

Tourist Satisfaction with Transportation Facilities in Goa: A Case Study of the Bardez Block

Biki Kundu*

Abstract : *Transportation is a fundamental component of the tourism industry, directly influencing its growth and sustainability. Enhancements in transportation systems significantly contribute to the expansion of tourism by improving accessibility and elevating the overall tourist experience. This study provides a comprehensive analysis of tourist satisfaction with the road transport system in Bardez Block, Goa. Tourist satisfaction was evaluated using responses to 17 questions rated on a 5-point Likert scale, based on interviews with 75 tourists across five prominent beaches (15 respondents per beach) in the region. The findings reveal notable dissatisfaction among tourists concerning road safety and infrastructure. Specifically, 46.7 percent of respondents expressed dissatisfaction with road security, while 56 percent were unhappy with the condition of footpaths. Other areas of concern included the inadequacy of road safety equipment, such as traffic signals (61.3 percent dissatisfaction), road shoulder conditions (62.7 percent), visibility of road markings (57.3 percent), and the presence of speed breakers (53.4 percent). Additionally, the dominance of private vehicle operators aggravated the dissatisfaction, highlighting a gap in the availability of reliable and affordable transport options. These results emphasize the pivotal role of road safety and infrastructure in shaping tourist satisfaction. Without adequate measures to enhance physical security and basic road safety equipment, even well-established tourist destinations risk losing their appeal and economic potential. This study underscores the urgent need for strategic improvements in the road transport system to sustain and enhance tourist satisfaction in the Bardez Block region.*

Key words: *Tourist motivation, Transportation, Road infrastructure, Connectivity, Road safety*

Introduction

Transport can be expressed as a series of modes operating across vast networks containing nodes and vertices (Muatan et al., 2022; Roy, 2011). The role of transport in the development of tourism is very important (Gronau & Kagermeier, 2007). Transport facilities at the destination play an important role in the destination choice of the tourist (Lohmann & Duval, 2011). It provides an easy and comfortable journey for the tourist to visit tourist places in the destination (Parahoo et al., 2014). Researchers have suggested that a well-connected road and other transport infrastructure in a region attracts tourists and can promote the tourism industry (Gronau & Kagermeier, 2007; Lohmann & Duval, 2011). Indeed, past research has suggested a positive relationship between transport infrastructure and tourist activities, which increases the flow of

* Masters Student, Dept. of Geography, University of North Bengal, e-mail : kundubiki57@gmail.com

tourists in the region (Gronau & Kagermeier, 2007). There are different kinds of modes of transport, like air, water, rail, and road. Network connectivity can exist on a global, regional, or local scale. Among different modes of transport, road transportation is the most commonly used transport. The people are very much dependent on the road transport facilities to do their daily work (Kanwal et al., 2020). It connects every place in the region and provides easy access to the movers (Laborda & Sotelsek, 2019). Where the other modes of transport are used to cover long distances (Roy, 2011). Thus, it is important to have a good road transport system for the development of the region (Bari, 2023).

From various studies, it is seen that the easily accessible tourist, after reaching the destination, likes to travel by renting a private vehicle or by using public transportation (Yukse et al., 2016). The easy way to travel is by using a bus, auto, taxi, e-rickshaw, rented scooter, etc. In the tourism industry, the only thing that is important is the comfortability of the tourist (Lohmann & Duval, 2011). The people mainly visit tourism destinations to spend leisure time and experience a new dimension of life (Hall, 1999). Thus, it is important to give them comfortable and satisfying services at the destination. This leads to the tourists revisiting the intention of the place. Road transport plays a significant role in shaping the satisfaction level of tourists by influencing their overall travel experience. In academia, there are many works on the transport satisfaction of the movers. Parahoo and others (2014) in their work highlights the importance of vehicles' physical condition in the determination of passenger satisfaction. The fare of the vehicle and waiting times play a significant role in determining the satisfaction of the passengers (Parahoo et al., 2014 and Yuksek et al., 2016). Parahoo et al. (2014) said that the comfortable and accessible road transport system, such as clean and reliable buses, taxis, or rental cars, contribute to tourist's comfort and help in creating a seamless travel experience from one location to another.

The satisfaction is not only dependent on the above-mentioned factors; there are many other factors (Parahoo et al., 2014; Yuksek et al., 2016). The road condition is also an important factor to determine the satisfaction of the passengers (Allen et al., 2019). Without the proper road condition, it is not possible to give a safe and comfortable journey to the customers (Hietbrink et al., 2012). In the matter of the tourism sector, this factor becomes a most important factor (Lohmann & Duval, 2011). Not because of the tourist satisfaction; it creates a bad perception for the tourist (Gronau & Kagermeier, 2007). Tourists feel less motivated to visit the place again (Lohmann & Duval, 2011). The potential of the region to emerge as a tourist destination is being compromised (Lohmann & Duval, 2011). Cities such as Prague, Barcelona, Venice, Jerusalem, Paris, and many others, which still have a high tourist attractiveness, suffered from various issues like overcrowded narrow streets, noisy roads, traffic congestion, etc. (Parahoo et al., 2014). Thus, it is necessary to mention the issues of road condition in the tourist destination (Hesse & Rodrigue, 2004). Quality road network, smooth traffic flow, well-maintained routes, and minimal traffic time enhanced the comfort and satisfaction of the traveler (Hynes et al., 2018).

