Meritorious Journal of Social Sciences & Management
Vol. 07, No. 1 (2024)
Journal homepage:
http://journal.mgp.org.pk/index.php/MJSSM

Impact of Infrastructure Governance with Moderating Role of Political Stability in the Top Tourist Countries

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ARTICLE DETAILS

History
Received format:
Nov, 2023
Available Online:
Dec, 2023

Keywords
Tourism, ICT Infrastructure, Physical infrastructure, Military Expenditure, Governance Structure, Political Stability.

ABSTRACT

The main objective of this study is to investigate the impact of political stability, governance structure, military expenditure, physical and ICT infrastructures upon tourism in an emerging economy. Ordinary least square (OLS) approach confirmed the relationship among variables. Results show that ICT and MEXP are statistically significant and have negative impact on the tourism in selected Asian countries. But PHI, GS, and PS are statistically significant and have positive effect on the tourism in selected Asian countries. Furthermore, interaction effect of (PS*ICT) is statistically significant and has positive effect on the tourism while interaction effects of (PS*PHI), (PS*MEXP) are statistically significant and have negative impact on the tourism. According to the result of the study PHI, GS, and PS have a positive impact on tourism, it's essential to capitalize on these factors. Governments and tourism stakeholders should focus on enhancing physical infrastructure (PHI), improving government stability (GS), and promoting political stability (PS) to attract more tourists. Since ICT and MEXP are negatively impacting tourism, strategies should be implemented to mitigate their effects. While ICT can sometimes disrupt traditional tourism industries, efforts should be made to adapt and integrate technology in a way that enhances the overall tourism experience.

Introduction

Tourism is the fastest growing economic sector (Tang, 2018). In many developing/middle-income countries across the world, the tourism industry has emerged as a significant source of revenue. There is a study that a strong tourist industry may have positive impact on economic growth and development countries (Khondker & Ahsan, 2015). In many countries, tourism is a significant mechanism for economic growth and the creation of employment opportunities (Azizan Marzuki, 2012). Different factors can affect the tourism activities of a country. This study examines how the governance structure, military expenditures, political stability, physical and ICT infrastructure affect tourism in a growing economy (Nadeem, Liu, Xu, Nawaz, Malik & Younis, 2020). The governance structure of a country may nourish economic and tourism activities. Well-structured governance supports tourism industry, but poor governance obstructs the growth of tourism industry (Nadeem, Liu, Xu,

Nawaz, Malik & Younis, 2020).

Without a doubt, remittances are vital in the growth procedure, especially when the beneficiary is a developing state. Remittances add to economic growth, poverty decrease and soothing social issues while empowering the beneficiary families to build utilization and to some scale, taking an interest in capital project. Although, there are a few arguments in regards with the impact of remittances on growth as far as disparity, its commitment to profitability and growth. In this manner, it is essential to take a gander at the impact of remittances on a state by-state evidence.

We focus closely on its view of tourism as a force for peace and political stability (WEBSTER et al., Webster & Ivanov 2016). Different researchers suggest that political stability is also necessary for an economy to develop and sustain its tourism industry. Strong institutions and political stability create a favorable environment for tourism-related investment by remittance-receiving households. Therefore, countries having political stability and strong financial mechanisms might direct their remittances towards productive sectors of the economy (Hasan, Abdullah, Hashmi & Sajid 2022).

Literature Review

Manzoor, Wei, Asif, Haq and Rehman, (2019) Stated that tourism is one of the most prominent and expanding industries in the world economy. This industry contributes significantly to the growth of a country's economy. The economies of the countries can benefit from a rise in tourism, particularly in terms of GDP and job prospects. The tourism sector is a major driver of economic expansion and GDP growth in South Asian nations. This study looks into how tourism affects employment and economic development in Pakistan. The main conclusion of this study is that there is a long-term association between the variables under consideration and that tourism has a favorable and substantial influence on Pakistan's economic growth as well as the employment sector. According to this report, lawmakers should concentrate on legislation that specifically emphasis the development of tourism given the industry's enormous potential across the nation.

Cannonier and Barke (2019) Stated that tourism’s generates to economic output in the Caribbean exceeds that in other parts of the world. We examine the causal relationship between tourism and economic growth using panel data collected over a three-decade span with a sole emphasis on Caribbean islands. The findings indicate that real Gross Domestic Product growth is positively and statistically significantly effect by tourism. According to this study's findings, a 10% increase in tourist expenditures can boost economic growth from 0.3% to 1%. The overall tourist multiplier, according to a quick back-of-the-envelope calculation, is about 0.25, which is lower than predictions from other research. For academics, professionals in the field, and decision-makers alike, these findings have significant ramifications.

