

Automobile Users Willingness To Pay On Public Mode Of Transportation: A Case Study Of Chennai City

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Abstract: In this paper, passenger willingness-to-pay (WTP) for improving the quality levels of a public transportation service is examined. Specifically, the objective of this research is to evaluating automobile users' willingness-to-pay on public transportation by considering some qualitative service aspects.

I. INTRODUCTION

Chennai City has a good network of public transport of bus and train. The Metropolitan Transport Corporation (MTC) provides the bus transport with 3464 buses plying on 732 routes carrying over 5 million people every day. The suburban train and the Mass Rapid Transit System (MRTS) network link the city's centre with its periphery. As per the State Transport Authority records, there are about 3.4 million registered vehicles in Chennai as of April 2011 of which over 2.5 million are two wheelers. Due to the tumultuous growth of private vehicles and narrow roads, congestion in Chennai City or the volume to capacity ratio of roads has increased to 1.2 times. The total vehicle population in Chennai, as on April 1, 2011, was 35,63,414 cars account for 56,758 and motor bikes 25,81,534. The total number of private vehicles in the city is 26,38,292, which is 74 per cent of the total vehicle population. According to the CMDA, this figure has been increasing at the annual rate of 9.7 per cent. Although private vehicles constitute a large share in the vehicle population, they cater to the requirements of a small fraction of commuters. Since 2004 Chennai City has recorded a growing rate of accidents and high fatality rates. Chennai with its suburbs had recorded the second highest number of fatalities amongst all urban centres in India after Delhi in 2008. (Transport Research Wing, Ministry of Road Transport and Highway Department, 2008). The city is also being clogged with increasing vehicle population which has risen by three times in past ten years.

II. SAMPLE DESIGN

The primary data required for the study have been elicited by using Survey Method in Chennai City. The study used multi-stage sampling method to identify the sample private automobile user. At the first stage a sample corporation zone has been identified from the north, south, central and west areas of Chennai City. At the second stage, from the six selected corporation zones, a sample division has been identified. At the third stage, from the 18 selected corporation divisions a sample private automobile user has been selected from 18 sample corporation divisions located in six Corporation Zones.

WILLINGNESS FOR ALTERNATIVE MODE OF TRANSPORTATION

When self-mode of transportation is difficult or inefficient compared to public mode of transportation the automobile users may switch over to the public modes.

WILLINGNESS TO SWITCH OVER TO PUBLIC TRANSPORTATION

The willingness of the respondents to switch over to public mode of transportation is shown in Table 1.1.

Prefer	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Yes	72 (30.9) [57.1]	5 (2.1) [50.0]	156 (67.0) [72.9]	233 (100.0) [66.6]

No	54 (46.2) [42.9]	5 (4.3) [50.0]	58 (49.6) [27.1]	117 (100.0) [33.4]
Total	126 (36.0) [100.0]	10 (2.9) [100.0]	214 (61.1) [100.0]	350 (100.0) [100.0]

Source: Field Survey

Table 1.1: Willingness to switch over to public transportation

It is evident that two-third (66.6 percent) of the respondents expressed their willingness to switch over to public mode of transportation. Four-wheeler users are the least (50.0 percent) among the different types of automobile users to switch over to public modes of transportation. Both two-wheeler and four-wheeler users expressed the highest proportion of willingness of 72.9 percent as compared to 57.1 percent of the two-wheeler users.

III. PROBLEM WITH SELF MODE OF TRANSPORTATION

Those expressed willingness to switch over to public transportation were asked about the problem with the self mode of transportation. The problems expressed with the self mode of transportation according to the different types of automobile users are recorded in Table 1.2. Among the 233 respondents expressed willingness to switch over to public transport cited various problems associated with their self mode of transportation. More than one-fourth (26.0 percent) cited the reason of high cost with the self mode of transportation followed by poor roads, traffic congestion and health problem in the percentages of 14.6, 11.4 and 5.1 respectively. Risk and parking problem are the other reasons cited which account for only 4.9 and 4.6 percentages. Maximum proportion of all types of automobile users cited the reason of high cost comprising 30.0 percent of the four-wheeler users followed by both two-wheeler and four-wheeler users and two-wheeler users in the percentages of 28.0 and 22.2 respectively.

