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The Implications of Corporate Social Responsibility (CSR) Practices in Electric Vehicle (EV) Automobile Companies in India

Dr. Sunil
Assistant Professor (Skill), Shri Vishwakarma Skill University, Haryana

Abstract
Corporate Social Responsibility (CSR) has emerged as a strategic competitive advantage in the Indian electric vehicle industry. Driven by Section 135 of the Indian Companies Act (2013), and reinforced by national sustainability initiatives such as FAME-III, Production Incentive Scheme (PLI) and India's 2070 carbon neutrality target, CSR has evolved from a mere charity to a driver of competitive advantage. This study examines the CSR practices of Tata Motors (EV division), Mahindra Electric, Ather Energy, Ola Electric and Hero Electric between 2016 and 2025. The total CSR expenditure of these companies has increased from Rs 28.4 crore in FY 2020/21 to Rs 198.7 crore in FY 2024/25. Corporate social responsibility initiatives – particularly EV charging infrastructure, battery recycling, environmental education and air quality improvements – showed a strong positive correlation with financial performance (EPS: $r = 0.71$, $p < 0.01$; ROE: $r = 0.68$, $p < 0.05$). The results suggest that CSR not only contributes to environmental goals and policy alignment, but also enhances financial sustainability. India aims to produce 10 million electric vehicles per year by 2030, and CSR positions EV manufacturers as sustainability accelerators rather than mere transportation providers.

Keywords: Corporate Social Responsibility, Electric Vehicles, India, Sustainability, Circular Economy, ESG, Automotive Industry

1. Introduction

India is at a critical juncture for the electric vehicle (EV) industry, reflecting the country's dual drive towards industrial innovation and environmental protection. In Q3 2025, total EV sales are expected to cross 4.2 million units, indicating a 30% compound annual growth rate (CAGR) in the electric two-wheeler segment (NITI Aayog, 2025). The government's commitment – through initiatives such as the FAME-III policy and the Rs 1.5 lakh crore Production Linked Incentive (PLI) scheme – has created an enabling environment for EV adoption and green industrialisation.

Unlike conventional internal combustion engine (ICE) car manufacturers, Indian EV companies are "born green" and "born responsible" and have built sustainability into their business models from the start. As such, CSR has become an integral part of their corporate DNA, addressing issues such as battery waste, charging infrastructure equity, gig worker welfare, and grid decarbonization.

This study examines how corporate social responsibility (CSR) practices impact sustainability outcomes and financial performance among key electric vehicle manufacturers. It also examines how CSR enhances stakeholder trust, policy impact, and ecosystem collaboration in a rapidly growing, high-risk, and rapidly evolving industry.

2. Review of Literature

Corporate social responsibility (CSR) has become a defining element in the Indian electric

vehicle (EV) sector, reflecting the strategic alignment between business performance, sustainability and social well-being. Recent evidence from the literature and industry suggests that EV companies are adopting CSR not as an additional philanthropic activity but as an operational and innovation-driven tool for sustainable mobility transformation.

Tata Motors' electric vehicle division is demonstrating how CSR can help drive environmental awareness through initiatives to use recycled lithium-ion batteries for stationary energy storage systems. The program is expected to reduce life-cycle greenhouse gas emissions by approximately 22% (Tata Motors, 2024), which is in line with global studies highlighting the economic and environmental benefits of using recycled lithium-ion batteries (Dong et al., 2023; Font, 2023). Such initiatives incorporate the principles of the circular economy and extend the life of electric vehicle components while reducing the generation of hazardous waste. Ather Energy's community initiative reflects the growing trend of stakeholder-focused CSR, where consumers are actively involved in the co-creation and design of sustainable infrastructure. The company's exceptionally high Net Promoter Score (NPS) of 94% (Ather Energy, 2024) demonstrates how corporate social responsibility (CSR) builds customer loyalty and trust. Similar findings from CSR research suggest that stakeholder engagement increases a company's credibility and accelerates the adoption of green technologies (Freeman, 1984; Kim & Thapa, 2022).

Mahindra Electric's Hariyali 2.0 program demonstrates the ecological dimension of CSR through large-scale afforestation and verified carbon offsets. Planting over 25 million trees, which offset 1.8 million tons of CO_2 emissions under the Clean Development Mechanism (CDM) (Mahindra & Mahindra, 2024), demonstrates measurable environmental returns. Previous research on environmental corporate social responsibility (CSR) confirms that such long-term afforestation initiatives contribute significantly to climate change resilience and social development (Gupta & Chatterjee, 2021).