Pimonenko and Lyulyov (2021) Stated that analysis deals with the investigation of relationship between tourism and economic growth. The study theorized that contemporary tourism was a wide-spread dynamic industry with a significant influence on economic growth that had been harmed by the COVID-19 problem. In order to anticipate the recovery of tourism activities in light of quarantine limitations, this research analyses developments in the tourism business. The extrapolation model ARIMA was used by the authors to achieve their objectives. The forecast has been conducted under different conditions as follows: 1) without the introduction of quarantine restrictions from 11.03.2020; 2) taking into account the quarantine restrictions on movements. The results showed that, in times of economic, social, and political unrest, the quarantine measures taken had a substantial influence on overcoming the recession in the tourist business. The results give background for future

researchers on developing a strategy to overcome the tourism recession.

Song and Wu (2022) Stated that a vast number of similar empirical studies have been published in the tourist literature, and many academics have recently explored the tourism-led economic growth (TLEG) theory. Unfortunately, many of these studies' study designs have not adequately addressed the theoretical underpinnings of the TLEG hypothesis. So, the conclusions drawn from their empirical analysis may be erroneous or even incorrect. This study offers suggestions for future TLEG investigations and critically assesses existing TLEG studies from theoretical and empirical angles.

Ullah, Khan, Saeed, Zada, Xin Kang and Hu (2022*)* Stated that tourism has played important role in the world economy. It ranks third in terms of socioeconomic sectors and makes up roughly 9% of the global GDP. Tourism boosts investments, opens up job possibilities, employs entrepreneurship, and protects cultural norms and values. Nonetheless, tourism faces serious challenges in developing countries, like Pakistan. As a result, the current study's the important factors that impact on tourism sector and exhibit the nexus between tourism and economic development in Pakistan. The study gathered information from the State Bank of Pakistan (SBP), the Global Terrorism Index (GTI), and Pakistan Tourism Data for the years 1995 to 2017. The study's findings indicate that terrorism, which undermines safety and security, tourist spending, and inflation rate; have a significant impact on Pakistan's tourism industry.

Methodology

This study explored the association between tourism industry and economic growth by using ordinary least square (OLS) approach. The study is quantitative, relying on quantitative panel data. The data are obtained from the World Bank's World Development Indicators (WDI) for the time period of 2000-2021. The mathematical function of the model is,

Tourism=f (ICT Infrastructure, Physical Infrastructure, Military Expenditure, Governance Structure, Political Stability).

Econometric model is,

$$TOR_{it} = \beta_0 + \beta_1 ICT_{it} + \beta_2 PHI_{it} + \beta_3 MEXP_{it} + \beta_4 GS_{it} + \beta_5 PS_{it} + \beta_6 (PS^{*}ICT)_{it} + \beta_7 (PS^{*}PHI)_{it} + \beta_8 (PS^{*}MEXP)_{it} + \beta_8 (PS^{*}GS)_{it} + \varepsilon_{it}$$

Where:

TOR=Tourism

ICT= ICT Infrastructure

PHI= Physical infrastructure

MEXP= Military Expenditure

GS= Governance Structure

PS= Political Stability

ε = Error Term

Results & Discussion

Descriptive Statistics

This unit presents the analysis and results of the study; where the data related to the selected Asian countries will be analyzed by conducting the necessary econometric techniques.

Table: Results of Descriptive Statistics

	TOR	ICT	PHI	MEXP	GS	PS
Mean	8.834781	12.44474	687.9622	2.070534	-0.06451	-0.85299
Median	5.415	7.709816	255.4882	1.995502	-0.02481	-0.80797
Maximum	49.0112	42.82708	6768.214	4.168723	1.254254	0.566449
Minimum	0.108	-1.38186	1.246333	0.571134	-1.06826	-2.81004
Std. Dev.	9.730513	10.36571	1370.238	0.856205	0.551097	0.781223
Skewness	2.049976	1.223088	3.021258	0.454641	0.331405	-0.33457
Kurtosis	7.366686	3.556444	11.15233	2.745864	2.577962	2.581001
Jarque-Bera	343.8265	60.31178	986.819	8.542366	5.917076	5.973471
Probability	0	0	0	0.013965	0.051895	0.050452
Sum	2032	2862.291	158231.3	476.2229	-14.8371	-196.188
Sum Sq. Dev.	21682.38	24605.6	4.30E+08	167.8771	69.54902	139.7609
Observations	230	230	230	230	230	230

