

AN EMPIRICAL EVALUATION OF TOURIST ARRIVAL IN THE STATE OF BIHAR, INDIA.

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Abstract

This paper tends to analyze the tourist footprint in Bihar from the year 2001 to 2018. The findings of this paper support that there is a significant and positive increase in domestic and foreign tourist arrivals in the state. Paper also reveals that 71 percent of total tourist arrivals in the state take place in its ten major regions i.e. Patna, Gaya, Bodhgaya, Bihar, Rajgir, Nalanda, Raxaul, Munger, Vaishali, Muzaffarpur, and Bhagalpur. Moreover, from Jan 2015 to Dec 2018, Gaya, Bodhgaya, and Rajgir account for the highest number of foreign arrivals whereas Patna, Gaya, and Rajgir account for the highest number of domestic tourist arrivals. The findings of this paper significantly help the state tourism sector and stakeholders to develop and adopt the best strategies for the overall development of Bihar tourism. The study has further research scope, in terms of attempting the same by enlarging the database, organization wise and across different organization.

Keywords: Bihar, Tourism, Tourist Arrival, Gross Development Product, Secondary Data.

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INTRODUCTION

Bihar is known for its rich culture and glorious history. It is famous for its religious sites and its ancient civilization. This state offers a vast option to the tourists in terms of antiques and artifacts, historical monuments, architecture, cultural diversities, festivals and fairs, yoga, eco-tourism, art and crafts beside a unique cuisine. Looking at the scope and prospect of tourism in the state, the government has taken many initiatives in this field. The government has identified 900 tourist spots and is planning to develop them as a tourist place. The state government is also working on a 20-year master plan for the development and promotion of tourism in the state (www.bstdc.bih.nic.in). The master plan will envisage the selection of tourist sites in all the 38 districts of the state. The tourism council would be constituted under each district administration for better monitoring and execution. The government is also encouraging the private sector to participate in maintenance of cultural and historical heritage sites with an aim to promote tourism. Under the Kaushal Yuva program, the state government has tied up with Sector Skill Councils for the skill development among youths (www.gov.bih.nic.in). Under the central government Swadesh Scheme, the Buddhist circuit has been identified as one of the thematic circuits for development under this scheme the ministry sanctioned Rs 33.17 crore for the construction of cultural center at Bodhgaya. A project of Rs. 41.53 crore had been recently completed for the development of Patna Sahib. Similarly, the development of the Kanwariya path and Jain circuit is also under process. The central government has also sanctioned Rs 50 crore for the Gandhi circuit. This all efforts only be materialized, if we have a clear understanding of tourist arrivals in the state. Thus, this paper examines the performance of tourist's arrival in the state from 2001 to 2018.

The present study is conducted in order to full fill the following objectives:

- To analyze changes in total tourist arrivals between 2001 to

2009 and 2010 to 2018.

- To analyze changes in domestic and foreign tourist arrivals in Bihar from the year 2001 to 2018.
- To analyze the top regions of Bihar in terms of tourist arrivals.

LITERATURE REVIEW:

Tourism leads to the economic development of a state via the stimulation of employment generation, domestic consumption, foreign exchange earnings and enhancing Gross Development Product (GDP). It is one of the prominent sources of foreign exchange earnings, especially for those countries which are less developed. There are many studies that depict the unidirectional causal relationship between tourism and revenue generation. According to Robert (2010), the tourism sector is one of the major export for 83 percent of developing countries and it is also a significant source of foreign exchange earnings after petroleum. Cores & Vanegas in 2008, states in their study that tourism helps in for economic diversification, income generation and preserve heritage value. Modeste (1995), found that tourism plays a significant role in economic growth via the stimulation of generation of foreign exchange earnings, domestic consumption, creation of employment and generation of further income through tourism flow on and perk - up effects. Honey and Gilpin (2009), states that tourism has a snowball effect on economic growth as the development of a new tourism destination attracts new business. Studies also reveal that income which we generate through tourism is not that easy to measure and this is because of the multiplier effect nature (Clarke et al,2009; Brida et al, 2010; Rastegar, 2010). The flow of revenue or income generated by tourist spending goes through various sections of the economy (Dritsakis, 2008; Boopen,2006). Caglayan, Sak and Karymshakoy (2010), study the empirical relationship between tourism and economic growth. The result of the study reveals that there is a unidirectional causality relationship between tourism revenue

