
Passengers' Preference: A Comparative Study between Nagaland State Transport and Other Bus Services

- Dr. Gautam Patikar *

Abstract

The transport need of the state has to be assessed not merely in terms of economic returns. The method i.e. ascertaining the preference and satisfaction of the customers is more appropriate in the case of public utility services like transportation. The opinion of the different groups of passengers varies according to their experiences, perceptions, family and social background.

In Nagaland passengers do have the opportunity to use the services of both private and public buses (NST). Therefore, a comparative study between these two bus services becomes important. Accordingly the socio-economic factors influencing the passengers' preference of the respondents have been studied. A field survey was conducted through out the state by administering questionnaire to 400 sample respondents.

The study revealed that majority of the sample respondents prefer private buses to NST buses. Important reasons for passengers' preference between NST and private buses have been highlighted in the study as well.

Keywords: commuters, preference, satisfaction, quality, score, private.

1. Introduction

Road Transport plays a crucial role in opening up of remote areas and helping their economic development. It is all the more important in the hill terrain of Nagaland, a state in North- Eastern part of the country. The overall objective of the road transport sector in the State plan is to create an efficient transport network as a part of the infrastructure for social and economic welfare. Thus transport need of the state has to be assessed not merely in terms of economic returns but customers' satisfaction and preference. There are two yardsticks to measure the success of any business. One is through quantitative factor such as profit, capital appreciation, and increase in the value of assets. The other is through ascertaining the satisfaction of the customers regarding the products sold and services extended by the business unit (Gunaseelan. 1998). The Study of Performance, Problems and Prospects of State Road Transport Undertakings in India conducted by 'Central Institute of Road Transport (Training and Research)' during 1981 emphasized only on the quantitative factors and analyzed the parameters of physical performance, financial performance and quality of services. In fact, the second method i.e. ascertaining the satisfaction of the customers

* Assistant professor, Department of Commerce, Nagaland university, Kohima Campus, Kohima.

is considered more appropriate in the case of public utility services such as transport. The opinion of the different groups of passengers varies according to their experiences, perceptions, family and social background. Therefore, ascertaining the opinion of all groups of passengers is imperative.

In Nagaland passengers do have the opportunity to use the services of both private and Nagaland State Transport (NST) buses. Therefore an attempt to study the comparison between NST and private buses with respect to passengers' preference becomes important. Accordingly, the socio-economic factors influencing the passengers' preference were also studied.

2. Objectives of the Study

Following are the objectives of this study:

1. To ascertain the extent of passengers' preference for NST and private buses.
2. To identify the reasons for passengers' preference between NST and private buses.
3. To analyse the socio-economic factors influencing passengers' preference between the NST and private buses.

3. Research Methodology

In an effort to make reason-based study a field survey was conducted through out the state by administering questionnaire to 400 sample respondents selected on random basis. In order to finalize the questionnaire for this purpose a pilot survey was conducted in three important districts of Nagaland namely Kohima, Dimapur and Mokokchung. Altogether 60 commuters were selected and were asked to state the causes for their preference of any specific type of bus operators. It was found that there are ten available reasons for preferring either NST or Private buses. But all these ten reasons were not available with one individual respondent. In fact no commuter could state more than five reasons for his/her preference between NST and private buses. Hence, ten (10) reasons were stated in the questionnaire administered to the sample respondents. Each respondent was asked to choose any five of the ten reasons and rank them according to his/her choice on the basis of priority.

Weight from 5 to 1 was allotted in the order of 1st Rank to 5th Rank. E.g. rank 1 has been given weight 5 and the rank five has been assigned weight 1. The total weighted score for each reason was arrived at by adding up the scores for each reason separately for NST and private buses. Also for easy comparison; the average weighted scores per respondents were also calculated by dividing total scores of each reason by 176 in case of NST buses and that of the total score of each reason for private buses by 209. Then all the reasons were ranked in the order of the weighted scores that each reason acquired. Also, certain socio-economic factors of the sample respondents were identified in order to analyse the passengers' preference between NST and Private Buses. These socio-economic factors are place of residence, age, marital status, sex, occupation, educational background, and frequency of travel, purpose of travel, distance traveled and owning of vehicles.

