The Impact of the Tourism Industry on Economic Growth in Afghanistan(2008 – 2020)

Abstract

This study aims to explore the relationship between Afghanistan's tourism industry and its economic growth. We utilized the ARDL model with structural breaks and time series data spanning from 2008 to 2020, the result reveals that both tourism expenditure and revenue significantly affect Afghanistan's economic growth, in both long and short periods. Particularly, a unit rise in international tourism expenditure leads to a 0.692 unit increase in economic growth, meanwhile, a unit rise in global tourism revenue leads to a 0.125 unit increase in economic growth. In addition, our study period coincided with Afghanistan's democratization process, underscoring the crucial roles of democratization in unlocking the tourism industry's potential to contribute significantly to sustainable economic growth.These findings provide valuable insights for policymakers to enhance tourism development and allocate resources effectively. It also encourages domestic and foreign investment by showcasing tourism's economic potential. Additionally, local communities, particularly in areas like Bamyan and the Wakhan Corridor, can leverage opportunities in hospitality, handicrafts, and cultural tourism.

Keywords: Tourism industry, Economic growth, ARDL model, Afghanistan.

JEL:L83, O53, O10, Q56

1. Introduction

Tourism is a crucial contributor to the global economy, providing a significant source of income for both developed and developing countries(Costa, 2017; Mason, 2006). Tourism plays a vital role in driving sustainable development for both developed and emerging economies; it offers diverse cultural, social, technological, experiential, and natural leisure and business experiences, contributing to communities' growth and prosperity worldwide(Turner, Rochelle & Evelyne Freiermuth, 2016). People travel outside their typical surroundings for personal or business-related reasons, and these individuals, commonly referred to as visitors, can be tourists, residents, or non-residents. Their activities, such as tourism expenditures, contribute significantly to the growth of the industry (World Tourism Organization, 1994). In modern economics, tourism is often called the "goose that lays golden eggs." (Aramberri, 2001). Tourism significantly impacts the global economy, making it a crucial contributor to global financial growth (Sofronov, 2018). International tourism receipts are a vital source of foreign exchange coupled with export income that recompenses current account deficits (Oh, 2005).

Based on the report from the World Travel and Tourism Council (WTTC), before COVID-19, travel and tourism contributed 10.4% of the global GDP ($10 trillion) and accounted for 10.3% of all jobs (334 million) in 2019. However, due to travel restrictions, its share of the global GDP decreased to $4.7 trillion (7.6% of the total global GDP in 2022). The industry experienced a growth of 21.7% in 2021 and 22% in 2022, leading to the creation of 22 million new jobs, marking a 7.9% increase from the previous year(Travel & Tourism Economic Impact | World Travel & Tourism Council (WTTC), n.d.).

Tourism can have positive and negative economic, social, cultural, and environmental effects on destinations (Vanhobe, 2005). Tourism development has been extensively

analyzed in both developed and developing nations due to its ability to connect various industries and provide benefits across different sectors of society. Researchers believe that tourism development positively impacts household income, government income, and balance of payments, making it widely accepted that tourism development contributes to the economic growth of host countries (Khan et al., 2022).

Since the 1960s, many scholars have advocated for the advantages of expanding tourism in developing countries. Several studies, such as those by (McKinnon, 1964; Sinclair, 1998), have used Spain as a prime example of tourism expansion and economic growth. Developing countries across the globe must strive for higher standards of living. Numerous factors must be taken into consideration to expedite economic growth. Rapid and consistent growth is the only path that leads towards prosperity. Economic growth is not random; it directly results from implementing all necessary measures to enhance progress and development (Azam et al., 2022). It is undeniable that Afghanistan, being a developing country, dramatically benefits from economic growth. Economic growth creates job opportunities, promotes education, increases GDP per capita, eradicates poverty, ensures political stability, and much more(Suryahadi et al., 2009). Tourism is a vital sector that significantly boosts economic growth in any country, and Afghanistan is no exception. With its antiquities, culture, and traditions, each region of the country has enormous potential in the tourism industry. Afghanistan's unique and attractive nature makes it a must-see destination for visitors.

