THE IMPORTANCE OF INFRASTRUCTURE DEVELOPMENT IN TOURISM INDUSTRY: REVIVAL STRATEGY IN POST COVID-19 PANDEMIC PERIOD

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ABSTRACT

Covid-19 pandemic has played havoc and affecting the social and economic life of people across the globe. The consequences of more bans on travel and trade and isolation from the international community are the severe shocks to the struggling economy. The high level of public fear, anxiety, rumors and misperceptions crippling the growth of the economy and uncertainties on future course of the pandemic restrict people to travel. India has been witnessing continuing growth in the number of new infections, despite the national or international lockdown with some guidelines. The impact of this pandemic is visible on all sectors of the economy, Travel & Tourism being no exception. On the other hand, Tourism plays a significant role in empowering the social, cultural and also the most important economic status of the country in the global context. It plays a positive role in boosting various economic variables like GDP, Foreign exchange earnings, employment generation, Balance of Payment etc.

India's geographical and cultural diversities, rich historical past, friendly citizens, best resources, programs and activities always attract people for visit. It however fares poorly on Infrastructure like Airport density, road quality, number of hotel rooms, number of ATMs (automated teller machine) etc. Infrastructure development is indispensable and acts as an economic pillar in the tourism industry. A good infrastructure creates the "destination pull demand" in the country and increases the tourist's arrival. So there is a need of development and promotion strategies & objectives during post pandemic period, which stimulate the long term and well integrated growth of Tourism industry. Thus, gravity framework is needed to evaluate the importance of infrastructure development, which is significant determinant of tourism inflows in India.

The present paper is mainly directed towards estimating India's potential in the growth of tourism sector after pandemic crises and giving suggestions on ways to improve it further.

Keywords: Tourism, International tourist's arrival, GDP, International tourism receipts, Employment generation, Air Transport Infrastructure, Ground & Port Infrastructure and Tourist Service Infrastructure.

INTRODUCTION

According to McIntosh, Robert W., Goeldner and Charles R. (1986) [1]Tourism is the sum of the phenomena and relationships arising from the interaction of tourists, business suppliers, host governments and host communities in the process of attracting and hosting these tourists and other visitors.

Tourism plays a significant role in empowering the social, cultural and also the most important economic status of the country in the global context. According to Matias, Nijkamp & Neto(2007)[2] "Tourism has been a major growth industry globally for over five decades. Factors underpinning this growth include the growth of incomes and wealth, improvements in transport, changing lifestyles and consumer values, increased leisure time, international openness and globalization, immigration, special events, education, information and communication technologies, destination marketing and promotion, improved general and tourism infrastructure and so on".

Tourism infrastructure is the basis of tourism development, as well as a base for utilization of destination resources. For tourists to be able to reach some tourist destinations there should be the developed transport infrastructure, which is a precondition for consuming other tourism services of the destination itself. The arrival of tourists enhances the efficiency of human resources at the destination, as tourists require certain services in order to feel better during their stay at the selected tourist destination. In particular, there is an increase in the demand for infrastructure services in terms of water supply, waste disposal, communication and electricity supply, as the necessary elements for comfortable functioning of tourists at the selected destination.[3]

Table no.1: The contribution of Tourism industry in world economy.

S.No.	Contribution Of Tourim In World	TOTAL
1.	**International Tourist Arrival In 2018** ➢ **Most Visited Country**	1.4 billion (Annual growth 5.4%) France (89.4 million)
2.	**Fee From Tourism In World 2018 (Self Calculated)**	1.45 trillion USD
3.	**Travel & Tourism Industry Gdp In 2019**	8.9 trillion USD (10.3% of total global economy GDP)
4.	**Travel & Tourism Industry Employment In 2019**	330 million (1 in 10 jobs around the world)
5.	**Visitors Exports In 2019**	1.7 trillion USD (6.8% of total exports and 28.3% of

		global service exports)
6.	**Capital Investment In 2019**	948 billion USD (4.3 % of total investment)

Source: World travel & Tourism council, Travel & Tourism global economic impact & trends 2020 report

Table no.2: The following table shows the contribution of Tourism industry in Indian economy.

