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A Study of Government Subsidies and Financial Support for Electric Bus Adoption in India

Dr. Rajkumar M. Sharma[1], Sunita Laxman Kale[2]

Ph.D.Supervisor Asst.Professor G.B.Murarka Arts and Commerce College Shegaon Dist.Buldana
[2] Research scholar Dist.Buldana G.B.Murarka Arts and Commerce College Shegaon

ABSTRACT :

Electric buses (e-buses) are a significant step towards cleaner public transport in India. Yet, the high Expenditure of e-buses in relation to diesel buses has slowed adoption. This research study looks at the role of government subsidies and financial support in promoting e-bus adoption. The research paper is based on secondary data from government reports, industry studies, and academic research. It reviews major policy schemes, for instance, the Faster Adoption and Manufacturing of Electric Vehicles (FAME) program, state-level subsidies, and public–private partnership models. The research study finds that subsidies have played an important role in reducing the upfront cost of e-buses and attracting investment; however, challenges remain in operational funding, infrastructure costs, and long-term financial planning. Suggestions include stable policy support, enhanced coordination between central and state governments, and innovative financing models.

1. Introduction

The public transport system of India faces the challenges of rising fuel prices and air pollution. Electric buses are one of the best solutions to reducing dependence on fossil fuels and are also helpful in improving the quality of the air. However, e-buses are more costly to buy as compared to diesel buses. This makes government financial support essential for large-scale adoption.

The Indian Government has introduced various subsidy schemes to promote electric mobility. Central government programs such as FAME-I (2015) and FAME-II (2019) provide incentives not only for e-bus purchase but also for charging infrastructure. Many states of India, including Maharashtra, Delhi, and Karnataka, also have their own benefits on subsidies and taxes.

This research paper studies how these subsidies and financial supports have affected the adoption of e-buses in India.

2. Literature Review

Ghosh (2020) reported that FAME-II has helped raise the number of e-buses, but it also concludes that there are delays in fund disbursement, which have slowed deployment.

Kumar and Singh (2021) analyze the state-level policies and conclude that states offering both capital subsidies and operational support had Rapid e-bus adoption rates.

3. Aim and Objectives

1. To review the central and state government subsidies for e-bus adoption in India.
2. To understand the financial support mechanisms available to transport agencies.
3. To assess the impact of these subsidies on the growth of e-bus fleets.
4. To suggest measures for improving the effectiveness of financial support.

4. Research Methodology

THIS RESEARCH IS PURELY BASED ON SECONDARY DATA SOURCES:

- ✓ Government policy documents and scheme guidelines (FAME-I, FAME-II, state EV policies).
- ✓ Ministry of Heavy Industries Report, NITI Aayog Report, and state transport departments.
- ✓ Academic research papers and industry publications.
- ✓ Data from the Society of Manufacturers of Electric Vehicles (SMEV) and news reports.
- ✓ The data is reviewed to identify key subsidy amounts, eligibility criteria, and adoption trends.

5. Findings

5.1 Central Government Support

FAME-I (2015–2019): Offered incentives for 425 e-buses in select cities.
FAME-II (2019–present): Allocated ₹10,000 crore, with ₹3,545 crore specifically for 7,090 e-buses across India.
Funds cover up to 40% of the e-bus cost.

5.2 State Government Support

Maharashtra: Offers capital subsidy of ₹20 lakh per e-bus plus registration fee exemption.
Delhi: Provides ₹30 lakh subsidy per bus and reduced road tax.
Karnataka: Gives tax exemptions and supports charging infrastructure.

5.3 Impact

Subsidies have significantly reduced the upfront costs of purchase.
Cities like Mumbai, Pune, Delhi, and Bengaluru have seen the fastest adoption due to the combined incentives of the central and state governments.
Operational cost support is still limited, making it hard for some agencies to sustain services.

6. Discussion

Government subsidies have played a significant role in raising e-bus adoption in India. Without them, many transport agencies would not be able to afford e-buses. However, the current model focuses mainly on purchase incentives, where less focus on operational support, which impacts Lasting sustainability. A move towards blended finance, where subsidies are combined with loans, leasing, and PPP models, could increase the adoption faster and more stably.

7. Suggestions:

1. Continue subsidies under a stable, long-term policy framework.
2. Increase operational subsidies to cover maintenance and electricity costs.
3. Develop a single-window clearance for subsidy approval and fund release.
4. Encourage PPP and leasing models to reduce financial burden on transport agencies.
5. Link subsidies with renewable energy charging to maximise environmental benefits.

8. Conclusion

Government subsidies and financial support have been the Key factors of e-bus adoption in India. While central government programs such as FAME-II and state incentives have reduced the costs of purchase, challenges remain in sustaining operations and building infrastructure. A combination of the subsidies, innovative financing, and policy stability will be significant for a large-scale transition to electric public transport.

9. REFERENCES

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