Assessment of Tourism Development in Ahmednagar District Based on Z- Score Method

Mr. Rohidas Sampat Bhadakwad[1]

Assistance Professor, Arts, Commerce and Science College, Satral (MS)

Dr. Subhash N Nikam[2]

Principal, MGV's Arts, Science and Commerce College, Manmad(MS)

Abstract : Human economic activity is evolving in response to changing needs, leading to fluctuations in industries based on available resources. Development of second and third tier businesses is important for the progress of the country. Abundant natural beauty in a country like India has contributed to the growth of the tourism industry. Additionally, significant socio-economic and cultural developments that demonstrate unity in diversity are evident in countries like India. These factors together offer substantial opportunities for the development of tourism in India. Tourism, as a contemporary and rapidly advancing field, is deeply rooted in human tendencies to explore and discover new places. It is known as an invisible industry influenced by socio-economic, political and geographical factors as well as personal preferences. Not only Attractions are important for the development of tourism business, but Accessibility, Accommodation and Amenities available at tourist destinations also affect tourism development. The aim of this research is to assess the level of tourism development in Ahmednagar district of Maharashtra state in India from this point of view. The Z-Score method has been used to analyze the tourist destinations in Ahmednagar district, thereby comprehensively evaluating the level of tourism development.

IndexTerms - Z score, Moderately Develop, Development Level

I. INTRODUCTION

Along with social, economic and environmental development, the tourism business also affects the quality of human life of the citizens living in the tourist area. Along with accommodation, food, transportation, information, recreation and entertainment required by tourists, there is also a demand for the products produced in that area. The work of connecting citizens with each other through cultural exchange is also done through tourism. Therefore, the more the participation of citizens in tourism development, the more the economy of that area gets a boost.

While developing the concept of tourism, the special natural attractions, cultural objects, historical places, food culture, traditional art, folklore, and folk life of that area are of special importance. For the

development of any tourist destination, along with the above attractions, the service facilities provided to tourists at the tourist destination are also important. For tourists it is as important as good facilities to see a new world and get a new experience from everyday life. Every country has preserved its traditional landmarks for this and it is well marketed and used extensively to attract tourists. Tourism is not only for seeing attractive places but like any other industry, the development of tourism depends on the service facilities available to the tourists and their quantity. These service facilities are called infrastructure in tourism. For example, people visiting a tourist destination need places to stay and eat, transportation is required for travel, various entertainment facilities are required for entertainment, tourists require various service facilities at a tourist destination,

This research covers the comparative assessment of tourism development in Ahmednagar district using 'Z' score method. Z score has been used for the development of tourist centers in Ahmednagar districts. In the said study area, which tourist centers are developed, underdeveloped, developing and less developed with the help of Z score. The said study will give impetus to the development of the tourist center; therefore it has been evaluated on the basis of the facilities available at the site of the tourist center. A total of 22 tourist centers have been considered in Ahmednagar. The total facilities here are mainly 14 tourist center facilities which have been analyzed with the help of Z score and the tourist center has been classified based on.

Tourist centers in Ahmednagar districts are classified into five categories. In Ahmednagar district, tourism centers have been taken for study by classifying them mainly as Historical, Natural, Religion, Educational and Heritage. In Ahmednagar district, case studies have also been classified in this manner and taken for study. A total of 22 tourist centers have been selected in Ahmednagar district. In this, religious tourism center 9, natural tourism center six, historical tourism center four, educational tourism two and heritage tourism center one, have been studied for the case study of total 22 tourism center.

Rational of the Study

The development of any tourist destination requires various factors such as attractions, accessibility, service facilities, and accommodation and the development of tourist destinations depends on those factors. There are many places in the world where there are places that attract tourists, but as the services required by tourists are not available there, even today tourist places are seen in a neglected state bbecause they lack the infrastructure to support the number of tourists.