4. Result Analysis

1. Passengers' Preference for NST and Private Buses

Out of the total sample respondents of 400, 15 respondents accounting for 3.75 per cent have expressed that they have no special preference for any specific type of bus operation. About 44 per cent of respondents numbering 176 have preferred NST buses and 209 respondents representing 52.25 per cent have preferred private buses. It is inferred that majority of passengers prefer private buses as explained in Table 1.

Table 1 : Passengers' Preference for NST and Private Buses

Preference	No. of Respondent
NST	176 (44%)
Private	209 (52.25%)
Others	15 (3.75%)

Source: Field survey

2. Reasons for Preference of NST/Private Buses

Table 2 : Reasons for preference of NST/private buses

Sl. No.	Reasons	NST Buses		Private Buses	
		Weighted Score	Rank	Weighted Score	Rank
1.	Reasonable Fare	591 (3.35)	1	485 (2.32)	3
2.	Quick Service	352 (2.00)	4	604 (2.89)	1
3.	Availability during convenient hour and place	387 (2.19)	3	500 (2.39)	2
4.	Safety and reliability	436 (2.47)	2	472 (2.25)	4
5.	Easy to carry luggage	249 (1.41)	5	359 (1.71)	5
6.	Maintenance and appearance of the vehicle	136 (0.77)	6	236 (1.12)	6
7.	Co-operative attitude of the crew members	87 (0.49)	9	170 (0.81)	7
8.	Concessional facilities	128 (0.72)	7	50 (0.23)	9
9.	Not satisfied with the operation of other service	97 (0.55)	8	104 (0.50)	8
10.	Any other reasons	20 (0.11)	10	16 (0.07)	10

Source: Field Survey

Note: Figures in brackets indicate average scores.

a. Reasons for Preferring NST Buses

The reasons for preferring NST buses by 176 respondents with the respective weighted scores as given by them and their order among the stated reasons are given in Table 2.

It has been observed from Table 2 that 'Reasonable Fare' was accorded the first rank as the reason for preferring NST buses, with the highest score of 591, the average weighted score being 3.35 per respondent. There is a vast difference of 155 scores between the scores accorded to the first reason and the second foremost reason. The second foremost reason namely, 'Safety and reliability' has been awarded with the weighted score of 436 with average weighted score of 2.47 per respondent. The next rank falls on the reason namely 'Availability during convenient hour and place' with a weighted score of 387. The average weighted score for this third reason is 2.19 per respondent. The fourth rank was accorded to the reason namely; 'Quick Service' with weighted score of 352 and the average weighted score per respondent was arrived at 2.00. 'Easy to carry luggage' has been accorded the fifth rank with weighted score of 249 and average weighted score of 1.41 per respondents. 'Maintenance and appearance of the vehicle' was awarded sixth rank with weighted score of 136 and the average weighted score of 0.77 per respondent. 'Concession facilities' has emerged as the seventh reason for preferring NST buses with a weighted score of 128 and the average weighted score of 0.72 per respondent. The eighth reason for preferring NST buses by the respondent is, 'Not satisfied with the operations of other service' with a weighted score of 97 and the average weighted score of 0.55 per respondent. 'Co-operative attitude of the crew member' has gained the weighted score of 87, with an average score of 0.49 and emerged as the ninth reason for preferring NST buses. The last rank was awarded to the tenth reason namely, 'Any other reasons' with a weighted score of 20 and an average weighted score of 0.11 per respondent.

Thus the most popular advantage of NST is the offering of services at 'Reasonable fare' and 'Safety and reliability' comes next. The third, fourth and fifth motivating factors have been the 'Availability during convenient hour and place', 'Quick Service' and 'Easy to carry luggage' respectively. The rest of the reasons stated are not strong enough to attract the passengers to NST buses, as the scores gained by such reasons are negligible.

