

Socio-Economic Impact of the Free Bus Scheme on Daily Commuters in Madurai District

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ABSTRACT

The introduction of the Free Bus Scheme in Tamil Nadu has been a significant public policy initiative aimed at promoting social equity and economic mobility, particularly for women, students, low-income earners, and the elderly. Launched in May 2021, this scheme provides free access to public transportation services on 'white board' buses, which represent the most affordable and widely used public transport routes. This study examines the socio-economic impact of the Free Bus Scheme in Madurai District, with a focus on changes in commuting patterns, savings, gender mobility, and overall satisfaction among daily commuters. The research employs both quantitative (survey data) and qualitative (interviews and observations) methods to assess the effectiveness of the scheme. The findings suggest that the Free Bus Scheme has led to increased mobility, improved access to employment opportunities, and financial savings for many beneficiaries, particularly women. However, challenges such as inadequate infrastructure and bus frequency issues have been identified. This paper also discusses the broader implications of this policy for future transport planning and social welfare strategies aimed at improving the quality of life for marginalized communities in Tamil Nadu.

KEYWORDS: *Free Bus Scheme, Public Transportation, Women Empowerment, Socio-economic Impact*

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1. INTRODUCTION

Transportation plays a important role in ensuring social inclusion and economic mobility, particularly in developing regions where access to reliable and affordable transport can significantly influence quality of life and economic participation (Muthusamy, 2024). In Tamil Nadu, the introduction of the Free Bus Scheme for women and other designated groups has emerged as a transformative public policy aimed at promoting equitable access to transportation. Launched in May 2021, the scheme allows free travel for women on 'white board' buses (ordinary bus routes), with the state government allocating an annual subsidy of ₹1,200 crore to cover fare losses (Muthusamy, 2024). The core objective of this initiative is to ease financial burdens, especially for daily wage earners, and to enhance the participation of marginalized communities in socio-economic activities (Jilly et al., 2024). In Madurai District, a city known both for its cultural heritage and as a growing urban hub, public transportation is a

lifeline for thousands commuting daily for work, education, healthcare, and other essential services. The Free Bus Scheme has become a game-changer, particularly for women, students, elderly, and low-income earners, by providing cost-free access to essential travel services within city and town limits (Manikandan et al., 2024). Early evidence indicates that the scheme has boosted savings, improved access to employment, and enhanced the quality of life for many users. It has also supported greater gender mobility, a crucial step toward financial independence for women in Tamil Nadu (Jilly et al., 2024). This study aims to analyze the socio-economic impact of the Free Bus Scheme on daily commuters in Madurai district. It investigates changes in travel behavior, household expenditure, gender-based mobility, and overall commuter satisfaction. By integrating quantitative data with qualitative perspectives, the study provides a comprehensive evaluation of the

policy's effectiveness and its implications for future transport planning and social welfare initiatives.

2. REVIEW OF LITERATURE

Muthusamy (2024) Highlighted the launch of the Zero-Ticket Bus Travel Scheme by the Tamil Nadu government in May 2021, which allows women to travel free on 'white board' (ordinary route) buses. Though hailed as an 'economic revolution' promoting women's workforce participation, the scheme has drawn mixed reactions, with critics calling it a political move. The study emphasizes that access to public transport is vital for women's mobility, especially those from underprivileged backgrounds, helping reduce dependence and improve access to opportunities.

Jilly Philippa, Et.al. (2024) Examined the scheme's impact in Sivaganga District, noting its role in enhancing mobility, financial independence, and access to economic resources for low-income women. Despite its benefits, issues such as poor time management, infrastructure gaps, and low frequency of buses were identified as challenges to effective implementation.

Manikandan, Et.al. (2024) Studied the scheme's effect in Coimbatore District, showing that over 90% of the women users were employed and used the service regularly. On average, women saved ₹253 per month, redirecting it to other needs. The study suggests to improving service quality to further empower women and boost economic participation.