and gross domestic product in Latin America, America and the Caribbean. For Asia, the Middle East, Sub-Saharan Africa, Central Asia and North Africa, revenue direction of causality was the case. Kadiloy (2010), used a generalized least square panel data model and concludes that there is a positive relationship between tourism and GDP. The study also states that apart from the positive impact on GDP tourism revenue also affects poverty reduction and food security. A study conducted by Francois (2011), reveals that both domestic and international tourism is an important component of the economic stimulus program, especially during the economic crisis. Hall (1995), also states that the most important reason why the government of many countries particularly in developing countries encourages tourism investment because of economic development. It is also stated and argued by many researchers that tourism should be considered as a means of development in a broader sense (Cooper et al., 1998; Wahab & Pilgram, 1997; Krapf, 1961; Kaiser & Helber, 1978; Murphy, 1985, Mc Intosh et al., 1995, Mathieson & wall, 1982). Caerter (1991), states in his study that there is a cumulative relationship between Economic development and tourism development. According to Lanza and Pigliaru (2000) small states develop faster through tourism as compare to large states when they are specialized in tourism. Glasson et al., (1995), states that the tourism industry can act as a catalyst for national and regional development, bringing employment, enhance infrastructure developments, benefiting locals and visitors and increase foreign exchange earnings. Many researchers state that tourism

expenditure in a country is an alternative form of export which brings many favorable opportunities in form of improving a country's balance of payment generate tax revenues and favor employment (Usual Gitelson, 1994; West, 1993; Davis, Allen & Consenza, 1988; Archer, 1995). In short, tourism can bring forth many benefits and favor a country's economy through its positive influence by way of spillovers and other externalities (Marin, 1992). The review of literature shows the importance of tourism in terms of economic development, revenue generation, employment generation, domestic consumption, foreign exchange earnings and enhancing GDP. Also, the scope of most of the existing research studies of Bihar tourism are limited to either religious tourism, specially Buddhism or tourist's circuits of Bihar. Also, there are very less studies, which deals the tourist arrival in Bihar and its different regions. Thus, there lies a research gap.

RESEARCH METHODOLOGY

The study is Descriptive cum Quantitative and is based on secondary data of Bihar tourism. IBM Statistical Package for the Social Sciences (SPSS) Version 20 is used to conduct data analysis. To achieve our objectives, data is collected from Bihar tourism official website (bhiartourism.gov.in/data.html). Data of tourists arrival from year 2001 to 2018 is shown in table 1. Month wise (from Jan 2015 to Dec 2018) , cumulative average percentage of tourist arrivals of top ten tourist arrival places is shown in table 2.

Table : 1 : Total Number Of Tourists Visited Bihar From 2001 To 2018

Year	Domestic Tourists	Foreign Tourists	Total Number Of Tourists
2001	6061168	85673	6146841
2002	6860207	112873	6973080
2003	6044710	60820	6105530
2004	8097456	38118	8135574
2005	6880685	63321	6944006
2006	10670268	94446	10764714
2007	10352887	177362	10530249
2008	11889611	345572	12235183
2009	15784679	423042	16207721
2010	16042725	540686	16583411
2011	18397490	972487	19369977
2012	21447099	1096933	22544032
2013	21588306	765835	22354141
2014	22544377	829508	23373885
2015	28029118	923737	28952855
2016	28516127	1010531	29526658
2017	32414063	1082705	33496768
2018	33621613	1087971	34709584

Source : Bihar Tourism Official Website (bhiartourism.gov.in/data.html)

Table : 2 : Cumulative Average Percentage Of Tourist Arrivals Of Top Ten Tourist Arrival Places of Bihar

