

Perception of Urban Commuters on Auto Rickshaw Transport Services in Agartala City

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Abstract- Societies rely on transport systems as for movement from one place to another. These movements are functioned at a wide variety of context. Auto rickshaws play an important role in this respect. It is one of the important transport modes that hold a key role in urban mobility. They commute, distribute and collect goods. This paper is an attempt to measure the Commuters satisfaction level and compare the quality of Auto Rickshaw Transport Services in comparison to other modes of transport in Agartala City. For this purpose Likert Scale of measurement had been used to access the level of satisfaction of the urban commuters on the auto rickshaw transport services. The result shows that the urban commuters are very satisfied by the quality of auto rickshaw transport service in comparison to the other mode of transportation in Agartala City.

Key words: Commuter, Satisfaction, Service, Perception.

1. INTRODUCTION

Transportation is concerned with mobility, particularly how this mobility is taking place in the context of a wide variety of conditions. Mobility is a geographical endeavour since it trades space for a cost for which it is considered as Transport Geography (Rodrigue et.al, 2006). Apart from this the urban travel attitude and behaviour of people in making choice of public transport as their means of transportation has also been studied and discussed. Kumar et.al. 2014 in his work revealed that People subsist in urban region normally depend on the transport, principally for their travels and also for the commodities. Public employ it for everyday commotion such as for work, education, and shopping and other leisure performance. Consequently, it is essential for city for the better performance as well as sustains good quality of life. It is probably that urban transport, its transport and communication, traffic management be supposed to consists of optimum amalgamation of the means and traditions of mobility with complete of philosophical relieve and console uphold the socio-economic and physical integration of the city. Rodrigue et.al 2006, exposed that quick urban development taking place athwart greatly of the world involve enlarged capacity of passengers and freight moving within urban places. Travels also have a tendency to engage longer distances, but evidence proposes that commuting times have lingered relatively constant in the twentieth century, about 1.2 hours per day. It let slip that voyage has progressively move to quicker transport modes and therefore larger distances could be travelled using the same amount of time. Jou 2011, had concluded that travel inside the urban environment is vibrant and is the key aspect in urban life. Also, it is the protract constituent for all social, economical and cultural

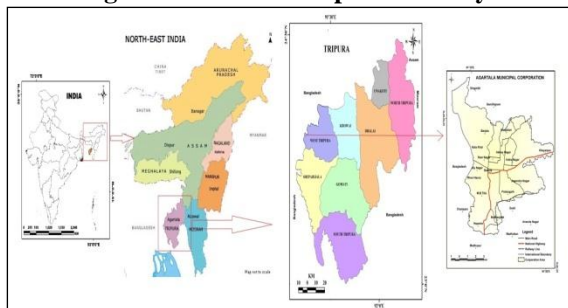
deeds in the town. To lodge budge, the passageway and transportation facilities are the extreme vital fundamentals structure of the infrastructure of urban places. On the verge of the third millennium, it is grave to assist pedestrian stir as the only approach of transportation for pass through the conurbation instigate and closing stages with means of transportation. Rodrigue et. al 2006, also interprets that Transit is primarily an urban transportation mode, principally in huge urban agglomerations. The urban environment is mostly appropriate for transit because it present circumstances fundamental to its competence, specifically high density and high short distance mobility loads. While transit is a shared public service, it prospective benefits from economies of agglomeration related to high densities and from economies of scale related to high mobility demands. Transit systems are prepared of many types of services. Diverse modes are employing to afford harmonizing services within the transit system and in a few cases between the transit system and other transport systems. Significant features of urban transit are frequencies, flexibility, costs and distance between stops. Different services used in urban transit are: metro system, bus system, transit rail system, shuttle system, Para transit system and taxi system. Vuchic 2002, stated that Transit symbolize a basic overhaul and an imperative part of all urban areas which make available diverge commotions, financial strength, communally and environmentally hum situation. A town and its built-up areas should have a glowing implementation and striking transit system to offer lofty feature of life and be exemplify as "habitable". Among all these contrary auto rickshaws had been playing a vital role as the commuters uses of Agartala use Auto-Rickshaws for a variety of purposes, including education, shopping, health care,

recreational trips, and commuting to work. They are also integrated as a feeder mode of transport as it provides first and last mile connectivity for public transport services and also ensures that public transport is accessible to all parts of the city especially for the children, elderly and disable persons (Mani et.al., 2012). Perception or sensitivity varies from person to person. Different people make out different things at a similar situation. A passenger is a term broadly used to describe any person who travels in a vehicle, but bears little or no responsibility for the tasks required for that vehicle to arrive at its destination. Nowadays, many factors are related to choosing a particular mode of transportation. As pointed out above, it is vital to understand the travel behaviour and the reasons for choosing one mode of Transport over another. However, travel behaviour is complex and multidimensional. People consider the characteristics, advantages, disadvantages and costs of the different modes to make a trip. Moreover, the choice of one specific transport mode can vary over time, according to the type of journey and the nature of the destination. Thus the present study attempts to measure the Commuters Satisfaction Level and compare the quality of Auto Rickshaw Transport Services in comparison to other modes of transport in Agartala City.