Table 1 shows the descriptive statistics of the variables. The mean value of tourism (TOR) is 8.834781, the mean value of ICT infrastructure (ICT) is 12.44474, the mean value of physical infrastructure (PHI) is 687.9622, the mean value military expenditure (MEXP) is 2.070534, the mean value government structure (GS) is -0.06451, and the mean value political stability (PS) is -0.85299. The maximum value of tourism (TOR) is 49.0112, the maximum value of ICT infrastructure (ICT) is 42.82708, the maximum value of physical infrastructure (PHI) is 6768.214, the maximum value of military expenditure (MEXP) is 4.168723, the maximum value of government structure (GS) is 1.254254, and the maximum value of PS is 0.566449. The minimum value of tourism (TOR) is 0.108, the minimum value of ICT infrastructure (ICT) is -1.38186, the minimum value of physical infrastructure (PHI) is 1.246333, the minimum value of military expenditure (MEXP) is 0.571134, the minimum value of government structure (GS) is -1.06826, and the minimum value of political stability (PS) is -2.81004.

Analysis of Correlation

	TOR	ICT	PHI	MEXP	GS	PS
TOR	1					
ICT	0.377428	1				
PHI	0.196941	-0.13422	1			
MEXP	-0.17613	-0.15941	0.169328	1		
GS	0.421495	0.697191	0.027607	-0.28058	1	
PS	0.200543	0.510643	-0.06771	-0.4014	0.586222	1

Above correlation matrix show positive relationship with all the employed variables, like tourism, ICT infrastructure, physical infrastructure, military expenditure, governance structure and political stability. ICT infrastructure strongly and positively correlated with tourism, PS political stability moderately correlated with tourism, physical infrastructure, military expenditure, governance structure positively correlated with tourism. To check the multicolinearity used the correlation matrix.

The null hypothesis is shown in the table's first column for potential rejection at various levels of significance. The observations are displayed in the second column, the F statistic is shown in the third, and the probability value is shown in the fourth. Because of the probability worth, i.e. the worth of GDP does Granger because DI is 0.0367. It indicates that gross domestic product has optimistic effect on DI. Ithas a unidirectionalrelationship with the GDP. Similarly, REMIT has positive impact on GDP. There is a bi-directional relationship between REMIT and GNE in the long run. While TRADE has positively related to the REMIT in the long run.

Variance Inflation Factors

Variable	VIF
ICT	2.165778
PHI	1.148444
MEXP	1.285801
GS	2.463022
PS	1.775577

Variance inflation factors are also used to test for multicolinearity, and is generally recommended that the VIF not exceed 10.

Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.783566	Prob. F (2,215)	0.1705
Obs*R-squared	3.721082	Prob. Chi-Square (2)	0.1556

The probability value is greater than 5% so there is no autocorrelation in the data.

Heteroskedasticity Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	11.05211	Prob. F (8,210)	0.5978

This result show that F-statistic 11.05211. The p-value of the Breusch-Pagan-Godfrey is 0.5978, which is greater than 0.05 that show there is no hetro exist in the data.

Redundant Fixed Effects Test

Effects Test	Statistic	d.f	Prob
Cross Section F	4.196439	-9,200	0.0001
Cross Section Chi-Sq	38.05513	9	0.0000

Redundant fixed effect is the test to select the criteria between the two methodologies, first is common constant method and second is fixed effect method. If the probability value is less than 5% than used fixed effect method. The probability value of cross section chi square is less than 5%, which shows that the fixed effect method is more appropriate for the analysis. A fixed effect method will be used after checking the Hausman testmethod and second is fixed effect method. If the probability value is less than 5% than used fixed effect method.

Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f	Prob
Period Random	48.90228	10	0.0001

If the Hausman test value is less than 0.05 then move towards fixed effect.

Results and Discussion

Moderating Role

Variables	**Coefficient**	**t-Stat**	**Prob.**
ICT	-0.02136	-3.68198	0.0003
PHI	0.000756	4.245318	0.0000
MEXP	-0.57663	-4.24548	0.0000
PS	-0.23451	-2.9716	0.0033
GS	0.061562	8.523308	0.0000
PS*ICT	0.004889	0.671391	0.0027
PS*PHI	-0.00056	-2.05817	0.0409
PS*MEXP	-0.35967	-2.6363	0.009
PS*GS	-0.21586	-1.27788	0.2028
R-squared	0.997016	**Durbin-Watson stat**	2.149552
Adjusted R-squared	0.996796	**F-statistic**	4543.776
Prob (F-stat)	0.000000		

This table shows that the coefficient value of ICT is -0.01252 and the probability value is 0.3071 is less than 5% means that one unit change in ICT will make -0.012 unit change in tourism. The meaning of this result is that the country has a negative impact of ICT on the tourism in selected Asian countries. The coefficient value of PHI is 0.000641 and the probability value is 0.019 is less than 5% means that one unit change in PHI will make 0.0006 unit change in tourism. The meaning of this result is that the country has a positive impact of PHI on the tourism in selected Asian countries.