The global tourist destination hubs like Bangkok, Pattaya, Bali, the Maldives, the Seychelles, Singapore are some examples of those that work to give a comfortable and hassle-free road transportation facility to their tourists (Parahoo et al., 2014). In this regard, in India, Goa is one of the global tourism destination hubs (Dias, 2004). As per the report of the Ministry of Tourism, Goa in the year 2023 had 38, 32,306 tourists, including 36, 15,919 domestic and 2, 16,387 foreign tourists. This makes Goa a tourist capital in India. As the geographical area of Goa is only 3702 sq km, which makes Goa a disadvantage for the operation of rail and airways travel within the state boundary. Consequently, the only way to travel within the state is the road transport sector. There are many studies on the transportation in Goa, but there is a lack in the measures of the satisfaction of the tourist with the transportation sector. As it was discussed earlier about the importance of road conditions in the development of tourism, it is necessary to find out the factors that determine satisfaction.

To handle the huge tourist traffic, various means of road transportation are available in Goa. Private and public transportation sectors are operating their vehicles from time to time. The recent study shows that in Goa per household vehicle is 3, which is highest in India, and the growth of the vehicle every year in Goa is 10 times more as compared to population. Thus, in Goa, there is no inadequacy of road transport vehicles. As it was already discussed in the previous paragraph, satisfaction never relies only on the vehicle's availability or the physical condition of the roads. It very much depends on the condition of roads. As Goa experiences a huge number of tourists every year, it is necessary to study the road condition of Goa. Using the case of the Bardez Block of Goa (the most tourist-visiting place in Goa), this paper will investigate the level of tourist satisfaction with the road condition in the study area. This paper also suggests a few recommendations for the improvement of the road condition.

Study Area

Bardez Block is located in the North Goa district of Goa. The block is surrounded by the Pernem block in the north, Tiswadi block in the south, Bicholim block in the east and west, the mighty Arabian Sea. Geographically, this block lies between 15°40'55.38"N to 15°29'25.50"N and 73°43'51.50"E to 73°54'53.89"E, respectively.

The total area of the block is about 263.98 sq km. It has a population of 251,118, with a population density of 899 people per square kilometre. The Bardez block has 43 villages, with 163,119 people living in urban areas and 74,321 in rural areas. The literacy rate is 82.55 percent, with 84.91 percent of males and 80.15 percent of females being literate (Census 2011). The languages spoken in Bardez include Konkani, Marathi, Hindi, Kannada, English, Urdu, and others. North Goa's famous tourist attractions are located in Bardez Block. The famous tourist attraction spots in North Goa is located in the Bardez block for that the region always experiences high tourist inflow.