Problem	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Health Problem	5 (27.8) [4.0]	1 (5.6) [10.0]	12 (66.7) [5.6]	18 (100.0) [5.1]
High Cost	28 (30.8) [22.2]	3 (3.3) [30.0]	60 (65.9) [28.0]	91 (100.0) [26.0]
Parking Problem	3 (18.8) [2.4]	0 (0.0) [0.0]	13 (81.2) [6.1]	16 (100.0) [4.6]
Poor Road	16 (31.4) [12.7]	0 (0.0) [0.0]	35 (68.6) [16.4]	51 (100.0) [14.6]
Risk	4 (23.5) [3.2]	1 (5.9) [10.0]	12 (70.6) [5.6]	17 (100.0) [4.9]
Traffic congestion	16 (40.0) [12.7]	0 (0.0) [0.0]	24 (60.0) [11.2]	40 (100.0) [11.4]

Total	72 (30.9) [100.0]	5 (2.1) [100.0]	156 (67.0) [100.0]	233 (100.0) [100.0]
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Source: Field Survey

Table 1.2: Problems with self mode of transportation according to the different types of automobile users

IV. MERITS OF PUBLIC TRANSPORT SAVING OF TIME

Saving of Time	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Strongly Agreed	2 (22.2) [2.8]	1 (11.1) [20.0]	6 (66.7) [3.8]	9 (100.0) [3.9]
Agree	7 (43.8) [9.7]	0 (0.0) [0.0]	9 (56.2) [5.8]	16 (100.0) [6.9]
Neutral	14 (35.9) [19.4]	1 (2.6) [20.0]	24 (61.5) [15.4]	39 (100.0) [16.7]
Disagree	24 (35.8) [33.3]	2 (3.0) [40.0]	41 (61.2) [26.3]	67 (100.0) [28.8]
Strongly Disagree	25 (24.5) [34.7]	1 (1.0) [20.0]	76 (74.5) [48.7]	102 (100.0) [43.8]
Total	72 (30.9) [100.0]	5 (2.1) [100.0]	156 (67.0) [100.0]	233 (100.0) [100.0%]

Table 1.3: Saving of time as the reason to switch over to public transportation according to the different type of automobile users

The respondents expressed willingness to switch over to public transport found some merits in them. Many of them were not able to give a single reason for this switch over. Hence saving of time in public transport is taken as the reason and the respondents were asked to rate the factor of time as the reason for their switch over to the public transport. The opinion of different types of automobile users to switch over to public transportation is for saving time that their ratings are recorded in Table 1.3. More than two-fifths of those expressed willingness to switch over to public transport (102 out of 233 or 43.8 percent) strongly disagreed time saving as the reason for that. Disagree was the rating of time saving of public transport by 28.8 percent. From this it is very clear that public transportation may not give the advantage of time saving if they switch over to public transport. However more than one-fourth (27.5 percent) expressed positive of time saving; most of those have sub-urban train transport in their mind. Among the different types of automobile users both two-wheeler and four-wheeler users are found maximum in the category of strongly disagree accounting for 48.7 percent followed by 34.7 percent by the two-wheeler users and 20.0 percent of the four-wheeler users.

V. SAVING OF MONEY

Public transport is always cheap when compared to self transport. Hence the respondents were asked about their level of

opinion on switching over public transport for saving money. The opinion of switching over to public transport for saving of money according to different types of automobile users is shown in Table 1.4. More than three-fifth of the respondents (62.2 percent) strongly agreed to switch over to the public transport is for the purpose of saving money. Respondents in the rating scale of the opinion in the category of 'agree' account for 29.2 percent. Thus 91.4 percent of the respondents willing to switch over to public transport accepted that this opinion is only to save money. However, only 3.0 percent are negatively responded to the reason. Four out of five four-wheeler users (80.0 percent) accepted to switch over to public transport strongly agreed that their willingness is in order to save money when compared to 67.3 percent of both two-wheeler and four-wheeler users and 50.0 percent of the two-wheeler users. Only two-wheeler user and both two-wheeler and four-wheeler users recorded slight disagreement about this opinion in the rating scale of strongly disagree by 1.4 and 1.3 percentages respectively.