An empirical investigation exploring the relationship between tourism development and economic growth in Afghanistan has yet to be conducted comprehensively. This study endeavours to fulfil that need by employing an empirical time series investigation between 2008 and 2020. The main objective of the research is to investigate the relationship between tourism and economic growth in Afghanistan. This will entail an analysis of factors, including tourism expenditures, the revenue generated by the tourism industry, and their influence on the country's overall economic growth. The results will provide empirical support by highlighting the precise elements of the tourism industry that have the most significant impact on Afghanistan's economic growth. Policymakers can make well-informed judgements about how best to allocate resources and formulate policies that will increase the tourism industry's contribution to economic development with the help of this evidence. Additionally, the findings can promote communication and cooperation between different tourism industry stakeholders, such as governmental bodies, private sectors, local communities, and international organisations. Furthermore, it can also serve as a guide for formulating policies that balance social and environmental protection and economic gains. By encouraging collaboration and partnerships, governments can harness those involved' combined expertise and resources to carry out programmes that push forward sustainable tourism development.

Review of Literature

Extensive research has been conducted on the connection between international tourism and economic growth. To provide a comprehensive review of the past studies on this subject, we have classified the literature into four categories: the tourism-led growth hypothesis (TLGH), the economic-driven tourism hypothesis (EDTH), the validity of both TLGH and EDTH hypotheses, and the Neutrality hypothesis. Table 1 illustrates some of the studies that are relevant to these hypotheses.

Table, 1. Categories of Hypothesis

Categories	Researchers
Tourism-led growth hypothesis (TLGH)	Karoubi et al., 2018.,Fayissa et al., 2007., Gunduz & Hatemi-J, 2005., Proença & Soukiazis, 2008.,

	Cortes-Jimenez & Pulina, 2010., Tang & Abosedra, 2016.,Tang & Ozturk, 2017., Belloumi, 2010., Zhang & Gao, 2016., Lean & Tang, 2010., Kadir & Karim, 2012., Trang et al., 2014.
Economically driven tourism hypothesis (EDTH) or Reverse hypothesis	Payne & Mervar, 2010., Bouzahzah & El Menyari, 2013., Suresh & Senthilnathan, 2014.,Ahiawodzi, 2013.
(bidirectional causality hypothesis – BC) or Feedback hypothesis	Naseem, 2021.,Antonakakis et al., 2015., Ongan & Demiröz, 2005., Bilen et al., 2017., Tang & Ozturk, 2017.,Gautam, 2011., Khalil et al., 2007.
(No causality hypothesis - NC) Neutrality Hypothesis	Kasimati, 2011., Katircioglu, 2009., Jin, 2011) and Ghosh, 2011.

In the following, the above-mentioned studies are explained in detail.

(Karoubi et al., 2018) analyzed the impact of tourism on the economic development of Tabriz city. The findings revealed that tourism contributes to the growth of the city's economy in various aspects. Specifically, it leads to an increase in income and employment opportunities, as well as a decrease in unemployment rates among the people of Tabriz. (Fayissa et al., 2007) studied 42 African countries from 1995 to 2004 using panel data to determine the potential contribution of tourism to economic growth and development within the neoclassical framework. It is common practice to verify such findings. The results indicated that tourism industry revenues significantly contribute to both the current GDP and economic growth of sub-Saharan African countries, along with co-investments in physical and human capital. The study concludes that African economies can improve their short-term economic growth by strategically strengthening their tourism industries.

(Gunduz * & Hatemi-J, 2005) The leveraged bootstrap causality test applied to a dataset of real gross domestic product, tourist arrivals, and real exchange rates has yielded an interesting finding. It suggests a positive and unidirectional impact from tourism to economic growth in Turkey. (Proença & Soukiazis, 2008) conducted a study on the significance of tourism as a potential growth factor in four Mediterranean countries- Italy, Greece, Portugal, and Spain. they supported TLGH in all these countries, which aligns with the findings of (Cortes-Jimenez & Pulina, 2010) who investigated this hypothesis specifically for Italy and Spain. (C. F. Tang & Abosedra, 2016) By applying the bounds testing approach to cointegration and Granger causality tests, they have conclusively examined the tourism-growth nexus in Lebanon from 1995-2010 and provided robust evidence that strongly supports the TLGH. (Belloumi, 2010) Applying the Johansen technique, it was found that tourism has a positive causal effect on economic growth in Tunisia. (Zhang & Gao, 2016) found that tourism development led to economic growth in China from 1995 to 2011.

