

Factors Influencing the Passengers to Select Train Travel: A Study in Salem Division of Southern Railway

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Abstract- In India, among the various infrastructure sectors, transport is the prime sector performing dual role as a commercial organisation and vehicle for fulfillment of social obligations. It has a crucial role in the movement of people and goods from one place to another. Now-a-days, there is a steep increase in the mobility of the people with an ultimate aim to earn for their livelihood. In order to facilitate easy movement of people to different corners of the world, there are various modes of transport like road, rail, air and water ways. The better means of transport is the need of the hour. There is a stiff competition prevailing among various modes of transport. Long distance road transport network is non-existent, underdeveloped or poorly maintained in most parts of India. The burden of carrying long distance traffic, whether people or goods falls mostly on railways. It is due to largest network, number of trains, convenience, speed, safety and affordability. Even though the Indian Railways offer many services, the preference and need of the passengers are dynamic. It differs among the passengers based on their level of income, purpose of travel, distance of travel, age and other factors. As the needs of the passengers vary, the reason for them to select railways as convenient mode of travel also varies. There are various factors which influence the passengers to select train as their mode of travel among the various ways of transportation. In this aspect, this paper highlights the factors influencing the passengers to prefer train as their mode of travel.

Index Terms- Convenience, Economy, Passenger, Railways.

I. INTRODUCTION

India is the seventh largest and second most popular country in the world. The economic reform deregulates the country and stimulates foreign investment. It has moved India firmly into the front ranks of the rapidly growing Asia Pacific region and unleashed the latent strengths of a complex and rapidly changing nation. The creation of world class infrastructure becomes essential for the development of the country. The growth of the infrastructure sector is a critical pre-requisite for a sustainable growth of the economy. It also affects international competitiveness and flow of direct international investments. As Indian Railways is one of the pillars of India's infrastructure, it has a symbiotic relationship with the country's economy. It is fondly called as the "Lifeline of the Nation"¹. The Indian Railways acts as a premier mode of transport joining all parts of the country. The railroads of India are the fourth most heavily used system in the world. Earlier there were only three types of

trains viz., the passenger, the mail and the express. But at present, there are many trains with different features in different names. The Indian Railways is increasingly becoming more outward looking and customer centric. Now-a-days, more number of people are preferring train travel due to various reasons. The passengers in the present scenario are highly sensitive. So, they should be handled with due care. Otherwise, it is not possible to achieve the desired goal.

II. OBJECTIVES OF THE STUDY

1. To find the factors influencing the passengers to prefer train travel.
2. To offer suitable suggestions based on the findings of the study to improve the services of the Indian Railways.

III. SAMPLING DESIGN AND METHODOLOGY

This study is an empirical research based on survey method. The present study is confined to Salem Division of Southern Railway zone. In the selected Salem Railway Division, there are four railway junctions viz., Coimbatore, Salem, Erode and Karur. All these junctions have been selected for the study. It is decided to consider 10% of the passengers from the total passengers originating per day at each of the four Junctions of Salem Division. By using Simple Random Sampling technique, the passengers have been selected from all the Junctions of the Salem Division. On the basis of the records provided by the Public Relations Officer of Salem Division, it is found that approximately 9,300 passengers originate every day from all these four Junctions. Out of them, it is decided to collect data from 10% of the passengers from each Junction. It is considered to be adequate and representative. The details of selected sample passengers are shown below.

Table 1: Selection of Sample Passengers

| S.No. | Junction | Average Number of Passengers Originating per Day | Number of Interview Schedule | | |
|-------|------------|--------------------------------------------------|------------------------------|-----------|------|
| | | | Distributed | Collected | Used |
| 1 | Coimbatore | 6,000 | 600 | 378 | 293 |
| 2 | Erode | 1,000 | 100 | 88 | 76 |
| 3 | Karur | 800 | 80 | 62 | 50 |
| 4 | Salem | 1,500 | 150 | 132 | 81 |
| Total | | 9,300 | 930 | 660 | 500 |

The sample passengers are mobile population and they remain busy and hectic in reaching their platforms, finding their respective compartments, listening to the announcements and in enquiry. Hence, out of the target of 930 sample passengers, it is possible to collect the data only from 660 passengers. Of them, owing to non-response, inconsistency and other reasons, 160 Interview Schedules have been excluded. Thus, the total sample passengers is 500. This 500 consists of 293 from Coimbatore Junction, 76 from Erode Junction, 50 from Karur Junction and 81 from Salem Junction.