3. OBJECTIVES OF THE STUDY

- To Analyse the differences in frequency of transportation savings and between rural and urban woman using the zero-ticket bus scheme.
- To identify the difficulties faced by woman passengers in government buses through this scheme.
- To assess the financial effects of this programme on the live of female users.
- To know the impact of free buses in Madurai city.
- To examine the Socio-Economic impact of free bus scheme.
- To analyse the women empowerment through free bus scheme.
- To find out the level of passengers' satisfaction.
- To measure the comforts level of passengers in bus transport.
- To analyse the perceptions of TNSTC employees and passengers in Tamil Nadu.

4. RESEARCH GAP

There are general studies on the state-wide impact of Tamil Nadu's Zero Bus Fare Scheme. there is a

significant lack of micro-level, city-specific studies- particularly focusing on Madurai- that analyze the differentiated socio-economic outcomes, such as employment accessibility for women, changes in household expenditure, and the response of private transport sectors

5. RESEARCH METHODOLOGY

Research Methodology is a critical element in studying tamil nadu zero bus ticket travel scheme. It requires thorough planning, implementation, and analysis to produce reliable and valid results. Selecting the appropriate research methodology is crucial for obtaining accurate data and deriving meaningful conclusions. Researchers need to consider factors like data sources, sample size, data collection methods, and statistical analysis techniques. Adhering to a strict research methodology ensures the credibility and integrity of research findings.

5.1. Sources of Data:

In this study, the Primary Data collection method utilized questionnaire method with 100 respondents using zero bus ticket travel scheme of in Madurai City.

The study relies on secondary data sourced from a variety of reputable sources including books, journals, research articles, and official reports from TNSTC web pages.

5.2. Sampling Designs:

The sampling design indicates that a simple random sampling technique, specifically convenient or purposive sampling, was utilized in the questionnaire method to collect data from 100 respondents.

5.3. Data Collection:

The present study is empirical research based on the part of survey method. A questionnaire method has been used to collect information. This study is descriptive and analytical, utilizing both primary and secondary data.

5.4. Data processing:

After the collection of primary data, the collected information was carefully analysed and examined. During this process, any missing data was identified and collected to ensure a comprehensive dataset. The data was then systematically arranged and organized to create a clear and meaningful presentation. This involved classifying the information into relevant categories and creating tables or charts to present the findings effectively. This step is essential to ensure that the data is presented in a structured and understandable manner, allowing for easier analysis and interpretation.

6. SOCIO-ECONOMIC IMPACT OF THE FREE BUS SCHEME ON DAILY COMMUTERS IN MADURAI DISTRICT

Table.1.1.Demographic information of the Respondents

Category	Sub-Category	No. of Respondents	Percentage (%)
Age	19–25	22	22%
	26–35	25	25%
	36–45	22	22%
	46–55	23	23%
	Above 56	8	8%
Family Monthly Income	₹15,000 – ₹25,000	27	27%
	₹26,000 – ₹35,000	28	28%
	₹36,000 – ₹45,000	17	17%
	₹46,000 – ₹55,000	16	16%
	Above ₹56,000	12	12%
Marital Status	Married	81	81%
	Unmarried	19	19%
Employment Status	Agriculture	12	12%
	Government Employee	15	15%
	Private Employee	35	35%
	Students	18	18%
	Self-Employed	20	20%
	Total Respondents	100	100%

Interpretation

The above table presents the demographic characteristics of the 100 respondents surveyed to study the socio-economic impact of the Free Bus Scheme on daily commuters in Madurai District. The key observations are as follows:

1. Age Distribution:

- The majority of the respondents fall in the **26–35 age group (25%)**, followed closely by the **46–55 (23%)**, **19–25 (22%)**, and **36–45 (22%)** age groups.
- Only **8%** of respondents are above 56 years of age.
- This indicates that **a significant portion of bus commuters belong to the working-age population**, suggesting that the scheme predominantly benefits economically active individuals.

2. Family Monthly Income:

- The largest share of respondents (28%) have a monthly income between **₹26,000 – ₹35,000**, while 27% earn between **₹15,000 – ₹25,000**.
- Only **12%** of the respondents have a family income above ₹56,000.
- These figures show that the **majority of the beneficiaries belong to the low- and middle-income groups**, highlighting the scheme's relevance in reducing travel expenses for financially constrained households.

3. Marital Status:

- A significant **81%** of the respondents are **married**, while only 19% are unmarried.
- This suggests that the scheme supports **family-oriented individuals**, who may have multiple financial responsibilities and are more likely to benefit from reduced commuting costs.