The research conducted by (Lean & Tang, 2010) highlights the support for TLGH in Malaysia. Moreover, they made a constructive proposal that the relationship remains stable over time by integrating rolling subsample procedures into the Granger causality test. This approach is similar to the study conducted by (Kadir & Karim, 2012) suggesting that it could be a useful tool for future research exploring the TLGH relationship. (Trang et al., 2014) investigated the TLGH hypothesis in Vietnam from 1992-2011 using the Granger causality test and growth decomposition method, finding support for the

hypothesis.

(Payne & Mervar, 2010) analyzed quarterly data from 2000:1 to 2008:3 to examine the relationship between tourism and economic growth in Croatia. They proposed that while economic growth leads to tourism growth in Croatia, the reverse is not true. (Bouzahzah & El Menyari, 2013) examined the connection between tourism and economic growth in Morocco and Tunisia. They used the error correction model framework, cointegration and Granger causality tests for the period of 1980-2010. The results indicated that EDTH was the most suitable model for the economies under study. (Suresh & Senthilnathan, 2014) have rejected the idea that tourism leads to economic growth in Sri Lanka during the period 1977-2012. Instead, they have shown that it is the economic growth that affects tourism. (Ahiawodzi, 2013) conducted a study on the long-term relationship between tourism and economic growth in Ghana from 1985 to 2010. The study used annual time series data on real GDP and real tourism earnings. The Johansen-Juselius test was employed to test for cointegration among the variables. The results of the Granger causality test supported the hypothesis that economic growth leads to an increase in tourism.

(Naseem, 2021) investigated the relationship between tourism and economic growth in Saudi Arabia using data from 2003 to 2019. The study found that there is a long-term relationship between economic growth and tourism receipts, expenditures, and the number of tourist arrivals. The number of tourist arrivals has a stronger relationship with economic growth than other parameters. (Antonakakis et al., 2015) conducted a study to examine the relationship between tourism growth and economic growth by using the spillover index approach. The research revealed that the correlation between tourism and economic growth is not consistent over time in terms of its strength and direction, indicating that the hypotheses of tourism-led economic growth (TLEG) and economy-led tourism growth (EDTG) are time-sensitive. Furthermore, the study suggests that the correlation between the two is significantly influenced by economic events.

(Ongan & Demiröz, 2005) found that economic growth in Turkey leads to an increase in tourism, as the tourism industry contributes significantly to the country's economy.In their study (Bilen et al., 2017) found that economic growth and tourism growth have a mutual influence on each other in twelve Mediterranean countries from 1995 to 2012. This result is consistent with the findings of (C. F. Tang & Ozturk, 2017) analysis of Egypt from 1982 to 2011, which also supported the reciprocal hypothesis. The study conducted by (Gautam, 2011) provides strong evidence of a two-way causal relationship between tourism earnings and economic growth in Nepal between the time period 1974 to 2010. This is in line with the findings of (Khalil et al., 2007), who conducted a similar study in Pakistan.

(Dr. Kasimati, 2011) conducted an investigation into the impact of tourism on the Greek economy. Through the use of Granger causality tests, it was conclusively demonstrated that there is no correlation between the two variables. According to (Katircioglu, 2009), the neutrality hypothesis for Turkey is supported by the bounds test and Johansen approach, leaving no doubt that tourism and economic growth are completely independent. (Jin, 2011) used an unrestricted VAR model to examine the dynamic effects of tourism on economic growth in Hong Kong. However, their results did not confirm the long-term effect of tourism on economic growth, which supports the neutrality theory. (Ghosh, 2011) investigated the relationship between international tourist arrivals and economic activity in India from 1980 to 2016. However, their study did not find any significant correlation between the two factors within an unrestricted vector autoregression framework.