2. STUDY AREA

Agartala is the capital city of Tripura which is a princely state of northeast India and it is located along 23°45'-23°55'N latitude and 96°15'-96°20'E longitude. It is also the second largest city of North-East India after Guwahati (Assam), both in municipal area and population. The city is now administrating by the Municipal Corporation. Agartala Municipal Corporation (AMC) has 49 numbers of wards with a total area 76.504 km². The Total population of the AMC is more than 400000 (*Census 2011*) with a density of 6251 persons per sq. km. As population is increasing the rate of vehicular movement is also increased which is accelerating positive as well as negative impact in the present study area.

Figure 1: Location map of the study area



3. METHODOLOGY

In order to study the proposed research problems and fulfill the objectives the researchers initially prepared the location map of the study area based on the road and ward map of Agartala City procured from the office of the Agartala Municipal Corporation (AMC). A suitable questionnaire survey was carried out on the Urban Commuters in Agartala City. A number of 25 subjects were taken randomly as a sample size. The personal interview were taken under varying circumstances such as comfortability, crowd, travel time etc. on bus, autos, electric rickshaws and paddle rickshaws and also visiting different wards of the city. The collected data were analysed by Likert Scale and simple statistical methods where the average, deviation and the variance level was taken out to find the most preferable mode of transport in Agartala City. The paper was presented in the shape of tabular form along with logical elucidation of the facts of the present research work.

4. RESULTS & DISCUSSION

4.1. Crowd

A large number of people gathered together in a disorganized or unruly way are the main characteristics of travelling in a public transport vehicles. From the perception study of the urban commuters in different areas of the city, it was found that the mean value of crowd while travelling in the Bus transport service is 2.38 which shows as average in comparison to 5 points scale. Thus the variance level is 36.62 per cent that shows nearly dissatisfaction level of the passengers while they travel by Bus. In terms of Auto rickshaw, E-Rickshaw and Paddle Rickshaw the mean values shows high rating satisfaction with high level of satisfaction in comparison to the Crowdedness that are faced in the Bus Transport service.

4.2. Connectivity

Connectivity is the term that defines the state of being connected or interconnected. From the field survey it was observed that the vehicles like auto rickshaw E-Rickshaw and Paddle Rickshaw are very highly connected to every corner of the city. Especially Paddle Rickshaws show the variance level of 95.22 per cent and mean value of 4.04 are very highly accessible and connected to each corner of the Agartala City. The mean value of Bus (2.28) is not connected in comparison to other mode of vehicles. It shows moderate level of connection. It is so because being large in size the vehicle could move in the main roads of the city where as the small or narrow type of roads are neglected or not connected.

4.3. Security

It is defined as the state of being free from danger or threat. It is quite often that passengers feel unsafe to travel with certain mode of vehicles at certain period of time and place. Passengers are always bound to move from one place to another according to their need. The variance level shows that commuters feel safe to travel with auto rickshaw in comparison to other mode of vehicles. They did not provide clear indication about the matter but the variance level of auto rickshaw shows highest 78.56 per cent and the mean value shows very good conditions to travel with auto rickshaw at any time of the day.

4.4. Comfort

It is termed as a state of physical ease and freedom from pain or constraint. Auto rickshaw, E-Rickshaw and Paddle Rickshaw are very highly comfortable to travel as per the field survey. Passenger carrying capacity in auto rickshaw is 3 where as E-Rickshaw is 4 and rickshaws are generally 2 excluding the drivers at the front rare. In bus the comfortability level is less (60.91 per cent). It is so because of the crowding (as highlighted in 3.1). Thus Bus services are not so much favorable for travel in perspective of comfortness.

4.5. Cleanliness

It is defined as the state or quality of being clean or being kept clean. In the public transport system we generally find an awful condition in the vehicles. The seats are not maintained. The interior parts of vehicles are unclean characterized with dusty and waste products. Commuters feel dissatisfaction when they face such circumstances while they are travelling. From the recent survey it is observed that the bus and the paddle rickshaws are not clean in terms of its exterior or interior parts of the vehicles. Whereas the E-Rickshaws and Auto Rickshaws are much more clean in comparison to any other public transport vehicles in Agartala City.

