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Economic Growth Through Tourism: A Global Analysis Using CS-ARDL Approach

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ABSTRACT

This paper examines the effects of tourism receipts and governance on economic growth in a panel of 103 countries. The short-run results of the Cross-Sectional Autoregressive Distributed Lag (CS-ARDL) model, indicate that labour force and fixed capital positively impact on economic growth, highlighting the significance of investing in infrastructure and maintaining a vibrant workforce. The validity of the Tourism-Led Growth (TLG) theory in the short and as well as in the long-run has been proved by a robust and significant positive connection between tourism receipts and GDP growth. Surprisingly, the presence of mobile cellular subscriptions (ICT) in the model does not affect economic growth significantly, indicating the possibility of reaching a point of technical saturation. Trade has a substantial influence on short-term GDP growth, while the role of governance in economic development is complex and might depend on contextual settings. The results indicate that attraction of worldwide tourists can substantially impact economic growth. Further research should investigate the time-based and regional aspects of these connections to improve our comprehension of the dynamics of economic growth.

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1. Introduction

Tourism is an important factor in the development of any economy. It increases the export receipts of a destination and is regarded as an economic endeavour that can foster worldwide economic expansion. International tourism plays a dual role in enhancing GDP growth and driving economic and cultural development in society, ultimately enhancing the local community's well-being. Multiple studies have established a direct correlation between tourism and GDP growth, indicating that it has a substantial impact on defining a nation's future (Cojan, 2022; Nguyen, Kuo, Lu, & Nhan, 2023; Razzaq, Fatima, & Murshed, 2023; Yong, 2022). Hence, tourism plays a crucial role in formulating policies and plans for national development.

Tourism can provide opportunities for job creation and income generation, ultimately contributing to the population's overall well-being. Undoubtedly, tourism accounted for the socio-economic advancement in recipient countries due to increasing investment in tourism development (World Tourism Organization, 2010). Its economic impact according to World Trade and Tourism Council (2015) estimated that the industry generated $7.5 trillion; which accounted for a 7.6% share of worldwide gross domestic product (GDP) and 22 million new employments globally. In the same vein, the report predicted that the industry would generate $11.3 trillion, an estimated globally GDP has 10.5% share and 357 million jobs through the world by 2025. Hence, tourism has inadvertently mitigated the menace of worldwide joblessness by producing windows of job opportunities in tourist hubs (Koens and Wood, 2017).

Tourism and governance are two significant factors influencing economic growth, yet their combined impact at a global level remains underexplored in the existing literature. While numerous studies have individually examined the effects of tourism on GDP growth (Adamopoulos, 2023; Almeida, 2023; Brida & Giuliani, 2013; Brida & Risso, 2010; Eeckels, Filis, & Leon, 2012; Eyuboglu & Eyuboglu, 2019; Nisantha & Erandathie, 2021; Portella-Carbó, Pérez-Montiel, & Ozcelebi, 2023; Rahman, Voumik, Nafi, & Zimon, 2023; SaĞLam & Egelİ, 2018; Shahzad, Shahbaz, Ferrer, & Kumar, 2017; Spinthiropoulos, Nikas, & Zafeiriou, 2020; Tang & Abosedra, 2016; Tang & Tan, 2015; Tiwari & Bisen, 2023; Tugcu, 2014; Wang, Wang, & Pan, 2022) and the influence of governance on economic development (Abdelbary & Benhin, 2019; Aljalely, Abdul Gabar, & Sarhan, 2022; Azimi, 2022; Fawaz, Mnif, & Popiashvili, 2021; Nikzad, 2021), a detailed study examining the interplay among tourism, governance, and GDP growth across nations is requiring. Understanding how these two key determinants collectively influence GDP growth is crucial for policymakers, researchers, as well as practitioners to formulate sustainable development policies on a global scale.