2. Methodology and Database

In this study, we aim to investigate the correlation between the growth of Afghanistan's economy and international tourism, and it also examines the long-run and short- run relationship between independent and dependent variables using the Auto Regressive Distributed Lag Model (ARDL) econometric model. The ARDL model is typically used for Log analysis, as stated by (Pesaran & Smith, 1995). Our research hypothesis is that the expenses and incomes generated from international tourism contribute to the country's GDP or economic growth. This hypothesis is supported by theoretical foundations and experimental studies conducted by (Pesaran et al., 2001).

To analyze the impact of relevant economic variables on economic growth, as measured by GDP, we begin with the key macroeconomic relationship. This base equation (Equation 1) is then extended to incorporate the effects of international tourism revenues (ITR) and international tourism expenditure (ITE). By including these variables, we aim to assess how the dynamics of international tourism influence overall economic growth.

Economic growth = f (international tourism revenues+ international tourism Expenditure). (1)

The Autoregressive Distributed Lag (ARDL) model, introduced by Pesaran et al. (2001), is a single-equation modeling technique widely used to analyze both long-run and short-run relationships among variables simultaneously. According to Pesaran et al. (2001), the ARDL representation of Equation (2) can be formulated and expressed in a log-linear econometric structure as follows:

$$\Delta GDPt = \alpha_0 + \sum_{i=1}^{n} \alpha_{1i} \Delta GDP_{t-i} + \sum_{i=0}^{n} \alpha_{2i} \Delta ITR_{t-1} + \sum_{i=0}^{n} \alpha_{3i} \Delta \ ITC_{t-1} + \beta_1 GDP_{t-i} + \beta_2 ITR_{t-i} + \beta_3 ITC_{t-i} \ + \varepsilon_t \quad (2)$$

In Equation 2, the GDP per capita of Afghanistan in year *t*, which serves as the indicator of economic growth, is the dependent variable. The independent variables include *ITRt*, representing international tourism revenues in year *t*, and *ITCt*, reflecting international tourism costs in year *t*. The symbol Δ denotes the first difference operator, while α represents the drift component, and ε is the residual term.

Dependent Variable:

- GDP: Gross Domestic Product per capita of Afghanistan, representing the economic growth in year t.

Independent Variables:

1. ITRt: International tourism revenues in year t.
2. ITCt: International tourism costs in year t.

In order to analyse the relationship between economic growth and tourism growth in Afghanistan, researchers have chosen to focus on the time span from 2008 to 2020 and utilized the Auto Regressive Distributed Lag Model (ARDL). This model was chosen due to the fact that economic variables are often impacted by intermittent values, as well as exogenous variables. By using the ARDL model, researchers can investigate the causal relationship between tourism and economic growth. However, this period is relatively short for conducting a comprehensive trend analysis using econometrics, but it was due to limited data availability for Afghanistan. Fortunately, the necessary pre-tests for the ARDL model, such as the Dickey-Fuller (ADF) and Phillips Perron (PP) tests, were conducted in the results and discussion section, enabling us to utilize the ARDL model within the

specified time frame. Furthermore, (Shin & Pesaran, 1999)demonstrate that the ARDL framework provides more robust and effective results for small sample sizes than other cointegration techniques because the ARDL-based estimators of the long-run coefficients are super-consistent in small sample sizes and the OLS estimators of the short-run parameters are T-consistent(Pesaran et al., 2001; T. C. Tang, 2002).

Additionally, economists often use gross domestic product (GDP) data as a measure of economic growth.the income of international tourists was used as a proxy for measuring tourism development (Naseem, 2021). The data for all three variables are collected from the World Bank database(https://databank.worldbank.org/source/world-development-indicators#).

3. Result and discussion

Table 2: presents a summary of descriptive statistics on the variables.

