

## Tale of Chhattisgarh and Madhya Pradesh States : Identical in terms of Geography but Poles Apart in terms of Tourism Development

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### Abstract

Madhya Pradesh and Chhattisgarh were formerly part of a single state Madhya Pradesh. The two states got separated in the year 2000. At the time of division both the states got similar geographical characteristics in their favour. Both states possessed vivid cultural heritage and excessive forest landmass. Madhya Pradesh converted itself as an international tourist destination while Chhattisgarh appears to be a state that has failed completely in transforming itself as a tourist destination despite richer scenic sites and denser forests. The research work determined through Granger analysis that tourism contributes significantly towards Madhya Pradesh state's GDP while in Chhattisgarh the tourism industry's contribution is negligible.

**Keywords:** MP, Forex, Grangers

### Introduction

Tourism is must for Indian economy boost and likewise infrastructure development in the country and investments in tourism sector should continue so that tourism industry prospers in India. Each state in India have its own prospects of tourism and Madhya Pradesh is no exception. Nature has bestowed Madhya Pradesh with vivid scenic beauties, lush green forest areas and extremely diverse biodiversity. Some of the human settlements in Madhya Pradesh that are historic in nature are now world heritage site such as Sanchi. This leads to tremendous prospects of tourism in Madhya Pradesh. As discussed in this research work from beginning itself that primary task of tourism is generation of forex. A tourist visits India with prospects of visiting one or multiple states. Certain states in India observe high tourist footfall and Madhya Pradesh is one of them. Madhya Pradesh due to its scenic beauties and vivid cultural background attracts inbound tourists. Thus, Madhya Pradesh plays a major role in attracting foreign tourists to India and subsequently contributing to generation of forex. The tourism prospects in Madhya Pradesh are still young. Tourism industry took a rocket ride in Madhya Pradesh from year 2003 only when the state government took proper measures to check the depleting forest area and conserve endangered Bengal Tiger. The efforts of government boosted tourism in Madhya Pradesh. It is evident from the analysis that as the tourist footfalls in Madhya Pradesh increases the Forex reserves tend to increase. However, it is necessary to know whether foreign tourist arrivals in Madhya Pradesh Granger causes forex exchange or not. This is necessary to reach to conclusion that tourism improvement efforts by Madhya Pradesh government is contributing significantly towards forex generation for the country or not. If not, what efforts is needed to be put in more so that foreign tourism in Madhya Pradesh starts causing a significant contribution in country's forex.

Chhattisgarh is a state with almost identical geographical characteristics as that of Madhya Pradesh. As like in Madhya Pradesh Chhattisgarh too possess the potential of tourism.

Chhattisgarh is a land rich in anthropology. The state is richer as compared to Madhya Pradesh in terms of scenic beauty and forest density. Despite possessing such cultural and landmass diversity Chhattisgarh is one of the poorest states in India in terms of wildlife diversity and density, tourist infrastructure and efforts to promote and preserve the tourism. Moreover, the state is infested with Naxalism which devastates the international image of the state. The problem presents the state as a land of blood and violence. Whatever may be the reason for underperformance of tourism in Chhattisgarh it is evident that the state lacks policies to support this industry.

The research work tries to identify the difference in the tourism in Madhya Pradesh and Chhattisgarh. Along with this the research work tries to determine the contribution of tourism industry in generating forex with respect to these states.

## Review of Literature

Chhattisgarh, formerly a part of Madhya Pradesh, achieved statehood in the year 2000. Despite its natural beauty and cultural diversity, the state's tourism sector has lagged behind. Several scholars (Smith, 2015; Patel, 2018) attribute this lag to a lack of proactive government policies, inadequate infrastructure, and limited marketing efforts. The absence of a cohesive tourism strategy has hindered Chhattisgarh from fully exploiting its potential.

Conversely, Madhya Pradesh has emerged as a frontrunner in India's tourism landscape. Known as the "Heart of India," this state has capitalized on its geographical and cultural riches. Researchers (Kumar, 2016; Singh et al., 2019) argue that Madhya Pradesh's tourism success can be attributed to a well-structured tourism policy framework, investments in infrastructure development, and aggressive marketing campaigns. The state has effectively leveraged its historical sites, wildlife sanctuaries, and cultural festivals to attract tourists.