Objectives

1. To identify tourism potential in Ahmednagar District.

2) To assess tourism development in Ahmednagar district with the help of the Z score **Methodology**

The present research study is based on the data collected from primary and secondary sources. Primary data was collected through intensive, fieldwork by visiting various tourist places through questionnaires in the study region. The secondary types of information have been collected through various reference books, paper articles, government websites, research articles, and other published data and information. The Z-Score method has been used for the analysis of tourist interest places in Ahmednagar district for Assessment of Tourism Development level.

$$Z\ score\ Value\ (Z) = \frac{\sum M_i\ N_i}{N}$$

Location of Study Area
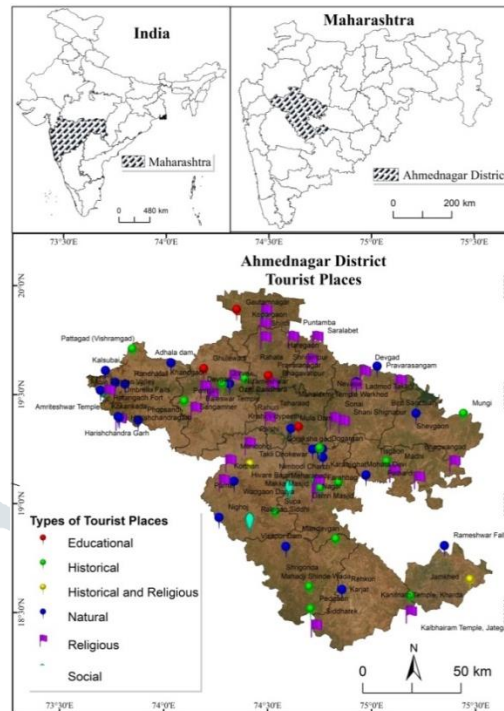
Map No.1 : Locational Map of Study Area

The study covers various tourist destinations within Ahmednagar districts of Maharashtra, exploring the tourism development of tourist centers. Geographically, Ahmednagar District is situated between 18° 2' and 19° 9' North latitudes and 73° 9' and 75° 5' East longitudes. Ahmednagar district spans 17,413 square kilometers and is divided into 14 tehsils. Particularly, it claims the highest peak in Maharashtra, Kalsubai, and features the Sahyadri mountain range, covering peaks like Harishchandragad, Ratangad, Kulang, and Ajuba. The 2011 census recorded a population of 4,543,159 in Ahmednagar district, with a sex ratio of 934 and a population growth rate of 12.43 percent between 2001 and 2011.

Result and Discussions

The survey of 73 different tourist places in Ahmednagar district (22) was carried out by personal visit. Fourteen different parameters are considered for assessment of tourist places. 73 Tourist centers in Ahmednagar districts are classified into five categories, mainly as Historical, Natural, Religion, Educational and Heritage. For the case study of tourist center in Ahmednagar district, six natural, nine religious, two educational, four historical and one in heritage tourism center have been selected for further study. A total of 22 tourist centers have been selected in Ahmednagar district based on Attractions and tourist footfall and grid method. Following map shows the methods used for selection of tourist centers.

Table 1 : Tourist Attraction in Ahmednagar City and around

Type	Places
Religious/ Pilgrimage	Shirdi, Shani Shinganapur, Meharabad, Mohatadevi, Shree Kshetra Deogad, Shri Kshetra Madhi, Siddhatek Ganapati
Heritage/ Cultural/ Historical	Ahmednagar City Heritage Sites, Chand Bibi Mahal, Ahmednagar Fort, Chondhi, Kharda Fort, Sandan Valley, Harishchandragad
Natural/Recreational	Bhandardara Dam, Randha Fall, Mula Dam, Nighoj
Educational	Hiware Bazar, Ralegan Siddhi

Other Tourist Places in Ahmednagar District:

Religious Places: Vruddheshwar, Nizarneshwar, Anand Rishi Dham Ashram, Vishal Ganapati Temple, Manjarsumbha Gad Gad and Bhairavnath Temple Punewadi

Geographical Tourist Places: Wadgaon Darya, Black Buck Sanctuary, Dongargan Beauty, Takali Dhokeshwar Cave, Rehekuri, Ratangad, Pravarasangam and Dongargan