Descriptive Statistics

Variables	GDP	ITE	ITR
Mean	1.77E+10	1.28E+08	99923077
Median	1.89E+10	1.30E+08	86000000
Maximum	2.11E+10	2.55E+08	1.79E+08
Minimum	1.11E+10	38000000	16000000
St.Dev.	3.07E+09	63338529	51333000
Skewness	-0.909	0.515	0.201
Kurtosis	2.735	2.641	1.874
Jarque-Bera	1.829	0.644	0.774
Probablity	0.023	0.012	0.002
Sum	2.31E+11	1.67E+09	1.30E+09
Sum Sq.Dev.	1.13E+20	4.81E+16	3.16E+16
Obseravation	**13**	**13**	13

Source: Authors calculation

Table 2 presents the descriptive statistics for the variables included in the model. The dependent variable, GDP (Gross Domestic Product per capita), which serves as a measure of economic growth, has a mean of 1.77×10^{1}□ and a standard deviation of 3.07×10□. This indicates the average economic output per capita in Afghanistan along with the variation in these values across the sample period.The independent variable ITR (International Tourism Revenue) has an average value of 99,923,077 and a standard deviation of 51,333,000, reflecting the average revenues generated from international tourism and the degree of variation around this mean.The variable ITE (International Tourism Expenditure) shows an average of 128,000,000 with a standard deviation of 63,338,529, indicating the average expenditure on international tourism and the associated fluctuations in these values.Furthermore, the statistical tests of elasticity, skewness, and probability, as well as the results of the Jarque-Bera test, suggest that the distribution of all variables in the study is normal. This indicates that the data for GDP, ITR, and ITE follow a normal distribution, which is important for the validity of the model and the reliability of subsequent inferences.

In order to analyse the time series data and ensure consistency in econometric modelling, we conducted a unit root test on the variables. The purpose of this test was to examine the

characteristics of the data. We used two common unit root tests - the (Dickey & Fuller, 1981; Phillips & Perron, 1988) The results of the unit root test are presented in Table 3.

	Dickey-Fuller (ADF)		Phillips Perron (PP)		
	at level				
Variable	Intercept and without Trend		Intercept and without Trend		Status
	t-Statistic	Prob	t-Statistic	Prob	
GDP	-3.526	0.031	-13.148	0.000	Stationary
ITR	-2.203	0.032	-2.138	0.036	Stationary
ITE	-4.813	0.003	-5.217	0.002	Stationary

Table 3, Result of the Unit Root Test

Source: Authors calculation

Upon conducting the test at the 95% confidence level, it was determined that there is no evidence supporting the presence of a unit root in the model's variables, including economic growth variables (GDP), international tourism revenues (ITR), and international tourism expenses (ITE). This suggests that these variables exhibit non-stationary behaviour. These findings align with the investigation conducted by (Khan et al., 2022; Savas, Bilal et al., 2010), providing valuable insights into the characteristics of the variables under consideration.

Table 4, Results of Estimation of Model Dynamic Regression.

Variables	Coefficient	Standard Error	T- statistics	P –value
LGDP (-1)	5/264	1/978	2/661	0/001
LGDP (-2)	5/337	2/176	2/452	0/003
LITE	0/045	0/019	2/368	0/002
LITE (-1)	0/694	0/286	2/426	0/003
LITE (-2)	0/097	0/041	2/365	0/002
LITR	0/265	0/151	1/784	0/041
LITR (-1)	0/068	0/026	2/615	0/001
LITR (-2)	0/131	0/065	2/015	0/006
C	32/151	11/206	2/868	0/103
F- statistics = 15.468 [0.042]		R^2 = 0.98	$\overline{R}^2$ = 0.92	

Source: Authors' calculation

According to Table 4, the model demonstrates a high coefficient of determination (R-squared) and adjusted R-squared, indicating that 98% of the variation in the dependent variable is explained by the independent variables included in the model. Additionally, the significance test of the overall regression, represented by the F-statistic, rejects the null hypothesis at the 95% confidence level. This suggests that at least one of the regression

coefficients is significantly different from zero, implying that the explanatory variables have a meaningful relationship with the dependent variable.