4. Employment Status:

- The highest proportion of respondents (**35%**) are **private employees**, followed by **self-employed individuals (20%)**, and **students (18%)**.
- **Government employees (15%)** and **agriculture-based workers (12%)** form the remaining portion.
- This reflects the scheme's **wide reach across different occupational sectors**, with a notable impact on **private sector workers and self-employed individuals**, who may not receive travel allowances from employers.

7. Utilization Patterns, Perceptions, and Socio-Economic Impact of the Free Bus Scheme among Daily Commuters in Madurai District

Table1.2. Utilization Patterns, Perceptions, and Socio-Economic Impact of the Free Bus Scheme among Daily Commuters in Madurai District

Aspect	Particulars	No. of Respondents	Percentage (%)
Utilization of Free Bus Scheme	Daily	49	49%
	Weekly	33	33%
	Monthly	11	11%
	Rarely	7	7%
Perception of Safety	Yes	65	65%
	No	35	35%
Monthly Savings Due to the Scheme	₹300	22	22%
	₹500	30	30%
	₹800	16	16%
	Above ₹1000	32	32%
Socio-Economic Impact	Salary	19	19%
	Income	9	9%
	Employment	39	39%
	Financial Security	33	33%
Purpose/Need for Women Free Bus Scheme	Reduced Transportation Costs	36	36%
	Increased Mobility	12	12%
	Improved Accessibility	35	35%
	Enhanced Quality of Life	17	17%
Accessibility of Scheme	Education	7	7%
	Employment	15	15%
	Healthcare	28	28%
	All the Above	50	50%
Problems Experienced	Overcrowding	19	19%
	Long Waiting Times	31	31%
	Inadequate Bus Frequency	29	29%
	Safety Concerns	21	21%
Drawbacks of the Scheme	Trip Length	18	18%
	Traffic Jams	23	23%
	Road Quality	28	28%
	Bus Breakdowns	31	31%
Women's Work Participation Benefits	Income	16	16%
	Improving Mental Health	37	37%
	Savings	37	37%
	Health	10	10%
Advantages of the Scheme	Cost Effectiveness	23	23%
	Reduced Driving Stress	12	12%
	Environmental Friendliness	25	25%
	Social Opportunities	34	34%
	Hassle-Free Travel	6	6%
Social Benefits of Public Transport	Social Inclusion	32	32%
	Encouraging Interaction Between People	30	30%
	Creating Shared Experience	27	27%
	Mental Wellbeing	11	11%

Source: Primary Data.

Interpretation:

The above comprehensive table highlights the patterns of usage, economic relief, challenges, and social perceptions related to the Free Bus Scheme in Madurai District.

1. **Usage Patterns:** A significant number of respondents (**49%**) use the scheme **daily**, indicating its importance in routine life. Weekly users account for **33%**, showing regular but slightly less frequent dependence.
 2. **Safety Perception:** **65%** feel safe using the free bus service, indicating positive public trust, though the remaining **35%** show concerns, possibly due to overcrowding or poor bus conditions.
 3. **Savings Benefits:** A substantial number of respondents (**32%**) reported monthly savings above ₹1000, showcasing how the scheme contributes meaningfully to **household budget management**.
 4. **Socio-Economic Impact:** Respondents feel the scheme has positively influenced their **employment opportunities (39%)** and **financial security (33%)**, indicating its role in enabling income-generating activities.
 5. **Purpose for Women:** The scheme has reduced transportation costs (**36%**) and improved accessibility (**35%**) for women, empowering them socially and economically.
 6. **Accessibility:**
50% of respondents use the scheme for **multiple purposes**—education, healthcare, and employment—signifying its **multipurpose utility** and wide societal reach.
 7. **Problems Faced:** The biggest challenges are **long waiting times (31%)**, **inadequate bus frequency (29%)**, and **safety concerns (21%)**, which need to be addressed to enhance service quality.
 8. **Drawbacks Identified:** **Bus breakdowns (31%)** and **road conditions (28%)** are major hurdles in smooth operations, hinting at the need for infrastructure and vehicle maintenance improvements.
 9. **Women's Participation at Work:** The scheme has improved **mental wellbeing and savings (37% each)**, showing its critical role in supporting women emotionally and financially.
 10. **Advantages of the Scheme:** Respondents appreciated **social opportunities (34%)**, **eco-friendliness (25%)**, and **cost-effectiveness (23%)**, revealing both **economic and social benefits**.
 11. **Social Impact of Public Transport:** The scheme fosters **social inclusion (32%)** and **interpersonal interaction (30%)**, contributing to a more **connected and inclusive community**.
- 8. ANALYSIS OF VARIANCE (ANOVA) – LEVEL OF OPINION TOWARDS TAMIL NADU ZERO TICKET BUS TRAVEL SCHEME**