The tourism sector has evolved as a significant sector that is driving economic growth and development all over the world. The contributions it makes go beyond the simple generation of cash; they also include the job creation, infrastructure development, and the preservation of cultural traditions. The expansion of the tourism sector has been made possible by globalization, technical developments, and increasing mobility. As a result, governments have made it a focal point in their efforts to capitalize on the tourism industry's potential for economic prosperity (Bhatti & Nawaz, 2020; Foon Tang, 2022; Naboko, 2023; Nawaz & Hassan, 2016b; Tiwari & Bisen, 2023; Verhun & Bondarchuk, 2022).

Simultaneously, governance plays a significant role in determining the economic landscape of nations. Effective governance structures, encompassing institutions, policies, and regulatory frameworks, provide the necessary foundation for sustainable economic growth (Olsen & Zusman, 2014). Investing decisions, business confidence, and overall economic performance are all heavily influenced by several fundamental factors, including transparent governance systems, the rule of law, and political stability (Ahmad, Yaqub, & Lee, 2024; Anis, 2023).

In existing research, the individual effects of governance and tourism on economic growth have been found; however, the combined effects of these two factors have received very little attention. To formulate well-informed policy interventions and foster inclusive and sustainable economic development on a global scale, it is vital to have an understanding of how governance interacts with tourism to influence economic development.

There is a considerable knowledge gap in the current literature concerning the combined effect that tourism and governance have on the economic landscape of the world, even though both tourism and governance are increasingly being recognized as important drivers of economic growth. Existing research tends to concentrate on the effect of tourism on economic growth (Hajam, Perween, & Malik, 2023; Kostakis, 2020; Thomi, Mose, & Nyoni, 2021;

Wijesekara et al., 2022) or the role of governance that plays in determining economic outcomes (Abdelbary & Benhin, 2019; Azimi, 2022; Fawaz et al., 2021; Hussain, Nawaz, & Ibraheem, 2021; Khalil, Hussain, Bhatti, & Ibraheem, 2022; Mahran, 2023; Misi Lopes, Packham, & Walther, 2023; Nikzad, 2021). These existing studies often overlook the complex association between tourism, economic growth and governance. Thus, empirical evidence and theoretical frameworks are lacking to completely understand the interrelationships among these three components in various countries. Thus, this study tries to find the impact of tourism and governance on economic development in 103 nations.

The implication of this study is important for academia and policymakers. The findings of this research provide policymakers with useful information that could be used to envision proper policies for the promotion of tourism for economic development.

2. Literature Review

Over the previous many years, there has been a shift towards the focus of the researchers on the complex interaction between the processes of governance, economic development, and tourism, as these factors affect the economies.

There are many studies available in the past researches that focus on the connection between economic development and tourism in several regions. Balaguer and Cantavella-Jorda (2002) did a path-breaking study on Spain and using time series data, the authors confirmed the existence of co-integration between economic growth and tourism hence supporting the tourism-led growth (TLG) assumption. In the same way, Dritsakis (2004) concluded that tourist earnings have a positive impact on long-run economic growth in Greece hence supporting the TLG hypothesis. Furthermore, Amaghionyeodiwe (2012) also emphasized that tourism receipts have a positive impact on the economic growth of Jamaica and underlined tourism's role in improving economic development.

The correlation between economic development and tourism was also analyzed with the help of panel regression analysis on larger samples. For instance, tourism boosted economic growth in 21 Latin American nations focusing on low to middle-income countries as pointed out by Eugenio-Martin, Martín Morales, and Scarpa (2004). In the same way, Fayissa, Nsiah, and Tadasse (2008) analyzed the links between foreign tourism consumption and per capita GDP in the countries of Sub-Saharan Africa. These outcomes underlined that in economic development the role of tourism is important.

Additionally, studies have shown how important regulatory frameworks and government support are for maximizing the benefits of tourism for economic growth. Cortes-Jimenez and Pulina (2010) examined the validity of TLG in Spain and Italy, emphasizing the value of public spending on physical and human capital as well as the growth of tourism. These ideas were also echoed by Lee and Chang (2008), who urged government support to increase tourism receipts and thereby economic development, especially in non-OECD nations.