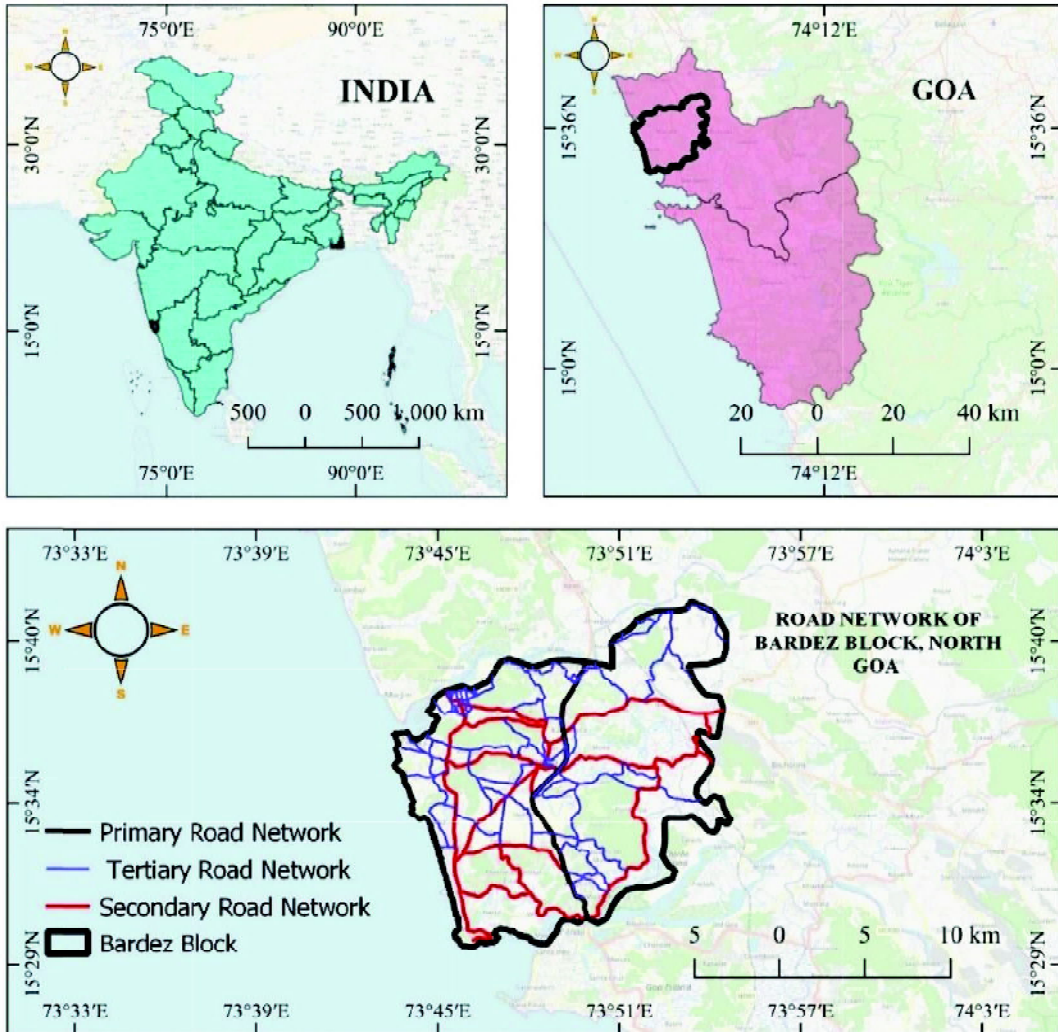


Fig. 1: Location Map of the Bardez Block, Goa

Methodology

Research is the technique to find out the already existing knowledge in the universe by applying different contexts. To find out the knowledge it requires a different methodology. Research methodology is the technique to solve the research problem in the scientific and systematic manner. Thus, in this study a unique research methodology was used.

Database

Both primary and secondary data sources were used for this study. To achieve the research objectives and understand tourist satisfaction with road transportation a survey was conducted from mid-February to mid-March 2024. in the study area. Secondary data were collected from various central and state government ministerial websites, reports published by the Government of Goa, and other organizations. To evaluate road transport in Goa, various historical literatures were also considered. A judgmental sample design was used for data collection. Recognition that such sampling may lead to subjectivity and bias in unit selection for interviews. Five famous beaches in the study area were selected for data collection: Anjuna Beach, Baga Beach, Calangute Beach, Candolim Beach and Sinquerim Beach. A total of 75 respondents were interviewed (15 from each beach). Both national and international tourists were interviewed to get a comprehensive overview about the topic. The tourists who were just to reach the beaches by using any vehicles were interviewed for better and reliable response. As many tourists residing besides the hotel and lodges of the beaches were avoided for the interview. As they are not using any vehicles to reach the beaches.

Methods

To develop the questionnaire, various literatures were reviewed and taking advice from the various scholars and professors. The questionnaire comprised two sections. The first section contained Age, gender, educational level, marital status, income level, were included as explanatory variables based on a literature review. The second section focused on road satisfaction, a set of 17 questions related to the aspect of transport satisfaction of tourists has been prepared based on a literature review (Table 1). The satisfaction items were rated on 5-point Likert scale from 'very satisfied' to 'very dissatisfied,' with values assigned as follows 5 = Very satisfied, 4 = Satisfied, 3 = Neutral, 2 = Dissatisfied, and 1 = Very dissatisfied

Data Analysis

The data were tabulated using IBM SPSS Statistics 25, and maps were prepared with QGIS software. Microsoft Excel was used to create tables and figures. Descriptive statistical analysis was conducted to evaluate tourist satisfaction in the study area, with satisfaction measured based on the majority perception. Frequency distribution tables were prepared to understand the demographic profile of the respondents. To understand the satisfaction level of the tourist another frequency distribution table containing percentages were prepared on the basis of their majority perception of the satisfaction of the tourist. Items were identified where respondents indicated satisfaction and dissatisfaction, and the potential reasons behind any dissatisfaction were explored. A frequency distribution table was also created to examine the demographic and socio-economic characteristics of the respondents, along with a separate table to distinguish between domestic and international tourists.

