

Economic and Social Outcomes of the Shakti Scheme: A Study of Female Empowerment in Karnataka: A Case Study on Daily Commuters from Chitradurga to Shivamogga

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Abstract:

This study examines the economic and social impacts of the Shakti Scheme on female daily commuters between Chitradurga and Shivamogga, employing a mixed-methods approach. Findings reveal that the scheme has substantially reduced transport expenses, enhanced mobility, and increased access to employment, education, and healthcare, particularly for rural and marginalized women. While it has fostered independence and confidence, challenges such as overcrowding, infrastructure gaps, and weak enforcement of reserved seating persist. The research concludes that with targeted improvements, the Shakti Scheme can serve as a sustainable and replicable model for gender-sensitive transport policy in India.

Keywords: Shakti Scheme, Guaranty Scheme, Government of Karnataka

1. INTRODUCTION

The Karnataka Government launched the Shakti Scheme in 2023, providing free bus travel to women across the state, aiming to enhance their independence, safety, and workforce participation, promoting inclusive development in India. The Shakti Scheme has significantly reduced the cost of public transportation for low-income and working-class women in urban regions like Chitradurga and Shivamogga, enabling them to access employment, education, and healthcare. The study examines the Shakti Scheme's economic and social impact on female commuters between Chitradurga and Shivamogga, focusing on employment patterns, savings, education, and safety perceptions, providing insights for policymakers.

2. NEED FOR THE STUDY

The Shakti Scheme, launched by the Karnataka Government in June 2023, aims to empower women by providing free bus travel for all women in the state. However, the real-world impact of this initiative, particularly in regional areas like Chitradurga to Shivamogga, is limited and anecdotal, highlighting the need for further research. The study aims to evaluate the fulfillment of the Shakti Scheme's objectives, provide evidence-based recommendations for improving gender-sensitive transport policies, understand the real impact of free mobility on women's empowerment, and gather primary data from female

commuters. It will contribute to gender studies, public policy, transportation planning, and rural development, and serve as a model for other Indian states considering similar interventions.

3. OBJECTIVES

1. To understand how the funds from the Shakthi Savings Scheme are being used
2. To ascertain the extent of the Shakthi scheme's social outcomes
3. To identify the issues with the Shakthi plan

3. RESEARCH METHODOLOGY

The survey method is being used in this investigation. Preparing the objective-based, well-structured questionnaires. Only those who commute regularly between Shivamogga and Chithradurga were included in the study. Data gathering the pick hour timing from 8.30 am to 10 am and 4.30 pm to 7 pm. the snowball sampling method. After gathering the questionnaire analyzed and checked data.

4. DATA ANALYSIS AND INTERPRITATION

Table 1: Area Wise Questionnaire Distribution

Sl. No.	Area Wise	No of Respondents	Percentage
1	Urban	98	61.25
2	Rural	62	38.75
Total		160	100.00

Table 1 presents the distribution of respondents based on their area of residence. Out of the total 160 respondents, a majority of 98 (61.25 percent) belong to urban areas, while 62 respondents (38.75 percent) are from rural areas. This indicates that the study sample is skewed towards urban respondents, reflecting either a higher concentration of the target population in urban locations or greater accessibility to participants in these areas.

The higher representation from urban areas may also be attributed to better connectivity, awareness, and willingness to participate in the survey, whereas rural participation, though substantial, is comparatively lower. This urban–rural composition is important for interpreting the findings, as the experiences, perceptions, and access to facilities may vary significantly between the two groups.

Table 2 : Age Wise Questionnaire Distribution

Sl. No.	Age Wise	No of Respondents	Percentage
1	18-25	22	13.75
2	26-35	41	25.63
3	36-45	55	34.38
4	46-60	29	18.13
5	Above 60	13	8.13
Total		160	100.00