Saving Money	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Strongly Agreed	36 (24.8) [50.0]	4 (2.8) [80.0]	105 (72.4) [67.3]	145 (100.0) [62.2]
Agree	32 (47.1) [44.4]	1 (1.5) [20.0]	35 (51.5) [22.4]	68 (100.0) [29.2]
Neutral	2 (15.4) [2.8]	0 (0.0) [0.0]	11 (84.6) [7.1]	13 (100.0) [5.6]
Disagree	1 (25.0) [1.4]	0 (0.0) [0.0]	3 (75.0) [1.9]	4 (100.0) [1.7]
Strongly Disagree	1 (33.3) [1.4]	0 (0.0) [0.0]	2 (66.7) [1.3]	3 (100.0) [1.3]
Total	72 (30.9) [100.0]	5 (2.1) [100.0]	156 (67.0) [100.0]	233 (100.0) [100.0]

Source: Field Survey

Table 1.4: Switching over to public transport to save money according to the different type of automobile users

SAFETY

There is a general perception of public that public transport is much safer when compared to self transport. The different type of automobile users willing to switch over to public transport for safety is furnished in Table 1.5. One out of every two (46.8 percent) of the respondents willing to switch over to public transport gives the rating of 'agree' to the reason of safety. Neutral is the rating of another 39.9 percent of such respondents. Negative opinion is very rare and most of it is from both two-wheeler and four-wheeler users. Four-fifths of the four-wheeler users (80.0 percent) gave the rating of neutral to safety. However maximum proportion of two-wheeler users (52.8 percent) and 45.5 percent of both two-wheeler and four-wheeler users gave the rating of agree to the opinion about safety.

Safety	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Strongly Agreed	36 (24.8) [50.0]	4 (2.8) [80.0]	105 (72.4) [67.3]	145 (100.0) [62.2]
Agree	32 (47.1) [44.4]	1 (1.5) [20.0]	35 (51.5) [22.4]	68 (100.0) [29.2]
Neutral	2 (15.4) [2.8]	0 (0.0) [0.0]	11 (84.6) [7.1]	13 (100.0) [5.6]
Disagree	1 (25.0) [1.4]	0 (0.0) [0.0]	3 (75.0) [1.9]	4 (100.0) [1.7]
Strongly Disagree	1 (33.3) [1.4]	0 (0.0) [0.0]	2 (66.7) [1.3]	3 (100.0) [1.3]
Total	72 (30.9) [100.0]	5 (2.1) [100.0]	156 (67.0) [100.0]	233 (100.0) [100.0]

Strongly Agreed	4 (20.0) [5.6]	1 (5.0) [20.0]	15 (75.0) [9.6]	20 (100.0) [8.6]
Agree	38 (34.9) [52.8]	0 (0.0) [0.0]	71 (65.1) [45.5]	109 (100.0) [46.8]
Neutral	29 (31.2) [40.3]	4 (4.3) [80.0]	60 (64.5) [38.5]	93 (100.0) [39.9]
Disagree	0 (0.0) [0.0]	0 (0.0) [0.0]	8 (100.0) [5.1]	8 (100.0) [3.4]
Strongly Disagree	1 (33.3) [1.4]	0 (0.0) [0.0]	2 (66.7) [1.3]	3 (100.0) [1.3]
Total	72 (30.9) [100.0]	5 (2.1) [100.0]	156 (67.0) [100.0]	233 (100.0) [100.0]

Source: Field Survey

Table 1.5: Switching over to public transportation for safety

VI. CONVENIENCE

Table 1.6 gives the rating of convenience as the reason to switch over to public transport by different type of automobile users is given in Table 1.6.