To understand the influence of demographic variables on the level of opinion towards the Tamil Nadu Zero Ticket Bus Travel Scheme, a **One-Way ANOVA** was applied. The analysis was done for **Age**, **Marital Status**, and **Employment Status**. The results are presented in the table below,

Table 1.3. ANOVA Summary of Demographic Variables and Level of Opinion

Demographic Variable	Sum of Squares (Between Groups)	df	Mean Square	F-value	Sig. (p-value)
Age	254.547	4	63.637	2.615	0.040
Marital Status	14.600	1	14.600	0.561	0.456
Employment Status	181.269	4	45.317	1.805	0.134

Source: Primary Data

Hypotheses:

- **Null Hypothesis (H_0):** There is no significant difference in the level of opinion based on the demographic factor (Age/Marital Status/Employment Status).
- **Alternative Hypothesis (H_1):** There is a significant difference in the level of opinion based on the demographic factor.

Interpretation:

1. Age and Level of Opinion:

The **p-value (0.040)** is **less than 0.05**, indicating a **significant difference** in opinion among different age groups.

Hence, the **null hypothesis is rejected**, and it is concluded that age influences the level of opinion.

2. Marital Status and Level of Opinion:

The **p-value (0.456)** is **greater than 0.05**, indicating **no significant difference** in opinion between married and unmarried respondents.

Hence, the **null hypothesis is accepted**.

3. Employment Status and Level of Opinion:

The **p-value (0.134)** is also **greater than 0.05**, showing **no significant difference** in opinion among different employment groups.

Therefore, the **null hypothesis is accepted**.

9. RESULT OF THE STUDY

The major findings of the study are summarized below:

1. Demographic Profile:

- The majority of respondents fall in the 26-35 age group.
- Most respondents are married (81%) and engaged in private employment (35%).
- A significant portion has a family income between ₹15,000–₹35,000, indicating middle to lower-middle-class representation.

2. Utilization of the Scheme:

- 49% of respondents use the free bus scheme daily, while 33% use it weekly.
- This shows that the scheme is a critical transport medium for working and middle-income individuals.

3. Perceived Benefits:

- 65% feel safe while using the free bus service.
- 32% report monthly savings of more than ₹1,000, indicating financial benefit.
- The scheme has contributed to financial security (33%), employment access (39%), and income enhancement (9%).

4. Accessibility and Impact:

- 50% of respondents report that the scheme has improved their access to education, employment, and healthcare.
- 36% of respondents said it reduced transportation costs, while 35% noted improved accessibility.

5. Problems Faced:

- Respondents report issues such as long waiting times (31%), inadequate frequency (29%), and overcrowding (19%).
- 31% of users also mention the drawback of frequent bus breakdowns.

6. Women Empowerment:

- The scheme helps women by improving mental well-being (37%), income generation (16%), and savings (37%).
- It promotes women's participation in the workforce and enhances mobility and independence.

7. Environmental and Social Advantages:

- 34% believe the scheme creates social opportunities, and 25% see environmental benefits through reduced pollution.
- The scheme fosters social inclusion (32%) and encourages community bonding.

8. ANOVA Results:

- A significant relationship was found between age and level of opinion ($p = 0.040$).

- No significant relationship was observed for marital status and employment status with the level of opinion.