S.No.	Contribution Of Tourim In World	TOTAL
1.	**International Tourist Arrival In 2018** • **India's Rank In World** • **India's Rank In Asia Pacific Region**	17.42 million (Annual growth 3.7%) 22nd (1.24% share in world) 7th (5.05% share in Asia pacific region)
2.	**Fee From Tourism In India 2018** • **India's Rank In World** • **India's Rank In Asia Pacific Region**	28586 million USD 13th (1.97%) 7th (6.60%)
3.	**Travel & Tourism Industry Gdp In 2019**	96427.4 million USD (3.6% of total GDP)
4.	**Travel & Tourism Industry Employment In 2019**	2,67,41700 (5.1% of total employment)
5.	**International Tourism Inbound Receipts In 2019**	27,365.1 million USD

Source: Indian tourism statistics 2019, Indian tourism statistics at a glance, World Travel & Tourism Competitiveness Index 2019 report

When Tourism growth is considered as dependent variable then its depends upon various factors like infrastructure development, safety and security, environment, natural and cultural resources etc. and when tourism growth is considered as an explanatory variable then the growth of tourism influence the growth of the macro variables like GDP, FEE, Balance of payment and employment generation etc. hence Tourist's arrival is vital for the survival of Tourism industry.

Infrastructure plays an important role in the development of the country. It has strong backward and forward linkages and thus acts as a major driver of growth across the economy. The creation of road networks, electricity generation and distribution networks, creation of telecommunication facilities,

construction activities, banking and financing, etc. in the first instance leads to the generation of livelihood opportunities to the vast skilled as well as unskilled labor force.

In light of its importance it is required to highlight the impact of Air Transport Infrastructure, Ground & Port Infrastructure and Tourist Service Infrastructure on International tourist's arrival.

OBJECTIVES OF THE STUDY

1. To study the impact of Infrastructure development on the growth of tourism in the country.

2. To draw the attention of a policy makers and economists towards the importance of Infrastructure development in the tourism industry after post pandemic period.

HYPOTHESIS

To fulfill the above objectives, a Hypothesis has been framed.

H0: There is no significant impact of Infrastructure development on the growth of tourism.

H1: There is significant impact of Infrastructure development on the growth of tourism.

METHODOLOGY

Data source: The present study mainly based on secondary data only. The secondary data is collected from reports like Travel and tourism competitiveness index repots and journals, websites etc.

The present study includes cross section data of tourism promoting factors (Infrastructure development) in the Asia Pacific Region to establish the relationship between the variables and giving suggestions on ways to improve it further.

According to World Economic Forum Travel & Tourism Competitiveness Index report (2019)[1] Tourism as depends upon the set of factors and policies that enable the sustainable development of the travel and tourism sector. It comprises of 4 sub-indexes, 14 pillars & 90 individual indicators, distributed among the different pillars. The present paper is mainly focused on the impact of tourism enabling factors on the growth of Tourism with the help of Air Transport Infrastructure, Ground & Port Infrastructure and Tourist Service Infrastructure indexes in Asia Pacific Region and also India's status in the World context.

Variables: It is noted that to measure the growth of Tourism, International tourist arrival is taken as a proxy variable. The Data regarding the International tourist arrivals has been taken in log form to compress for analysis.

Here International tourist arrival (X) is taken as dependent variable and Air transport infrastructure (A), Ground & port infrastructure (B) and Tourist service infrastructure (C) are as independent variables. In Air transport infrastructure index, six individual indicators are included. These are Quality of air transport infrastructure, Available seat kilometers (domestic), Available seat kilometers (international), Aircraft

departures, Airport density, Number of operating airlines. In Ground & port infrastructure index, seven individual indicators are included. These are Quality of road infrastructure, Road density, Paved road density, Quality of Railroad infrastructure (survey question), Railroad density, Quality of port infrastructure, Ground transport efficiency. In Tourist service infrastructure index, four individual indicators are included. These are Hotel room (number per 100 populations), Quality of tourism infrastructure, Presence of major car rental companies, Automated teller machine

Analysis tools: The semi-log regression model has been taken in this paper. The descriptive statistical tools like mean, standard deviation, percentage and coefficient of variation have been taken. And the inferential statistical tools like correlation, regression analysis both simple and multiple and significance will be tested at 5% level of significance by tests like t-test, F-test and ANOVA have been taken in this paper.

