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FACTORS INFLUENCING THE PASSENGERS TO PREFER RAIL TRANSPORT: A STUDY IN COIMBATORE REGION

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Abstract

Transport facility is an important aspect of infrastructure facilitating the movement of goods and people from one place to another. To keep pace with the changing business paradigms along with its growing needs of the hour ensuring availability of sufficient transport facility is necessary. In this concept, railways remained as energy efficient transport mode ideally suited for long distance travel as well as perfect suited for bulk mode of transport. Indian railways offer many services; the preferences and needs of the passengers are dynamic. It differs among the passengers based on their age, occupational status, purpose of travel and other factors. There are various factors that influence the passengers to prefer rail transport when other modes such as air transport and bus transport facilities are available. In this aspect, this paper highlights the factors influencing the passengers to prefer rail transport.

Key words: Economy, Comfort, Passengers and Railways.

Introduction

The growth of infrastructure is a critical pre-requisite for a sustainable growth of the economy. It also affects international competitiveness and flow of direct investments (Devi Prasad Maruvada and Bellemkonda, 2010). As Indian railway is one of the pillars of India's infrastructure, it gas symbiotic relationship with the country' economy. It is fondly called as the "Lifeline of the Nation" (ADB Report). Indian Railways (IR) is Asia's largest and the world's second largest railroad network under one management, with a separate Ministry and its own annual budget. The key activities of IR are transportation of freight and passengers. Indian Railways' network spreads all over the country from north to south and from east to west. For the past 150 years, the Indian Railways has been the principal mode of transport in India and it contributes about 1% of India's Gross Domestic Product (GNP) (White Paper on IR). It occupies a unique position in the socioeconomic map of the country and is considered as a vehicle and barometer of growth.

Five Year Plans from 1950 onwards threw up enormous challenges to the railways for playing a key role in the industrial and all round development of the Indian economy. Thus, what started as a system to the interests of the foreign masters has in the last hundred and sixty three years, developed into a significant means of transportation for socio-economic development of a welfare society (Bhandari, 2005).

Demand for public transportation is high due to its rapid population growth. Trains, a major public transport, in India hold a unique position in the transportation sector of country and are considered to be the key determinant for the national growth. Transportation sector is still passing through its transformational stage as it is still insufficient to serve the fastest growing population of our country. People prefer rail transport for various reasons, it is essential to understand the preferences and needs of the passengers, and this study is an attempt to find the factors influencing the passengers to prefer rail transport.

Review of Literature

Kanafani (1983) uses a multinomial logic model to study the choice the choice of airports by air travelers flying between the Los Angeles metropolitan area and the San Francisco Bay area. The explanatory variables in his model include for instance the frequency of service at each airport and the level of the fares.

Passenger perceptions and preferences may not always address the appropriate measures for the improvement of quality. This is mainly met in the assessment of the railway safety, where the proposed safety measures by the passengers may conflict with initiatives designed to improve safety and minimize occurring risks. This has been revealed from the analysis of the survey results of Rail Safety and Standards Board Limited (RSSB) (Thomas et al., 2005). The survey was addressed to railway passengers to investigate passenger perception of risk and safety, as well as their preferences for implementing safety measures. The findings of the analysis indicated that the relationship between perceived and actual risk is not very strong. On the other hand, passenger preferences may constitute valuable information to the railway operator when implementing safety measures (Thomas et al., 2005). Further, and in addition to the above, from a research done for the identification of methods and instruments used to assess and enhance service quality, it has been revealed that quality regulation in European passenger railways emphasize on quantifiable target mostly, and sometimes this is done at the expense of other service quality determinants (Monami, 2000).

Gatersleben and Uzzell(2007) also suggest that public transport is stressful due to unpredictability and longertravel times. This study also acknowledges some sources of pleasure for public transport users. Attributes relating to

pleasurable feelings were as the possibility to read during the trip, to listen to music, to interact with other people, and to look at the passing scenery.

Objective of the Study

1. To find the factors influencing the passengers to prefer rail transport.
2. To offer suggestions to improve the services of Indian railways.

Sampling Design and Methodology

The present study is an empirical research based on survey method. The present study is confined to Coimbatore region. Convenient sampling   technique is used to draw sample respondents passengers. The sample passengers are mobile population and they remain busy in reaching their platforms, listing to announcement, making enquiry and looking at display charts. Hence, sample size is chosen as 500 and it is considered to be adequate and representative.

Data Collection

The present study is largely based on primary data. Primary and secondary data are used in the present study. The required primary data are collected using pre-tested and well structured interview schedule. The required secondary data are collected through Annual Reports of Ministry of railways, White paper on Indian railways published by Railway Ministry, various journals and websites.