YEAR	TOTAL NUMBER OF TOURISTS ARRIVAL FROM 10 REGIONS	TOTAL NUMBER OF TOURIST ARRIVALS	% age	YEAR	TOTAL NUMBER OF TOURISTS ARRIVAL FROM 10 REGIONS	TOTAL NUMBER OF TOURIST ARRIVALS	% age
Jan-15	2102750	2109163	99.69	Jan-17	3880978	3881639	99.98
Feb-15	1175743	1177071	99.88	Feb-17	1502790	1503500	99.95
Mar-15	1116815	1121705	99.56	Mar-17	1406486	1406486	100
Apr-15	934326	934531	99.97	Apr-17	1137375	1137375	100
May-15	709249	709878	99.91	May-17	939610	939610	100

Jun-15	1643048	1643692	99.96	Jun-17	994467	994467	100
Jul-15	2864628	2864826	99.99	Jul-17	1996108	5163931	38.65
Aug-15	1151076	4049434	28.42	Aug-17	1094268	1094268	100
Sep-15	1035899	1035899	100	Sep-17	1879646	2673512	70.30
Oct-15	1895748	2043827	92.75	Oct-17	1445126	5894848	24.51
Nov-15	1475625	3612391	40.84	Nov-17	1273094	5126454	24.83
Dec-15	1657508	7650438	21.66	Dec-17	2818749	3680678	76.58
Jan-16	2088991	2089363	99.98	Jan-18	1772944	1772944	100
Feb-16	1356890	1357526	99.95	Feb-18	1474814	1491653	98.87
Mar-16	1205864	1242364	97.06	Mar-18	1354011	1372078	98.68
Apr-16	1036139	1036358	99.97	Apr-18	1203320	1222585	98.42
May-16	841309	884003	95.17	May-18	1939091	1959556	98.95
Jun-16	811596	811799	99.97	Jun-18	2580255	2601944	99.16
Jul-16	1551102	1551863	99.95	Jul-18	1693612	1716993	98.63
Aug-16	1273816	4451280	28.61	Aug-18	1557623	5225979	29.80
Sep-16	944484	1933888	48.83	Sep-18	1330860	2123506	62.67
Oct-16	1120538	4668203	24.00	Oct-18	2123119	2150984	98.70
Nov-16	1395876	4089538	34.13	Nov-18	1551665	1578425	98.30
Dec-16	2467020	5410473	45.59	Dec-18	1881041	11492937	16.37

Source : Bihar Tourism Official Website (bhiartourism.gov.in/data)

➤ **Method of approach for first objective :**

The first objective is to analyze changes in total tourist arrivals in between 2001-2009 and 2010 - 2018. For this objective we have collected data from Bihar tourism official website (bhiartourism.gov.in/data.html). Data of tourists arrival from year 2001 to 2018 is shown in table 1. To achieve this objective we have formulated hypothesis statement i.e. Tourist arrival in between 2001 - 2009 and 2010 - 2018 is not changed.

- Ho : There is no significant change between total number of tourists arrivals in between 2001 to 2009 and 2010 to 2018
- Ha : There is a significant change between total number of tourists arrivals in between 2001 to 2009 and 2010 to 2018

Descriptive statistics of total number of tourists arrival, depicts that the said variable is normally distributed as the Skewness / Standard error value lies in between -1.96 to + 1.96 at 0.5 significance level. Also, the P- value of Kolmogorov- Simironov and Shapiro- Wilk test is more then .05, which shows our data follow a normal distribution. But, the result of Levene's statistics is less than .05 , which depicts an unequal variance between the groups. Therefore, we have used a non parametric test i.e. Mann- Whitney U test to test our null hypothesis. Test result of Mann Whitney U test (Table 3), shows that the significant value is less than .05. Which means , we are fail to accept our null hypothesis. Thus, there is a significant change between total number of tourists arrivals in between 2001 - 2009 and 2010 - 2018.

Table 3 : Test Statistics of Mann- Whitney U

	Total number of tourists arrivals (2001 to 2018)
Mann-Whitney U	.000
Wilcoxon W	45.000
Z	-3.576
Asymp. Sig. (2-tailed)	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 ^b

a. Grouping Variable: Year
b. Not corrected for ties.