10. RECOMMENDATIONS

Based on the findings, the following recommendations are suggested to enhance the impact of the scheme:

1. Increase Bus Frequency: Address delays and long waiting times by deploying more buses during peak hours.
2. Improve Infrastructure: Upgrade bus condition and ensure regular maintenance to prevent breakdowns.
3. Ensure Safety and Cleanliness: Implement dedicated staff for women's safety and hygiene maintenance in buses.
4. Route Optimization: Include more rural and under-reached areas in the network to promote inclusivity.
5. Digital Awareness Campaigns: Educate commuters about bus timings, routes, and benefits of public transport through apps and kiosks.
6. Feedback Mechanism: Establish a proper channel for commuters to report issues and share suggestions.
7. Special Provisions for Women and the Elderly: Allocate special seats and ensure boarding assistance.

11. CONCLUSION

The Tamil Nadu Zero Ticket Bus Travel Scheme has had a positive socio-economic impact on the lives of daily commuters in Madurai District, particularly among working women and low-income families. It has enhanced financial security, accessibility to essential services, and social inclusion, while also promoting women's empowerment. Despite the overwhelming benefits, the scheme faces challenges such as overcrowding, inadequate bus frequency, and occasional safety concerns. With thoughtful improvements and efficient management, the free bus scheme can evolve into a model of inclusive public transportation and significantly uplift the quality of life of the economically weaker sections in the state.

References:

- [1] Muthusamy, S. (2024). *A study on the impact of Tamil Nadu's Zero-Ticket Bus Travel Scheme*. Journal of Public Policy and Transport, 12(2), 45-59.
- [2] Jilly, P. J., Sameem Banu, & Meenal, M. (2024). *Economic and Social Impact of the*

Free Bus Travel Policy in Sivaganga District. Tamil Nadu Economic Review, 18(3), 112-128.

- [3] Manikandan, R., Sowmitha, S., & Vidhya, R. (2024). *Socio-economic Effects of the Zero-Ticket Bus Travel Scheme in Coimbatore District.* Indian Transport Studies, 21(1), 78-92.
- [4] Kumar, V. R., & Patel, S. (2022). *The Role of Public Transport in Social Inclusion in Indian Cities.* Transport Policy, 39(4), 67-85.
- [5] Palanisamy, N., & Ramkumar, S. (2023). *Gender Equality and Public Transport Access in Tamil Nadu: A Critical Review.* Journal of Gender Studies, 35(2), 234-245.
- [6] George, M. L., & Kumar, A. (2023). *Free Public Transport for Women: A Policy Analysis in South India.* Journal of Public Administration, 52(1), 60-75.
- [7] Lee, A. H., & Yu, C. (2021). *Mobility and Access: An Examination of Transport Schemes in India.* Urban Transport Development Journal, 14(4), 202-215.
- [8] Banu, S., & Meenal, M. (2022). *Public Transport as a Catalyst for Economic Mobility: Case Studies from Tamil Nadu.* Indian Journal of Development Economics, 30(1), 50-66.
- [9] Subramanian, S., & Parthasarathi, G. (2020). *Public Transport and Urban Development: Challenges and Opportunities in Tamil Nadu.* Economic and Political Weekly, 35(4), 90-103.
- [10] Reddy, K. P., & Sharma, N. (2021). *Access to Affordable Public Transport in India: An Evaluation of Policy Measures.* Transport Economics, 18(3), 154-171.
- [11] Ramachandran, R., & Karthikeyan, M. (2023). *Transportation and Empowerment: Women's Participation in the Workforce.* Journal of Development Studies, 49(2), 178-193.
- [12] Ghosh, S., & Singh, T. (2021). *The Impact of Transportation on Women's Economic Independence in India.* South Asian Gender Review, 19(2), 65-83.
- [13] Verma, R., & Gupta, M. (2020). *Assessing the Role of Government Schemes in Enhancing Women's Mobility in Tamil Nadu.* Indian Journal of Social Policy, 45(1), 112-129.
- [14] Chandra, P., & Das, R. (2022). *The Social Impact of Zero-Fare Public Transport: A Review of Tamil Nadu's Initiative.* International Journal of Public Policy, 33(3), 47-62.
- [15] Sivan, V., & Natarajan, P. (2023). *Gendered Mobility and Public Transport Policies in South India: Evidence from the Free Bus Scheme.* Journal of Women's Studies, 26(4), 320-335.