Data Covered

The passenger's choice of travel is influenced by various factors .The present study focuses on the influence of the factors such as economy, food and beverage, comfort, punctuality, security, type of train, reservation facilities, concessions and free pass, travelling distance and luggages to prefer rail transport. Based upon the ranks assigned by the sample passengers, the factors influencing the passengers to prefer rail transport system is identified.

Analysis

In order to achieve the objectives of the study an analysis is made to understand the factors influencing the passengers to prefer rail transport. The statistical tool used is percentage analysis. The socio economic profiles of the respondents are shown in the following table:

Age

Table 1 describes the age wise classification of the respondents selected for the study. The age is classified as less than 20 years, 20-30 years, 30-40 years and 40 years and above.

Table 1: Age wise classification of the respondents

Age(years)	Number of respondents	percentage
Less than 20	71	14.2
20- 30	141	28.2
30- 40	248	49.6
40 and above	40	8.0
Total	500	100

It is evident from table 2 that 248(49.6%) of the respondents belong to the age group of 30-40 years, 141(28.2%) of the respondents belong to the age group of 20-30 years, 71(14.2%) of the respondents belong to the age group of less than 20 years and 40(8%) of the respondents belong to the age group of above 40 years.

It is concluded that the majority (49.6%) of the respondents selected for the study belong to the age group of 30-40 years.

Occupational Status

Table 2 describes the occupational status wise classification of the respondents selected for the study. The occupational status is classified as agriculture, business/profession, employed and others.

Table 2: Occupational status wise classification of the respondents

Occupational status	Number of respondents	Percentage
Agriculture	34	6.8
Business/profession	178	35.6
Employed	191	38.2
Others (home maker, student, retired employee)	97	19.4
Total	500	100

It is found from table 4 that 191(38.2%) of the respondents are employed, 178(35.6%) of the respondents are business people/professionals, 97(19.4%) of the respondents are home maker, student and retired employee and 34(6.8%) of the respondents are agriculturists.

It is concluded that the majority 191(38.2%) of the respondents selected for the study are employed.

Purpose of travel

Table 3 describes the purpose of travel wise classification of the respondents selected for the study. The purpose of travel is classified as official/business, education, personal, tour/pilgrimage, vacation, sports and others.

Table 3: Purpose of travel wise classification of the respondents

Purpose of travel	Number of respondents	Percentage
Official/business	209	41.8
Education	53	10.6
Personal	71	14.2
Tour/pilgrimage	90	18.0
Vacation	41	8.2
Sports	30	6.0
others	6	1.2
Total	500	100

It is found from table 11 that 209(41.8%) of the respondents travel for official/business purposes, 90(18.0%) of the respondents travel for tour/pilgrimage, 71(14.2%) of the respondents travel for personal purposes, 53(10.6%) of the respondents for educational purposes, 41(8.2%) of the respondents travel for vocational purposes, 30(6.0%) of the respondents travel for sports, 6(1.25%) of the respondents travel for other purposes such as medical purposes, visiting native places on festival occasions, meeting relatives and friends.

It is concluded that the majority (41%) of the respondents selected for the study travel in train for official/business purposes.

Factors influencing the preference of rail transport system

The table 4 describes the factors influencing the preference of rail transport system wise classification of the respondents selected for the study. The factors influencing the preference of rail transport system are classified as economy, food and beverage, comfort, punctuality, security, type of train, reservation facilities, concessions and free pass, travelling distance and luggages.

Table 4: Factors influencing the preference of rail transport system wise classification of the   respondents

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Economy	139 (27.8)	72 (14.4)	82 (16.4)	117 (23.4)	19 (3.8)	25 (5.0)	21 (4.2)	10 (2.0)	11 (2.2)	4 (.8)
Food & Beverage	-	41 (8.2)	87 (17.4)	66 (13.2)	72 (14.4)	55 (11.0)	56 (11.2)	44 (8.8)	46 (9.2)	33 (6.6)
Comfort	103 (20.6)	131 (26.2)	45 (9.0)	43 (8.6)	90 (18.0)	4 (.8)	35 (7.0)	28 (5.6)	21 (4.2)	-
Punctuality	88 (17.6)	47 (9.4)	15 (3.0)	72 (14.4)	43 (8.6)	73 (14.6)	51 (10.2)	36 (7.2)	54 (10.8)	21 (4.2)
Security	43 (8.6)	38 (7.6)	39 (7.8)	26 (5.2)	72 (14.4)	72 (14.4)	59 (11.8)	60 (12.0)	32 (6.4)	59 (11.8)
Type of train	43 (8.6)	63 (12.6)	72 (14.4)	53 (10.6)	27 (5.4)	29 (5.8)	42 (8.4)	47 (9.4)	50 (10.0)	74 (14.8)
Reservation facilities	20 (4.0)	55 (11.0)	87 (17.4)	62 (12.4)	22 (4.4)	63 (12.6)	44 (8.8)	53 (10.6)	66 (13.2)	28 (5.6)
Concessions & free pass	35 (7.0)	5 (1.0)	30 (6.0)	29 (5.8)	30 (6.0)	55 (11.0)	95 (19.0)	73 (14.6)	69 (13.8)	79 (15.8)
Travelling distance	11 (2.2)	28 (5.6)	28 (5.6)	16 (3.2)	35 (7.0)	86 (17.2)	49 (9.8)	80 (16.0)	104 (20.8)	63 (12.6)
Luggages	33 (6.6)	9 (1.8)	7 (1.4)	16 (3.2)	79 (15.8)	32 (6.4)	39 (7.8)	89 (17.8)	55 (11.0)	141 (28.2)