However, the repercussions of tourism on economic growth go beyond simply monetary measurements and include environmental sustainability factors (Liu, Lan, Chien, Sadiq, & Nawaz, 2022). `Marsiglio (2015) posited that a balanced approach to tourism development is imperative for small island nations, advocating for environmentally conscious tourism practices to mitigate adverse ecological impacts. Similarly, Zhang and Gao (2016) highlighted the necessity of low-carbon tourism initiatives to alleviate environmental degradation, particularly in regions like China where tourism-induced CO2 emissions pose significant challenges.

To substantiate the relationship between tourism and economic growth, the current form of literature provides support for four hypotheses: the growth hypothesis, the neutrality hypothesis, the feedback hypothesis, and the conservation hypothesis, (Brida, Cortes-Jimenez,

& Pulina, 2016; Dogru & Bulut, 2018; Oh, 2005). It is the contention of the growth hypothesis that tourism activities contributed positively to the advancement of the economy. The findings of Mohapatra (2018) and Fahimi, Akadiri, Seraj, and Akadiri (2018) provided an indisputable confirmation of this hypothesis. Nevertheless, the cause-and-effect relationship between tourism and economic growth remains a puzzle. Assuming that individuals will be encouraged to invest in tourism when their economy improves, the conservation hypothesis operates under the assumption that this will occur. In addition, the feedback hypothesis proposes that there is a reciprocal association between the growth of the economy and the consumption of tourism (Balli, Sigeze, Manga, Birdir, & Birdir, 2019; Mitra, 2019; Seghir, Mostéfa, Abbes, & Zakarya, 2015). On the other hand, according to the neutrality hypothesis, there are no associations between economic growth and tourism which result in spillover effects (Brida, Punzo, & Risso, 2011; Georgantopoulos, 2013; Wu & Wu, 2019).

In addition to tourism's direct impact on economic growth, scholars have increasingly scrutinized the mediating role of governance in shaping this relationship. Tang and Abosedra (2014) examined the MENA region, revealing that political instability negatively influences economic growth, underlining the imperative of stable governance structures to enhance tourism-led economic development. In this regard, Tang, Salman, and Abosedra (2020) described how the institutions could amplify the effect of tourism and financial development on the GDP growth in Asia’s small dragon economies. The results of their work highlighted the role of the institutional environment and called for the improvement of governance structures for the effective use of the potential offered by tourism.

The analysis of the theoretical framework reveals how tourism and governance influence the growth of the economy which is established on empirical evidence. These studies reveal that good governance is responsible for the increase in travel demand and international visitors’ arrivals that boost the economic growth of a nation (Magazzino, Adedoyin, Bilgili, & Shahzad, 2023; Swamy & Lagesh, 2023). Besides, the moderating impact of governance on the tourism-induced EKC hypothesis was researched, and it was established that governance indicators can either positively or negatively influence tourism-induced carbon emissions (Topcu, Denaux, & Crews, 2023). Besides, the influence of governance on GDP growth has been discussed, and the results indicate that the influence of governance is significant at the 5% level. Further, the study revealed that the GDP growth of one country can influence the economic growth of the neighbouring countries positively (Mahran, 2023).

This literature review presents information concerning tourism, governance, and economic growth emphasizing methods and regional experiences. Nevertheless, there is a considerable and growing gap in the literature that shows the importance of larger-scale empirical testing that would include more countries. However, existing research offers valuable knowledge, which is, nevertheless, regionally bounded and thus cannot shed light on the multifaceted nature of this relationship. Therefore, the aim of the current study is to address this research gap by analyzing the effect of Tourism and Governance on Economic Growth in 103 countries, making a detailed analysis that goes beyond the regional level and that will help to make decisions on a larger scale. This research will contribute to the existing knowledge in the field by examining the multifaceted interactions within tourism, governance, and economic development to offer policy recommendations for global economies.