In contrast, Ola Electric's Future factory CSR model integrates gender equality considerations into industrial design, employs a 100% female workforce, and achieves a 98% retention rate (Ola Electric, 2025). This is consistent with studies linking gender equality considerations to improved organizational performance and social equity through CSR in manufacturing sectors (Jain & Singh, 2023; Singh & Dutta, 2022). Overall, the literature reviewed suggests that CSR in the Indian electric vehicle industry operates in three synergistic areas: technological sustainability (recycling and reuse of batteries), stakeholder engagement (community participation), and social inclusion (gender and livelihood programs). Taken together, these CSR models not only enhance the competitiveness of the company but also advance India's broader goals of transitioning to a circular economy and equitable growth.

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3. Methodology

Using a descriptive and correlational research design, this study examines the relationship between corporate social responsibility (CSR) practices and company performance in the Indian electric vehicle (EV) industry. Using secondary data from the financial year 2020-2025, the study analyzes how CSR investments and initiatives impact sustainability and financial performance among leading electric vehicle manufacturers.

3.1 Sample

The research focuses on five major EV-focused or EV-diversified firms representing both legacy automakers and emerging players: Tata Motors (EV Division), Mahindra Electric, Ather Energy, Ola Electric and Hero Electric.

3.2 Data Sources

The study relies on secondary data collected from credible and publicly available documents, including: Official CSR and sustainability reports of the selected firms (FY 2020–25), Ministry of Corporate Affairs (MCA) CSR filings under Section 135 of the Companies Act, 2013, Corporate ESG disclosures and sustainability indices such as the BSE100 ESG Index. Key variables include CSR expenditure (actual vs. mandated 2%), initiative themes (e.g., charging infrastructure, battery recycling, green skilling, and air quality), and financial metrics (EPS, ROE, ROA, and NPM). This design enables both descriptive insights into CSR trends and correlational analysis linking CSR intensity with financial performance among India's leading EV firms.

3.3 Variables and Analytical Approach

Variable	Description
CSR Spend	Actual vs. mandated 2% expenditure
Themes	Infrastructure, Recycling, Skilling, Air Quality
Financial Indicators	EPS, NPM, ROE, ROA
Methods	Paired t-tests, ANOVA, Pearson correlations, and fixed-effects panel regression

4. Findings

4.1 CSR Spending Trends

CSR expenditure among India's leading EV companies demonstrated substantial growth between FY 2020–21 and FY 2024–25, reflecting a deepening commitment to sustainable and socially responsible business practices. Total CSR investments across the five firms increased from ₹28.4 crores in FY 2020–21 to ₹198.7 crores in FY 2024–25, representing an overall growth of more than 600% within five years.

Company	FY 2020–21 (₹ Cr)	FY 2023–24 (₹ Cr)	FY 2024–25 (₹ Cr)	Excess (% over 2% mandate)
Tata Motors (EV)	12.5	18.2	26.3	+22%

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Company	FY 2020–21 (₹ Cr)	FY 2023–24 (₹ Cr)	FY 2024–25 (₹ Cr)	Excess (% over 2% mandate)
Mahindra Electric	8.1	42.5	62.0	+28%
Ather Energy	3.2	12.8	38.5	+15%
Ola Electric	4.6	28.3	52.9	+18%
Hero Electric	—	8.1	19.0	+10%

Source: CSR and sustainability reports, FY 2020–25; MCA filings.

Statistical testing through a one-sample t-test ($t = 5.82$, $p < .001$) confirms that, on average, all five firms significantly exceeded the mandatory 2% CSR spending threshold stipulated under Section 135 of the Companies Act, 2013. This demonstrates a voluntary and strategic orientation toward CSR rather than mere compliance. The average excess spending stood at 18.3% in FY 2024–25. Among the firms, Mahindra Electric showed the highest CSR expenditure growth, while Ather Energy recorded the most rapid proportional increase. Notably, Ola Electric was the only firm that reported unspent CSR funds during the study period, transferring ₹8.2 crores to the PM CARES Fund in 2024 as per regulatory requirements. Overall, the data reflect a shift in corporate behavior, where EV manufacturers increasingly view CSR as an investment in sustainability ecosystems—charging networks, battery recycling, and community engagement—rather than as a cost or compliance burden.

4.2 CSR Thematic Priorities

Thematic analysis of CSR initiatives reveals a focused and strategic distribution of funds across four key domains closely aligned with the EV value chain and India's sustainability priorities.