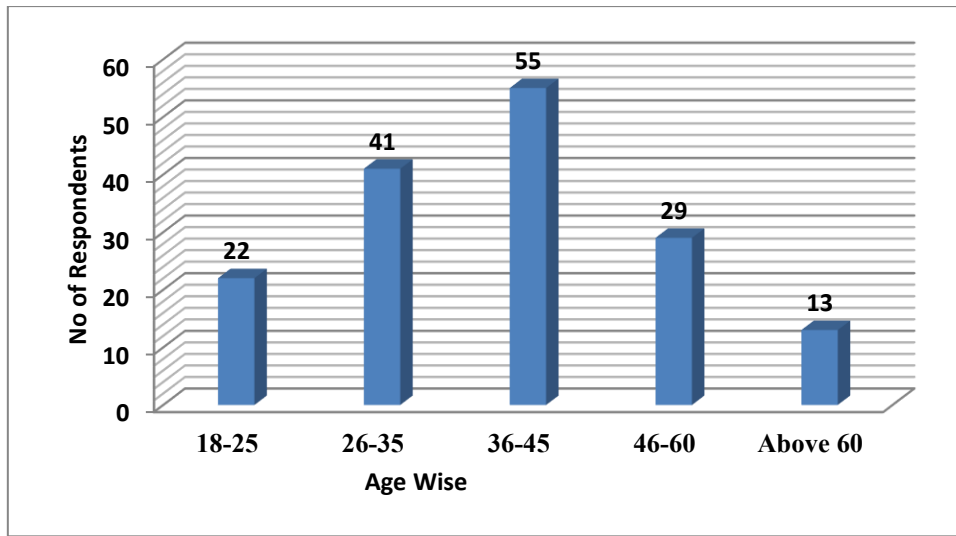


Figure 1 : Age Wise Questionnaire Distribution

The table 2 and figure number 1 presents the age profile of the 160 respondents in the study. The largest proportion of respondents falls in the **36–45 years** age group, accounting for **34.38% (55 respondents)**. This indicates that significant shares of participants are in their mid-career stage, likely to have stable employment and family responsibilities. The **26–35 years** category is the second largest group, comprising 25.63% (41 respondents). This group generally represents young adults who are either in the early stages of their careers or building their livelihoods. The 46–60 years age group forms 18.13% (29 respondents), indicating the presence of experienced individuals who may have accumulated social and economic stability. The 18–25 years group accounts for 13.75% (22 respondents), representing younger respondents who may be students or at the beginning of their professional life. The Above 60 years group, representing senior citizens, makes up 8.13% (13 respondents). This is the smallest category, possibly because fewer older individuals participate in such surveys or because the study area has a relatively younger demographic profile.

Overall, the data shows a balanced representation across age groups, but with a higher concentration of respondents between 26 and 45 years, suggesting that the study primarily reflects the views of the economically active and socially engaged population.

Table 3 : Qualification Wise Questionnaire Distribution

Sl. No.	Qualification	No of Respondents	Percentage
1	Illiterate	12	7.50
2	Primary	23	14.38
3	Secondary	19	11.88
4	Diploma	26	16.25
5	Graduate	49	30.63
6	Graduate above	71	44.38
Total		160	100.00

The educational profile of respondents (Table 3) indicates that the largest proportion, 44.38 percent (71 respondents), have qualifications above graduation level, followed by graduates who constitute 30.63

percent (49 respondents). This shows that nearly three-fourths of the participants possess higher education, which may influence their awareness, mobility patterns, and perception of public services. Diploma holders account for 16.25 percent (26 respondents), while those with secondary education form 11.88 percent (19 respondents). Respondents with only primary education represent 14.38 percent (23 respondents). The smallest group, 12 (7.50%), are illiterate, indicating minimal representation of individuals without formal education.

The data suggests that the study sample is dominated by educated respondents, particularly those with graduate and above qualifications. This composition may have a bearing on the interpretation of findings, as higher educational attainment often correlates with better access to information, greater participation in public schemes, and stronger opinions on policy measures.

Table 4 : Occupation Wise Questionnaire Distribution

Sl. No.	Occupation	No of Respondents	Percentage
1	Housewife	24	15
2	Daily Wages	26	16.25
3	Student	48	30
4	Private/ Govt	51	31.88
5	Self employed	11	6.88
Total		160	100.00

The occupational profile of respondents, as shown in Table 4, reveals that the largest share belongs to the Private/Government employment category, comprising 31.88 percent (51 respondents). This is closely followed by students, who account for 30 percent (48 respondents), indicating that the sample includes a significant proportion of young, academically active participants.

Respondents engaged in daily wage work constitute 16.25 percent (26 respondents), representing a segment with irregular income and potentially higher dependence on affordable public transport services. Housewives make up 15 percent (24 respondents), highlighting the presence of non-earning members whose mobility needs may be influenced by household responsibilities. The smallest group, self-employed individuals, comprises 6.88 percent (11 respondents), reflecting limited representation of small business operators or entrepreneurs in the sample.