The divergent trajectories of Chhattisgarh and Madhya Pradesh's tourism development underscore the pivotal role of policy and strategy in harnessing a region's tourism potential. Chhattisgarh's case exemplifies the repercussions of a fragmented approach, while Madhya Pradesh's success highlights the rewards of a well-conceived and executed strategy. Researchers advocate for Chhattisgarh to emulate Madhya Pradesh's proactive approach by formulating a comprehensive tourism policy (Gupta, 2020) and investing in infrastructure (Yadav, 2017).

## Research method

To identify what is the effect of foreign tourist arrivals in MP and CG on forex generation through tourism in India Granger Causality test was performed. The Granger Causality test was performed to test 'does tourist arrivals in MP and CG cause forex to Increase in India'. In other words, forex generated through tourism was considered as a dependent variable on foreign tourist arrivals in MP and CG. Granger causality test is a method of testing that whether preceding values of an independent variable termed X is able to explain the variations in the dependent variable Y. In this case the independent variable X is foreign tourist arrivals in MP and CG while the dependent variable Y is the indicator of forex generation. From here the forex generated through tourism will be denoted by forex and foreign tourist arrivals in MP will be denoted by FTAMP.

A typical set of equation that is used for Granger causality testing (GCT) is

$$Y_t = a_0 + a_1Y_{t-1} + a_2Y_{t-2} + \dots + a_jY_{t-j} + b_1X_{t-1} + b_2X_{t-2} + \dots + b_jX_{t-j} + \mu_t$$

Granger causality test is test of joint hypothesis. It states that the lagged values of X are not statistically. Therefore, the null hypothesis gets framed as

$$H_0: b_1=b_2=\dots = b_j = 0$$

While the alternate hypothesis gets framed as

$$H_1: b_j \neq 0, \text{ for at least one value of } j$$

As per Grangers causality testing method null hypothesis is tested using two models. That means estimation of two models are required to test the null hypothesis. The first estimation involves omission of historical values of X.

$$Y_t = a_0 + a_1Y_{t-1} + a_2Y_{t-2} + \dots + a_jY_{t-j} + \varepsilon_t$$

The above presented model is known as the restricted model. The second model that is needed to be estimated is the unrestricted model that does not involves omission of historical values of X.

$$Y_t = a_0 + a_1Y_{t-1} + a_2Y_{t-2} + \dots + a_jY_{t-j} + b_1X_{t-1} + b_2X_{t-2} + \dots + b_jX_{t-j} + \mu_t$$

The above presented model is the second model, also known as the unrestricted model.

The test for Causality is finalized while using Granger method by calculating F -test comparing the Sum of squared error from the restricted model here by it will be referred as SSE\_r and the Sum of squared errors of unrestricted model here by it will be referred as SSE\_u. If SSE\_u is statistically different from SSE\_r then the restriction of omitting the past values of the independent variable X is not valid. The F-statistics is given by the equation presented below.

$$F = \frac{(SSE_r - SSE_u)/m}{SSE_u/(n - k)}$$

In the above equation m is the number of restrictions, n is the number of observations in historical sample while k is the total number of parameters estimated in the unrestricted model including the constant. The F-statistics is compared with a critical value to determine whether the null hypothesis can be rejected or not. The null hypothesis being X not Granger causes Y. In this case the foreign tourist arrival in MP not Granger causes forex generation in India through tourism. Time period considered for this granger test was 2003 to 2017. Data was assimilated from Tourism statistics in India.

## Research Analysis

First estimation of restricted model was done followed by unrestricted model. Table 1 shown below was utilized for the necessary calculation.

Table 1 Data entries for calculation of restricted and unrestricted models – Madhya Pradesh

Year	Forex (Millions)	Forex L1	Forex L2	Tourist Lag1 in Lakhs	Tourist Lag2 in Lakhs
2017	2731	22920	21070	3.63	4.21
2016	22920	21070	20236	4.21	3.17
2015	21070	20236	18445	3.17	2.8
2014	20236	18445	17737	2.8	2.76
2013	18445	17737	16564	2.76	2.69
2012	17737	16564	14193	2.69	2.52
2011	16564	14193	11136	2.52	2.3
2010	14193	11136	11832	2.3	2
2009	11136	11832	10729	2	2.5
2008	11832	10729	8634	2.5	2.3
2007	10729	8634	7493	2.3	1.6
2006	8634	7493	6170	1.6	1.45
2005	7493	6170	4463	1.45	0.92
2004	6170	4463	-	0.92	-
2003	4463	-	-	-	-

