)	(Std. Error)	(t-value)	(p-value)
log TR	-0.9839	0.8169	-1.2043	0.2517
log FDI	-0.1118	0.1127	-0.9920	0.3408
FE	0.0513	0.0224	2.2889	0.041
INF	-0.1409	0.0670	-2.1027	0.0573
C	16.6061	5.1043	3.2533	0.0069

The long-run ARDL results indicate that tourism receipts (logTR) and foreign direct investment (logFDI) do not have a significant impact on nominal GDP (logNGDP). Because their p-values (0.2517 and 0.3408) are greater than the standard value (0.05) at the level of 5% significance level. Moreover, the coefficients of both variables are negative, which implies the lack of statistical significance, which suggests that tourism receipts and foreign direct investment do not exert a stable long-run impact on the economy of Bangladesh during the study period. On the other hand, foreign exchange rate (FE) has a positive and significant (0.0513, $p = 0.041$) impact on economic growth, which indicates exchange rate movements are positively associated with nominal GDP in the long run (Oh, 2005). Furthermore, inflations show a negative coefficient (-0.1409) and is marginally significant ($p = 0.0573$) at 10%, but not conventional 5% significance level, which suggests that higher inflation reduces economic growth in the long run, but the effect is relatively weak. Overall, the findings suggest that, despite the existence of a long-run relationship confirmed by the Bounds test, tourism receipts do not appear to be a key driver of economic growth in Bangladesh.

Table 6: Short-Run Result

Variable Name	(Coefficient)	(Std. Error)	(t-Statistic)	(Probability)
D(LOGNGDP(-1))	-0.2263	0.1835	-1.2331	0.2412
D(LOGTR)	0.0033	0.0145	0.2266	0.8246
D(LOGTR(-1))	0.1063	0.0191	5.5615	0.0001
D(LOGTR(-2))	0.0682	0.0206	3.3042	0.0063
D(LOGTR(-3))	0.0407	0.0142	2.8582	0.0144
D(FE)	-0.0051	0.0016	-3.2807	0.0066
D(FE(-1))	-0.0044	0.0026	-1.7044	0.1140
D(FE(-2))	-0.0004	0.0016	-0.2779	0.7858
D(FE(-3))	-0.0039	0.0014	-2.7283	0.0183
D(IN)	-0.0039	0.0017	-2.3250	0.0384
D(IN(-1))	0.0058	0.0023	2.5108	0.0274
D(IN(-2))	0.0055	0.0021	2.6088	0.0229
CointEq(-1)	-0.0991	0.0174	-5.7131	0.0001

The short-run result shows that changes in the tourism receipts have a positive and significant effect on economic growth in short-run, particularly at lagged periods. While the contemporaneous change in logTR is insignificant (0.0033, $p = 0.8246$), its first (0.1063, $p = 0.0001$), second (0.0682, $p = 0.0063$), and third (0.0407, $p = 0.00144$) lags are positive and highly significant that suggest tourism revenue affects economic growth with a delayed

impact, rather, their effects appear after tourism spending passes through the hotels, transport, retail, employment, and related service activities. Moreover, foreign exchange rate (FE) indicate a mixed but mostly negative short run effect, with the contemporaneous change (-0.0051, $p = 0.0066$) and the third lag (-0.0039, $p = 0.0384$) being statistically significant, which implies that exchange rate fluctuations influence GDP dynamics (Dogru et al., 2017). Inflation also exhibits significant short-run effects, the current change (-0.0039, $p = 0.0384$) negative affects the economy, while it's lagged values (first: 0.0058, $p = 0.0274$; second: 0.0055, $p = 0.0229$) shows a positive and significant effects on economy. The lagged value of nominal GDP (-0.2263, $p = 0.2412$) itself is not significant, which suggest limited short-run persistence. Importantly, error correction term (CointEq (-1)) is negative (-0.0991) and highly significant that confirms the existence of a stable long-run relationship and indicating that approximately 9.9% of short-run disequilibrium is corrected each year.

