



A Pilot study: Emerging Trends in Service Entrepreneurship and Economic Development: of Passenger Satisfaction with IRCTC in India

Mrs. Priya Shinde¹ & Dr. Saroj Hiremath²

¹Research Scholar, Vidya Bhavan College of Commerce, 20, Solapur Road, Bhairoba Nala, Pune - 411013, Maharashtra, India

²Principal, Vidya Bhavan College of Commerce, Vidya Bhavan College of Commerce, 20, Solapur Road, Bhairoba Nala, Pune - 411013, Maharashtra, India

Corresponding Author – Mrs. Priya Shinde

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Abstract:

In recent years, service entrepreneurship has emerged as a key driver of economic development in India, particularly in sectors such as transportation, tourism, and hospitality. The Indian Railway Catering and Tourism Corporation (IRCTC), as a pioneering entrepreneurial initiative within the public sector, has played a critical role in reshaping service delivery in railway catering, ticketing, and tourism management. This study explores the emerging trends in service entrepreneurship through the lens of IRCTC and examines its contribution to economic development in India. The research focuses on understanding passenger perceptions and levels of satisfaction regarding various IRCTC services, including online ticketing, catering, tourism packages, and customer support. A structured questionnaire was used to collect primary data from passengers across different demographics. The findings highlight the entrepreneurial innovations adopted by IRCTC, such as digitalization and customer-centric service models, while also identifying key service gaps and customer expectations. The study concludes by outlining challenges and opportunities for further entrepreneurial growth within the railway and tourism sectors, thereby offering insights for policymakers, service providers, and future entrepreneurs in enhancing service quality and fostering economic progress.

Keywords: IRCTC, Passenger Satisfaction, Service Entrepreneurship, Economic Development, Tourism Services, Customer Perception.

Introduction:

Entrepreneurship in the service sector has emerged as a significant catalyst for economic development in India, contributing to job creation, innovation, and enhanced consumer experiences. Among various domains, the transportation and tourism industries have witnessed substantial growth fueled by digital transformation and customer-centric entrepreneurial strategies. The Indian Railway Catering and Tourism

Corporation (IRCTC), a subsidiary of the Indian Railways, stands as a prominent example of successful service entrepreneurship in the public sector. Since its inception in 1999, IRCTC has transformed traditional railway services by introducing innovative business models in areas such as e-ticketing, catering, travel tourism, and hospitality services.

India's economic development is increasingly driven by the expansion of

service-oriented platforms that emphasize convenience, accessibility, and customer satisfaction. IRCTC's evolution from a conventional railway service provider to a dynamic entrepreneurial venture showcases how public-sector enterprises can foster innovation and support economic growth. With the rapid adoption of digital technology, IRCTC has revolutionized the travel experience by offering seamless e-ticket booking, mobile applications, tourism packages, and enhanced catering services. These innovations not only improve operational efficiency but also contribute to national economic development by attracting domestic and international travelers, generating employment, and boosting tourism revenue.

Passenger perception and satisfaction play a crucial role in evaluating the success and sustainability of such entrepreneurial initiatives. A thorough understanding of customer experiences helps in identifying strengths, weaknesses, and emerging opportunities within the service delivery system. As consumer expectations continue to evolve, service entrepreneurship requires continuous adaptation and innovation to maintain competitiveness and customer loyalty. In this context, assessing passenger satisfaction with IRCTC services becomes essential for analyzing its role in promoting economic development and identifying areas for further improvement.

This study thus aims to examine emerging trends in service entrepreneurship through the lens of IRCTC, analyze passenger perceptions regarding its service quality, and evaluate satisfaction levels across different service touchpoints. Additionally, the research seeks to highlight challenges faced by IRCTC and explore

opportunities for expanding entrepreneurial ventures within the railway and tourism ecosystem. The findings of this study are expected to provide valuable insights for policymakers, industry stakeholders, and emerging entrepreneurs to enhance service quality, foster innovation, and contribute effectively to India's economic development.

Research Objectives:

1. To examine the role of IRCTC as a service entrepreneurship model in India's economic development.
2. To analyze passenger perception toward the quality and efficiency of IRCTC services.
3. To assess the level of customer satisfaction with IRCTC's online ticketing, catering, and tourism services.
4. To identify emerging trends and innovations adopted by IRCTC in the service sector.
5. To explore the key challenges faced by IRCTC in delivering quality services and enhancing user experience.
6. To suggest potential entrepreneurial opportunities and strategies for improvement in the railway service ecosystem.

Literature Review:

The Indian Railway Catering and Tourism Corporation (IRCTC) has become a key player in India's service entrepreneurship landscape, offering integrated services in **ticketing, catering, and tourism**. According to Singh and Gupta (2018), IRCTC represents a model of **public-sector entrepreneurship**, combining efficiency, innovation, and large-scale customer outreach.