In order to explore the impact of tourism on economic growth, the next step is to investigate whether a long-term equilibrium relationship exists between the variables in the model. Studies conducted by (Pesaran et al., 2001; Pesaran & Smith, 1995) have used F-statistics to determine whether there is a long-term relationship between the model's variables. To do this, they first estimated the ARDL model in the form of error correction and then evaluated the significance of the variables' levels and lags.The result of this test indicates that there is no long-term relationship between the variables. If the F statistic value is less than I(0), the null hypothesis is not rejected, and therefore, there is no long-term relationship between the variables. On the other hand, if the F statistic value is greater than I(1), the null hypothesis is rejected, indicating a long-term relationship between the variables. However, if the F statistic value falls between two limits, we cannot make any definitive conclusions.

Table 5, Results of Bounds F-tests for ARDL Cointegration Relationship.

F-statistics	P-value					
2/8893	10 % level		5 % level		1% level	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
	2.63	2.35	2.1	2.27	4.13	5

Source: Authors' calculation

The calculated F statistic value in Table 5 is higher than the upper critical value at the 5% significance level. This leads to the rejection of the null hypothesis, indicating that there is a statistically significant long-term equilibrium relationship between the variables of Gross Domestic Product (GDP), International Tourism Cost (ITE), and International Tourism Revenue (ITR) in the specified model. This finding aligns with the results reported in the study by [10,46], suggesting consistency with prior research. This implies that changes in GDP, ITE, and ITR are interrelated in the long term within the given model.

Estimate Long – run Relationships

Once we have confirmed the existence of a long-term relationship between the variables, it is imperative that we accurately estimate their impact on the model. The economic impact of international tourism in Afghanistan is presented in Table 5.

Table 6, Long-run Relationships

Variables	Coefficient	Std. Error	t-Statistic	Prob
LITE	0.692	0.204	3.408	0.001
LITR	0.125	0.043	2.906	0.021
C.	34.669	4.368	7.903	0.015

Source: Author's calculation

It is important to acknowledge the significant limitations in current research on Afghanistan, such as the availability, quality, and reliability of data, as well as the country's unique security challenges, political instability, and susceptibility to external shocks. Despite these limitations, the data in Table 6 demonstrates that both international tourism costs (ITE) and international tourism revenue have a substantial impact on

Afghanistan's economic growth. However, their estimated coefficients and influence on the dependent variable vary.

The findings suggest that a one-unit increase in international tourism costs results in a 0.692 increase in GDP in the long run, aligning with a study by [29]. Additionally, international tourism revenues also have a positive and significant effect on GDP. For instance, a one per cent increase in international tourism income leads to a 0.125-unit increase in GDP. This result is also supported by (Fayissa et al., 2007) in relation to African countries.It has been proven that tourism costs and tourism income have a positive impact on the economic growth of Afghanistan. The coefficients of the variables in the model are statistically significant at a confidence level of 90%, which indicates that the results are reliable. Additionally, the high R^2 values of the estimated model suggest that 97% of the changes in the dependent variable can be attributed to the explanatory variables.

Table 7, Estimates for Error Correction to Test the Main Hypothesis

Variables	Coefficient	Std. Error	t-Statistic	Prob
D(LGDP(-1))	5.337	1.093	4.880	0.039
D(LITE)	0.045	0.011	3.790	0.043
D(LITE(-1))	0.097	0.031	3.068	0.031
D(LITR)	0.265	0.045	4.917	0.038
D(LITR(-1))	0.131	0.029	4.442	0.047
CointEq(-1)*	-0.927	0.172	-5.375	0.032
R^2 =0.92		$\bar{R}^2$ = 0.90		DW = 2.28

Source: Author's calculation

Based on the insights presented in Table 6, it seems that the examined variables have adequately accounted for Afghanistan's GDP in the short term. The short-term outcomes reveal that alterations in tourism expenses and international tourism revenue yield an immediate and noteworthy boost to GDP, despite any interruptions.