More Convenient	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Strongly Agree	0 (0.0) [0.0]	1 (11.1) [20.0]	8 (88.9) [5.1]	9 (100.0) [3.9]
Agree	14 (40.0) [19.4]	0 (0.0) [0.0]	21 (60.0) [13.5]	35 (100.0) [15.0]
Neutral	40 (37.4) [55.6]	1 (0.9) [20.0]	66 (61.7) [42.3]	107 (100.0) [45.9]
Disagree	9 (20.0) [12.5]	2 (4.4) [40.0]	34 (75.6) [21.8]	45 (100.0) [19.3]
Strongly Disagree	9 (24.3) [12.5]	1 (2.7) [20.0]	27 (73.0) [17.3]	37 (100.0) [15.9]
Total	72 (30.9) [100.0]	5 (2.1) [100.0]	156 (67.0) [100.0]	233 (100.0) [100.0]

Source: Field Survey

Table 1.6: Rating of convenience as the reason to switch over to public transportation by different types of automobile users

Convenience is not a strongly given opinion; however 45.9 percent of the respondents willing to switch over to public transport gave the rating of neutral. All other ratings are almost of equal importance except strongly agree. The opinion of convenience is disagreed and strongly disagreed by 19.3 and 15.9 percentages respectively. For majority of the four-wheeler users, convenience is not the reason for the switching over to public transport. Two-

wheeler users and both two-wheeler and four-wheeler users rate convenience to the level of neutral accounting for 55.6 and 42.3 percentages respectively

VII. REASONS FOR PREFERRING SELF MODE OF TRANSPORTATION

The reason for preferring to self mode of transportation by the respondents is shown in Table 1.7. Out of 117 automobile users who have preferred self mode of transportation over public transportation, 10.9 percent opined that crowding is the main problem with public transportation and 10 percent cited delaying as the main problem with public transportation and 6.9 percent of them given poor frequency is the main problem with public transportation. One out of five (20 percent) four wheeler users says that crowding is the main problem with public transportation and it is also the opinion of two wheeler and both two- wheeler and four-wheeler users in the percentages of 9.5 and 12.2 respectively. This statistics show that public transportation is far below the standard level of expectation of the respondents and it is hard to trust as a means of emergency mode of transportation.

Problem	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Crowded	12 (31.6) [9.5]	2 (5.3) [20.0]	24 (63.2) [11.2]	38 (100.0) [10.9]
Delay	19 (54.3) [15.1]	1 (2.9) [10.0]	15 (42.9) [7.0]	35 (100.0) [10.0]
Not Convenient	2 (22.2) [1.6]	1 (11.1) [10.0]	6 (66.7) [2.8]	9 (100.0) [2.6]
Poor Frequency	16 (66.7) [12.7]	0 (0.0) [0.0]	8 (33.3) [3.7]	24 (100.0) [6.9]
Poor Maintenance	5 (50.0) [4.0]	1 (10.0) [10.0]	5 (40.0) [2.4]	11 (100.0) [3.2]
Total	54 (46.2) [100.0]	5 (4.3) [100.0]	58 (49.6) [100.0]	117 (100.0) [100.0]

Source: Field Survey

Table 1.7: Preferring self mode of transportation

SUB-URBAN RAILWAY

Willingness expressed by different types of automobile users to sub-urban railway transport is shown in Table 1.8. Sub-urban Transport is the most reliable and less time consuming. But the important limitation is that the distance between the residence and railway station and the distance between the railway station and the work place are the determining factors in choosing the sub-urban rail transport. It is found that 87.1 percent of the respondents are willing to switch over to sub-urban rail transport. Both two-wheeler and four-wheeler using respondents expressed in largest proportion (91.1 percent) followed by two-wheeler users and four-wheeler users in the percentages of 81.7 and 70.0 respectively.