Source: Tourism Statistics in Madhya Pradesh

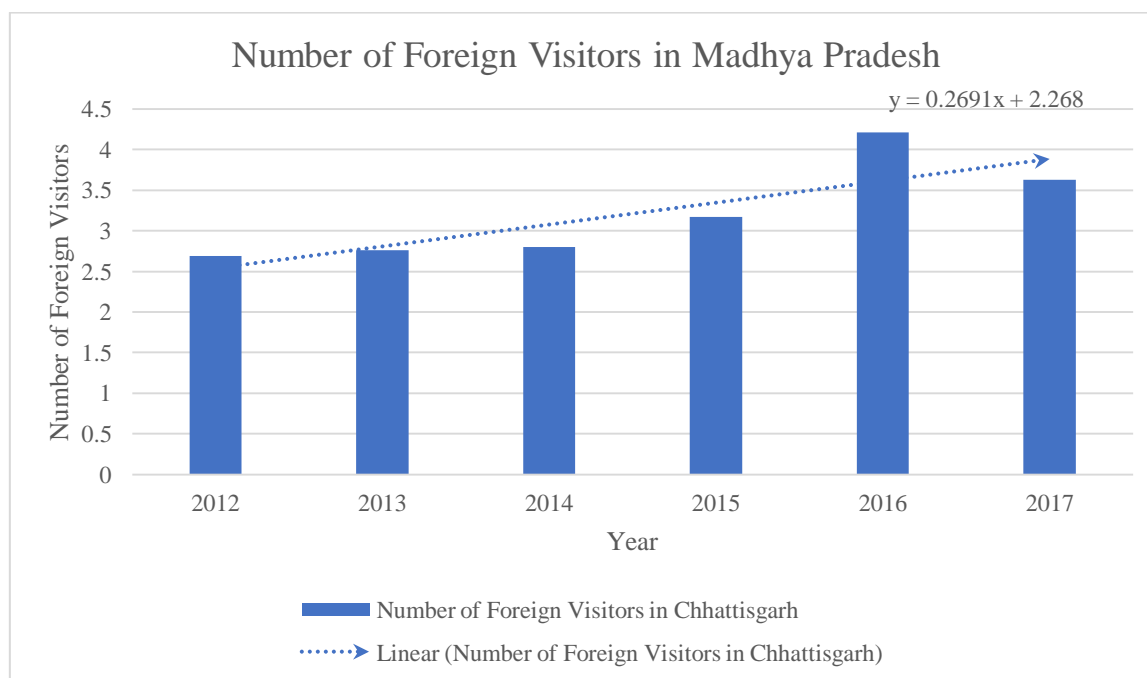


Figure 1 Number of Foreign Visitors in Madhya Pradesh

The figure 1 presents the trend in the number of tourists visiting Madhya Pradesh each year. From the figure it is evident that the number of tourists in MP are increasing at a rate of 0.2691 Lakh tourists/ Year. The figure indicates that each year almost 27000 new foreign tourist visit Madhya Pradesh.

Calculation of Restricted Model

$$forex_t = a_0 + a_1forex_{t-1} + a_2forex_{t-2} + \varepsilon_t$$

The SSE\_r generated in this model is 336030098.2

Secondly estimation of unrestricted model was done

$$forex_t = a_0 + a_1forex_{t-1} + a_2forex_{t-2} + b_1FTAMP_{t-1} + b_2FTAMP_{t-2} + \mu_t$$

The SSE\_u generated in this model is 154194032.5

From the above values F is calculated as 5.896, using the F-statistics p-value was calculated which comes out to be 0.0107. Hence, it can be said that at level of 1% significance the foreign tourist arrival in MP does not granger causes forex generation through tourism in India. However, the p-value is just above 1% or 0.01, if significance level is raised to 5% or 0.05 than it can be said that tourism in MP does granger causes forex generation through tourism in India.

Hence, it can be concluded that at 5 percent significance level tourism in MP does have a significant effect on forex generation.