b. Reasons for Preferring Private Buses

It is observed from Table 2 that 'Quick Service' has been the foremost reason for preferring private buses by the respondents. The weighted score for this is 604 with an average weighted score of 2.89. The second rank has been awarded to 'Availability during convenient hour and place'. The weighted score for this is 500 with an average weighted score of 2.39 per respondent. 'Reasonable Fare' has been awarded the next rank with weighted score of 485 and an average weighted score of 2.32 per respondent. The fourth rank is awarded to 'Safety and reliability' with

weighted score of 472 and an average weighted score of 2.25 per respondent. The fifth reason for preferring private buses by the respondents has been 'Easy to carry luggage' with a weighted score of 359 and an average weighted score of 1.71 per respondent. The sixth rank has gone to 'Maintenance and appearance of the vehicle' with a weighted score of 236 and an average weighted score of 1.12 per respondent. The seventh reason has been 'Co-operative attitude of the crew members' for preferring private buses with weighted score of 170 and an average weighted score of 0.81. The eighth rank has been accorded to 'Not satisfied with the operations of other service' with a weighted score of 104 and an average score of 0.50 per respondent. The ninth rank has been awarded to 'Concessional facilities' with a weighted score of 50 and an average weighted score of 0.23 per respondent. The other reasons have been awarded the last rank with a weighted score of 16 and average weighted score of 0.07 per respondent.

Thus it is inferred that the most popular advantage of private operators is the offering of 'Quick Service' followed by 'Availability during convenient hour and place' and then 'Reasonable fare' respectively. The fourth and fifth motivating factors for preferring private buses have been 'Safety and reliability' and 'Easy to carry luggage' respectively. The rest of the reasons stated are not strong enough to attract the passengers to private buses, as the scores gained by such reasons are negligible.

3. Passengers' Preference and their Socio-Economic Profile

In this section the socio-economic factors of the sample respondents and their preference for NST and private buses have been analysed.

(a) Age and Preference

Table 3 : Age and Passenger Preference of Bus

Age (in years)	Respondents				
	Total No.	NST		Private Buses	
		No.	%	No.	%
Below 25	146	63	43.15	3	56.85
25 to 40	173	75	43.35	8	56.65
40 to 55	40	21	52.50	9	47.50
Above 55	26	17	65.38	9	34.62
Total	385	176	45.71	209	54.29

Source: Field Survey

It is observed from Table 3 that respondents in the age group between 40 to 55 years totaling 40 of which 21 respondents accounting for 52.5 per cent prefer NST buses and 19 respondents representing 47.5 percent prefer private buses, while respondents below 25 years showed increasing preference private buses against NST buses. Out of 146 sample respondents, 63 (43.2%) respondents showed their preference for NST buses and 83 (56.8%) respondents preferred private buses. The respondents in the age group between 25 to 40 years seems to have shown more preference for private buses with 75 (43.4%) respondents prefer NST buses and 98 (56.6%) respondents prefer private buses. The respondents in the age group above 55 years have preferred NST buses more than private buses.

It is inferred that younger respondents with age below 40 years prefer private buses while older respondents in the age group above 40 years have shown their preference for NST buses

(b) Sex and Preference

It is observed from Table 4 that male passengers numbering 108 (45.9%) prefer NST buses and 127 (54.1%) prefer private buses. Among 150 female respondents, 68 (45.3%) respondents prefer NST buses and 82 (54.7%) respondents prefer private buses. It is therefore inferred that respondents whether male or female both prefer private buses than NST buses.

Table 4 : Sex and Passenger Preference of Bus

Sex	Respondents				
	Total No.	NST		Private buses	
		No.	%	No.	%
Male	235	108	45.96	127	54.04
Female	150	68	45.33	82	54.67
Total	385	176	45.71	209	54.29

Source: Field Survey

(c) Marital Status and Preference

It is revealed from Table 5 that the married respondents are divided almost equally between the two types of bus operators. 81(21.0%) married respondents prefer NST buses while 82 (21.3%) married respondents prefer private buses. Out of the total of 222 unmarried respondents, 95 (24.7%) respondents have shown their preference for NST buses while 127 (33.0%) respondents have shown their preference for private buses.

Table 5 : Marital Status and Passenger Preference of Bus

Marital Status	Respondents				
	Total No.	NST		Private Buses	
		No.	%	No.	%
Married	168	81	48.21	82	51.79
Unmarried	222	95	42.79	127	57.21
Total	385	176	45.71	209	54.29

Source: Field Survey

(d) Passengers' Preference and their Place of Residence

Table 6 : Place of Residence and Passenger Preference of Bus

Place of Residence	Respondents				
	Total No.	NST		Private Buses	
		No.	%	No.	%
Rural	132	64	48.48	68	51.52
Urban	253	112	44.27	141	55.73
Total	385	176	45.71	209	54.29

Source: Field Survey

Table 6 depicts that out of the total number of 385 respondents who have reported their preference, 132 (34.3%) are from rural areas and 253 (65.7%) are from urban areas. As many as 64 respondents, representing 48.5 per cent of rural dwellers have preferred NST buses, while 68 respondents representing 51.5 per cent have preferred private buses. On the other hand, 112 respondents accounting for 44.3 per cent of the urban dwellers have preferred NST buses and 141 respondents accounting for 55.7 per cent have preferred private buses. It is observed that though more of the urban and rural passengers have preferred private buses, the preference for the same was more among the urban passengers than among the rural passengers.