3. Model, Data Description, and Methods

3.1. Model Building

The main aim of this research is to focus on the tourism and governance impact on economic growth, particularly the GDP growth rate. In this study, we apply a conceptual framework to examine factors of economic development in 103 countries during 1996-2022. The theoretical framework of this study is the Solow growth model in which the explained

variable is GDP growth while the explanatory variable is tourism receipts. Mobile cellular subscription, labour force participation rate, total trade, and gross capital formation are the control variables in this extended Solow model to analyze the role of tourism receipts on economic growth under the tourism-led growth hypothesis.

By using Principal Component Analysis a Composite Governance Index is created to measure the governance influence on economic development. This index consolidates six aspects derived from the World Governance Indicators (WGI): Government Effectiveness, Rule of Law, Control of Corruption, Regulatory Quality, Political Stability and Absence of Violence, and Voice and Accountability.

The model is structured as follows:

$$GDPGR_{it} = \beta_0 + \beta_1 GCF_{it} + \beta_2 LFPR_{it} + \beta_3 ITR_{it} + \beta_4 GOV_{it} + \beta_5 MCS_{it} + \beta_6 TR_{it} \quad (1)$$

Where:
GCF = Gross Capital Formation
LFPR = Labor Force Participation Rate
ITR = International Tourism Receipts
GOV = Governance
MCS = Mobile Cellular Subscription
TR = Total Trade

(i) Denotes the country and (t) represents the period. The error term ϵ_{it} captures unobserved factors influencing the GDP growth rate.

3.2. Data Description

The dataset encompasses 103 countries for the period 1996 – 2022, obtained from the World Bank Databases. Key variables include GDP Growth Rate, Gross Capital Formation, Labor Force Participation Rate, Tourism Receipts, Composite Governance Index, Mobile Cellular Subscription, and Total Trade derived from World Development Indicators (WDI).

Table 2
Data Description and Data Sources

Notation	Series	Measurement	Data Source
GDPGR	GDP growth rate	Annual percentage change in GDP	World Development Indicator (WDI)
GCF	Gross Capital Formation	Gross Capital Formation as per cent of GDP	WDI
LFPR	Labor Force Participation Rate	Labour force participation rate, total (% of total population ages 15-64)	WDI
ITR	International Tourism Receipts	International tourism, receipts (current US$)	WDI
MCS	Information and Communication Technology (ICT) Development	Mobile cellular subscriptions (per 100 population)	WDI
TR	International Trade	Trade (% of GDP)	WDI
GOV	Governance	Composite index calculated through principal component analysis (PCA).	World Governance Indicator (WGI)

The Composite Governance Index is created through Principal Component Analysis, providing a comprehensive measure of governance by condensing six World Governance

Indicators (WGI) into a single representative index. This index captures the multidimensional aspects of governance influencing economic growth. Data description, measurement, and data sources are described in Table 2.

3.3. Estimation Methods

This study uses the CD-ARDL model to examine tourism, governance, and economic growth in 103 nations. This allows us to quantify the joint correlation effects of the chosen nations' strong economic interrelationships. To account for cross-sectional correlation in the error term, the CS-ARDL model improves the ARDL model with a linear combination of the average cross-sectional of the dependent and independent variables (Chudik, Mohaddes, Pesaran, & Raissi, 2016).