Table 2 Number of Foreign Tourists visiting Chhattisgarh

Year	Number of Visitors From Foreign Land	Contribution of Forex by Foreign Visitors
2012	4172	Negligible in GSDP of Chhattisgarh
2013	3886	
2014	7777	
2015	6394	
2016	9220	
2017	6655	

Source: Tourism Statistics in Chhattisgarh

From the table 2 it is evident that tourism industry in Chhattisgarh generates almost negligible forex each year. Therefore, due to this Granger's causality test could not be performed for Chhattisgarh state. This further indicates that contribution of CG tourism industry towards CG GSDP is negligible or rather insignificant. From figure 2 it is evident that the number of tourists in the state is increasing at a rate of 772.4 tourist per year which is dwarf as compared to the rate of growth of tourism in Madhya Pradesh.

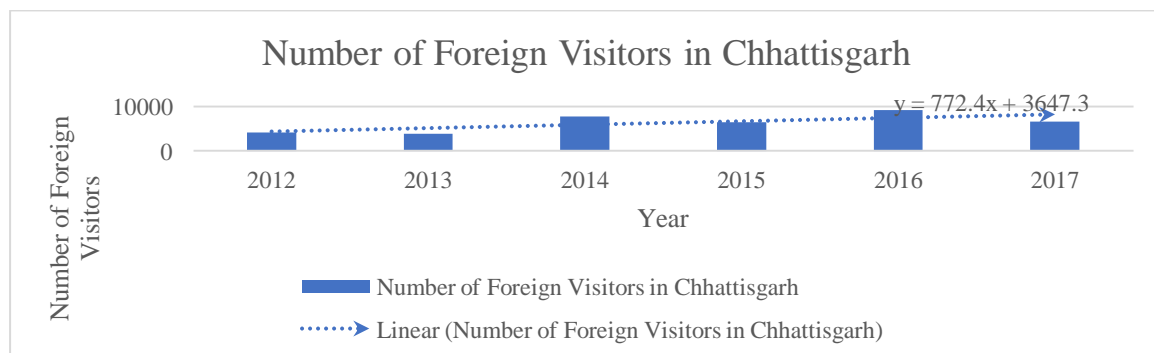


Figure 2 Number of Foreign Visitors in Chhattisgarh

Table 3 Difference Between Foreign Visitors in Chhattisgarh and Madhya Pradesh

Year	Foreign Visitors MP in Lakhs	Foreign Visitors CG in Lakhs	MP – CG
2012	2.69	0.041	2.649
2013	2.76	0.0388	2.7212
2014	2.8	0.077	2.723
2015	3.17	0.063	3.107
2016	4.21	0.092	4.118
2017	3.63	0.066	3.564