(e) Occupation and Preference

Table 7 depicts the classification of the respondents on the basis of their occupation viz., Service (160), Business (40), Housewives (17), Students (129) and others (39).

Among these categories 38 respondents belonging to salaried group largely prefer private buses which account for, 55.6 per cent against 71 (44.4%) respondents have shown their preference for NST buses. The respondents belonging to business group have also shown their preference for

private buses which accounts for 52.5 per cent. As regard to the housewives it is observed that they have mostly preferred NST buses to private buses. Out of 17 respondents in this group 10 have preferred NST buses against 7 (41.2%) respondents have preferred private buses. Students have mostly preferred private buses which accounts for 55.8 per cent of the total respondents in this category. The remaining 39 respondents belonging to the last category have reported almost similar preference with a very marginal difference in favor of private buses. It is therefore, observed that excepting housewives all other respondents have preferred private buses to NST buses.

Table 7 : Occupation and Passenger Preference of Bus

Occupation	Respondents				
	Total No.	NST		Private Buses	
		No.	%	No.	%
Service	60	71	44.38	89	55.62
Business	40	19	47.50	21	52.50
Housewife	17	10	58.82	7	41.18
Students	129	57	44.19	72	55.81
Others	39	19	48.72	20	51.28
Total	385	176	45.71	209	54.29

Source: Field Survey

(f) Level of Education and Preference

On the basis of level of Education, respondents have been grouped into four categories viz., Bellow-Matriculate, Matriculate, Graduate and Post-Graduate.

It is observed from Table 8 that there were 38 below matriculate respondents of which 18 (47.4%) respondents have preferred NST buses against 20 (52.6%) below matriculate respondents preferring private buses. Out of a total of 110 matriculate respondents, 48 (43.6%) respondents have preferred NST buses whereas 62 (56.4%) respondents have preferred private buses. The graduate respondents have reported their preference marginally in favour of private buses. There were 82 post graduate respondents of which 33 (40.2%) have preferred NST buses while 49 (59.8%) have preferred private buses. It is therefore inferred that the respondents whether literate, matriculate, graduate or post graduate have preferred private buses to NST buses.

Table 8 : Level of Education and Passenger Preference of Bus

Education	Respondents				
	Total No.	NST		Private Buses	
		No.	%	No.	%
Bellow-Matriculate	38	18	47.37	20	52.63
Matriculate	110	48	43.64	62	56.36
Graduate	155	77	49.68	78	50.32
Post-Graduate	82	33	40.24	49	59.76
Total	385	176	45.71	209	54.29

Source: Field Survey

(g) Frequency of Travel and Preference

Frequency of travel by the respondents is yet another important factor that determines one's choice of bus whether NST or private buses. The respondents have been grouped as Daily Travelers (41), Frequent Travelers (129) and Occasional Travelers (215) as shown in Table 9.

It is observed that 46.3 per cent daily travelers prefer NST buses against 52.7 per cent of the respondents preferring private buses. The frequent travelers have largely preferred private buses which accounts for 56.6 per cent of the respondents in this category. Out of a total of 215 occasional travelers, 101 (47.0%) respondents have reported their preference for NST buses whereas 114 (53.0%) respondents have preferred private buses. So, it can be said that the respondents on the basis of their frequency of travel whether daily, frequently or occasionally have preferred private buses to NST buses.

Table 9 : Frequency of Travel and the Passenger Preference of Bus

Frequency of travel	Respondents				
	Total No.	NST		Private Buses	
		No.	%	No.	%
Daily	41	19	46.34	22	53.66
Frequently	129	56	43.41	73	56.59
Occasional	215	101	46.98	114	53.02
Total	385	176	45.71	209	54.29

Source: Field Survey

(h) Purpose of Travel and Preference

The respondents were grouped into three categories on the basis of the purpose for which they mostly travel, viz., social, business, official. The numbers of respondents in the respective groups were 242, 52, and 91 respectively.