According to the CS-ARDL framework of error correction, the variable being regressed is considered a weakly exogenous variable at a one-year lag (Sohag, Chukavina, & Samargandi, 2021). Furthermore, the CS-ARDL method helps in monitoring the unobservable parameters of the regression model that are necessary for identifying long-run effects. It resolves the issues of cross-sectional dependence (CD) both in the long run and short run (Chudik et al., 2016; Samargandi, Sohag, Kutan, & Alandejani, 2021). According to Pesaran and Yamagata (2008), the CD test can be used to check the co-correlation impact of major economic interdependence within countries. The CD test is helpful when checking the sample item for cross-section independence (Islam, Sohag, & Alam, 2022). The CD test can be represented mathematically as follows:

$$CD = \left(\frac{TN(N-1)}{2}\right)^{1/2} \Big/ \hat{P} \tag{2}$$

The augmented Dickey-Fuller (ADF) regression model relates the cross-sectional residuals between any two variables as $\hat{P}$. The symbols used are N for the cross-sectional units and T for time. Depending on the findings of the investigation, slope homogeneity among panel entities may be determined by using CD and panel unit root tests. In the last place, CS-ARDL analysis is applied to test short-term and long-term relations within co-integration mechanism variables. The paper chose the CSARDL model for many reasons. First, the CSARDL model estimates long and short-term elasticities simultaneously (Fedoseeva & Zeidan, 2018). Second, the model handles single I(0), I(1), or mixed integration orders (Shin, Yu, & Greenwood-Nimmo, 2014). Endogeneity is controlled with CSARDL (Adewuyi, 2016). In the error correction framework, the CSARDL paradigm interprets the regressed variable's 1-year lag as a weakly exogenous regressor. This method precisely controls unobservable difficulties used to measure long-term regression model effects. It also controls CD in the short-term and long-term (Sohag et al., 2021). The empirical baseline panel model for GDPGR using the CSARDL approach is shown in Equation 3.

$$\Delta\mathrm{GDPGR}_{it} = \mu i + \emptyset_i \left(GDPGR_{it-1} - \beta_i X_{it-1} - \partial_{1i}\overline{GDPGR}_{t-1} - \partial_{2i}\bar{X}_{t-1}\right) + \sum_{j=1}^{p-1} \pi_{ij} \Delta GDPGR_{it-j} + \sum_{j=0}^{q-1} \omega_{ij} \Delta X_{it-j} + p_{1i}\Delta\overline{GDPGR}_t + p_{2i}\Delta X + \epsilon_{it} \tag{3}$$

GDP growth rate (dependent variable) is represented by $\Delta\mathrm{GDPGR}_{it}$, and the independent variables (GCF, LFPR, ITR, ICT, TR, and GOV) are represented by X_{it}. The long-run coefficient of the dependent variable is given by $\overline{GDPGR}_{t-1}$, whereas the long-run investigated coefficient of the independent variables is displayed by $\bar{X}_{t-1}$. Additionally, the independent and dependent short-run coefficients are given by $\Delta GDPGR_{it-j}$ and ΔX_{it-j}, respectively. The disturbance term is ϵ_{it}, and the cross-sectional units are displayed as *J = 1…J*. The time is represented as *t = 1…T* and the dependent and independent variables' short-run coefficients are shown, respectively, by π_{ij}/ω_{ij}. Finally, the short-run coefficient of the mean of the dependent and independent variables is shown by p_{1i} and p_{2i}, respectively.

4. Results and Discussion

Table 3 encapsulates descriptive statistics detailing pivotal economic variables observed across 103 countries over the specified timeframe. The average GDP growth rate registers at 3.24%, exhibiting a moderate standard deviation of 4.04%, indicative of discernible variability. Gross Capital Formation (GCF) demonstrates an average of 23.85%, with a standard deviation of 6.92%, signifying moderate dispersion.