Sub-Urban Railway Transport	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Yes	103 (33.8) [81.7]	7 (2.3) [70.0]	195 (63.9) [91.1]	305 (100.0) [87.1]
No	23 (51.1) [18.3]	3 (6.7) [30.0]	19 (42.2) [8.9]	45 (100.0) [12.9]
Total	126 (36.0) [100.0]	10 (2.9) [100.0]	214 (61.1) [100.0]	350 (100.0) [100.0]

Source: Field Survey

Table 1.8: Willingness to switch over to sub-urban train transport

WILLINGNESS TO PAY FOR SUB-URBAN RAIL TRANSPORT

The respondents were asked about their willingness to pay (WTP) for travelling 10 Kms distance in MRTS (Metropolitan Rapid Transit System) with facilities as equivalent to the metro rail transport. In this only those respondents willing to switch over to sub-urban train transport is included. Since the respondents are not able to give the exact amount willing to pay for the sub-urban train transport, different tariff rates are given to them for selecting their interested tariff. Different automobile users willing to switch over to sub-urban train transport is distributed in different payment classes. The details are furnished in Table 1.9. It is found that 38.7 percent of the automobile users willing to switch over to sub-urban train transport are willing to pay Rs. 20 - Rs 30 for travelling a distance of 10 Kms with facilities equivalent to metro rail. Next largest proportion of respondents or 31.8 percent willing to pay Rs. 10 - Rs. 20 for the same travel. Respondents willing to pay Rs. 30 -Rs. 40 and Rs. 40 and above for sub-urban/MRTS transportation account for 16.4 and 10.2 percentages respectively. Respondents using both two-wheeler and four-wheeler are found maximum in the payment class of Rs. 20 - Rs 30 accounting for 42.1 percent. However respondents using two-wheelers are found maximum in a lower payment class of Rs. 10 - Rs 20. Four-wheeler users have been found in different payment classes in equal percentages of 28.6 percent. The average amount willing to pay for sub-urban train transport for travelling a distance of 10 km is Rs. 29.25.

Distance of 10 Kms (Amount in Rs)	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Below 10	3 (33.3) [2.9]	0 (0.0) [0.0]	6 (66.7) [3.1]	9 (100.0) [3.0]
10-20	48 (49.5) [46.6]	2 (2.1) [28.6]	47 (48.5) [24.1]	97 (100.0) [31.8]
20-30	34 (28.8) [33.0]	2 (1.7) [28.6]	82 (69.5) [42.1]	118 (100.0) [38.7]
30-40	11 (22.0) [10.7]	1 (2.0) [14.3]	38 (76.0) [19.5]	50 (100.0) [16.4]

40 and Above	7 (22.6) [6.8]	2 (6.5) [28.6]	22 (71.0) [11.3]	31 (100.0) [10.2]
Total	103 (33.8) [100.0]	7 (2.3) [100.0]	195 (63.9) [100.0]	305 (100.0) [100.0]

Source: Field Survey

Table 1.9: Amount willing to pay for sub-urban/MRTS travelling

WILLING TO PAY FOR BETTER ROADS

Table 1.10 shows the distribution of different types of automobile users' willingness to pay for better road facilities in Chennai City. The respondents were asked about their willingness to pay for better roads as equivalent to the toll roads in a month. They were given different rate classes from which they are asked to choose any one class according to their willingness to pay. More than two-fourth (41.1 percent) of the respondents are willing to pay Rs. 50 – Rs. 100 per month for better roads. This is followed by Rs. 100 – Rs 150 and Rs. 150 – Rs. 200 in the percentages of 23.1 and 12.3 respectively. Four-wheeler users are found maximum (40.0 percent) in the highest willingness to pay class of Rs. 200 and above per month; where it is Rs 50- Rs. 100 for two-wheeler users and both two-wheeler and four-wheeler users accounting for 42.1 and 41.6 percentages respectively. The average amount willing to pay for better roads in Chennai City in a month by the respondents is estimated Rs. 143.83.