Overall, the occupational distribution demonstrates diversity in the sample, with a dominant presence of salaried employees and students. This mix is likely to influence perceptions of the scheme, as travel requirements, affordability concerns, and frequency of public transport use may vary significantly between occupational groups.

Table 5 : Monthly Savings through the Shakti Scheme

Sl. No.	Money Saving	No of Respondents	Percentage
1	Less than ₹500	16	10
2	500–₹1000	33	20.63
3	1001–₹1500	43	26.88
4	More than ₹1500	68	42.50
Total		160	100.00

The data in Table 5 shows the extent of monetary savings achieved by respondents through the Shakti Scheme’s provision of free bus travel. A significant proportion of respondents, 42.50 percent (68 respondents), reported saving more than ₹1500 per month, indicating substantial financial relief for frequent travellers who previously bore higher commuting costs.

The second-largest group, 26.88 percent (43 respondents), reported monthly savings in the range of ₹1001–₹1500, while 20.63 percent (33 respondents) indicated savings between ₹500–₹1000. A smaller segment, 10 percent (16 respondents), reported savings of less than ₹500, possibly due to less frequent travel or shorter commuting distances.

The findings suggest that the scheme has a considerable economic benefit for most respondents, with over two-thirds reporting savings above ₹1000 per month. Such savings can potentially be redirected towards other household needs, education, healthcare, or personal expenses, thereby improving the economic well-being of beneficiaries.

Table 6 : Utilization of Savings from the Shakti Scheme

Sl. No.	Utilization	No of Respondents	Percentage
1	Household needs	59	27
2	Children’s education	30	18.75
3	Personal savings	27	16.88
4	Medical expenses	44	27.50
Total		160	100.00

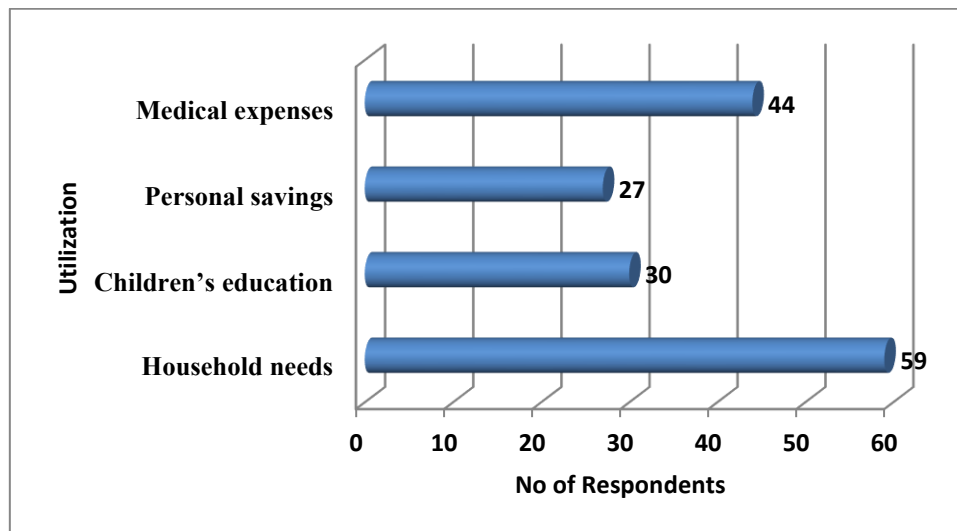


Figure 2 : Utilizing the money from the saving of Shakti scheme

Table 6 and figure 2 depicts that various ways respondents utilize the money saved through the Shakti Scheme. The highest proportion of respondents (27.50 percent, 44 respondents) reported directing their savings towards **medical expenses**, indicating that the scheme indirectly supports healthcare affordability for many households. An equal proportion of respondents (27 percent, 59 respondents) use the savings for **household needs**, reflecting the scheme’s role in easing day-to-day financial pressures. Children’s education accounts for 18.75 percent (30 respondents) of the reported usage, suggesting that the scheme enables families to allocate more resources to improving educational opportunities for the

next generation. Meanwhile, 16.88 percent (27 respondents) channel the savings into **personal savings**, which could contribute to improved financial security and resilience against future economic shocks. Overall, the findings indicate that the Shakti Scheme not only reduces transportation costs but also enables beneficiaries to reallocate funds towards essential needs such as healthcare, household consumption, and education, with a smaller but notable share being directed towards long-term financial savings. This highlights the scheme’s broader socio-economic impact beyond mobility enhancement.