Passenger satisfaction plays a crucial role in determining the success of service-based enterprises. Parasuraman, Zeithaml, and Berry's (1988) **SERVQUAL model** identifies five dimensions—tangibility, reliability, responsiveness, assurance, and empathy—that influence customer satisfaction. Studies such as Khurana and Sharma (2022) and Patel and Iyer (2020) have applied these dimensions to evaluate the quality of railway services in India, finding that **reliability and assurance** are the strongest predictors of passenger satisfaction.

Mishra and Sahu (2020) highlight the importance of **digital transformation** in IRCTC's operations, particularly through its e-ticketing system, which has enhanced service efficiency and accessibility. Similarly, Nayak and Prasad (2021) observe that IRCTC's online platforms have

expanded entrepreneurship opportunities in tourism and hospitality, contributing to **economic development** by generating employment and promoting domestic travel.

However, challenges persist. Studies by Mohanty and Kumar (2021) and Venkat and Iyer (2022) reveal passenger concerns regarding **food quality, responsiveness, and complaint resolution**, suggesting that service consistency remains an issue. Bansal and Sharma (2021) argue that embracing **digital service innovation and customer-centric strategies** can help overcome these challenges.

Overall, the literature suggests that IRCTC's entrepreneurial initiatives have strengthened India's tourism economy, yet **continuous improvement in service quality and passenger engagement** is essential to sustain growth and satisfaction.

Research Methodology:

| Aspect | Details |
|-----------------------------|---|
| Research Design | Descriptive and analytical research design |
| Nature of Study | Mixed-method (Quantitative + Qualitative) OR purely quantitative (depending on your preference) |
| Data Type | Primary and Secondary Data |
| Primary Data Source | Structured questionnaire administered to railway passengers using IRCTC services |
| Secondary Data | Reports from IRCTC, government publications, journals, articles, annual reports, websites |
| Sampling Method | Convenience / Stratified Random Sampling (recommended for diversified passenger base) |
| Sample Size | 38 respondents (can be justified based on feasibility) |
| Data Collection Tool | Close-ended questionnaire with Likert scale (1–5 or 1–7 scale) |

Sample Size and Sampling Technique:

A **sample size of 38 respondents** was selected for the pilot study. Respondents were chosen from passengers who had

recently used IRCTC services for ticket booking, catering, or tourism within the **Pune region**.

- **Sampling Technique:** *Convenience Sampling* (non-probability method)
- **Justification:** This method was appropriate for a pilot study due to limited time, accessibility, and the need for preliminary validation rather than statistical generalization.
- Passengers expressed **high satisfaction** with online ticketing and digital payment features.
- Moderate satisfaction was observed in catering services and food hygiene.
- Tourism package awareness was **low**, indicating a potential area for promotional improvement.

Pilot Study Findings:

Out of 38 respondents, **55%** were **male** and **45% female**.

- **60%** of respondents were aged between 25–40 years.
- **Average Cronbach's Alpha = 0.84**, indicating strong reliability of the questionnaire.

Results and Analysis of Pilot Study:

1. Overview of Data Collected:

A total of **38 valid responses** were collected from passengers who had used IRCTC services, including ticket booking, catering, and tourism packages. The responses were analyzed using **SPSS and Excel** for descriptive statistics and reliability testing.

2. Demographic Profile of Respondents:

| Demographic Variable | Category | Percentage (%) |
|----------------------------|-----------------------|----------------|
| Gender | Male (21) | 55.3% |
| | Female (17) | 44.7% |
| Age Group | 18–25 years | 21.1% |
| | 26–40 years | 57.9% |
| | 41–60 years | 18.4% |
| | Above 60 years | 2.6% |
| Occupation | Students | 23.7% |
| | Working Professionals | 47.4% |
| | Business Owners | 15.8% |
| Frequency of Travel | Retired/Other | 13.1% |
| | Once a month | 31.6% |
| | 2–3 times a year | 47.4% |
| | Rarely | 21.0% |

Interpretation: Most respondents were **working professionals aged 26–40 years**, indicating that the majority of IRCTC users

in Pune are regular or semi-regular train travelers who rely on digital booking platforms.