Table 1 : Questions for Satisfaction Survey

Question No	Statement: To what extent are you satisfied with the following Statement	References
1.	How satisfied are you with the safety while you are walking on the footpath along the road?	(Al-Ayyash & Abou-Zeid, 2019; Alborzi, 2021)
2.	How safe are you while driving on the road?	(Alborzi, 2021; K, 2022)
3.	How much security do you have while travelling on the road?	(Alborzi, 2021; Allen et al., 2019)
4.	How satisfied are you with the pavement condition?	(Hietbrink et al., 2012; Imam, 2014)
5.	Are you satisfied with the road shoulder condition?	(Bari, 2023; Hietbrink et al., 2012)
6.	Are you satisfied with the drainage condition on both side of the road?	(Kanwal et al., 2020)
7.	How satisfied are you with the road equipment?	(Kanwal et al., 2020; Lohmann & Duval, 2011)
8.	How satisfied are you with the condition of the road making?	(Lohmann & Duval, 2011; Stojic et al., 2020)
9.	How satisfied are you with the road supporting structure?	(Stojic et al., 2020)
10.	Are you satisfied with the condition of the footpath along the road?	(Imam, 2014)
11.	Are you satisfied with the condition of plants along both sides of the road?	(Hall, 1999; Hesse & Rodrigue, 2004)
12.	How satisfied are you with the traffic safety signal?	(Imam, 2014)
13.	How satisfied are you with maintaining the speed limit on the road?	(Suboti? et al., 2017)
14.	How satisfied are you with the road maintenance?	(Ji & Gao, 2010)
15.	How satisfied are you with the visibility of the horizontal and vertical line on the roads?	(Laborda & Sotelsek, 2019; Suboti? et al., 2017)
16.	How satisfied are you with the speed breaker on the road?	(Hynes et al., 2018; Laborda & Sotelsek, 2019)
17.	How satisfied are you with the service on the road?	(Imam, 2014)

N.B - Each question was coded as 5 = Very Satisfied; 4 = Satisfied; 3 = Neutral; 2 = Dissatisfied; 1= Very Dissatisfied

Results

Tourists Perception on Road Infrastructure and Connectivity

Understanding tourist satisfaction is one of the primary objectives of the study. In the tourism industry, customer satisfaction is very important, as it has a direct effect on the tourist's revisit intention and recommendation of the place to others. Scholars like Lohmann and Duval (2011) and Kanwal et al. (2020) explained "tourist satisfaction as a positive perception or feeling that tourists develop or acquire by engaging in 41 recreational activities and is expressed as the degree of pleasure derived from such experiences. Also, researchers like Gronau and Kagermeier (2007) argued that tourist satisfaction is one of the comprehensive aspects, and factors like attraction and destination image are important to evaluate tourist satisfaction. In addition, Lohmann and Duval (2011) and Hall (1999) revealed that tourist satisfaction as an affecting opinion is more suitable to evaluate after revisit intention.

Profiles of Tourists Surveyed

For the understanding of the tourist in the study area, the demographic and socio-economic background of the tourist is very important. A total of 75 tourists were interviewed to assess their satisfaction level about the uses of the road transport system in the region. In the total study sample, 45 respondents or 60 percent are males and 30 or 40 percent of the respondents are female. The majority (32 percent) of the respondents come from the 21 to 30 age group, followed by 31 to 55 (30.70 percent), 15 to 20 (25.30 percent), and only 9 respondents, or 12 percent of them, come from more than 55 age categories. In the matter of occupational status, the majority (30.70 percent) of the respondents are doing business by profession. Followed by students (22.70 percent), private job holders (18.70 percent), self-employed (18.70 percent), government jobs (4 percent), and only 4 percent of the respondents are daily wage earners. Most of them belong to the Christian community (37.30 percent) by religion. In terms of mother tongue, the majority of the respondents are Russian speaking (21.30 percent), followed by 18.70 percent of the respondents who are Hindi speaking respondents. In terms of education status, the respondent's majority (48 percent) are doing graduation. In the matter of the marital status of the respondents, 48 percent of the respondents are unmarried, and 42.70 percent of the respondents are married. 30.70 percent of the respondents earn more than 4 lakh rupees annually, and only 18.70 percent of the respondents earn between 1 lakh and 2 lakh rupees per annum (Table 2).

Origin of the Tourist

In this study, 40, or 53.30 percent, of respondents are domestic, and 46.70 percent, are international. In terms of international tourists, most of them are from Russia (45.71 percent), followed by the United Kingdom (20 percent), Germany (17.14 percent), France (8.57 percent), and Italy (2.85 percent). In terms of domestic tourists, the majority (24.24 percent) are from West Bengal, followed by Tamil Nadu (20 percent), Bihar, Rajasthan, Telangana, and Maharashtra each share 10 percent of the tourists. Gujarat and Odisha share 3 or 7.50 percent of respondents who were interviewed (Table 3).