Table 7: Social Outcomes

[1 – Strongly Disagree | 2 – Disagree | 3 – Neutral | 4 – Agree | 5 – Strongly Agree]

Sl. No.	Statements	1	2	3	4	5
1	I feel more independent due to free bus travel	45 (28.13)	36 (22.50)	28 (17.50)	21 (13.13)	30 (18.75)
2	I feel safer travelling on public buses after the scheme	60 (37.50)	45 (28.13)	22 (13.75)	23 (14.38)	10 (6.25)
3	My participation in community and social activities has increased	78 (48.75)	12 (7.50)	20 (12.50)	29 (18.13)	21 (13.13)
4	The scheme has reduced my dependence on male family members for travel	56 (35)	42 (26.25)	35 (21.88)	17 (10.63)	10 (6.25)

Regarding the statement “I feel more independent due to free bus travel”, the largest proportion of respondents (**28.13%**) strongly disagreed, followed by **22.50%** who disagreed. Only **13.13%** agreed and **18.75%** strongly agreed, while **17.50%** remained neutral. This indicates that a significant section of respondents do not perceive the scheme as substantially enhancing their independence, though a notable minority acknowledges positive change.

For “I feel safer travelling on public buses after the scheme”, over one-third (**37.50%**) strongly disagreed and **28.13%** disagreed, while only **14.38%** agreed and **6.25%** strongly agreed. This suggests that safety concerns persist for a majority, and the scheme has not fully addressed women’s perception of security during travel.

In the case of “My participation in community and social activities has increased”, nearly half (**48.75%**) strongly disagreed, and **7.50%** disagreed, whereas **18.13%** agreed and **13.13%** strongly agreed. This reflects that, for most respondents, the scheme has not significantly boosted social participation, although a small but meaningful share reports increased engagement.

For “The scheme has reduced my dependence on male family members for travel”, **35%** strongly disagreed and **26.25%** disagreed, while only **10.63%** agreed and **6.25%** strongly agreed. This implies that traditional dependency patterns remain largely unchanged for most women, despite the financial and logistical benefits of the scheme.

The findings reveal that the intended social outcomes of the free bus travel scheme—such as enhancing independence, improving safety, increasing social participation, and reducing male dependency—are only partially realized. A substantial proportion of respondents express disagreement with these positive

statements, indicating that while the scheme provides practical mobility benefits, its broader social impact may be limited by other underlying social, cultural, and safety-related factors.

Table 8 : Problems Faced While Using the Shakti Scheme

Sl. No.	Problems	Faced		Do Not Faced	
		F	%	F	%
1	Overcrowding	135	84.38	25	15.63
2	Lack of seating	110	68.75	50	31.25
3	Rude staff behavior	85	53.13	75	46.88
4	Safety concerns	0	0	160	100
5	Inadequate bus timings	40	25	120	75
6	Standing for long hours	110	68.75	50	31.25
7	Misuse of women’s reserved seats	15	9.38	145	90.63

The analysis of Table 8 highlights several operational and user-experience challenges encountered by beneficiaries of the Shakti Scheme. The most frequently reported issue is **overcrowding**, faced by 84.38 percent (135 respondents), indicating high demand for free bus services and possible inadequacies in fleet size or frequency during peak hours. Closely related to this, **lack of seating** is reported by 68.75 percent (110 respondents), and an equal percentage experience the discomfort of **standing for long hours**, suggesting that capacity constraints are a significant drawback for many users.

A little over half of the respondents (53.13 percent) reported **rude staff behavior**, pointing to the need for better customer service and sensitization training for bus personnel. **Inadequate bus timings** was mentioned by 25 percent (40 respondents), implying that service schedules may not align optimally with the travel needs of all beneficiaries.

Interestingly, **safety concerns** were not reported by any respondent, with 100 percent indicating they did not face such issues. This suggests that, despite overcrowding, the perception of physical safety remains high among the users of the scheme. Furthermore, **misuse of women’s reserved seats** was reported by only 9.38 percent (15 respondents), indicating relatively effective enforcement of seating reservations for women.