Theme	% of Total CSR Spend (2024–25)	Flagship Examples
Charging Infrastructure	32%	Ather Grid (1,500+ public chargers), Tata Power collaboration for community charging hubs
Battery Recycling & Second Life	28%	Mahindra–TerraCycle partnership (98% recovery), Tata's second-life ESS pilot
Green Skilling & Gig Welfare	22%	Ola's 50,000 driver EV upskilling program, Ather's women technician initiative
Urban Air Quality	18%	Hero's "Clean Air" tree plantation campaign, Mahindra's Hariyali 2.0 program

An ANOVA test ($F = 14.2$, $p < .01$) confirmed statistically significant differences among companies' CSR focus areas, suggesting differentiated strategic approaches. For instance, Mahindra Electric emphasizes large-scale environmental regeneration and carbon offsetting, while Ather Energy and Ola Electric invest heavily in human capital development and digital community engagement. Tata Motors, with its strong partnership with Tata Power, leads in infrastructural CSR projects related to EV charging ecosystems.

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This diversity in CSR focus reflects each firm's unique operational model and sustainability philosophy. While legacy automakers such as Tata and Mahindra emphasize environmental restoration and infrastructure, EV startups like Ather and Ola highlight inclusion, innovation, and skill development—illustrating how CSR serves as both a social and competitive differentiator in the EV market.

4.3 CSR–Financial Performance Linkages

Correlation and regression analyses indicate a strong positive relationship between CSR spending and firms' financial performance indicators. The findings suggest that increased CSR intensity is not only consistent with improved sustainability outcomes but also contributes to measurable financial benefits.

Metric	Correlation (r)	p-value
Earnings Per Share (EPS)	0.71	< .01
Return on Equity (ROE)	0.68	< .05
Net Profit Margin (NPM)	0.65	< .05
Return on Assets (ROA)	0.62	< .05

Regression analysis (fixed effects model) revealed that CSR spending accounts for approximately 68% of the variance ($R^2 = .68$) in financial performance among the sampled firms. This demonstrates that CSR investments are closely linked with both profitability and shareholder returns. For instance, Mahindra Electric's ROE increased from 8.1% in FY 2021 to 18.4% in FY 2025, coinciding with a significant escalation in CSR expenditure toward environmental and community initiatives.

The results align with global CSR-performance theories (Carroll, 2021; Porter & Kramer, 2011), which argue that strategic CSR contributes to competitive advantage by enhancing brand reputation, stakeholder trust, and operational efficiency. In the Indian EV context, CSR thus functions as both a financial catalyst and a sustainability accelerator, reinforcing the sector's alignment with the national net-zero 2070 agenda.

4.4 Discussion

The findings of this study underscore the evolving nature of Corporate Social Responsibility (CSR) in India's electric vehicle (EV) sector, demonstrating that CSR has moved beyond compliance toward becoming a strategic lever for financial and social value creation. The substantial 600% rise in CSR spending between FY 2020–21 and FY 2024–25 reflects not only growing profitability but also a broader institutional recognition that sustainability investments directly enhance brand equity, stakeholder trust, and long-term competitiveness.

Drawing on Freeman's (1984) Stakeholder Theory, the results indicate that EV firms are increasingly aligning CSR with the interests of multiple stakeholder groups—ranging from consumers and employees to regulators and local communities. Ather Energy's Ather Community and Ola Electric's Future factory exemplify this stakeholder-centric approach, where CSR initiatives are designed to foster participatory engagement and inclusivity. Such practices extend the concept of CSR from corporate philanthropy to shared value creation, as

articulated by Porter and Kramer (2011), wherein business and societal benefits reinforce each other.

Similarly, the findings resonate with Elkington's (1997) Triple Bottom Line (TBL) framework, which emphasizes the interdependence of people, planet, and profit. Tata Motors and Mahindra Electric's environmental CSR initiatives—such as battery second-life applications and large-scale afforestation—demonstrate how CSR can simultaneously yield environmental benefits ("planet") and economic returns ("profit") while supporting community development ("people"). This integrated approach reflects a maturing CSR ethos where environmental stewardship and social inclusion are embedded within core business strategies rather than treated as peripheral activities.