Table 7: Granger Causality Test

Null Hypothesis	Obs	F-statistics	Probability	Decision (5%)
H_0 : Log TR does nor Granger Cause Log NGDP	32	2.6219	0.0911	Do not reject the H_0
H_0 : Log NGDP does not Granger Cause Log TR	32	4.8370	0.0160	Reject the H_0

The Granger Causality test result indicates one-directional causal relationship between economic growth and tourism in Bangladesh. Specifically, the tourism receipts (log TR) do not Granger-cause the nominal GDP (log NGDP), as the null hypothesis cannot be rejected at a 5% significance level ($p = 0.0911$). This suggests that tourism does not have predictive power over economic growth. Conversely, nominal GDP (log NGDP) does not Granger-cause tourism receipts, which implies that the null hypothesis is rejected ($p = 0.0160$), indicating that economic growth significantly predicts changes in tourism activity. The findings imply the presence of growth-driven tourism effect instead of tourism-led growth, which means that improvements in overall economic performance improve the tourism activity, but tourism expansion does not act as a primary driver of economic growth in the long-run, a result consistent with the evidence reported by Payne & Mervar (2010).

Table 8: Diagnostics Tests (Author's calculation using EViews)

Name of Test	P-Value	Null Hypothesis	Decision
Ramsey RESET	0.2983	H_0 : No problem of functional form	Do not reject the null hypothesis
Hetro Test	0.9745	H_0 : No problem of heteroskedasticity	Do not reject the null hypothesis
Serial Correlation Test	0.4371	H_0 : No problem of serial correlation	Do not reject the null hypothesis

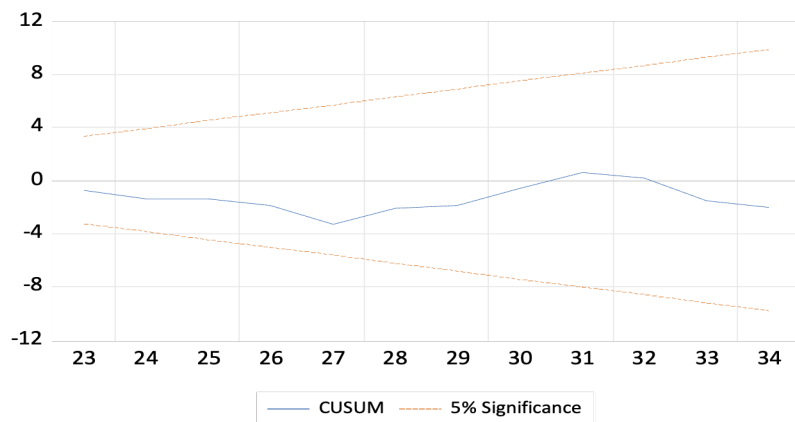


Figure 4: CUSUM test (Source: EViews diagnostic output)

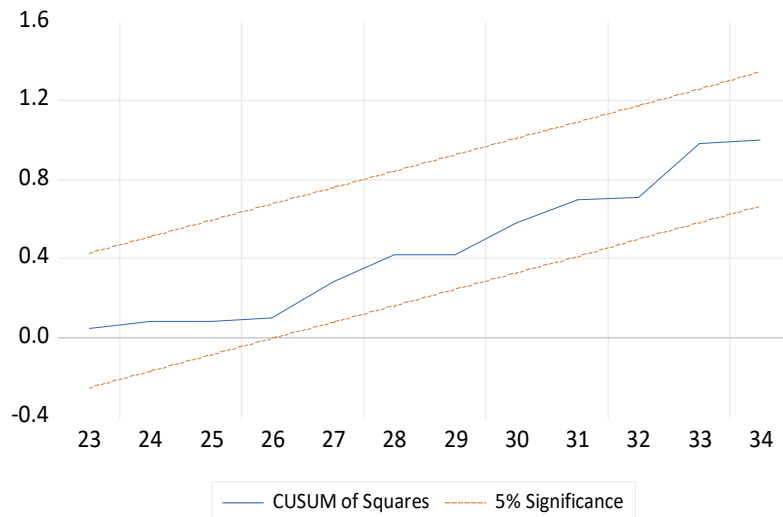


Figure 5: CUSUM Squares Test (Source: EViews diagnostic output)

Diagnostic testing suggests that the model is well specified. The Ramsey RESET test ensures that there are no functional-form problems, and the heteroscedasticity test and serial correlation do not indicate any evidence of violations (Pesaran et al., 2001; Breusch & Pagan, 1979; Ramsey, 1969). In addition, CUSUM and CUSUMSQ diagnostic plots are in the critical limits, hence ensuring stability of parameters and overall model reliability throughout the sample period (Brown et al., 1975).

