

Manuscript ID:
IJEBAMPSR-2026-030304

Volume: 3

Issue: 3

Month: June

Year: 2026

E-ISSN: 3065-9140

Submitted: 06 May 2026

Revised: 11 May 2026

Accepted: 09 June 2026

Published: 30 June 2026

Address for correspondence:

Nilesh Anil Shinde
Research Student (Ph.D.),
Karmaveer Bhaurao Patil
University, Satara
Email:
nileshshinde3101@gmail.com

DOI: 10.5281/zenodo.22988814

DOI Link:
<https://doi.org/10.5281/zenodo.22988814>



Creative Commons (CC BY-NC-SA 4.0):

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-Share Alike 4.0 International Public License, which allows others to remix, tweak, and build upon the work noncommercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

How to Cite this Article:

Shinde, N. A. (2026). Corporate Social Responsibility Practices and Their Impact on Socio-Economic and Environmental Development in India: A National-Level Empirical Study. *International Journal of Economics, Business, Accounting, Agriculture and Management Towards Paradigm Shift in Research (IJEBAMPSR)*, 3(3), 23–29. <https://doi.org/10.5281/zenodo.22988814>

Corporate Social Responsibility Practices and Their Impact on Socio-Economic and Environmental Development in India: A National-Level Empirical Study

Nilesh Anil Shinde

Research Student (Ph.D.), Karmaveer Bhaurao Patil University, Satara

Abstract

Corporate Social Responsibility (CSR) has moved from a predominantly philanthropic practice to a regulated component of corporate activity in India. This study examines the relationship between CSR intensity and socio-economic and environmental development using a national-level state-year framework. The study is based on secondary data and focuses primarily on the post-regulation period, with the methodological description identifying annual observations from 2014 to 2019 and the concluding analysis referring to data extending to 2020. The empirical framework considers education, health and income inequality as socio-economic outcomes and material consumption, industrial effluents, residential effluents, air pollution and biodiversity as environmental outcomes. The reported descriptive evidence shows an average CSR intensity of 0.90, approximately equivalent to 9% of net profits, with state-level intensity ranging from 0.60 to 1.28. Education accounts for nearly half of aggregate CSR disbursements, while education and health receive the largest CSR allocations. The paper applies ordinary least squares (OLS) with state-clustered standard errors and considers fixed-effects and instrumental-variable specifications as robustness approaches. The evidence reported in the source indicates a positive association between CSR intensity and socio-economic development, alongside negative associations with selected environmental indicators. Because the available source does not report complete coefficient tables, standard errors, p-values or sample-size details, the rewritten paper does not invent inferential statistics. Instead, it presents all source-supported numerical evidence transparently and identifies areas requiring further statistical estimation.

Keywords: Corporate Social Responsibility, CSR Intensity, Socio-Economic Development, Environmental Sustainability, Education, Health, Income Inequality, India, OLS, Sustainable Development

Introduction

Corporate Social Responsibility has become an important dimension of contemporary business strategy and sustainable development. In India, CSR has progressively expanded from voluntary philanthropy toward structured corporate responsibility covering education, healthcare, rural development, women's empowerment, sanitation, infrastructure and environmental protection. The evolution of CSR has been shaped by public policy, stakeholder expectations and the recognition that economic activity affects social welfare and environmental quality. The Indian policy environment is distinctive because the Companies Act framework introduced mandatory CSR expenditure for qualifying companies. This regulatory development created an opportunity to examine whether corporate expenditure is associated with measurable development outcomes at the national and sub-national levels. The central question is not merely how much firms spend, but whether the distribution and intensity of CSR expenditure correspond with improvements in social welfare and environmental conditions. Existing research has extensively discussed CSR motivations, corporate governance and firm-level practices, but national-level empirical evidence connecting CSR with broad development outcomes remains comparatively limited. A state-year framework is therefore useful because social and environmental outcomes are geographically distributed and are influenced by state-level institutions, infrastructure and economic conditions. This rewritten study organizes the available evidence into a clearer empirical structure and adds statistical presentation using only numerical information supported by the source document. The objective is to improve analytical clarity without fabricating regression coefficients or significance levels that are not contained in the original material.

1. Problem Statement

Despite the expansion of mandatory CSR in India, uncertainty remains regarding the extent to which CSR expenditure contributes to socio-economic development and environmental sustainability. The problem is particularly important at the national level because CSR investments are unevenly distributed across sectors and states. A systematic statistical assessment is therefore required to understand the relationship between CSR intensity and development outcomes.