Archeological Sites in Ahmednagar District: Damri Masjid, Gate near Niyamat Khan's Place, Kotla of Twelve Imams, Mucca Masjid Old tomb near Changiz Khan's palace, Tomb of Nizam Ahmedshah, Hemadpanthi Temple, Dhokeshwar Caves, Building Known as Faria Bagh, Jain Temple, Temple of Mallikarjuna, Cave Temple, Jarasangh Nagari, Temple of Mallikarjuna Temple of Shiva called Naktichedeul, Salbathan's Tomb, Temple of Shiva on the further side of the stream, Baleshwar Temple, Temple of Laxmi Narayan, Temple of Amriteshwar, Triple shrine temple of Bhavani, Five Stone Gates, Temple of Devi, Temple of Siddheshwar Mahadev, Temple of Vishnu Five Ghats at attached thereto, Ancient sites and remains at Daimabad, Ancient site locally known as Ladmod

Historical Tourist Places: Historical Museums, Tank Museum Patta Fort, Palashi Fort

Agro-base / Educational Tourist Places: Mahatma Phule Krushi Vidyapeeth Rahuri, Saiban, Lakshmi Agro

Medical Tourist Places: Ahmednagar City, Pravara Medical Trust (PMT)

For these 22 tourist places detailed survey was carried out by considering 14 different parameters. Out of 14, 4A Factors (Attractions, Accessibility, Amenities and Accommodation) are measure vital factors which are affect development of tourist places. Other 10 factors (Food Facility, Parking, Facility, Drinking Water, Toilet Facility, Information Center, Shopping Facility, Medical Facility, Cleanliness, Safety & Security and Tourist Guide) are also considered along with 4 A factors. The summery of these 10 factors are summarized in

These 14 parameters are evaluated by giving 10 point scale for each parameter. The average value (X) for 22 tourist places is calculated. The highest average score for Shirdi and Ahmednagar fort while lowest score for Dhokeshwar Caves and Harishchandagarh. These data are further used for statistical analysis of Z score method. The summary of calculated Z score for 22 different tourist places is summarized in

Table . From the calculated data of Z score is observed that highest Z score value for Shirdi and Ahmednagar fort while lowest Z score value for Dhokeshwar Caves and Harishchandagarh.

Table 2 : Z Score of tourist Places in Ahmednagar District

Sr. No.	Name of Tourist Place	Average Score (x)	x-u	Z Score (x-u/ σ)
1	Shirdi	9.57	1.43	2.71
2	Shanishingnapur	8.00	1.20	2.27
3	Siddhatek	6.86	1.02	1.94
4	Meharabad	5.86	0.88	1.66
5	Harishchandra Garh	3.71	0.55	1.05
6	Deogad	7.57	1.13	2.15
7	Newasa	6.86	1.02	1.94
8	Mohotadevi	7.86	1.17	2.23
9	Kanifnath	7.29	1.09	2.07
10	Bhandardara	7.79	1.16	2.21
11	Kalsubai	7.57	1.13	2.15
12	Sandan Valley	7.43	1.11	2.11
13	Nighoj Pot holes	6.71	1.00	1.90
14	Mula Dam	8.00	1.20	2.27
15	Rehakuri	7.07	1.06	2.00
16	Ahmednagar Fort	8.57	1.28	2.43
17	Chandbibimahal,	8.57	1.28	2.43
18	Ratangadh,	7.64	1.14	2.17
19	Chaundi, Kharda	5.14	0.77	1.46
20	Dokeshwar Caves	2.86	0.43	0.81
21	Hiware Bajar	7.07	1.06	2.00
22	Ralegan Siddhi	7.07	1.06	2.00

The limiting values of Z score and Standard deviation are setup for deciding the level of tourist center development. Developed, Moderately Develop, Developing and Unexplored tourist places were chosen by seating up the limiting values of Z score as summarize in **Error! Reference source not found.**