Bar graph shown in Figure 1, depicts that the mean value of tourist arrivals from 2001-2009 and 2010 - 2018 has increased from 9338100 to 25656812.

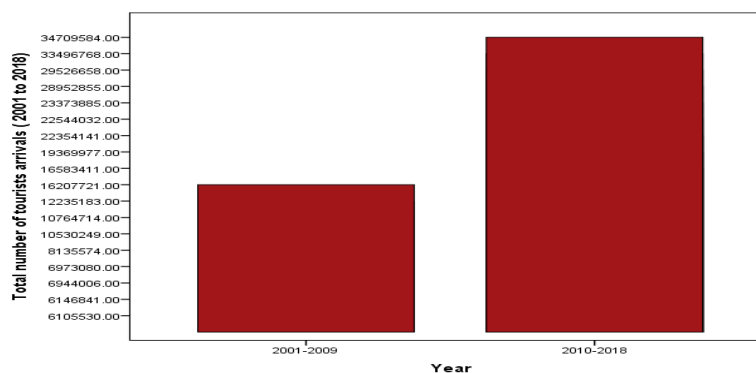


Fig : 1 : Bar graph representation of Total number of Tourist arrivals from 2001 to 2018

- **Method of approach for second objective :**
The second objective is to analyze changes in domestic and foreign tourist arrivals in Bihar from year 2001 to 2018 . Data of tourists arrival from year 2001 to 2018 is shown in table 1. To achieve this objective we have formulated hypothesis statement i.e. Domestic and Foreign tourists arrivals in Bihar is not changed from year 2001 to 2018.
- **Ho :** There is no significant difference between Domestic and Foreign tourists arrivals in Bihar from 2001 to 2018.

- **Ha :** There is a significant difference between Domestic and Foreign tourists arrivals in Bihar from 2001 to 2018.

Normality and Descriptive Statistics of variables , depict that our data is not normally distributed. Therefore , we have used a non parametric test i.e. Mann - Whitney U , to test our hypothesis. Result of this test (Table 4) shows that P value is less than .05 . Thus , we will accept our alternative hypothesis i.e. there is a significant difference between Domestic and Foreign tourists arrivals in Bihar from 2001 to 2018.

Table 4 : Test Statistics of Mann Whitney U

	Tourist Arrival (2001 to 2018)
Mann-Whitney U	.000
Wilcoxon W	171.000
Z	-5.125
Asymp. Sig. (2-tailed)	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 ^b

Figure 2 , depicts positive increase in Domestic and Foreign tourist arrivals from year 2001 to 2018. It is also clear from the figure that after 2007 onwards there is continuous increase in Domestic Tourists arrivals in the state, where as in case of Foreign Tourist arrivals sudden drop is seen after 2012.

Box plot representation shown in Figure 3 , depicts the median value of Domestic and Foreign Tourist arrivals and their contribution in Total Tourist arrivals from 2001 to 2018. Figure shows that Median value of Domestic and foreign tourist from 2001 to 2018 are 15913702 and 481864 respectively, whereas that of Total tourist arrivals is 16395566. It is also clear from the diagram that total contribution of domestic tourists and Foreign tourists in Total tourist arrivals is 96.94 % where and 3.08 % respectively.