Table 3
Descriptive Statistics

Variables	Obs.	Mean	Std. Dev.	Min.	Max.
GDPGR	2781	3.24	4.04	-29.10	24.37
GCF	2781	23.85	6.92	1.16	79.40
LFPR	2781	67.77	9.38	41.91	89.45
ITR	2781	21.42	2.00	11.51	26.21
ICT	2781	76.01	50.01	0.00	212.45
TR	2781	83.79	54.31	2.70	437.33
GOV	2781	0.17	1.05	-1.69	2.38

Moreover, table 3 shows that the Labor force participation rate (LFPR) averages 67.77%, displaying a standard deviation of 9.38% and thus portraying a range of participation levels. The recently provided data for Tourism Receipts (ITR) indicates an average of 21.42, with a low standard deviation of 2.00, suggesting a more stable trend in tourism-related economic activities. Mobile Cellular Subscription (ICT) per 100 population reveals a mean of 76.01 and a wide standard deviation of 50.01, reflecting notable variability. Total Trade (TR) averages 83.79, displaying moderate dispersion with a standard deviation of 54.31. Governance (GOV) exhibits an average index of 0.17, with a standard deviation of 1.05, signifying moderate variability. These statistics collectively provide a comprehensive summary of the distribution and characteristics of the examined variables, laying the groundwork for subsequent econometric analyses.

Table 4
Correlation Matrix of Six Individual Institutional Indicators

Variables	GDPGR	GCF	LFPR	ITR	MCS	TR	GOV
GDPGR	1.0000						
GCF	0.2186	1.0000					
LFPR	-0.0188	-0.0128	1.0000				
ITR	-0.0738	0.0650	0.1852	1.0000			
ICT	-0.1695	0.0605	0.1734	0.4302	1.0000		
TR	0.0518	0.1002	0.1323	0.0536	0.2270	1.0000	
GOV	-0.0946	0.0180	0.4196	0.5357	0.3117	0.3299	1.0000

Table 4 presents the correlation matrix of individual indicators, providing insight into the interrelationships among key economic variables. The correlation coefficients reveal discernible patterns of association. Notably, the GDP growth rate (GDPGR) exhibits a modest positive correlation with Gross Capital Formation (GCF) (r = 0.2186) and a negligible negative correlation with the Labor Force Participation Rate (LFPR) (r = -0.0188). Tourism Receipts (ITR) demonstrate a weak negative relationship with GDP growth (r = -0.0738) and a positive yet moderate correlation with Mobile Cellular Subscription (MCS) (r = 0.1852). The latter, in turn, displays a notable negative correlation with GDP growth (r = -0.1695). Total Trade (TR) manifests a weak positive correlation with GDP growth (r = 0.0518) and moderate positive associations with Labor Force Participation Rate, Tourism Receipts, and Mobile Cellular Subscription. The relationship between GDP growth and governance (GOV) is characterized by a negative correlation of -0.0946. Additionally, governance demonstrates variable degrees of positive correlations with other measures. various correlations provide vital insights into the

possible interconnection of various variables, which allows for a more detailed examination of their combined influence on economic development.

Table 5
CD Test and Second-generation Panel Unit Root

Variables	CD	p-value	Level CIPS	1st CIPS	Order of Integration
GDPGR	127.90	0.000	-3.403***	-	I(0)
GCF	20.61	0.000	-2.012	-4.395***	I(1)
LFPR	35.54	0.000	-1.336	-3.326***	I(1)
ITR	209.91	0.000	-2.397***	-	I(0)
GOV	-1.49	0.000	-1.769	-4.270***	I(1)
ICT	336.87	0.000	-1.882	-3.403***	I(1)
TR	64.20	0.136	-1.482	-4.244***	I(1)

The results of the Cross Dependency (CD) test and the second-generation panel unit root tests, including the Cross-sectionally Augmented Im-Pesaran-Shin (CIPS) test, are briefly explained in Table 5 regarding the outcomes of each variable that was examined. The result of the CD test shows the existence of cross-sectional dependency and all the p-values are less than 0. The result obtained equals the 000 level, which implies the presence of cross-sectional dependence in the model. From the CIPS unit root tests of this table, the evidence is found to reject the null hypothesis of a unit root for GDP growth rate (GDPGR) and tourism receipts (ITR). This means that the variables are of I(0) which suggests stationarity of these variables in the system. On the other hand, GCF, LFPR, GOV, ICT, and TR all have data that goes against the null hypothesis. This means that the said variables are I(1) integrated and possess the non-stationary characteristic. These findings are important to determine the appropriate procedures for dealing with non-stationary variables in the econometric analyses and reveal the high level of cross-sectional dependence of the examined indicators.