The statistically significant correlations between CSR expenditure and financial performance (EPS: $r = 0.71$; ROE: $r = 0.68$; $p < .05$) further validate the business case for sustainability. These results align with Carroll's (2021) view that CSR, when strategically aligned with corporate purpose, enhances not only social legitimacy but also market performance. Mahindra Electric's marked improvement in ROE and Tata Motors' consistent CSR investment growth exemplify how firms that internalize CSR principles tend to exhibit greater financial resilience and investor confidence.

Moreover, the thematic analysis indicates that CSR priorities among EV firms mirror the sector's structural needs—charging infrastructure, battery recycling, skilling, and air quality—all of which are critical to India's transition toward a low-carbon, circular economy. By channeling CSR resources into these domains, EV companies are contributing to systemic sustainability outcomes, reinforcing national objectives such as the FAME-III mission, PLI-Auto schemes, and India's Net Zero 2070 commitments.

In essence, the discussion highlights a paradigm shift in CSR within the EV industry—from reactive compliance to proactive ecosystem-building. CSR has evolved into a platform for innovation, inclusion, and circularity, positioning India's EV companies as both economic and environmental change agents. This integrated model of CSR not only supports corporate growth but also accelerates India's sustainable mobility transition.

5. Conclusion and Recommendations

5.1 Conclusion

This study demonstrates that Corporate Social Responsibility (CSR) has emerged as a strategic driver of competitiveness, innovation, and sustainability within India's electric vehicle (EV) industry. By analyzing five leading firms—Tata Motors (EV Division), Mahindra Electric, Ather Energy, Ola Electric, and Hero Electric—across the period FY 2020–25, the research reveals a substantial increase in CSR investment, from ₹28.4 crores in FY 2020–21 to ₹198.7 crores in FY 2024–25, representing a growth rate exceeding 600%. This escalation reflects the sector's rapid evolution from compliance-based CSR to purpose-led sustainability integration.

Empirical evidence from correlation and regression analyses affirms a significant positive relationship between CSR expenditure and financial performance metrics (EPS: $r = 0.71$; ROE: $r = 0.68$; NPM: $r = 0.65$; all $p < .05$). These results validate the hypothesis that socially responsible firms tend to outperform their peers financially, reinforcing the business case for

CSR. Mahindra Electric's improved ROE (from 8.1% to 18.4%) and Ather Energy's enhanced brand value exemplify how CSR can enhance both profitability and corporate reputation.

The findings also highlight that CSR in the EV sector is strategically aligned with sustainability imperatives—notably in charging infrastructure, battery recycling, green skilling, and air quality management. Collectively, these themes address core ecosystem challenges, supporting national objectives such as the FAME-III policy, PLI-Auto scheme, and India's Net Zero 2070 target. Through these efforts, EV companies are redefining their identity—not merely as mobility providers, but as sustainability accelerators contributing to a circular economy and equitable green transition.

This transformation reflects theoretical linkages to Stakeholder Theory (Freeman, 1984) and the Triple Bottom Line (Elkington, 1997), emphasizing the integration of economic, social, and environmental dimensions of performance. CSR has thus become a strategic governance mechanism, fostering stakeholder trust, enhancing social legitimacy, and enabling firms to co-create value with the communities and ecosystems they serve.

5.2 Recommendations

Based on the study's findings and current industry trends, the following key recommendations are proposed:

1. **Adopt Advanced Evaluation Frameworks:** Implement standardized CSR assessment tools such as SROI and GHG Protocols to measure real environmental and social impact effectively.
2. **Align with National Sustainability Missions:** Integrate CSR initiatives with government programs like NEMMP and FAME-III to enhance coherence between corporate and national sustainability goals.
3. **Strengthen Circular Economy Practices:** Prioritize CSR activities in battery recycling, second-life energy storage, and material recovery through collaboration with startups and research institutions.
4. **Promote Inclusion and Skill Development:** Expand CSR efforts targeting women, gig workers, and rural communities via training and employment initiatives, following models like Ola's Future factory.
5. **Ensure Transparency through Digital Reporting:** Utilize AI and blockchain-based CSR dashboards to improve accountability, data accuracy, and stakeholder trust.
6. **Encourage Incentives for CSR Excellence:** Policymakers should reward firms exceeding CSR mandates through tax benefits or sustainability ratings to foster long-term, high-impact initiatives.

5.3 Future Research Directions

Future studies should extend this analysis by incorporating longitudinal data and cross-sector comparisons (e.g., between EV, renewable energy, and traditional auto industries). Further exploration of AI-enabled CSR analytics and behavioral aspects of stakeholder engagement could deepen understanding of how technology mediates sustainability outcomes in the evolving EV landscape.

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