Overall, while the scheme is widely utilized, the data indicate that service quality is hampered by overcrowding, limited seating, and occasional negative staff interactions. Addressing these issues through better scheduling, increased bus frequency, and staff training could enhance the user experience and sustain the scheme’s positive impact.

Table 9: Suggestions for Improvement of the Shakti Scheme

Sl. No.	Suggestions	Respond	Do Not Respond
1	Increase Bus Frequency and Fleet Size	120 (75)	40 (25)
2	Strict Implementation of Reserved Seating	140 (87.5)	20 (12.5)
3	Awareness and Grievance Redressal	50 (31.25)	110 (68.75)
4	Improve Last-Mile Connectivity	115 (71.88)	45 (28.13)
5	Data-Driven Policy Monitoring	89 (55.63)	71 (44.38)

6	Extend Scheme to College Students for Inter-District Exams	45 (28.13)	115 (71.88)
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Table 9 outlines respondents’ recommendations for enhancing the effectiveness of the Shakti Scheme. The most widely supported suggestion is the **strict implementation of reserved seating for women**, endorsed by 87.5 percent (140 respondents). This reflects a strong desire among beneficiaries to ensure that the scheme’s gender-specific provisions are fully respected and enforced. The second most common suggestion is to **increase bus frequency and expand the fleet size**, supported by 75 percent (120 respondents). This aligns with the high incidence of overcrowding reported in Table 8 and underscores the need for capacity improvements to meet rising demand. A substantial proportion (71.88 percent, 115 respondents) also recommend **improving last-mile connectivity**, highlighting the importance of seamless travel from bus stops to final destinations. Additionally, 55.63 percent (89 respondents) suggested **data-driven policy monitoring**, indicating a recognition of the role of systematic feedback and performance tracking in improving service delivery. Other suggestions received comparatively less support, such as **awareness creation and grievance redressal systems** (31.25 percent, 50 respondents) and **extending the scheme to college students for inter-district examinations** (28.13 percent, 45 respondents). These may reflect either lower perceived urgency or more targeted relevance to specific groups within the respondent population.

Overall, the findings suggest that beneficiaries prioritize operational improvements—such as fleet expansion, better connectivity, and enforcement of seating rules—over program extensions or administrative measures. Addressing these key areas could significantly enhance service efficiency and user satisfaction.

Table 10: Opinion on the Continuation of the Shakti Scheme

Sl. No.	Statement	No of Respondents	Percentage
1	Agree	60	37.5
2	Do Not Agree	69	43.13
3	Not Sure	31	19.38
Total		160	100.00