4.6. Travel time & Punctuality

Travel Time is usually specified period of time spent in travelling at work or from the entrance of a business establishment to the place where work is actually done whereas punctuality defines as the fact or quality of being on time. Passengers always prefer to move as fast as they are able to reach their destination. In Agartala city almost all the public transport vehicles move within their time period and try to commute the passengers in their specific time.

4.7. Charged fare

‘Charge Fare’ is one of the important characteristics of any transportation mode in the world. A person who travels from one place to another have to pay a minimum charge for travelling as termed ‘Charged Fare’. Thus in the present study area it was found that the charge fare of Bus transport system in Agartala City is very minimum in comparison to small vehicles. Paddle rickshaws charge the most high frequency of fare in Agartala city. The variance level shows that E – Rickshaws and Auto Rickshaws are moderate in charge fare where as Paddle Rickshaws charge fare are significantly higher than the expected mean value.

4.8. Service, Reliability and Availability at Peak Time

‘Service’ is defined as a system supplying a public need. ‘Reliability’ is termed as the quality of being trustworthy or of performing consistently well whereas the quality of being able to be used or obtained is defined as ‘Availability’. From the field investigation it is found that auto rickshaws are much more reliable and available in peak hours of the day. The service of this particular mode of transport is also highly satisfactory in comparison to Bus, E-rickshaw and paddle rickshaw.

4.9. Behavior of the driver

The way in which one acts or conducts oneself, especially towards others is defined as Behavior. From the perception survey of the urban commuters it was found that 65.92 per cent of the passengers agreed that the behaviors of the bus drivers and the conductors are average or moderate in scale whereas 69.63 per cent for auto rickshaw drivers and 64.19 per cent for E-Rickshaw Drivers are not so good in behavior. Most number of satisfaction levels is observed in the behavior of Hand pull rickshaws.

5. CONCLUSION

The auto rickshaw transport services are called the “Nerve of the transport system of Agartala Municipal Corporation”. But this transport system of Agartala had faced a lot of challenges and problems since time being. But today, leaving behind all such constrains, this service of transportation are playing much more beneficial role in the society in different aspects and features in comparison to any other vehicular movements of transportation.

Table 1: Variance level of Commuters Mode of Choice in Urban Mobility

Characteristics of Public Transportation in Agartala city		Bus			Auto Rickshaw			E- Rickshaw			Paddle Rickshaw		
		χ	δ	CV	χ	δ	CV	χ	δ	CV	χ	δ	CV
1	Crowd	2.38	9.43	39.62	3.34	26.28	78.68	3.36	27.63	82.23	2.08	12.67	60.91
2	Connectivity	2.28	14.07	57.19	4.06	37.40	93.5	4.06	37.40	93.5	4.04	38.47	95.22
3	Security	2.12	11.95	56.36	3.76	29.53	78.53	2.56	9.00	35.15	3.76	29.53	78.53
4	Comfort	2.08	12.67	60.91	4.06	37.40	93.5	2.78	25.69	92.08	4.06	37.40	93.5
5	Cleanliness	2.88	12.63	43.85	3.78	34.87	92.24	3.9	36.08	92.51	3.42	23.11	67.57
6	Travel time	1.78	16.15	90.73	4.06	37.40	93.5	3.5	31.11	88.88	2.42	19.76	81.65
7	Punctuality	1.88	16.16	85.95	3.5	24.73	70.65	3.52	24.30	69.03	2.88	12.63	43.85
8	Charged fare	3.46	23.13	66.84	2.46	9.2	37.39	2.22	6.91	31.12	1.78	16.15	90.73
9	Service	2.38	8.15	34.24	3.32	27.19	81.89	3.1	26.50	85.48	3.8	19.14	50.36
10	Reliability at Peak Time	2.92	13.52	46.30	3.42	23.11	67.57	3	16.93	56.43	3.46	23.13	66.84
11	Availability at Peak Time	2.2	12.14	55.18	2.78	25.69	92.08	4.06	37.40	93.5	4.06	37.40	93.5
12	Behavior of the driver	3.24	21.36	65.92	2.72	18.94	69.63	2.74	17.59	64.19	3.34	19.88	59.52

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Abbreviations

1. AMC: Agartala Municipal Corporation
2. χ : Mean
3. δ : Standard Deviation
4. CV : Coefficient of Variation

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