Sample size (N): 22 Asian countries

Table 3: List of Asian Countries And International Tourists Arrival & Score in Air Transport Infrastructure, Ground & Port Infrastructure and Tourist Service Infrastructure in 2019

Asian Countries	International Tourists Arrival In Million (X)	Air Transport Infrastructure (Y₁) Values In 1-7(Best)	Ground & Port Infrastructure (Y₂) Values In 1-7(Best)	Tourist Service Infrastructure (Y₃) Values In 1-7(Best)
Australia	8815300	6	3.6	6.1
Bangladesh	125000	2.0	3.5	1.9
Brunei Darussalam	259000	3.3	3.8	4.0
Cambodia	5602200	2.3	2.5	3.2
Chaina	60740000	4.3	3.9	3.5
Hong Kong Sr	27884500	5.6	6.4	4.3
India	15542900	4.2	4.5	2.8
Indonesia	12948000	3.9	3.3	3.1
Japan	28691100	4.8	6.0	5.7
Koria, Rep.	13335800	4.6	5.2	5.6
Lao Pdr	3256800	2.4	2.5	3.4
Malasiya	25948500	4.6	4.5	4.5
Mongolia	469300	2.2	2.2	2.9

Nepal	940200	2.3	2.0	2.2
New Zealand	3555000	4.9	3.8	5.8
Pakistan	965500	2.2	3.3	2.7
Philippines	6620900	3.2	2.8	3.6
Singapore	13907500	5.5	6.4	5.1
Sri Lanka	2116400	2.8	3.7	3.3
Taiwan, Chaina	10739600	3.9	5.1	4.8
Thailand	35482500	4.6	3.3	5.9
Viet Nam	12922200	3.4	3.0	2.8

Source: World economic forum travel & tourism competitiveness index reports 2019

ANALYSIS

a. Dependent Variable: $\log(X)$

b. Predictors: (Constant) Y_1, Y_2, Y_3

c. Regression model $[\log(X) = \alpha + \beta_1 Y_1 + \beta_2 Y_2 + \beta_3 Y_3]$

Table No 4: Output of the square Semi-logarithmic regression for study area as a whole

MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					F Change	**df1**	**df2**	**Sig. F Change**
1	0.714	0.510	0.428	0.55091	3.277	3	18	0.0042

ANOVA

Model		Sum of Square	Df	Mean Square	F	Sig.
1	Regression	5.692	3	1.897	6.2516	0.0042
	Residual	5.463	18	0.303		
	Total	11.155	21			

COEFFICIENTS

Model		Unstandardized Coefficients		t-value	p>t
		Coefficients	Std. Error		
1	(Constant)	5.2766	0.434	12.16	4.023
	Air Transport Infrastructure (Y_1)	0.515	0.198	2.59	0.019
	Ground & Port Infrastructure (Y_2)	-0.351	0.135	-0.26	0.798
	Tourist Service Infrastructure (Y_3)	-0.085	0.157	-0.54	0.595

The first part of the table displays the descriptive statistics. The total numbers of observations are

22. The R^2 (the coefficient of determination) value of 0.510 means about 51% of the variation in International tourists arrival in Asian countries are explained by these three independent variables. Here R^2 is an increasing function of the number of explanatory variables. It means, if one adds an additional variable in the model, the R^2 values increases. This is also called the game of "maximizing" R^2 i.e. higher the R^2, better the Model (DamodarGujrati 2011). The term "adjusted" means adjusted for the degrees of freedom, which depend on the number of regressors or explanatory variable in the model. The value of adjusted R^2 is 0.428, which is lower than value of unadjusted R^2. The test of regression coefficients (test of the overall significance) was carried out by F-test (Analysis of Variance) or P-value of F-test. The null hypothesis was formulated as there exists difference among all regression coefficients (H 0: $\beta_i = 0$) or all slope coefficients in the square Semi-logarithmic regression are simultaneously equal to zero. The F value is 6.252, but its P-value (0.0042) is low. It concluded that the null hypothesis is strongly rejected. It means all coefficients of variables in the square Semi-logarithmic regression are not simultaneously equal to zero. Thus the overall model is significant at 1 % level of significance.