Table 6
***The Effects of Tourism, ICT Development, and Governance on Economic Growth*.**

DV: GDPGR		
Short-run estimates		
Variables	**Coefficients**	**Standard error**
GCF	0.3679***	.0553
LFPR	0.4201*	.2344
ITR	2.191**	.9597
ICT	-0.0149	.0135
TR	.0336*	.0191
GOV	-1.161**	.5748
Error Correction (EC)	-1.2990***	.02217
Long-run estimates		
Variables	Coefficients	Standard error
GCF	0.276***	.1699
LFPR	0.291*	.0413
ITR	1.938**	1.005
ICT	-0.010	0102
TR	0.027*	.0147
GOV	-0.952**	.4481
Observations	103	
Time	27	
Country	2781	

Table 6 shows CS-ARDL model results of the both short run and long-run durations. In the near run, gross fixed capital formation (GCF) has a strong favorable influence on economic growth. A one-unit increase in Gross Capital Formation correlates with a 0.3679 unit rise in short-run GDP growth. This positive coefficient indicates that short-term gains in capital

formation boost GDP growth. Short-term investments in physical assets and infrastructure help to drive economic growth (Ncanywa & Makhenyane, 2016; Sharma & Mittal, 2019). A one-unit increase in Gross Capital Formation corresponds to a 0.276 unit rise in long-term GDP growth. Long-term investments in capital formation, like short-term investments, have a favourable impact on economic growth (Nawaz & Hassan, 2016a; Pasara & Garidzirai, 2020).

The coefficient for labour force participation rate (LFPR) shows s one-unit increase in LFPR is related to a 0.4201 unit increase in short-run GDP growth. Higher labour force participation rates imply more people actively contributing to economic activities, positively affecting short-term economic growth (Yakubu, Akanegbu, & Jelilov, 2020). On the other hand, a one-unit increase in LFPR is associated with a 0.291 unit increase in long-run GDP growth. Over the long term, sustained increases in the labour force participation rate contribute positively to economic growth (Leogrande & Costantiello, 2023).

A one-unit increase in International Tourism Receipts (ITR) is related to a 2.191-unit rise in short-run GDP growth. The high coefficient suggests a strong progressive impact of tourism on short-term economic growth. Tourism spending stimulates economic activity (Aliyev & Ahmadova, 2020). The positive impact of tourism on long-term economic growth is supported by the coefficient (1.938), reinforcing the notion that tourism has lasting economic benefits. A one-unit rise in International Tourism Receipts is associated with a 1.938-unit increase in long-run GDP growth (Indriani, 2022; Razzaq et al., 2023).

Table 6 also shows that a one-unit increase in Mobile Cellular Subscriptions (ICT) is insignificantly associated with a decrease of 0.0149 units in short-run GDP growth. The negative coefficient suggests that a focus on mobile cellular subscriptions could divert resources from other economic activities, impacting growth negatively in the short run. The result of this association is also insignificant in the long run and shows a one-unit rise in Mobile Cellular Subscriptions is linked with a decrease of 0.010 units in long-run GDP growth. Similar to the short run, the negative coefficient suggests a potential negative impact of an emphasis on mobile cellular subscriptions on long-term economic growth. Although the impact of (ICT) in the short run as well as in the long run is insignificant and very minute. However, it is contrary to the findings of the existing research (Gruber & Koutroumpis, 2011; Hussain & Li, 2023; Lum, 2011; Nguyen, 2023). This unexpected association between ICT and economic growth might be due to contextual factors, for instance, in economies with limited infrastructure or where mobile usage is dominant over traditional economic activities, the impact could differ. The second reason can be technological saturation meaning that if a large portion of the population already has mobile subscriptions, further increases may not contribute significantly to economic growth. Saturation can lead to diminishing returns.