Table 10 : Purpose of Travel and Passenger Preference of Bus

Purpose of travel	Respondents				
	Total No.	NST		Private Buses	
		No.	%	No.	%
Social	242	117	48.35	125	51.65
Business	52	19	36.54	33	63.46
Official	91	40	43.96	51	56.04
Total	385	176	45.71	209	54.29

Source: Field Survey

It is observed from Table 10 that majority of the passengers do travel for social purpose. 117 respondents of this group representing 48.4 per cent have reported their preference for NST buses whereas 51.6 per cent of these respondents have preferred private buses. Out of the total number of 52 respondents who travel for business purpose, only 19 (36.5%) respondents preferred NST buses while 33 (63.5%) respondents have preferred private buses. The respondents who traveled for official purpose were numbered 91, out of which 40 (44.0%) respondents' preferred NST buses and 51 (56.0%) respondents preferred private buses. It is therefore inferred that passengers who travel for business purpose mostly prefer private buses followed by those who travel for official and then social purposes.

(i) Distance Traveled and Preference

Table 11 : Distance Traveled and Passenger Preference of Bus

Distance traveled (in Kms.)	Respondents				
	Total No.	NST		Private Buses	
		No.	%	No.	%
Up to 150	140	67	47.86	73	52.14
Up to 300	116	49	42.24	67	57.76
Above 300	129	60	46.51	69	53.49
Total	385	176	45.71	209	54.29

Source: Field Survey

Table 11 depicts the grouping of the respondents into three categories on the basis of distance traveled by them. There were 140 respondents who were traveling upto 150 kilometers. Of these 67 (47.9%) respondents have reported their preference for NST buses against 73 (52.1%) respondents have preferred private buses. Out of a total of 116 medium distance travelers i.e., upto 300 kilometers, 49 (42.2%) respondents have preferred NST buses while 67 (57.8%) respondents have preferred private buses. The long distance travelers i.e., above 300 kilometers were 129 respondents out of which 60 (46.5%) respondents have preferred NST buses while 69 (53.5%) respondents have preferred private buses. It is therefore inferred that passengers traveling upto

300 kilometers have mostly preferred private buses to NST buses followed by long distance travelers and short distance respectively.

(j) Possession of Personal Vehicle and Preference-

Out of 385 respondents who have reported their preference of buses, only 251 respondents owned personal vehicles viz., motorcycle, scooter and car.

Table 12 : Possession of Personal Vehicle and Preference

Possession of personal Vehicle	Respondents				
	Total No.	NST		Private Buses	
		No.	%	No.	%
Motor cycle	30	11	36.67	19	63.33
Scooter	42	24	57.14	18	42.86
Car	179	88	49.16	91	50.84
Total	251	123	49.00	128	51.00

Source: Field Survey

In Table 12, the numbers of respondents owning motor cycle were numbered at 30. Of these 11 respondents representing 36.7 per cent have preferred NST buses while 19 respondents representing 63.3 per cent preferred private buses. The respondents owning scooters numbered at 42, out of which 24 (57.1%) respondents have reported their preference for NST buses whereas 18 (42.9%) respondents have preferred private buses. The number of respondents who owned cars was 179. Of these 88 (49.2%) respondents preferred NST buses whereas 91 (50.8%) respondents preferred private buses. It is therefore inferred that respondents owning motor cycles and cars have mostly preferred private buses to NST buses. While respondents owning scooters have mostly preferred NST buses to private buses. The numbers of respondents owning two wheelers were mostly from Dimapur District and car owners were included in the sample throughout the state.

5. Conclusion

Thus to sum up, it can be said that the study on Passengers' Preference is useful for any transport operator, as this would reflect on the state of affairs of the service they provide to their passengers which would facilitate them to formulate their policy, rearrange their schedule and trips and other service conditions, so as to influence passengers' preference and enhance the level of passenger satisfaction and thereby the operators can live up to the minimum expectation of the public. The study of passengers' preference through this paper reveals that the passengers do prefer both NST and private buses. However, majority of the sample respondents prefer private buses than NST buses.

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