4.3 Content Analysis Results

4.3.1 Problems in the tourism industry that create barriers to economic growth of Bangladesh

A qualitative content analysis is done using secondary qualitative data to supplement the quantitative analysis and to determine the structural factors limiting the role of tourism in economic growth. These included peer-reviewed journal articles, government and institutional official reports, reputable national and international media publications that are related to the

tourism sector in Bangladesh. The overall findings of this analysis are summarized in table 9, highlighting some of the major problems and descriptions.

Table 9: Problems in the Tourism Sector in Bangladesh

No	Problems	Description	Source
1	Inadequate tourism infrastructure	The accommodation is of great difference, as some have made facilities expensive, and others are of low standard, and the infrastructure that gives support is inadequate to cater to international tourism.	Rahman et al., 2010; Rashid, 2023
2	Weak transport connectivity and no integrated master plan	The transport connectivity to destinations via road, rail, air, and water is ineffective, and the lack of an integrated national transport master plan is a failure in tourism policy implementation.	Rahman et al., 2010
3	Unplanned land use and environmental degradation at key destinations	The unplanned commercial growth around the area of Cox's Bazar and Saint Martin mar the aesthetic value and undermine the experience of the visitors; the failure of adequate land-use planning aggravates the problem.	Rahman et al., 2010
4	Insufficient marketing and promotional capacity	The expansion of tourism is limited by poor promotional campaigns, insufficient brand recognition, and ineffective marketing approach and execution.	Sarkar, 2021
5	Weak digital presence and information provisioning	The information systems and web presence in the official tourism are not well developed and therefore restrict the visibility of the destination and the provision of trip-planning information to the visitors.	Rashid, 2023
6	Skill deficit and limited professional training capacity	Skilled manpower and technical training are issues in tourism services and tourism marketing; the current training programs are limited to meet the overall demands of the sector.	Al Muneem & Avi, 2019
7	Poor safety/security at destinations	Tourists complain about safety; safety restrictions reduce the stay period and affect the quality of the destination (e.g., worries about safety in the evening).	Alam, 2018; Islam & Akter, 2021
8	Political instability and limited political commitment	An unstable political environment deters travel; there are bigger factors at play, including tourist development, which requires a political will and vision that is currently not witnessed.	Rahman, 2017
9	Weak inter-agency coordination and fragmented governance	The lack of coordination of the agencies involved in tourism reduces the suitability of the policy in addition to the performance of the policy.	Islam & Akter, 2021

No	Problems	Description	Source
10	Governance risk (Corruption) in multi-actor tourism delivery	The issue of corruption in institutions in the public sector may hamper the sector's development, because tourism requires cross-sector synergy and the provision of public services.	Sarkar, 2021
11	Institutional design/organizational effectiveness issues	Bangladesh Tourism Board (BTB) is required to take the lead in promotion and marketing and assist in policy and investment support, but the constraints of an institutional design and structure reminiscent of the Parjatan Corporation may limit reform and agility.	Sarkar, 2021
12	Regulatory barriers (visa frictions)	Slow visa process report discourages inbound tourism.	Rashid, 2023
13	Market organization gaps (tour operators/ tourism services)	The data of the destination-level studies show the presence of information gaps, absence of tour operators, and low-quality hotel services as the factors that independently hinder the quality of services.	Rahman et al., 2010; Rashid, 2023
14	Climate vulnerability and disaster disruption risk	Natural environments are the main resource of tourism; extreme weather conditions, catastrophes, and infrastructure disruptions can directly damage the destination and cut the demand, thus increasing the need to implement adaptive policy planning.	Mukherjee & Khan, 2009
15	Inclusion constraints (women's entrepreneurship barriers)	The reviews highlight institutional and socio-cultural impediments, which negatively affect women entrepreneurs, such as limited access to finance and education, as well as cultural support mechanisms, and thus inclusive tourism development.	Akter et al., 2024