The coefficient value of MEXP is -0.80174 and the probability value is 0 is less than 5% means that one unit change in MEXP will make -0.801 unit change in tourism. The meaning of this result is that the country has a negative impact of MEXP on the tourism in selected Asian countries. The coefficient value of GS is 1.729903 and the probability value is 0 is less than 5% means that one unit change in GS will make 1.729 unit change in tourism. The meaning of this result is that the country has a positive impact of GS on the tourism in selected Asian countries. The coefficient value of PS is 0.406714 and the probability value is 0.12 is less than 5% means that one unit change in PS will make 0.406 unit change in tourism. The meaning of this result is that the country has a positive impact of PS on the tourism in selected Asian countries.

The coefficient value of interaction effect (PS*ICT) is 0.004889 and the probability value is 0.0027 is which is less than 5% means that one unit change in (PS*ICT) will make 0.004889 unit change in tourism. The meaning of

this result is that the country has a positive impact of (PS*ICT) on the tourism in selected Asian countries.

The coefficient value of interaction effect (PS*PHI) is -0.00056 and the probability value is 0.0027 is which is less than 5% means that one unit change in (PS*PHI) will make -0.00056 unit change in tourism. The meaning of this result is that the country has a negative impact of (PS*PHI) on the tourism in selected Asian countries.

The coefficient value of interaction effect (PS*MEXP) is -0.35967 and the probability value is 0.009 is which is less than 5% means that one unit change in (PS*MEXP) will make -0.35967 unit change in tourism. The meaning of this result is that the country has a negative impact of (PS*MEXP) on the tourism in selected Asian countries. The coefficient value of interaction effect (PS*GS) is -0.21586 and the probability value is 0.2028 is which is greater than 5% means that it has no effect on the tourism. This result indicate, PS*GS is statistically insignificant.

Conclusion

This article investigates the relationship between tourism and economic growth of the selected Asian countries. The research aimed to find out whether political stability influences economic growth. The countries examined were carefully selected from the World Bank database, in the study panel data was used. The main objective of this study is to investigate the impact of political stability, governance structure, military expenditure, physical and ICT infrastructures upon tourism in an emerging economy. Ordinary least square (OLS) approach to cointegration and dynamic confirmed the relationship among variables. Tourism is the fastest growing economic sector. In many developing/middle-income countries across the world, the tourism industry has emerged as a significant source of revenue.

There is a study that a strong tourist industry may have positive impact on economic growth and development countries. In many countries, tourism is a significant mechanism for economic growth and the creation of employment opportunities. The fact that tourism contributes to economic growth and development is one of the main reasons governments encourage and promote it across the world. This study examines how the governance structure, military expenditures, political stability, physical and ICT infrastructure affect tourism in a growing economy. The governance structure has a positive impact on tourism. Construction of transportation infrastructure is closely related to the development of tourism industry. The tourist chooses different forms of tourism traffic according to local conditions for several travel needs, such as: roads, rail, aviation, water etc. Tourism trends are changing around the world, and ICT infrastructure has become an important part of tourism industry. Network reporting at tourist destinations rises the online presence and helps to attract tourists and enhance tourism activities. Websites of tourist destinations are expected to provide all the important information and tourism apps (mobile applications) should have the information of tourist places, hotels, buses and railways and all other important information that are believed to play an vital role in tourism development and provide ease to tourists. The fact that tourism contributes to economic growth and development is one of the main reasons governments encourage and promote it across the world. The governance structure of a country may nourish economic and tourism activities. Well-structured governance supports tourism industry, but poor governance obstructs the growth of tourism industry. The governance structure has a positive impact on tourism. We focus closely on its view of tourism as a force for peace and political. Different researchers suggest that political stability is also necessary for an economy to develop and sustain its tourism industry. Strong institutions and political stability create a favorable environment for tourism-related investment by remittance-receiving households. Therefore, countries having political stability and strong financial mechanisms might direct their remittances towards productive sectors of the economy. Future studies can investigate narrowing tourism to religious tourism also provides an attractive area for researchers to work on and discover. And the impacts of

different governance indicators on tourism could be investigated.

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