Table 2: Profiles of Tourists Surveyed (N = 75)

Characteristics	Categories	Frequency	Percentage
Sex	Male	45	60.00
	Female	30	40.00
Age	15 to 20	19	25.30
	21 to 30	24	32.00
	31 to 55	23	30.70
	More than 55	9	12.00
Occupation	Govt. Job	3	4.00
	Private Job	14	18.70
	Business	23	30.70
	Daily Wage Earner	3	4.00
	Self Employed	14	18.70
	Student	17	22.70
	House wives	1	1.30
Religion	Hindu	22	29.30
	Muslim	11	14.70
	Christian	28	37.30
	Buddhist	6	8.00
	Sikh	8	10.0
Mother Tongue	Hindi	14	18.70
	Marathi	5	6.70
	English	12	16.00
	Tamil	8	10.70
	Telugu	4	5.30
	Bengali	9	12.00
	Russian	16	21.30
	Italian	1	1.30
	Germany	6	8.00
Education Qualification	Secondary	10	13.30
	Higher Secondary	17	22.70
	Graduate or Equivalent	36	48.00

	Post-Graduation or Equivalent	12	16.00
Marital Status	Married	32	42.70
	Unmarried	36	48.00
	Widow	3	4.00
	Divorce	3	4.00
	Separate	1	1.30
Annual income	1 lakh to 2 lakh	14	18.70
	2 lakhs to 3 lakhs	19	25.30
	3 lakhs to 4 lakhs	19	25.30
	More than 4 lakhs	23	30.70

Source: Field Survey, 2024

Table 3: Origin of the Tourist in the Study Area (N = 75)

Characteristics	Categories	Frequency	Percentage
Types of Tourists	Domestic	40	53.30
	International	35	46.70
Country of origin	Russia	16	45.71
	United Kingdom	7	20.00
	USA	3	8.57
	Italy	1	2.85
	Germany	6	17.14
	France	3	8.57
State of origin	West Bengal	9	22.50
	Bihar	4	10.00
	Rajas than	4	10.00
	Tamil Nadu	8	20.00
	Telangana	4	10.00
	Gujrat	3	7.50
	Maharashtra	4	10.00
	Odisha	3	7.50

Source: Field Survey, 2024

Satisfaction of the Tourist

The measurement of tourist satisfaction by the use of the roads in the study area is one of the study objectives. The study shows that the majority of the respondents are satisfied with the condition of road transport in the study area. In the matter of safety while driving on the footpath (50.70 percent), in the condition of pavement (47.70 percent), drainage condition on both sides of the road (70.40 percent), road equipment (57.30 percent), condition of road making (61.30 percent), road supporting structure (56 percent), condition of plants along both sides of the road (54.60 percent), speed limit on the road (54.30 percent), road maintenance (61.30 percent), service on the road (56 percent), respondents are satisfied (Table 4).

Table 4 indicates that in the matter of footpath condition, 22.70 percent of the respondents are satisfied, 16 percent are dissatisfied, and 40 percent are very dissatisfied with the footpath condition in the study area. The combined sum of the dissatisfaction is 56 percent, which is approximately half of the respondents.

From Table 4 it is revealed that the respondents are very dissatisfied in the matter of safety while walking alone on the footpath, where 46.70 percent of the respondents are dissatisfied; in the matter of safety and security, 28 percent of the respondents are very dissatisfied. 62.70 percent of respondents are dissatisfied with the shoulder condition of the road. The respondents are not satisfied with the traffic signal; 61.30 of the respondents are given a negative review. In the question of vertical and horizontal road lines on the road, 57.30 percent of the respondents are dissatisfied with that. In the matter of speed breakers on the road, 53.40 percent of the respondents are not satisfied with that.

Discussion

The findings of the present study show that the tourists are showing their satisfaction on most of the asked statements. There are few statements where they express their concerns, like the safety of the tourist on the road. The study shows that to develop a place as a tourist destination hub, it is required to have a proper law and order situation in that place (Parahoo et al., 2014). The anti-social elements should be under the control of the local authority (Alola et al., 2021).

In the matter of the study region, there is a huge lack of security for the tourists. The tourist expresses their concerns that in any kind of emergency they even do not know how to grab help from the security personnel. Wallace (2009) in the study shows how the tourism sector of any region can be criminalized. Due to lack of monitoring, lack of security personnel and corruption in the tourist department. The same things can be found in this study as there is not such any security of tourists in the place. This makes them insecure in certain cases. From the study of Karagiannis and Madjd Sadjadi (2012) the solo female travelers report their concern due to lack