4.3.2 Strategic solutions for these problems

This section outlines strategic solutions (Table 10) to reduce the major institutional, organizational, and policy-based barriers that have been outlined in the tourism sector in Bangladesh. The suggestions are justified by the quantitative empirical outcomes as well as qualitative content analysis based on the research

Table 10: Strategic Solution to the Problems

Core Problems	Strategic Solutions	Policy Direction
Inadequate tourism infrastructure	Public-Private Partnership (PPP) led infrastructure Development	The government policy must focus on the creation of hotels, transport hubs, sanitation, and utilities in major destinations through public-private partnership (PPP). This may be improved by incentivizing the transformation of service quality into an international level by providing tax reductions and simplifying the approval procedures.
Weak transport connectivity and no integrated master plan	Integrated National Tourism Transport Master Plan	The tourism policy needs to be harmonized with the national transport planning system to ensure smooth multimodal connectivity, i.e., road and rail as well as air and water beyond the destinations of significance. Additionally, the development of special tourism corridors can reduce the prices of travel and increase accessibility.
Unplanned land use and environmental degradation at key destinations	Destination level land use zoning and carrying capacity regulation	Strict zoning policies and environmental impact studies should be published in Cox Bazar, Saint Martin Island, and other environmentally sensitive areas to preclude overdevelopment in these areas and maintain the environment.
Insufficient marketing and promotional capacity	National destination branding and digital marketing strategy	To increase its global recognition, Bangladesh should consider promoting a unified tourism brand that is reinforced with international digital marketing, partnerships with international tourist sites, and destination content.
Weak digital presence and information provisioning	Integrated tourism digital platform	A single digital hub, where destination information is concentrated, allows booking as well as sharing information on safety, and including e-visa processing, is estimated to benefit the decision-making of tourists and their trust.
Skill deficit and limited professional training capacity	Tourism human capital development programs	The growth of vocational training, hospitality educational institutions, and certification programs is essential to improve the quality of service and professional standards.
Poor safety/security at destinations	Tourism specific safety and security framework	To increase visitor confidence, it is necessary to establish and strengthen special tourism policing units, advanced surveillance, and elaborate emergency response structures at key tourist spots.
Political instability and limited political commitment	Long-term tourism policy continuity framework	The development of tourism should be bound with political cycles through mandatory national tourism strategies, which ensure cross-party support.
Weak inter-agency coordination and fragmented governance	Centralized tourism governance authority	A high-level inter-ministerial tourism coordinating body should be established, thus enhancing the efficiency and consistency in policy making and execution.

Core Problems	Strategic Solutions	Policy Direction
Governance risk (Corruption) in multi-actor tourism delivery	Transparency and accountability mechanism	E-procurement, open disclosure, and independent audit in the tourism development projects can reduce corruption and enhance investor confidence.
Institutional design/organizational effectiveness issues	Institutional reform of tourism authorities	The Bangladesh Tourism Board and various organizations should be reorganized with a view to attaining operational independence, performance-driven management, and private sector engagement.
Regulatory barriers (visa frictions)	Tourist-friendly visa liberalization	The growth of e-visa, visa-on-arrival services, and lessened entry protocols would go a long way in enhancing inbound tourism outputs.
Market organization gaps (tour operators/tourism services)	Tour operator accreditation and quality standards	The professionalization of the tourism value chain through the application of licensing processes and certification procedures on the tour operators, hotels, and guides is likely to increase visitor satisfaction.
Climate vulnerability and disaster disruption risk	Climate resilient and sustainable tourism planning	The planning of tourism must incorporate climate change adaptation, disaster management measures, and conservation of the ecosystem, especially in coastal and island tourism.
Inclusion constraints (women's entrepreneurship barriers)	Inclusive tourism entrepreneurship programs	The delivery of financial empowerment, educational services, and market connections to the women entrepreneurs shall contribute to the inclusive economic growth and creation of tourism projects on the basis of community involvement.