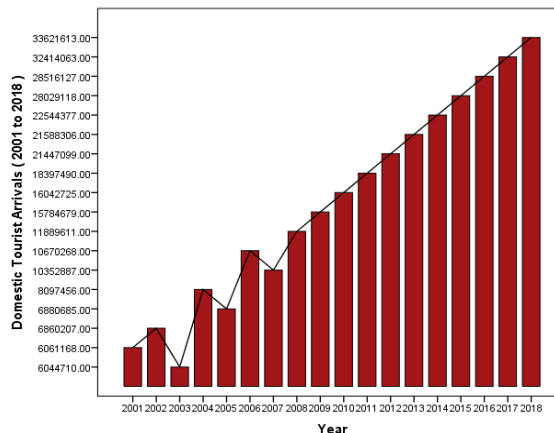


Figure 2: Domestic and Foreign Tourists Arrivals from 2001 to 2018

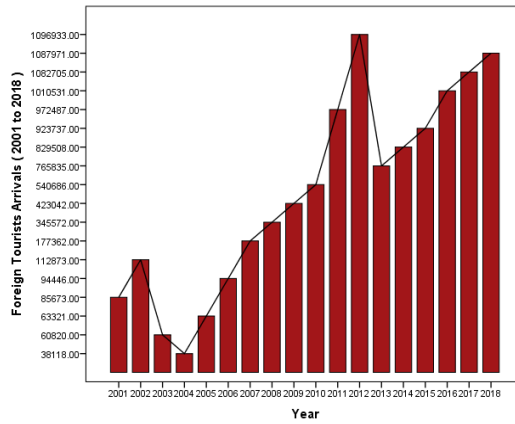
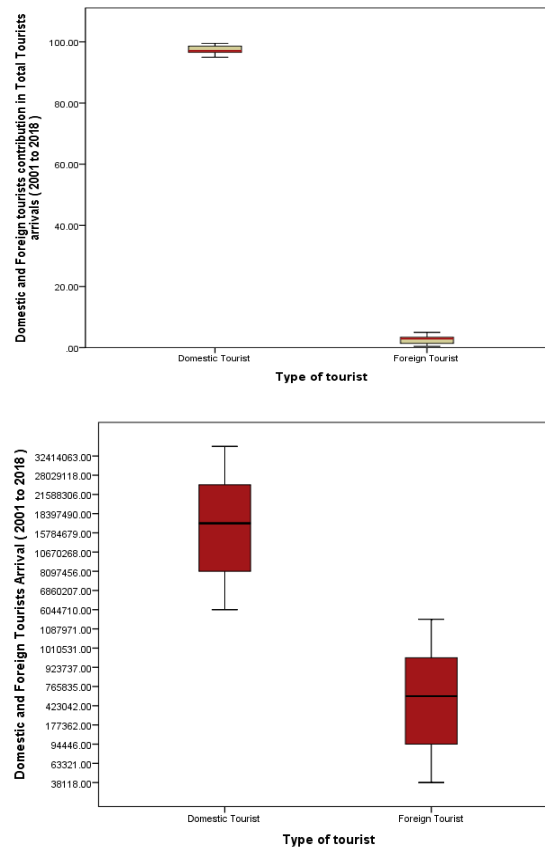


Fig 3: Box plot representation of Domestic and Foreign Tourist arrivals and their contribution in Total Tourist arrivals from 2001 to 2018



➤ **Method of approach for third objective :**

The third objective is to analyze the top regions of Bihar in terms of tourist arrivals. We have taken month wise (from Jan 2015 to Dec 2018) cumulative average percentage of tourist arrivals data of top ten tourist arrivals places of Bihar, shown in Table 2. To achieve this objective we have formulated hypothesis statement i.e. more than 72 percent of total tourist arrivals in Bihar takes place in its ten regions.

- **Ho:** $\mu \leq 72$
- **Ha:** $\mu > 72$

We have used inverse df transformation method (Templeton, 2011) , to make our data normally distributed. Descriptive and

Normality test result, depict that our data follows a normal distribution. We have used One tailed one sample 't' test to test our null hypothesis. Test statistics at 90 % confidence interval depicts that, $t (47) = 1.894$ exceeds of Critical Vale (CV) of 1.678 and has P value .03 , which is less than .05. Therefore, we are fail to accept our null hypothesis . Thus , there is a significant difference between the sample and population mean i.e. sample $\mu > 72$ and hence 72 percent of total tourist arrivals in Bihar takes place in its ten regions. These ten regions of Bihar are Patna, Gaya, Bodhgaya, Rajgir, Nalanda, Raxaul, Munger, Vaishali, Muzaffarpur and Bhagalpur. Fig 4 shows that, from Jan 2015 to Dec 2018 Gaya, Bodhgaya and Rajgir accounts highest number of

Foreign tourists arrivals whereas Patna, Gaya and Rajgir accounts highest number of Domestic tourists arrivals.