Table 4: Measures of Satisfaction Level of the Respondents in Bardez Block, Goa

Statement: To what extent are you satisfied with the following Statement	Very Satisfied n (percent)	Satisfied n (percent)	Neither Satisfied nor Dis- satisfied n (percent)	Dis- satisfied n (percent)	Very Dis- satisfied n (percent)
How satisfied are you with the safety while you are walking on the footpath along the road?	8 (10.70)	9 (12.00)	16 (21.30)	12 (16.00)	30 (40.00)
How satisfied are you with the safety while driving on the road?	11 (14.70)	27 (36.00)	12 (16)	11 (14.70)	14 (18.70)
How satisfied are you with the security while travelling on the road?	6 (8.00)	18 (24.00)	16 (21.30)	14 (18.70)	21 (28.00)
How satisfied are you with the pavement condition?	15 (20)	17 (27.70)	10 (13.30)	20 (26.70)	13 (17.30)
Are you satisfied with the road shoulder condition?	7 (9.30)	12 (16)	9 (12)	27 (36)	20 (26.70)
Are you satisfied with the drainage condition on both sides of the road?	17 (22.70)	32 (42.70)	10 (13.30)	4 (5.30)	12 (16)
How satisfied are you with the road equipment?	12 (16.00)	31 (41.30)	12 (16.00)	13 (17.30)	7 (9.30)
How satisfied are you with the condition of the road making?	25 (33.30)	2 (28.00)	7 (9.30)	9 (12.00)	13 (17.30)
How satisfied are you with the road supporting structure?	19 (25.30)	23 (30.70)	23 (10.70)	15 (20.00)	(13.30)
Are you satisfied with the condition of the footpath along the road?	8 (10.70)	23 (30.700)	8 (10.70)	18 (24.00)	18 (24.00)
Are you satisfied with the condition of plants along both sides of the road?	19 (25.30)	22 (29.30)	6 (8.00)	10 (13.30)	18 (24.00)
How satisfied are you with the traffic safety signal?	6 (8.00)	17 (22.70)	6 (8.00)	30 (40.00)	16 (21.30)
How satisfied are you with maintaining the speed limit on the road?	10 (13.30)	31 (41.0)	10 (13.30)	13 (17.30)	11 (14.70)
How satisfied are you with the road maintenance?	16 (21.30)	30 (40.00)	(14.70)	10 (13.30)	8 (10.70)
How satisfied are you with the visibility of the horizontal and vertical line on the roads?	13 (17.30)	17 (22.70)	2 (2.70)	37 (49.30)	6 (8.00)
How satisfied are you with the speed breaker on the road?	11 (14.70)	16 (21.30)	8 (10.70)	29 (38.70)	11 (14.70)
How satisfied are you with the service on the road?	11 (14.70)	31 (41.30)	8 (10.70)	15 (20.00)	10 (13.30)

Source: Field Survey, 2024

of security in the tourist place. They feel insecure not only on the roads but the hotels, restaurants, pubs, and clubs they admit their insecurity (De Albuquerque & McElroy, 1999; Wallace, 2009). In this study the female respondents show their concerns that during the night they feel insecure on the road to travel alone. They admit their concerns that the alcoholic young age guys are many times passing vulgar comments on them. Due to the lack of police personnel, they cannot take any action.

The footpath condition on both sides of the road, the respondents are very dissatisfied. Only 27 percent of the roads have a footpath along them. Not only the inadequacy of the footpath along the road, the average width of the footpath is very narrow, as suggested by the Indian Road Congress (minimum clear width 1.8 m), posing safety risks to pedestrians, and reducing overall walkability. Lohmann and Duval (2011) shows the importance of footpaths in making the movers' perception on the transportation. The inadequacy of the footpath along the road is because half of the (47.01 percent) roads were maintained by the Gram panchayat and Panchayat saniti. Which makes restrictions on the development of the footpath along both sides of the road.

The respondents are very dissatisfied, as in the study area there are no such traffic signals that can make traffic flow smoothly. As the traffic signal is one of the major safety equipment on the roads, it ensures safety while driving by providing orderly movement of the vehicles (Stojic et al., 2020). The finding reveals that the safety lines on the roads are not properly marked, which makes the respondents dissatisfied. As per the study of Muatan et al. (2022), it revealed that in the province of Arizona, accidents on the roads are reduced by 80 percent by introducing proper safety marks in the roads. Muatan et al. (2022) in the study finds that if the driver gets all the safety equipment on the road, like the speed limit boards, reflective radium to ensure the edges of the road at night, safety barriers in the roads, and other indication boards, it may reduce the accident on the roads.

Virkar and Mallya (2018) reveals that the satisfaction on the road is not only dependent on the road material condition, connectivity, and the density of roads in the region. The satisfaction of the movers very much depends on the safety of the movers on the roads (Pawlasova, 2015). It could be safe from any strangers or any safety measures installed for the movers on the road (Soza-Parra et al., 2019). There could be diverse transport options for the movers, but if there is only the monopoly of the private players, it may create problems for the passengers by increasing the fares of the ticket. In this study, the same things can be seen. In Bardez, there is a diverse option of vehicles for the tourist, such as buses, taxis, sharing cabs, jeeps, rented vehicles, etc., which shows a robust transport ecosystem. However, the limited availability of government transport vehicles (only 15 percent) forces tourists to depend on private transport, increasing their travel expenses and wait time.

Recommendations

- I. Although the respondents are overall satisfied with the road transport facility in the study area, the government should work on the safety of the travelers. It should be from both anti-social elements and by installing safety equipment in the roads.
- II. To address tourists' concerns about road security, especially at night, the local authority should ensure security measures. Increasing the presence of security personnel and traffic police may ensure safer travel, particularly for women.
- III. Enhancing the number of government-operated buses is crucial. With only 15 percent of the buses in operation, tourists face long waiting times, sometimes exceeding 10-15 minutes. And this gap gives the private player the opportunity to exploit the tourist by asking for high fares. By introducing more government buses, it could be balanced.
- IV. To ensure safety for the pedestrians, the local authority should increase the width of the roads and footpaths as per the regulation of the national road congress. This could only be possible by acquiring land from both sides of the roads. The shopkeepers should be compensated for that or rehabilitating the shops in a business-friendly area may solve these issues.