Amount WTP (Rs. Per month)	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
below 50	27 (54.0) [21.4]	1 (2.0) [10.0]	22 (44.0) [10.3]	50 (100.0) [14.3]
50-100	53 (36.8) [42.1]	2 (1.4) [20.0]	89 (61.8) [41.6]	144 (100.0) [41.1]
100-150	27 (33.3) [21.4]	3 (3.7) [30.0]	51 (63.0) [23.8]	81 (100.0) [23.1]
150-200	10 (23.3) [7.9]	0 (0.0) [0.0]	33 (76.7) [15.4]	43 (100.0) [12.3]
200 and Above	9 (28.1) [7.1]	4 (12.5) [40.0]	19 (59.4) [8.9]	32 (100.0) [9.1]
Total	126 (36.0) [100.0]	10 (2.9) [100.0]	214 (61.1) [100.0]	350 (100.0) [100.0]

Source: Field Survey

Table 1.10: Willing to pay for better roads facilities

WILLING TO PAY FOR PUBLIC TRANSPORTATION

The amount willing to pay for a 10 Km travel by using public transport of a specified quality by different types of automobile users in Chennai City is shown in Table 1.11. Nearly half of the total respondents (48.0 percent) for 10 Km journey by using a specified quality of public transport are Rs. 10- Rs. 20. The next largest number of respondents willing to pay below Rs. 10 for the same

length of journey accounts for 30.9 percent. Respondents willing to pay Rs. 20 – Rs 30 and Rs 30 and above account for 10.3 and 10.9 percentages of the respondents respectively. Nearly half of the two-wheeler users (46.0 percent) willing to pay below Rs. 10, while 57.5 percent of both two-wheeler and four-wheeler using respondents are found in the willingness to pay class of Rs.10 – Rs 20. One out of every two four wheeler users is willing to pay the highest amount of Rs. 30 and above. The average willingness to pay for 10 Km travel in better transport is estimated as Rs. 19.09.

Travelling 10 Kms. by public transportation (Amount in Rs)	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Below 10	58 (53.7) [46.0]	0 (0.0) [0.0]	50 (46.3) [23.4]	108 (100.0) [30.9]
10-20	42 (25.0) [33.3]	3 (1.8) [30.0]	123 (73.2) [57.5]	168 (100.0) [48.0]
20-30	12 (33.3) [9.5]	2 (5.6) [20.0]	22 (61.1) [10.3]	36 (100.0) [10.3]
30 and Above	14 (36.8) [11.1]	5 (13.2) [50.0]	19 (50.0) [8.9]	38 (100.0) [10.9]
Total	126 (36.0) [100.0]	10 (2.9) [100.0]	214 (61.1) [100.0]	350 (100.0) [100.0]

Source: Field Survey

Table 1.11: Willing to pay for specified quality of public transport

DESCRIPTIVE STATISTICS OF WILLINGNESS TO PAY

Table 1.12 shows descriptive statistics of willingness to pay for sub-urban train transport, better road and better public transport facilities.

Willing to Pay (in Rs.)	N	Minimum	Maximum	Mean	Std. Deviation
Sub-Urban Railway/MRTS in 10 Kms.	305	10	150	29.25	12.596
Better Roads Per Month in Rs.	350	15	1000	143.83	111.447
Best Public Transportation Facility in 10 Kms	350	5	70	19.09	11.299

Source: Field survey

Table 1.12: Descriptive statistics of willingness to pay

Out of 305 automobile users, the average willingness to pay for travelling a distance of 10 Kms is Rs 29.25 with a minimum of Rs. 10 and maximum of Rs. 150. The amount willing to pay for better roads per month is at the average of Rs 143.83 with minimum of Rs 15 and maximum of Rs. 1000. If best public transportation facility is provided the automobile users are willing to pay for travelling a distance of 10 Kms at the average of Rs. 19.09 with minimum of Rs. 5 and maximum of Rs. 70.

LOSS OF PRESTIGE

It is the perception of many of the urban elites is a loss of prestige to use public transport. The respondents were also posed the same question and the responses are recorded in Table 1.13. Nearly half or 46.0 percent of the respondents opined positively of prestige loss if they use public transport. More than three-fifth of the two wheeler users have no prestige loss if they use public transport, while 50.0 percent of the four wheeler users and 49.1 percent of both two-wheeler and four-wheeler using households registered the same opinion. The respondents were also asked if they are provided with air conditioned best quality public transport facility for compensating the loss of prestige from the present urban public transport.