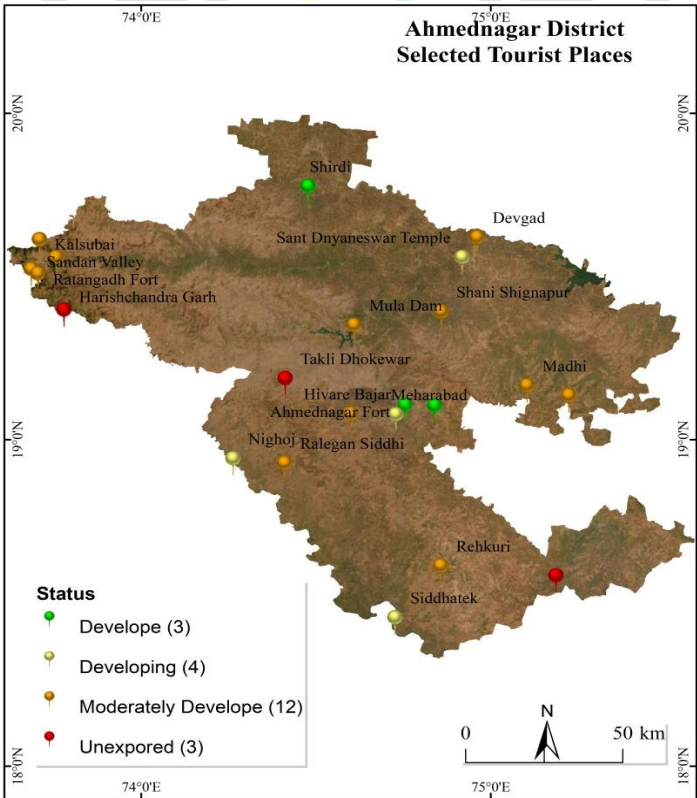Table 3: Tourist Places Development Level Classification on Z Score in Aurangabad District

Sr. No.	Name of Tourist Place	Z Score (x-u/ σ)	Level of Tourist place Development
1	Shirdi	2.71	Developed
2	Shanishingnapur	2.27	Moderately Developed
3	Siddhatek	1.94	Developing
4	Meharabad	1.66	Developing
5	Harishchandra Gad	1.05	Unexplored
6	Deogad	2.15	Moderately Developed
7	Newasa	1.94	Developing
8	Mohotadevi	2.23	Moderately Developed
9	Kanifnath	2.07	Moderately Developed
10	Bhandardara	2.21	Moderately Developed
11	Kalsubai	2.15	Moderately Developed
12	Sandan Valley	2.11	Moderately Developed
13	Nighoj Pot holes	1.90	Developing
14	Mula Dam	2.27	Moderately Developed
15	Rehakuri	2.00	Moderately Developed
16	Ahmednagar Fort	2.43	Developed
17	Chandbibimahal,	2.43	Developed
18	Ratangadh,	2.17	Moderately Developed

19	Chaundi, Kharda	1.46	Unexplored
20	Dokeshwar Caves	0.81	Unexplored
21	Hiware Bajar	2.00	Moderately Developed
22	Ralegan Siddhi	2.00	Moderately Developed

Based on the statistical limiting values of Z score for each tourist place are categorized in to 4 different development stages as summarized in Table. The summary of 22 tourist places taken for case study were classified and summarized in Table . The data shows that out of 22 tourist places in Ahmednagar district 3 are fully developed Shirdi, Ahmednagar Fort and Chandbibimahal), 4 are Moderatly develop (Siddhatek, Meharabad, Newasa, Nighoj Pot holes), 12 are developing (Shanishingnapur, Deogad, Mohotadevi, Kanifnath, Bhandardara, Kalsubai, Sandan Valley, Mula Dam, Rehakuri, Ratangadh, Hiware Bajar, Ralegan) and 3 tourist centers are Unexplored (Harishchandra Gad, Chaundi (Kharda), Dokeshwar Caves).

Table 4: Tourist Places Development Level Classification on Z Score in Aurangabad District

Sr. No.	Development Class	Name of Tourist Places	Number of Tourist Places
1	Develop	Shirdi, Ahmednagar Fort, Chandbibimahal,	3
2	Moderately Developed	Siddhatek, Meharabad, Newasa, Nighoj Pot holes	4
3	Developing	Shanishingnapur, Deogad, Mohotadevi, Kanifnath, Bhandardara, Kalsubai, Sandan Valley, Mula Dam, Rehakuri, Ratangadh, Hiware Bajar, Ralegan Siddhi	12
4	Unexplored	Harishchandra Gad, Chaundi (Kharda), Dokeshwar Caves	3