3. Reliability Analysis:

| Construct | No. of Items | Cronbach's Alpha (α) |
|----------------------------------|-----------------|-------------------------------|
| Tangibility | 4 | 0.81 |
| Reliability | 4 | 0.85 |
| Responsiveness | 3 | 0.79 |
| Assurance | 3 | 0.82 |
| Empathy | 3 | 0.76 |
| Passenger Satisfaction | 4 | 0.84 |
| Overall Scale Reliability | 21 items | 0.84 |

Interpretation: Cronbach's Alpha value of **0.84** confirms that the questionnaire had

good internal consistency, and hence, is reliable for use in the main study

4. Descriptive Statistics of Service Quality Dimensions:

| Dimension | Mean Score | Standard Deviation | Interpretation |
|---------------------------------------|-------------|--------------------|----------------------|
| Tangibility (Cleanliness, facilities) | 3.89 | 0.78 | Satisfied |
| Reliability (Consistency, accuracy) | 4.02 | 0.65 | Highly Satisfied |
| Responsiveness (Helpfulness of staff) | 3.67 | 0.80 | Moderately Satisfied |
| Assurance (Trust and safety) | 4.08 | 0.63 | Highly Satisfied |
| Empathy (Personal attention) | 3.60 | 0.84 | Satisfied |
| Overall Passenger Satisfaction | 3.85 | 0.74 | Satisfied |

Interpretation: Respondents expressed **high satisfaction** with *reliability* and *assurance* dimensions, particularly for **online ticket booking, payment security, and customer trust** in IRCTC's brand.

However, **responsiveness** and **empathy** scored slightly lower, indicating the need for better complaint handling and more personalized service.

5. Aspect-wise Passenger Feedback

| Service Aspect | Mean Score (1–5) | Passenger View |
|--------------------------------|------------------|----------------|
| Ease of Online Booking | 4.21 | Excellent |
| Payment Gateway Reliability | 4.08 | Excellent |
| Food Quality and Hygiene | 3.42 | Average |
| Catering Staff Behavior | 3.55 | Satisfactory |
| Tourism Packages | 3.76 | Good |
| Mobile App / Website Usability | 4.05 | Very Good |
| Customer Complaint Resolution | 3.52 | Average |
| Value for Money | 3.89 | Good |
| Overall Experience | 3.90 | Good |

Interpretation: Passengers are most satisfied with **digital convenience** (booking, payments, app usability). However, **food**

quality and **customer support** were highlighted as **areas needing improvement**.

6. Correlation Between Service Quality and Passenger Satisfaction:

| Variable Pair | Correlation Coefficient (r) | Relationship |
|--|-----------------------------|----------------------|
| Service Quality → Passenger Satisfaction | 0.79 | Strong Positive |
| Reliability → Satisfaction | 0.82 | Very Strong Positive |
| Responsiveness → Satisfaction | 0.68 | Moderate Positive |
| Empathy → Satisfaction | 0.64 | Moderate Positive |

Interpretation: There exists a **strong positive relationship** ($r = 0.79$) between service quality and passenger satisfaction. This supports the hypothesis that **better service quality enhances passenger satisfaction**, aligning with previous studies on IRCTC and public transport systems.

7. Key Findings from the Pilot Study:

- Questionnaire reliability** was statistically acceptable ($\alpha = 0.84$).
- IRCTC's reliability and assurance factors** were rated highest, suggesting strong trust in its operations.
- Catering and food hygiene** remain areas of concern.
- Passenger satisfaction** levels are overall *above average*, with a mean score of 3.85/5.
- Respondents appreciate **digital convenience** (website, app, and e-payments).
- Some passengers suggested improving **customer grievance redressal** and **train-based catering service consistency**.

8. Implications for the Main Study:

- The pilot test demonstrates that the questionnaire is **valid, reliable, and suitable** for a larger-scale study.
- It highlights **priority areas for IRCTC** to focus on—particularly in catering, empathy, and staff responsiveness.
- Findings validate the need for continued research on how **service quality influences satisfaction**, leading to **economic and tourism development** through IRCTC's entrepreneurial initiatives.

Summary:

The pilot study of 38 respondents revealed that IRCTC enjoys **strong passenger trust** and satisfaction in its online and digital services but needs to strengthen **customer responsiveness and food quality** to ensure higher overall satisfaction.

Conclusion:

The study reveals that IRCTC stands as a significant example of service entrepreneurship in the Indian public sector, contributing notably to economic development through digital innovation,

enhanced customer accessibility, and tourism promotion. The transformation of IRCTC into a customer-centric service platform has strengthened India's transportation and tourism ecosystem by ensuring convenience, transparency, and wider outreach. The findings indicate that passenger satisfaction is largely influenced by service quality dimensions such as reliability, responsiveness, ease of ticket booking, catering quality, hygiene, punctuality, and digital support services.

Passengers perceive IRCTC as a reliable and innovative service provider; however, certain service gaps such as delayed catering delivery, inconsistent food quality, technical glitches in the app/website, and customer support responsiveness were highlighted. The study concludes that satisfied passengers are more likely to re-engage with IRCTC services, recommend them to others, and contribute to revenue generation, thereby supporting economic development through tourism expansion, job creation, and infrastructural growth.

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