IV. COLLECTION OF DATA

Both primary and secondary data are used in the present study. The present study is largely based on the primary data. Required primary data have been collected in the course of interview with the railway passengers through survey method with a pre-tested, well structured and non-disguised Interview Schedule. The required secondary data for the present study have been collected through Annual Reports of Ministry of Railways, White Paper on the Indian Railways published by Railway Ministry, Reports of Comptroller and Audit General of India, various issues of RBI Annual Bulletins, data from Central Statistical Organisation, Indian Railways Year Book of various years, records from Public Relations Officer of Salem Division, various journals, periodicals and through web sites.

V. FINDINGS OF THE STUDY

The success of the Indian Railways is judged with the help of various parameters like physical, financial, safety and performance of human resources. Of them, physical (number of passengers) is an important parameter. It is known fact that a passenger's choice of travel is influenced by innumerable factors. Particularly, in the present tech-savvy era, passengers' choice varies frequently. In the pilot study, factors like economy, interactive telephone enquiry system, travelling distance, convenience, tatkal scheme, punctuality, speed, concession and free pass, safety, facilities at station, easy to carry more luggage and reservation facility have been given in the Interview Schedule.

On the basis of the outcome of the pilot study, only factors like economy, travelling distance, convenience, punctuality, speed, concession and free pass, safety, facilities at station, easy to carry more luggage and reservation facility have been used in the Final Interview Schedule. By way of giving these factors in the Final Interview Schedule, sample passengers have been called to assess each factor on its own significance. Each passenger is instructed to indicate the importance of the influencing factor by giving rank 1 to the most important factor, rank 2 to the second important factor and so on.

Based upon the ranks assigned by the sample passengers, the order of important factors influencing the passengers to prefer train travel is identified. To find the most significant factor influencing the sample passengers in selecting train as their mode of travel, Garrett's Ranking Technique is employed. It is calculated as percentage score and the scale value is obtained by employing Scale Conversion Table given by Henry Garrett.

The Percentage Score is calculated as²,

$$\text{Percentage Score} = \frac{100(R_{ij}-0.5)}{N_j}$$

Where, R_{ij} is Rank given for i^{th} item j^{th} individual
 N_j is Number of items ranked by j^{th} individual

The percentage score for each rank from 1 to 10 are calculated. The percentage score thus obtained for all the ten ranks are converted into scale values using Scale Conversion Table given by Henry Garrett. The scale values for first rank to tenth rank is 81, 70, 63, 57, 52, 47, 42, 36, 29 and 18 respectively. The score value (fx) is calculated for each factor by multiplying the number of respondents (f) with respective scale values (x). The total scores are found by adding the score values (fx) of each rank for every factor. The mean score is then calculated to know the order of preference given by the respondents for the factors. Based on the mean score, the overall ranks are assigned for each. The ranking analysis of the factors influencing the passengers in selecting train as their mode of travel through Garrett's Ranking Technique is shown in Table 2.