Source: Calculated

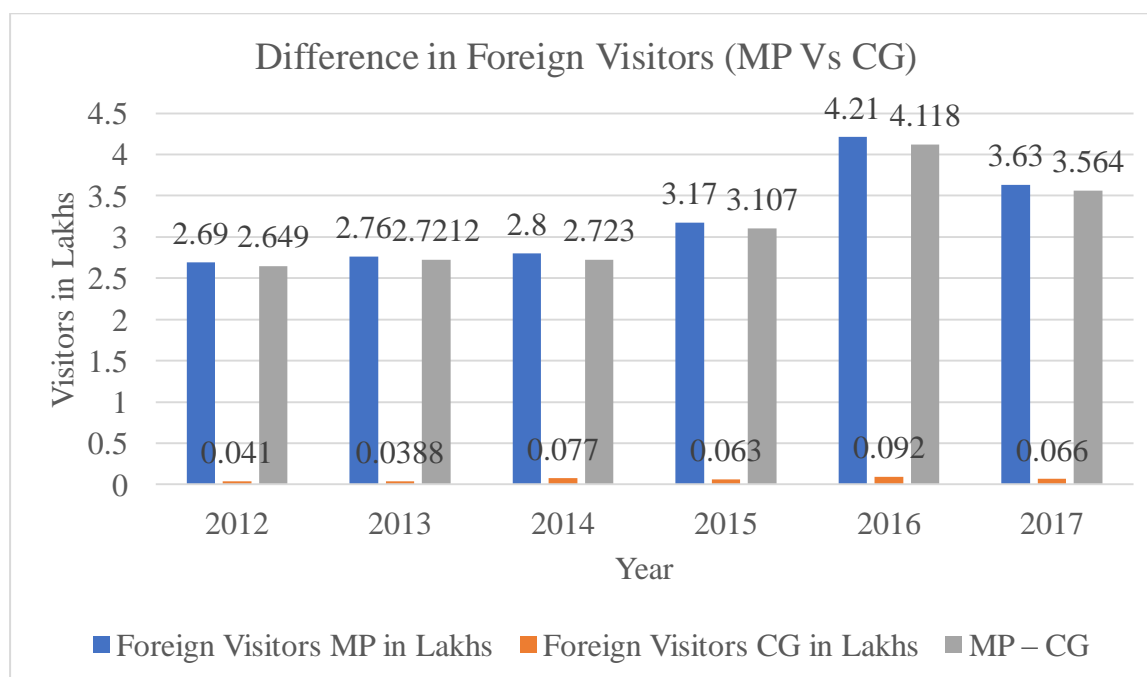


Figure 3 Difference in Foreign Visitors (MP Vs CG)

From figure 3 it is evident that from year 2012 to 2017 the number of foreign visitors in MP exceeded by at least 2 Lakhs each year as compared to Chhattisgarh. This indicates that tourism industry of Chhattisgarh is miniscule as compared to the gigantic tourism industry of Madhya Pradesh.

## Conclusion

Granger causality test was used to determine causal relationship if any between Tourism in Madhya Pradesh and forex generation. From the analysis it was determined that number of foreign tourist inflow in Madhya Pradesh is not having a causal relationship with forex generation. This was obtained at a significance level of 1 percent. Increased confidence level fails to establish any relationship between tourism in MP and forex generation. If confidence level is decreased to 95 percent that is increasing the significance level to 5 percent there exists a causal relationship between tourism in MP and forex generation through it. Considering a significance level of 5% it can be said that null hypothesis is rejected and tourism in MP has a significant effect on increasing the forex generation. Tourism aspects in MP should be increased more. From the analysis it is evident that tourism in MP is contributing towards forex generation in India through tourism at a significance level of higher than one percent. This indicates that there still exists tremendous scope for MP

tourism. It is being suggested that MP government should start festivals on themes like burning man festival of US and sunburn festival of Goa. National parks present in MP which are major foreign tourist attraction point in MP are closed from June to October. During this period, the state notices weak tourist footfall. Thus, resulting in lesser inbound tourists and lesser forex generation. Government can come up with such festivals and carnivals that will maintain the tourist inflow in MP during these periods also. Khajuraho can be used to organize such festivals as it a centre of curiosity amongst foreigners for erotic figures engraved on the temple walls and second it is open throughout the year. This will not only maintain tourist inflow, but festivals will provide a surge in local economy. On the contrary the tourism industry of Chhattisgarh is negligible. The tourism industry of Chhattisgarh is so small that Granger's causality test could not be performed to access whether the contribution of foreign tourism in Chhattisgarh contributes significant or not towards the forex generation.

Despite Chhattisgarh getting one-third of mainland Madhya Pradesh at the time of state division the percentage of landmass occupied by natural resources was either equivalent or greater than Madhya Pradesh. In the year of 2000 Madhya Pradesh state government completely revamped their tourism infrastructure and pledged to convert the tourism as sector which contributes significantly towards states gross domestic product. Presently the states tourism sector contributes around 14 percent towards the states gross domestic product whereas the tourism industry of Chhattisgarh contributes less than 0.1 percent towards states gross domestic product. The state of Chhattisgarh failed to identify the places of tourist potential. Places which were developed as tourist hotspots lacked domestic tourist inflow thereby rendering it to be foreign tourist unsuitable. Infrastructure developed using central grants lacked maintenance and therefore the tourists soon abandoned it for good. Forest areas such as Barnawapara, Indrawati and Achanakmar forest reserves had incapable forest staff and therefore the tiger and the wild water buffalo population dwindled in the area. The population of wild water buffalo (State animal) has declined to a point of extinction. Barnawapara and Achanakmar forest reserves which were once known for healthy tiger density had 2 to 3 tigers in the range while some reports even suggests that tigers are zero in number in the state and those identified are tigers passing by the state forest ranges to other more suitable and friendly forest areas of Odhisha and Telangana.

To conclude with Madhya Pradesh and Chhattisgarh tell tale of two separate states with identical geography in terms of tourism industry prosperity. The world is full of abnormalities and economic recessions are always on the verge. Madhya Pradesh has evolved its tourism industry as an alternate income source while Chhattisgarh has evolved itself as a highly vulnerable state with no other alternative sector to contributes towards state's economy in case of agriculture and heavy industry performance failure.

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