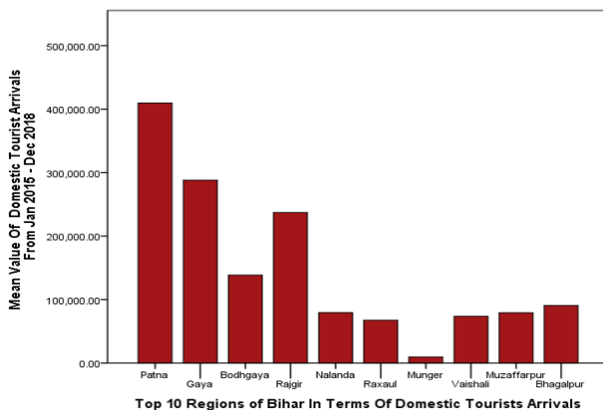
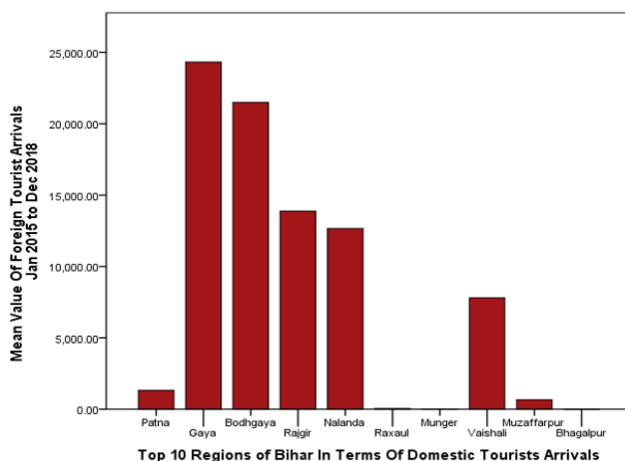


Fig 4 : Mean Value of Foreign and Domestic Tourist Arrivals from Jan 2015 to Dec 2018



FINDINGS, CONCLUSION AND RECOMMENDATION :

The findings of this research work based on research objectives and proposed hypothesis are as follows :

- There is a significantly positive increase in Domestic and Foreign tourist arrivals in the state from year 2001 to 2018.
- Contribution of domestic tourists in total tourist arrival is 96.94 % which is way beyond the foreign tourist arrivals i.e. 3.08 %.
- 72 % of total tourist arrivals in Bihar take place in its ten regions. These regions are Patna, Gaya, Bodhgaya, Bihar, Rajgir, Nalanda, Raxaul, Munger, Vaishali, Muzaffarpur and Bhagalpur.
- From Jan 2015 to Dec 2018, Gaya, Bodhgaya and Rajgir accounts highest number of foreign arrivals where as Patna, Gaya and Rajgir accounts highest number of Domestic tourist arrivals.

Study depicts that there is a significant and positive increase in domestic and foreign tourist arrivals in the state from year 2001 to 2018, which shows the potential of tourism in this state. But, contribution of domestic tourists in total tourist arrivals is way ahead than foreign tourist. Also, it is clear from the data analysis that 71 percent of total tourist arrivals in this state take place in its ten regions. These regions are Patna, Gaya, Bodhgaya, Bihar, Rajgir, Nalanda, Raxaul, Munger, Vaishali, Muzaffarpur and

Bhagalpur. Therefore, significant efforts must be taken to attract foreign tourists and promote existing undeveloped tourist places of the state. Bihar has huge potential for tourism industry and this will directly or indirectly benefits all other primary , secondary and tertiary industries. But due to poor infrastructure, lack of awareness, lack of political will and bad governance this industry is not flourishing in its fullest extent. The study has implications for the tourism industry stakeholders in terms of providing insights to unaddressed challenges of state tourism industry. The study may significantly help the tourism sector to develop and adopt best strategies for the overall development of Bihar tourism. The study has further research scope , in terms of attempting the same by enlarging the data base, organization wise and across different organizations.

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