Table 2: Factors Influencing the Passengers to Select Train Travel

| Ranks Scale | I 81 | II 70 | III 63 | IV 57 | V 52 | VI 47 | VII 42 | VIII 36 | IX 29 | X 18 | Total | Total Score | Mean Score | Rank | |
|----------------------------|-----------------|------------------|-------------------|------------------|-----------------|------------------|-------------------|--------------------|------------------|-----------------|--------------|--------------------|-------------------|-------------|----|
| Factors | | | | | | | | | | | | | | | |
| Economy | f | 72 | 76 | 73 | 65 | 54 | 48 | 29 | 21 | 34 | 28 | 500 | 27984 | 55.97 | 2 |
| | fx | 5832 | 5320 | 4599 | 3705 | 2808 | 2256 | 1218 | 756 | 986 | 504 | | | | |
| Facilities at station | f | 67 | 64 | 48 | 49 | 73 | 63 | 52 | 36 | 24 | 24 | 500 | 27089 | 54.18 | 3 |
| | fx | 5427 | 4480 | 3024 | 2793 | 3796 | 2961 | 2184 | 1296 | 696 | 432 | | | | |
| Travelling distance | f | 68 | 66 | 58 | 66 | 45 | 40 | 43 | 56 | 29 | 29 | 500 | 26949 | 53.90 | 4 |
| | fx | 5508 | 4620 | 3654 | 3762 | 2340 | 1880 | 1806 | 2016 | 841 | 522 | | | | |
| Reservation facility | f | 42 | 37 | 38 | 44 | 68 | 50 | 52 | 65 | 53 | 51 | 500 | 23759 | 47.52 | 6 |
| | fx | 3402 | 2590 | 2394 | 2508 | 3536 | 2350 | 2184 | 2340 | 1537 | 918 | | | | |
| Convenience | f | 107 | 65 | 64 | 42 | 32 | 43 | 40 | 36 | 41 | 30 | 500 | 28033 | 56.07 | 1 |
| | fx | 8667 | 4550 | 4032 | 2394 | 1664 | 2021 | 1680 | 1296 | 1189 | 540 | | | | |
| Speed | f | 49 | 38 | 22 | 30 | 38 | 31 | 67 | 60 | 77 | 88 | 500 | 21949 | 43.90 | 9 |
| | fx | 3969 | 2660 | 1386 | 1710 | 1976 | 1457 | 2814 | 2160 | 2233 | 1584 | | | | |
| Punctuality | f | 49 | 73 | 64 | 37 | 55 | 50 | 37 | 37 | 53 | 45 | 500 | 25663 | 51.34 | 5 |
| | fx | 3969 | 5110 | 4032 | 2109 | 2860 | 2350 | 1554 | 1332 | 1537 | 810 | | | | |
| Concession and free pass | f | 03 | 23 | 47 | 40 | 39 | 61 | 71 | 69 | 80 | 67 | 500 | 20981 | 41.96 | 10 |
| | fx | 243 | 1610 | 2961 | 2280 | 2028 | 2867 | 2982 | 2484 | 2320 | 1206 | | | | |
| Easy to carry more luggage | f | 24 | 31 | 42 | 57 | 45 | 65 | 53 | 72 | 59 | 52 | 500 | 22869 | 45.74 | 7 |
| | fx | 1944 | 2170 | 2646 | 3249 | 2340 | 3055 | 2226 | 2592 | 1711 | 936 | | | | |
| Safety | f | 19 | 27 | 44 | 70 | 51 | 49 | 56 | 48 | 50 | 86 | 500 | 22224 | 44.45 | 8 |
| | fx | 1539 | 1890 | 2772 | 3990 | 2652 | 2303 | 2352 | 1728 | 1450 | 1548 | | | | |
| Total | Σf | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | | | | |

Note: x = Scale value; f = Number of Passengers; fx = Score

It is clear from the Table 2 that the passengers are giving more importance to the factor Convenience (56.07) followed by Economy (55.97), Facilities at station (54.18), Travelling distance (53.90), Punctuality (51.34), Reservation facility (47.52), Easy to carry more luggage (45.74), Safety (44.45), Speed (43.90) and the least importance is given to Concession and free pass (41.96).

VI. SUGGESTIONS AND CONCLUSION

- It is suggested that the Ministry of Railways can provide adequate and necessary basic facilities to the passengers like pure drinking water, hygienic food, good sanitation, seating arrangement, electronic scrolling indicator inside the trains, electronic charging facility and proper enquiry facilities at all stations and in trains to enhance the convenience of the passengers thereby attracting more number of passengers.
- The majority of the passengers are having strong negative opinion about the Railways regarding theft, robbery and bed bug menace. Hence, it is suggested that the Ministry of Railways should take all possible steps by deploying more number of Mobile Security Forces to give further protection to the passengers and by keeping the bed rolls in an insect free manner.
- Even in the ladies compartment, female passengers are of the opinion that they are insecure. Hence, it is

suggested that the Authorities concerned should come forward to extend their helping hands for female passengers by deputing more Women Security Forces in a serious manner. This arrangement will definitely boost up the image of the Railways in the minds of the female passengers.

- Further, it is also suggested that medicine facilities can be provided in long distance trains as the passengers face health problems like indigestion, cold, etc at the time of their travel.

By realising the significance of the contribution of the service sector in the Indian economy, an attempt has been made to examine the factors influencing the passengers to prefer train travel. Every facet has been thoroughly examined on the basis of collected data and with the statistical tool. The effect of the present study shows that the performance of the Indian Railways is not up to the mark and they face many problems both at the station and on-board the train. With the aim of making the Indian Railways to increase the number of originating passengers various suggestions have been offered. If all the suggestive measurements have been considered earnestly by the Indian Railways and the Policy Makers, it is hope that the Indian Railways will excel and bring grandeur to our country in the near future.

III. FACTORS INFLUENCING THE PASSENGERS TO PREFER TRAIN TRAVEL

3.1 Kindly rank the factors influencing you to prefer train travel.

| S.No. | Factors | Rank |
|-------|-----------------------------|------|
| 1 | Economy | |
| 2 | Facilities at station | |
| 3 | Travelling distance | |
| 4 | Reservation facility | |
| 5 | Convenience | |
| 6 | Speed | |
| 7 | Punctuality | |
| 8 | Concession and free pass | |
| 9 | Easy to carry more luggages | |
| 10 | Safety | |

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