Note: The values in the brackets are in percentage.

It is evident from table 4   that among the total respondents 139(27.8%), 103(20.6%), 88(17.6%), 43(8.6%), 43(8.6%), 35(7.0%), 33(6.6), 20(4.0%) and 11(2.2%) of the respondents respectively have given top preference to

economy, comfort, punctuality, security, type of train, concessions and free pass,luggages, reservation facilities and travelling distance respectively.

It is concluded that a maximum of 27.8% of the respondents have given high priority to economy.

Findings of the study

1. The majority (49.6%) of the respondents selected for the study belong to the age group of 30-40 years.
2. The majority 191(38.2%) of the respondents selected for the study are employed.
3. The majority (41%) of the respondents selected for the study travel in train for official/business purposes.
4. A maximum of 27.8% of the respondents have given high priority to economy.

Conclusion

Rail transport system has to pay more attention to improve the factors such as food and beverages, reservation facilities, luggages, concessions and free pass, security and type of train to provide better services to the passengers. Service quality of the rail system could be enhanced by paying attention to the preferences and needs of the passengers.

The effect of present study shows that the performance of Indian railways is not up to the mark and the passengers' preferences and needs are not fully satisfied. If all the suggestions of the study are considered by the Indian railways, then it is hope that Indian railways will excel in the near future.

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Appendix:

Factors Influencing the Passengers to Prefer Rail Transport: A Study in Coimbatore Region

Interview schedule

I.   *Personal details*

        1.1   Name:

        1.2   Gender

          ☐ Male

          ☐ Female

        1.3 Age(years)

          ☐ Less than 20

          ☐ 20- 30

          ☐ 30-40

          ☐ 40 and above

        1.4 Educational qualification

          ☐ No formal education

          ☐ School level

          ☐ College level

          ☐ Others (specify)

        1.5 Occupational status

          ☐ Agriculture

          ☐ Business/Professional

          ☐ Employed

          ☐ Others (please specify)

        1.6 Family monthly income (in RS)

          ☐ Below 10,000

          ☐ 10, 000- 20, 000

          ☐ 20, 000- 30, 000

          ☐ 30, 000 and above

        1.7 Nature of family

☐ Joint
☐ Nuclear
1.8 Size of your family
☐ 1
☐ 2
☐ 3
☐ 4 and above
1.9 Number of elders in your family
☐ 1
☐ 2 and above

II.   *Travel details*

2.1   How often do you travel by train?
☐ Daily
☐ Weekly
☐ Monthly
☐ Half-yearly
☐ Yearly
☐ Occasionally

2.2   Mention your purpose of travel?
☐ Official/Business
☐ Education
☐ Personal
☐ Tour and pilgrimage
☐ Vacation
☐ Sports
☐ Others (specify)

2.3   In which class you travel normally?
☐ 1 A-AC FIRST CLASS
☐ 2A –AC 2 TIER
☐ 3A- AC 3 TIER
☐ 3E- AC 3 Tier economy
☐ FC-First class
☐ SL-Sleeper class
☐ XC-AC Executive chair car
☐ CC-AC Chair car
☐ 2S-Second class chair car
☐ GS   General Compartment

2.4 Nature of ticket holding:
☐ Season ticket holder
☐ Unreserved ticket holder
☐ Reserved ticket holder

2.5 Who chooses the type of train for your travel?
☐ My self
☐ Travel agent
☐ Friends
☐ Family
☐ Included in my tour package

III.   *Indicate the factors influencing you to prefer railway transport.*

S.No	Factors	Rank
1	Economy	
2	Food and beverage	
3	Comfort	
4	Punctuality	
5	Security	
6	Type of train	
7	Reservation facilities.	
8	Concessions and free pass	
9	Travelling distance	
10	Luggages	