4.4 Overall Findings

The research problem of the current study is to determine the association between tourism and economic growth in Bangladesh using a mixed-method design. Descriptive and trend analysis show that the tourism activity has increased over the long run, but it is extremely volatile, and there are huge breakouts during the external shock periods like the COVID-19 pandemic. This volatility indicates low resilience in the tourism industry and limits its ability to give a stable contribution to the growth of the economy.

The ARDL Bounds test result supports the long-run relationship of nominal GDP, tourism receipts, foreign direct investment, the exchange rate, and inflation. However, the long-run coefficient of tourism receipts as statistically insignificant, which indicate tourism has not become a core driver of economic growth in Bangladesh. In the short run, tourism has a positive lagged effects, suggesting that tourism spending contributes temporarily through service-sector linkages but does not yet generate sustained structural transformation. The Granger causality test shows a unidirectional relationship from economic growth to tourism rather than tourism-led growth. These findings suggest that tourism performance appears to depend more on overall economic conditions than acting as an independent driver of long-term economic growth, providing a basis for further qualitative investigation into underlying structural and institutional factors.

To explain these empirical findings, qualitative content analysis takes into consideration the presence of the entrenched institutional, organizational, and policy restraints, i.e., weak governance, poor infrastructure, low marketing capabilities, safety issues, political instability, and environmental mismanagement, which combine to affect the productivity of tourism and its possible spillover impacts to the overall economy.

On the whole, the evidence suggests that a weak role played by tourism in the economic growth of Bangladesh is attributed to the structural and institutional flaws and not the inherent absence of tourism potential. Enhancing governance and connecting investments, as well as the ability of the sector to rebound, are paramount realities needed to ensure that tourism plays a more effective role in supporting long-term economic growth.

5. Conclusion

The paper has studied the relationship between tourism and economic growth in Bangladesh using an integrated method of dynamic time series data and qualitative content analysis. The ARDL Bounds test confirms a long-run equilibrium relationship among nominal GDP, tourism receipts, FDI, exchange rate, and inflation. However, the long-run result shows that tourism does not have any significant impact on economic growth in the long run. These findings do not support the TLGH in the scenario of Bangladesh. Instead, the evidence suggests that tourism has not functioned as a key driver of economic growth in Bangladesh. The short-run results suggest that tourism has positive but lagged effects on economic performance, the error correction term is statistically significant, which confirms stable adjustment toward the long-run equilibrium. Moreover, the Granger causality test result shows a one-directional relationship running from economic growth to tourism that indicate a growth-driven tourism pattern.

Qualitative content analysis shows that there are long-standing institutional, organizational, and policy constraints that hinder the economic performance of the tourism sector. Lack of governance and coordination, inadequate infrastructure, lack of marketing, safety issues, political instability, as well as environmental susceptibility all hamper the productivity of tourism and reduce its spill-over effects. Such structural impediments explain why growth in tourism is poorly translated to macroeconomic performance. The paper finds that even though there is some growth potential in the area of tourism in Bangladesh, tourism cannot be an effective engine of economic growth until the needed institutional reform, better investment connection, and sustainable destination management occur. There is a need to address these limitations in order to increase the overall impact of tourism on economic development in the long term.

5.1 Limitations and Future Research Directions

This research is limited by the fact that it relies on the secondary time-series measurements and a very small sample, which might violate the external validity of the econometric results. Future research might use panel data designs, regional endogenous analysis, or apply sophisticated econometric models to explain long-run processes and identify structural discontinuities. Further, the study would be complemented by the incorporation of primary qualitative data of policy makers, industry stakeholders, and tourists to create an in-depth insight into governance and institutional issues. Future studies can also focus on the role played by sustainability, digitalization, and climate adaptation to promote tourism-based development in Bangladesh.

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