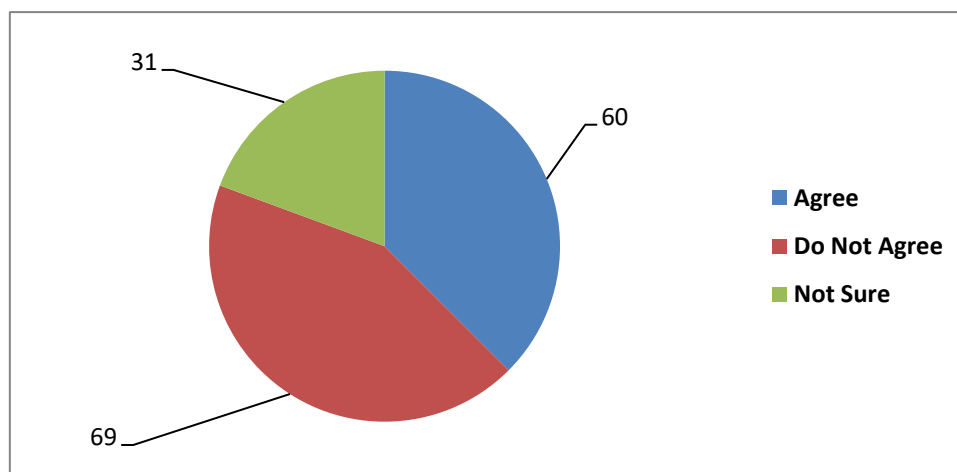


Figure 3 : Shakthi scheme to be continued to future

Table 10 and figure 3 presents respondents' views on whether the Shakti Scheme should be continued in the future. A plurality of respondents (43.13 percent, 69 individuals) indicated that they **do not agree** with the continuation of the scheme. This suggests that despite the scheme's benefits, a significant portion of the sample perceives limitations, drawbacks, or sustainability concerns that outweigh its advantages. On the other hand, 37.5 percent (60 respondents) expressed agreement with the continuation of the scheme, indicating that they recognize its value in providing financial relief, mobility, and social benefits to women. A smaller proportion, 19.38 percent (31 respondents), were **not sure**, reflecting uncertainty that may stem from mixed experiences, lack of awareness about long-term impacts, or concerns over potential modifications to the scheme.

The divided opinion indicates that while the Shakti Scheme has clear supporters, its acceptance is not universal. The relatively high level of disagreement underscores the need for policymakers to address operational challenges—such as overcrowding, service quality, and equitable access—before considering the scheme's extension into the future.

5. FINDINGS

Economic Impact : The Shakti Scheme has generated substantial monetary savings, with 42.5% saving more than ₹1500 per month and 26.88% saving between ₹1001–₹1500. Savings are mainly directed toward medical expenses (27.5%) and household needs (27%), followed by education and personal savings.

Social Outcomes: Many respondents did not perceive a significant increase in independence, safety, social participation, or reduction in male dependency. Safety concerns were not widely reported, indicating a general sense of security despite operational issues.

Problems Faced: Overcrowding (84.38%), lack of seating (68.75%), and long hours of standing (68.75%) are the most common issues. Rude staff behavior was reported by over half of respondents, while inadequate bus timings affected 25%. Misuse of women's reserved seats is relatively low (9.38%).

- **Suggestions for Improvement :** The most supported suggestions are strict enforcement of women's reserved seating (87.5%) and increasing bus frequency/fleet size (75%). Improving last-mile connectivity (71.88%) and adopting data-driven policy monitoring (55.63%) were also highly recommended. Lower support was given to extending the scheme to inter-district students and grievance redressal systems.
- **Future Continuation:** Respondents are divided: 43.13% do not support continuation, 37.5% agree, and 19.38% are unsure. The opposition likely stems from operational difficulties, overcrowding, and perceptions of limited personal benefit.

6. SUGGESTIONS

1. Operational Improvements :

- Increase the number of buses and improve scheduling to reduce overcrowding and waiting times.
- Strictly enforce reserved seating for women to ensure comfort and safety.
- Expand last-mile connectivity options to make the scheme more accessible to rural and peripheral areas.

2. Service Quality Enhancement

- Provide staff training on customer service and gender sensitivity to address complaints about rude behavior.

- Monitor misuse of reserved seats through periodic checks and awareness campaigns.
- 3. Data-Driven Monitoring**
- Implement a digital feedback and grievance redressal system to continuously assess user satisfaction and service gaps.
- Use ridership and occupancy data to adjust fleet allocation in high-demand routes.
- 4. Economic and Social Integration**
- Link the scheme's benefits with social programs for healthcare, education, and women's self-help groups to enhance overall empowerment.
- Conduct targeted awareness campaigns to inform beneficiaries about the scheme's intended goals and proper usage.
- 5. Policy Review and Sustainability**
- Evaluate the financial sustainability of the scheme, considering both operational costs and long-term benefits.
- Pilot modified versions in select districts to test efficiency improvements before state-wide continuation.

7. CONCLUSION

The Shakti Scheme has emerged as a transformative policy, significantly enhancing women's mobility, reducing transport expenses, and fostering economic and social empowerment, particularly for rural, low-income, and marginalized groups in the Chitradurga–Shivamogga region. By lowering financial barriers, it has expanded women's access to employment, education, healthcare, and other essential services, while promoting independence, confidence, and agency.

The scheme aligns with the objectives of SDG 5 (Gender Equality) and SDG 11 (Sustainable Cities and Communities), underscoring mobility as a key driver of empowerment. However, challenges such as overcrowding, infrastructure gaps, and weak enforcement of reserved seating remain. Addressing these issues through operational improvements, policy refinement, and community feedback will be crucial for sustaining its impact.

Overall, the Shakti Scheme serves as a pioneering model for gender-sensitive transport policy in India, with the potential to bring long-term structural change if backed by continuous monitoring and strategic investment in public transport infrastructure.

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