Among the estimated coefficients, the CointEq (-1) coefficient holds the highest significance, and its analysis is crucial for short-term insights. This coefficient (-1) reflects the pace of movement from short-term equilibrium to long-term equilibrium. Table 5 presents the results where the estimated coefficient of CointEq is -0.927, signifying a primarily negative and statistically significant value. This suggests that the short-term model's imbalance error is rectified by approximately 92% per period.

Table 8, Summary of the result

Factors	Impact on Economic Growth	Explanation
Tourism cost	Positive	Tourism cost contributes significantly to Afghanistan's GDP growth. Every unit increase in tourism expenditure leads to a 0.692-unit increase in GDP, highlighting the crucial economic effect of tourism-related expenditures.
Tourism	Positive	Tourism revenue plays a pivotal role in promoting

revenue		economic growth. For every unit increase in tourism revenue, GDP rises by 0.125 units, further promoting the tourism importance to Afghanistan's economic growth.
Democratization	Positive	Democratization enhances sustainable innovation, which in turn leads to constant and inclusive economic growth. Fostering an environment that encourages innovation is a key aspect of democratization, as it ensures that economic development is fair and sustainable.

Prior research has established that tourism can significantly drive economic growth. This study provides new insights by examining Afghanistan's unique context, particularly in its post-conflict setting. One of the key contributions of this study is the emphasis on the role of democratization in fostering sustainable innovations. Unlike other studies that focus solely on economic factors, this research reveals that democratic reforms in Afghanistan have been instrumental in promoting eco-friendly tourism models, ensuring that economic benefits do not compromise environmental sustainability.Democratization is frequently linked to the development of transparent institutions and accountable governance, which in turn can foster sustainable innovations. This aligns with Schumpeter's theory of innovation, emphasizing the pivotal role of institutional frameworks in enabling entrepreneurial activities(Śledzik, 2013). These institutional changes create opportunities for sustainable tourism practices, such as eco-tourism, which can yield long-term economic benefits.

Our study period coincided with Afghanistan's democratization experience, underscoring the pivotal role of democratization in realizing the potential of Afghanistan's tourism sector for economic growth. The experiences of nations such as Nepal, Rwanda, and Cambodia serve as compelling examples of how political stability and strategic investments in sustainable tourism infrastructure can drive economic transformation in post-conflict nations(Chheang, n.d.; Gautam, 2011; Hor, 2021; Nielsen & Spenceley, n.d.). For Afghanistan, embracing a transition towards more democratic governance, focused on eco-tourism and sustainability, holds the promise of significantly enhancing the tourism industry's contribution to economic growth. By prioritizing sustainable innovations and environmental stewardship, Afghanistan can ensure long-term growth while safeguarding its rich cultural and natural heritage, thereby fostering a resilient and thriving tourism sector.

The findings illustrate the potential impact of tourism on the economic growth of Afghanistan. Our results show that both tourism revenue and tourism costs significantly influence the country's economic growth. This has several practical implications. Firstly, the government and policymakers can use these findings to create and implement policies to enhance the development of the tourism industry. Additionally, the government can allocate resources more efficiently based on these priorities. Furthermore, our findings can attract domestic and foreign investors by highlighting the economic benefits of investing in Afghanistan's tourism industry. Finally, our findings can help local communities identify economic opportunities within the tourism industry. For example, communities near tourist attractions, such as Bamyan province and the Wakhan corridor, can explore entrepreneurship opportunities in hospitality services, handicraft production, and cultural experiences.

4. Conclusion and Policy Implication

The purpose of this research is to analyze the relationship between international tourism and economic growth in Afghanistan from 2008 to 2020 using the ARDL Autoregressive Distributed Lag model. Based on the results of the ARDL long-term coefficient estimation, it is evident that the variable of international tourism costs has a significant impact on economic growth, with a coefficient of 0.692. This implies that an increase in international tourism costs leads to a corresponding increase in economic growth in Afghanistan. Additionally, the variable of international tourism income also has a positive and significant effect on economic growth, with a coefficient of 0.125.Tourism plays an important role in the economic growth and development of host countries. The currency generated from tourism is often used to import capital goods, which are used to produce products and services. This, in turn, leads to the growth of the host country's economy. Since tourism is closely linked to accommodation facilities, food, transportation services, and other related services, it helps to increase the production of the host country, leading to the creation of new income and employment opportunities.