In the above coefficient table, the explanatory variables, their estimated coefficients, the standard errors of coefficients, the t-statistic of each coefficient, which is simply the ratio of estimated coefficient divided by its standard error, and the P-value or the exact level of significance of the t-statistic.

The null hypothesis for each coefficient is that the population value of the coefficient (β_i) is zero i.e. the dependent variable is not influenced by the particular independent variable, when other independent values are constant. The smaller the P value the greater the evidence against the null hypothesis.

On the basis of output of this regression model, only one variable i.e. Y_1 is significant variable at 5% level of significance (P-value=0.05). It means the reliability of Air transport infrastructure positively influence the International tourists arrival. If the quality and extent of Air transport infrastructure improved then the International tourist's arrival increases.

Note- However only one variable (Y_1) is significant at 5% level of significance. But the other independent variables are also co-related with International tourist's arrival and there is some impact of these variables on International tourist's arrival.

CONCLUSION

Tourism development affects the progress and prosperity of the national economy. Investment in modernization of infrastructure is the important component of successful tourism development which leads to distribution of tourism services (especially in remote destinations) and give path for the existence on the tourism market.

India as a tourist destination is becoming popular due to presence of various enabling factors but due to lack of Infrastructure development, its growth is comparatively slow compared many countries like Spain[4] has topped the World Economic Forum ranking of countries best equipped to welcome tourist in 2019. The Travel & Tourism Competitiveness Report 2019[5] gives an overall rank of 34th to India out of 140 countries. It fares good in Quality of air transport available seat kilometres (3rd in domestic, 16th in international), Number of operating airlines (19th), Road density (19th), Paved road density (24th), Quality of railroad infrastructure (23rd), Ground transport efficiency (33rd), Railroad density (37th), Quality of roads (51st), Quality of port infrastructure (51st), Quality of air transport infrastructure (57th). But certain other parameters, which although have seen improvement, but have negatively impact India's rank are Quality of tourism infrastructure (74th), Presence of major car rental companies (95th), Aircraft departures (98th), Automated teller machines per adult population (102nd), Tourist Service Infrastructure (109th), Airport density (135th) and Hotel rooms (142nd) etc.

SUGGESTIONS

Infrastructure, transportation facilities, road network, and environment are key factors of the tourism sector which significantly contribute to the economy. Improvement of these factors is the need of the hour.

According to the World Travel and Tourism Council (WTCC), the Covid-19 pandemic is likely to cost the tourism industry almost 22 billion USD and a loss of almost 50 million jobs worldwide. Therefore, it comes as no surprise that the tourism in India has witnessed a significant decline post covid. It can be anticipated that the following years might be tough for the hospitality industry with no definite. This has caused an unpredictable market crisis that any of the sectors has ever witnessed.

Though the pandemic is not completely over, the unblocking has started across the globe with some precautions & guidelines. Markets, malls, parks and all such public places have been allowed to operate with some constraints. People have started stepping out and travelling with precautions. The tourism sector is now recovering, but it needs some appropriate approach to make it recover fast. It is an important time for

Indian tourism industry to make a move towards adopting a more sustainable, hygienic, and responsible form of tourism. This period can be seen as an opportunity also to improve the infrastructure, road & communication network etc. It increases the employment level as well as the economic condition of the country. It also increases the attractiveness of Indian tourism industry. If India utilizes the opportunity to enhance and upgrade its tourism sector then we may witness higher growth trends in tourism inflows which will boost up the economy, directly or indirectly.

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