The coefficient of total trade (TR) shows that a one-unit rise in TR is associated significantly with a 0.0336 unit rise in short-run GDP growth. Increased trade activity typically contributes positively to economic growth by facilitating the exchange of goods and services. A one-unit rise in Total Trade is related to a 0.027-unit rise in long-run GDP growth. Consistent with the short-run results, increased trade contributes positively to long-term economic growth (Purnama & Yao, 2019; Silberberger & Königer, 2016).

A one-unit increase in the governance index is connected with a decrease of 1.161 units in short-run GDP growth. The negative coefficient suggests that, in the short run, better governance might lead to a slowdown in economic growth. This result is contrary to some expectations but could be context-dependent (Abdelbary & Benhin, 2019; Fawaz et al., 2021). Similar to the short run, better governance might hurt long-term economic growth, suggesting a complex relationship that might vary over time and region (Azimi, 2022; Shittu, Musibau, & Jimoh, 2022). The above results show that a one-unit increase in the governance index is related to a decrease of 0.952 units in long-run GDP growth. The negative association between governance and economic growth should not be misconstrued as implying that strong

governance is detrimental to growth and should not be sought after (Briguglio, Vella, & Moncada, 2019).

The error correction term describes the rate at which the model corrects deviations from the long-run equilibrium following a shock. A significant negative coefficient of ECT (-1.2990) indicates that the model swiftly corrects deviations from the long-run equilibrium, reverting to the equilibrium. A one-unit divergence from the long-run equilibrium in the preceding period corresponds to a -1.2990-unit adjustment in the present period. A higher negative error correction term indicates a faster rate of adjustment towards long-run equilibrium. In an economic sense, this indicates that if a short-term shock causes the GDP growth rate to deviate from its long-term equilibrium, the system swiftly corrects and returns to the equilibrium level. In such a circumstance, Narayan and Smyth (2006) claim that an ECT value between -1 and -2 signifies dampening fluctuations until a quick convergence is attained for the process of error correction around the long-run value. Thus, it is reasonable to argue that the tourist, governance, and economic growth models exhibit dampening rather than monotonic variations in the long run until they reach quick convergence.

5. Conclusion and Future Directions

The CS-ARDL model's short-run estimates unveiled several noteworthy relationships. The positive and significant influence of gross fixed capital formation (GCF) on short-term economic development underscores the criticality of infrastructure and physical asset investments. The positive association between the labour force participation rate (LFPR) and both short and long-term GDP growth underscores the significance of a dynamic labour force in stimulating economic expansion. International Tourism Receipts (ITR) exhibited a robust positive correlation with economic growth over both the immediate and extended periods, consistent with the TLG hypothesis that revenues related to tourism stimulate economic activity.

Mobile Cellular Subscriptions (ICT) had no significant inverse relationship with long-term or short-term economic growth, contrary to an earlier study. Technological saturation or overreliance on mobile devices for economic activity may explain the results. Short-term GDP growth is positively influenced by total trade (TR), highlighting the role of trade in economic development. A complicated finding related to governance hampered both the short- and long-term growth of GDP. This unexpected finding raises the possibility that governance's impact on economic growth varies between contexts. The research indicates that international tourism revenue boosts short- and long-term economic growth (GDP). Tourism-dependent economies should prioritize international visitor attraction and retention. Governance and economic growth depend on many factors; therefore, policymakers must carefully evaluate them. The complexity of this link across time and space requires more exploration. This study provides significant insights; however, limitations must be acknowledged. The results are based on a specific time frame and a selection of countries; therefore, context may affect their application. We may need more research to examine time and other aspects of the found relationships to improve the existing research.

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Altaf Hussain: Conceptualization, Methodology, Data Collection, Data Analysis, Writing - Original Draft Preparation.
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