Conclusion

Our goal of this paper explored the different factors that create the perception of the tourist about the road transport condition in Bardez block. This highlights the significant challenges in the road transport sector. The infrastructural issues in the region make the tourist dissatisfied in some factors. From the study the one prominent factor emerging is the security of the tourist in the road. The security in terms of physical security from the anti-social elements and the security marks in the roads. The study reveals that to make tourist perception positive it is important to have proper security of the tourist in the region. Lack of security personnel in the roads make the tourist insecure from the anti-social persons. Security is a paramount concern, particularly for night time travel. Strengthening the presence of security personnel and traffic police will create a safer environment, addressing the safety concerns of tourists and locals alike.

The region's infrastructure needs significant enhancements to meet the expectations of tourists and ensure seamless travel experience. Improvements in pedestrian infrastructure, such as widening footpaths and ensuring their continuity, are critical for enhancing safety and accessibility. Additionally, uniform road maintenance across the region will address the variability in road conditions caused by decentralized management. Public transportation is another vital area requiring attention. An increase in the number of government buses will not only reduce waiting times but also make travel more affordable and accessible for tourists. This change is essential for reducing traffic congestion and promoting sustainable travel practices.

This measure is important to create a significant impact on the overall visitor experience. Ultimately, while tourists are generally satisfied with the road transport facilities, addressing the highlighted issues will elevate the region's infrastructure to meet higher standards. By implementing these suggestions, the government can enhance the travel experience, boost tourism, and ensure the safety and satisfaction of all road users in Bardez Block, North Goa.

Acknowledgements

I am grateful to the Department of Geography and Applied Geography, University of North Bengal, for allowing me to do this work. I am thankful to Dr. Dulon Sarkar, Assistant Professor, Department of Geography, Saheed Kshudiram College, for his valuable suggestions to improve this work. I am thankful to Mr. Surajit Kar, Research Scholar, Department of Geography, Calcutta University, for encouraging me for the publication of this paper. I am thankful to my parents for their unconditional support and love. Finally, I convey my gratitude to the respondents, without their active participation this work can't be successful.

References

- Al-Ayyash, Z., & Abou-Zeid, M. (2019). Investigating commute satisfaction differences of private car users and public transport users in a developing country context. *Transportation*, 46, 515-536. <https://doi.org/10.1007/s11116-019-10000-2>
- Alborzi, P. (2021). The Relationship between Passengers' Satisfaction of Urban Road Transport Services and Their Sense of Belonging. *Environmental Management and Sustainable Development*, 10 (3), 89-96. <https://doi.org/10.5296/emsd.v10i3.18919>
- Allen, J., Muñoz, J. C., & de Dios Ortúzar, J. (2019). Understanding public transport satisfaction: Using Maslow's hierarchy of (transit) needs. *Transport Policy*, 81, 75-94. <https://doi.org/10.1016/j.tranpol.2019.06.005>
- Alola, U. V., Alola, A. A., Avci, T., & Oztüren, A. (2021). Impact of corruption and insurgency on tourism performance: A case of a developing country. *International Journal of Hospitality & Tourism Administration*, 22 (4), 412-428. <https://doi.org/10.1080/15256480.2019.1650686>
- Bari, M. M. (2023). Sustainable Transport Developments for Dhaka City. *Urban Transition-Perspectives on Urban Systems and Environments*. <https://doi.org/10.5772/intechopen.111857>
- De Albuquerque, K., & McElroy, J. (1999). Tourism and crime in the Caribbean. *Annals of tourism research*, 26 (4), 968-984. [https://doi.org/10.1016/S0160-7383\(99\)00031-6](https://doi.org/10.1016/S0160-7383(99)00031-6)
- Dias, R. A. (2004). *The Socio-Economic History of Goa with Special Reference to the Comunidade System: 1750-1910* [Doctoral Dissertation, Goa University].
- Gronau, W., & Kagermeier, A. (2007). Key factors for successful leisure and tourism public transport provision. *Journal of transport geography*, 15 (2), 127-135. <https://doi.org/10.1016/j.jtrangeo.2006.12.008>
- Hall, D. R. (1999). Conceptualising tourism transport: inequality and externality issues. *Journal of transport geography*, 7 (3), 181-188. [https://doi.org/10.1016/S0966-6923\(99\)00001-0](https://doi.org/10.1016/S0966-6923(99)00001-0)