The correlation between international tourism and economic growth has been extensively researched and analyzed over time. The Tourism-Led Growth Hypothesis (TLGH) is based on the idea of export-oriented growth, which proposes that economic growth is not only achieved by increasing production factors, but also by stimulating exports. It is widely accepted that international tourism is a key factor that positively impacts long-term economic growth. This has been proven by many researchers which is mentioned in the literature section. As such, the growth of the tourism industry in Afghanistan is expected to drive economic development. But in the case of Afghanistan, there are some limitations which must be acknowledged, First, due to the ongoing conflict and governance challenges, data availability for Afghanistan is still insufficient and inconsistent, especially when it comes to statistics and economic indicators relating to tourism. This may not fully reveal the economic impact of tourism and restricts the scope of our investigation. Furthermore, the analysis does not take into consideration unofficial tourism, which can be quite important in Afghanistan but is hard to measure.

Secondly, the analysis fails to adequately account for the environmental expenses linked to the rapid expansion of the tourism industry. While tourism may promote economic progress, it can also have a negative impact on the environment, particularly if infrastructure development is not properly planned out or natural resources are overused. In order to evaluate the ecological sustainability of economic growth driven by tourism, future studies should take into account incorporating environmental indices. According to the results of our investigation, and the limitations mentioned above we recommend the following policy implications for the policymakers and governance of Afghanistan to support sustainable tourism growth.

Afghanistan must implement economic and environmental policies that put a priority on long-term resilience in order to promote the growth of sustainable tourism. Promoting ecotourism, preserving natural habitats, and enforcing laws that restrict the detrimental effects of mass tourism should be the main objectives of environmental policy. From an economic perspective, the government ought to give top priority to the training of a trained labour force for the tourism industry, improve governance and transparency to draw in more foreign direct investment and establish incentives for private sector investment in environmentally friendly travel initiatives. Long-term economic growth via tourism will be made possible by policies that uphold political stability and encourage democratization, which will also boost investor confidence.

Afghanistan has the potential to increase its tourism revenue by investing in better infrastructure, improving the quality of tourism products and promoting them more effectively in target markets. Implementing domestic policies that reduce living expenses, strengthen exchange rates, maintain political stability, and minimize bureaucratic procedures can also aid in this effort. However, one major obstacle for the Afghanistan tourism industry is the issue of insecurity, which the government must address to make the country a safer and more attractive destination for tourists.

Furthermore, the development of a comprehensive plan for reproductive tourism research is also needed, it should consider all strengths, weaknesses, opportunities, and threats, as well as the natural, cultural, and service-related facilities available in the region.

Another important aspect is to establish community-based organizations and non-governmental bodies that are involved in rural tourism. This can be achieved by setting up rural tourism institutions under the direct supervision of the Ministry of Culture and Information. Additionally, the administration of districts and villages in rural areas should be strengthened to enhance their capabilities and position in the region. The main objectives of these efforts include encouraging both public and private sector involvement in tourism projects that promote civil, social, and economic growth, establishing continuous and decentralized monitoring systems to keep track of all local tourism activities and movements, planning and organizing the accommodation of rural tourists in pre-determined locations and houses, ensuring continuous and localized monitoring to ensure the successful implementation of comprehensive tourism plans and programs, and identifying and assessing new tourism opportunities in the area to attract private sector investments and participation.

In the end, a balanced strategy that protects cultural and environmental resources while maximizing the economic potential of tourism is needed for Afghanistan and other post-conflict countries. By doing this, it will be ensured that tourism supports resilient, inclusive, and sustainable economic development.

Data availability statement

Data is available in world bank database, world development indicators.

Ethical approval

The manuscript in part or in full has not been submitted or published anywhere.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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