Map No. 2: Tourist Places Development Level Classification Map

Conclusion

Tourist centers in Ahmednagar districts are classified into five categories. In Ahmednagar district total of 22 tourist centers have been selected in Aurangabad district. 22 tourism centers have been selected as case studies in Ahmednagar district. In this, religious tourism center 9, natural tourism center six, historical tourism center four, educational tourism two and heritage tourism center one, have been studied for the case study of total 22 tourism center. In Ahmednagar district e.g. Shirdi, Ahmednagar Fort, Chandbibi mahal. Moderately Developed tourist are 04 e.g. Siddhatek, Meharabad, Newasa, Nighoj Pot holes. Developing tourist places are 12 e.g. Shanishingnapur, Deogad, Mohotadevi, Kanifnath, Bhandardara, Kalsubai, Sandan Valley, Mula Dam, Rehakuri, Ratangadh, Hiware Bajar, Ralegan Siddhi and Unexplored tourist places are 03 e.g. Harishchandra Gad, Chaundi (Kharda), Dokeshwar Caves.

FUTURE SCOPE AND SUGGESTION'S

1. For developing and Unexplored Tourist places having high potential but need to be provided with necessary facilities (mention in four 'A' factors table) by state government and local authorities

2. In addition to developed and moderately develop tourist places, fund allocation and basic infrastructural development should be provided by government and local authorities for developing and unexplored tourist places.

3. Local authorities/Trust of develop tourist place should take initiatives for popularization, connectivity, Accommodation facility and basic infrastructure facilities for nearby moderately develop, developing and unexplored tourist places. So that overall development of tourist centers enhances the job opportunities in nearby tourist places.

References

1. Adavitot S.C and Gatade D.G (2007) The study of Behavioural Pattern of Pilgrim Tourists at Akkalkot in Solapur District, Maharashtra State, The Deccan Geographer 45(2) Pp 23-28.

2. Ashraful Azam Khan, Haslinda Hashim (2020) Tourist Satisfaction Index for Tourism Destination, Integrating Social Media Engagement into the European Customer Satisfaction Index: A Conceptual Paper, *International Journal of Academic Research in Business and Social Sciences* 10(9) Pp 72-90.

3. Behzad R. and Jaybhaye R.G (2014) Issues of empowerment of local people for Ecotourism Development: A Case Study: Shir-Ahmad wildlife refuge-Iran, *International Research Journal of Environment Sciences, 3(8) Pp 72-76*

4. Bharambe S. N. and S. S. Jadhav (2019) Satisfaction Index and Development of Manudevi Religious Tourist Place in Yawal Tahsil, District Jalgaon, Maharashtra, International Journal of Research and Analytical Reviews, 6(1) Pp 907-912.

5. Bharat L. Gadakh (2015) An Assessment of Tourism Potential: A Case Study of Nashik City, Maharashtra, *International Journal of Research in Geography, 1(1) Pp 8-12.*

6. Jadhav B.S and Gophane B.N (2011)Eco -Tourism Potential Centers in Western Ghat of Kolhapur District Maharashtra, Maharashtra Bhugolshastra Sanshodhan Patriha 28(1) Pp5-10

7. Jadhav R.S (2015) , Geographical Analysis of Tourism; A case Study of Nighj, Parner Tahsil, District Ahmednagar, Maharashtra, India, Maharashtra Bhugolshastra Sanshodhan Patriha 32(1) Pp23-26

8. Kamble S.M and Bhandare D.J (2011)Geography Study of aravade Religious Tourist Centre in Sangli District, Maharashtra Bhugolshastra Sanshodhan Patriha 28(1) Pp65-69

9. Khairil Wahidin Awang (2009) Tourism Development: A Geographical Perspective, Asian Social Science 5(5) Pp 67-76.

10. Vasudev Shivaji Salunke et.al, (2021) A Geospatial Approach to Enhance point of the interest and Tourism Potential Centers in Parner Tehsil in Maharashtra, India, International Journal of Scientific Research in Science, Engineering and Technology, 8(1),Pp 186-196.

11. Vijay N. Suroshi (2012) A Study of Sustainable Tourist Centers in Parner Tahsil: A Geographical Analysis, Universal Journal of Environmental Research and Technology, 2(4), Pp 355-361