Prestige Loss	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Yes	47 (29.2) [37.3]	5 (3.1) [50.0]	109 (67.7) [50.9]	161 (100.0) [46.0]
No	79 (41.8) [62.7]	5 (2.6) [50.0]	105 (55.6) [49.1]	189 (100.0) [54.0]
Total	126 (36.0) [100.0]	10 (2.9) [100.0]	214 (61.1) [100.0]	350 (100.0) [100.0]

Source: Field Survey

Table 1.13: Opinion of prestige loss using public transport according to the type of automobile users

The answer of different types of automobile users to this question is depicted in Table 1.14.

Compensate	Automobiles Owned			Total
	Two Wheeler	Four Wheeler	Both	
Yes	21 (17.1) [44.7]	5 (4.1) [100.0]	97 (78.9) [89.0]	123 (100.0) [76.4]
No	26 (68.4) [55.3]	0 (0.0) [0.0]	12 (31.6) [11.0]	38 (100.0) [23.6]
Total	47 (29.2) [100.0]	5 (3.1) [100.0]	109 (67.7) [100.0]	161 (100.0) [100.0]

Source: Field Survey

Table 1.14: Luxury/Ac facilities compensate the loss of prestige using

More than three fourth (76.4 percent) of the respondents opined that such air conditioned better transport facilities will compensate the loss of prestige. All the four-wheeler users agreed to the point but only 44.7 percent of the two-wheeler users and 93.0 percent of both two wheeler and four-wheeler users agreed to the point.

VIII.SUMMARY OF THE FINDING

It is evident that two-third (66.6 percent) of the respondents expressed their willingness to switch over to public mode of transportation. Four-wheeler users are the least (50.0 percent) among the different types of automobile users to switch over to public modes of transportation. More than one-fourth cited the reason of high cost with the self mode of transportation followed by poor roads, traffic congestion and health problem in the percentages of 14.6,11.4 and

5.1 respectively. More than two-fifths of those expressed willingness to switch over to public transport strongly disagreed time saving as the reason for that. Disagree was the reason of time saving of public transport by 28.8 percent. From this it is very clear that public transportation may not give the advantage of time saving if they switch over to public transport.

More than three-fifth of the respondents (62.2 percent) strongly agreed to switch over to the public transport is for the purpose of saving money. One out of every two (46.8 percent) of the respondents willing to switch over to public transport gives the rating of 'agree' to the reason of safety. Convenience is not a strongly given opinion. Out of 117 respondents preferred self mode of transportation 10.9 percent crowding as the main problem and 10 percent cited delay as the main problem with public transportation. And 6.9 percent of them rated poor frequency is the main problem with public transportation.

It is found that 87.1 percent of the respondents are willing to switch over to sub-urban rail transport. Both two-wheeler and four-wheeler using respondents expressed in largest proportion (91.1 percent) followed by two-wheeler users and four-wheeler users in the percentages of 81.7 and 70.0 respectively. It is found that 38.7 percent of the automobile users willing to switch over to sub-urban train transport are willing to pay Rs. 20 - Rs 30 for travelling a distance of 10 Kms with facilities equivalent to metro rail. More than two-fourth (41.1 percent) of the respondents are willing to pay Rs. 50 - Rs. 100 per month for better roads. Four-wheeler users are found maximum (40.0 percent) in the highest willingness to pay class of Rs. 200 and above per month; where it is Rs 50- Rs. 100 for two-wheeler users and both two-wheeler and four-wheeler users accounting for 42.1 and 41.6 percentages respectively. Nearly 50 percent willing to pay for public transport for a travel of 10 kms is Rs. 10- Rs. 20.

Our of 305 automobile users the average willingness to pay for travelling a distance of 10 Kms is Rs 29.25 and the amount willing to pay for better roads per month is at the average of Rs 143.83. Nearly half of the respondents opined positively of prestige loss if they use public transport. More than three fourth (76.4 percent) of the respondents opined that air conditioned better public transport facilities will compensate the loss of prestige. All the four-wheeler users agreed to the point but only as compared to 44.7 percent of the two-wheeler users and 93.0 percent of both two-wheeler and four-wheeler users.

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