- Hesse, M., & Rodrigue, J.-P. (2004). The transport geography of logistics and freight distribution. *Journal of transport geography*, 12 (3), 171-184. <https://doi.org/10.1016/j.jtrangeo.2003.12.004>
- Hietbrink, M., Hartmann, A., & Dewulf, G. P. M. (2012). Stakeholder Expectation and Satisfaction in Road Maintenance. *Procedia - Social and Behavioral Sciences*, 48, 266-275. <https://doi.org/10.1016/j.sbspro.2012.06.1007>
- Hynes, M., Bolbocean, O., McNally, M., Conroy, M., Bednarczuk, D., Hyland, F., . . . Marie, C. (2018). "Howya gettin'on?" Investigating Public Transport Satisfaction Levels in Galway, Ireland. *Urban Science*, 2 (4), 102. <https://doi.org/10.3390/urbansci2040102>
- Imam, R. (2014). Measuring public transport satisfaction from user surveys. *International Journal of Business and Management*, 9 (6), 106-114.
- Ji, J., & Gao, X. (2010). Analysis of people's satisfaction with public transportation in Beijing. *Habitat International*, 34 (4), 464-470. <https://doi.org/10.1016/j.habitatint.2009.12.003>
- K, G. (2022). A Study of Passengers Satisfaction on Bus Service in Pollachi. *Journal of Information and Computational Science*, 10 (3). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4160437
- Kanwal, S., Rasheed, M. I., Pitafi, A. H., Pitafi, A., & Ren, M. (2020). Road and transport infrastructure development and community support for tourism: The role of perceived benefits, and community satisfaction. *Tourism Management*, 77, 104014. <https://doi.org/10.1016/j.tourman.2019.104014>
- Karagiannis, N., & Madjd Sadjadi, Z. (2012). Crime, criminal activity and tourism performance: issues from the Caribbean. *Worldwide Hospitality and Tourism Themes*, 4 (1), 73-90. <https://doi.org/10.1108/17554211211198606>
- Laborda, L., & Sotelsek, D. (2019). Effects of Road Infrastructure on Employment, Productivity and Growth: An Empirical Analysis at Country Level. *Journal of Infrastructure Development*, 11 (1-2), 81-120. <https://doi.org/10.1177/0974930619879573>
- Lohmann, G., & Duval, D. T. (2011). Critical aspects of the tourism-transport relationship. *Contemporary tourism reviews*, 1, 1-38. https://www.goodfellowpublishers.com/free_files/fileTransportReview.pdf
- Muatan, J. A., Rifai, A. I., & Handayani, S. (2022). The Analysis of National Road User Satisfaction in Urban Area (Case Study of The PGC-Kramat Jati-Graha Cijantung Route, Jakarta). *Indonesian Journal of Multidisciplinary Science*, 1 (1), 397-408. <https://doi.org/doi.org/10.55324/ijoms.v1i1.397>
- Parahoo, S. K., Harvey, H. L., & Radi, G. Y. A. (2014). Satisfaction of tourists with public transport: An empirical investigation in Dubai. *Journal of Travel & Tourism Marketing*, 31 (8), 1004-1017. <https://doi.org/10.1080/10548408.2014.890158>
- Pavlasova, P. (2015). The factors influencing satisfaction with public city transport: A structural equation modelling approach. *Journal of Competitiveness*, 7 (4). <https://pdfs.semanticscholar.org/fcb4/6fcd525ee3da344814edbb58cd2a5e07baa6.pdf>
- Roy, P. B. (2011). *Spatial Dynamics, Problems and Prospects of Surface Transport Network in Birbhum District, West Bengal, India* [Doctoral Dissertation Visva Bharati University].
- Soza-Parra, J., Raveau, S., Muñoz, J. C., & Cats, O. (2019). The underlying effect of public transport reliability on users' satisfaction. *Transportation Research Part A: Policy and Practice*, 126, 83-93. <https://doi.org/10.1016/j.tra.2019.06.004>
- Stojic, D., Ciric, Z., Sedlak, O., & Marcikic Horvat, A. (2020). Students' views on public transport: satisfaction and emission. *Sustainability*, 12 (20), 8470. <https://doi.org/10.3390/su12208470>

- Subotia, M., Tešia, M., & Vidovia, N. (2017). Analysis of the level of satisfaction of road network users-case review of road section Koprivna–Modriča (r-465). *JOURNAL TTTT-TRAFFIC AND TRANSPORT THEORY AND PRACTICE*, 2 (1-2). <https://doi.org/10.7251/JTTTP1701034S>
- Virkar, A. R., & Mallya, P. D. (2018). A review of dimensions of tourism transport affecting tourist satisfaction. *Indian Journal of Commerce and Management Studies*, 9 (1), 72-80. <https://doi.org/10.18843/ijcms/v9i1/10>
- Wallace, W. C. (2009). Tourism and crime in a small island tourist destination: the case of Tobago. *Caribbean Journal of Criminology and Public Safety*, 14 (12), 186-213. https://utt.edu.tt/files/cms/criminology_journal_2009.pdf#page=209
- Yukse, G., Akkoç, I. T., & Bayer, R. U. (2016). The effects of public transport performance on destination satisfaction. *African Journal of Hospitality, Tourism and Leisure*, 5 (4), 1-12.