2. Research Objectives

1. To examine the intensity and distribution of CSR expenditure across Indian states and sectors.
2. To assess the relationship between CSR intensity and socio-economic outcomes, particularly education, health and income inequality.
3. To examine the relationship between CSR expenditure and environmental outcomes, including resource use, effluents, air pollution and biodiversity.
4. To present descriptive and econometric evidence on the national-level CSR-development relationship.
5. To identify implications for corporations, government, regulators, civil society and investors.

3. Research Questions

1. How does CSR intensity vary across Indian states and sectors?
2. Which socio-economic areas receive the greatest CSR attention?
3. Is higher CSR intensity associated with improved socio-economic development?
4. How is CSR associated with selected environmental indicators?
5. What policy and managerial measures can improve the developmental effectiveness of CSR?

4. Significance of the Study

The study contributes by connecting corporate responsibility with measurable development indicators rather than treating CSR solely as a corporate governance or reputational activity. Its national-level perspective is relevant to policy makers seeking to align CSR with development priorities and to companies seeking stronger outcome measurement.

Literature Review

1. Evolution of CSR in India

The source literature traces Indian CSR policy discussions to the 1969 'Philosophy of Corporate Social Responsibility' document, which identified education, health, drinking water, employment and agriculture as areas of broad national interest. Public-sector organizations subsequently developed projects in education, healthcare, rural development, sanitation and infrastructure. Automobile, cement and mining industries are described as early sectors in which CSR practices became more visible. The policy environment developed further through the National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business and the Companies Act framework. The Companies (Corporate Social Responsibility Policy) Rules provided greater structure to CSR expenditure and reporting. Subsequent amendments strengthened monitoring and implementation.

2. CSR and Sustainable Development

CSR can contribute to sustainable development through several channels. Social investments may improve human capital by supporting education and health. Community development may improve access to services and economic opportunities. Environmental CSR may support resource efficiency, pollution control, ecological restoration and biodiversity conservation. However, CSR expenditure can also be insufficient, fragmented or poorly aligned with local needs. Consequently, expenditure volume alone cannot establish developmental effectiveness.

3. Empirical Gap

The literature identified in the source indicates a gap in national-level quantitative evidence, particularly concerning the joint relationship between CSR, socio-economic outcomes and environmental outcomes. This study addresses that gap through a state-year empirical framework.

Conceptual Framework

The conceptual framework assumes that CSR intensity influences development through sectoral allocation and implementation. CSR expenditure is treated as the principal explanatory construct. Socio-economic development is represented through education, health and income inequality, while environmental performance is represented through material consumption, industrial effluents, residential effluents, air pollution and biodiversity.

Construct	Indicators	Expected analytical role
CSR intensity	CSR intensity / CSR index	Main explanatory variable
Education	Overall literacy rate	Socio-economic outcome
Health	Population covered by any health scheme	Socio-economic outcome
Income inequality	Gini coefficient of monthly per capita expenditure	Socio-economic outcome
Resource use	Material consumption	Environmental outcome
Pollution	Industrial effluents; residential effluents; air pollution	Environmental outcomes
Biodiversity	Biological diversity / species richness	Environmental outcome
Economic context	GDP per capita	Control / socio-demographic variable

Methodology

1. Research Design

The study follows a national-level cross-sectional/state-year empirical design. The methodological section of the source identifies annual observations from 2014 to 2019, while the conclusion refers to analysis for 2014–2020. This discrepancy is retained transparently rather than silently reconciled. Future replication should define the final observation window consistently before estimation.

2. Unit of Analysis and Sampling

The unit of analysis is the Indian state. Publicly listed firms constitute the primary sampling frame, supplemented by eligible unlisted entities subject to mandatory CSR provisions. State-level aggregation is appropriate because education, health, income distribution, pollution and biodiversity outcomes are geographically defined.

3. Data Sources

The source identifies Government of India/MCA data, World Bank data and published research sources as the principal information base. CSR expenditure is derived from corporate disclosures and Ministry of Corporate Affairs information. Socio-economic and environmental indicators are assembled at state-year level.

4. Variables and Measurement

CSR intensity is constructed to capture the distribution of CSR expenditures across priority activities, combining information on the number of activities and amounts spent. GDP per capita is incorporated as a socio-demographic/economic control. Education is represented by the literacy rate for the population aged seven and above,

health by the share of population covered under a health scheme, and income inequality by the Gini coefficient of monthly per capita expenditure.

5. Statistical Model

The principal econometric specification is an ordinary least squares model of the form:

$$\text{Development}_{it} = \beta_0 + \beta_1 \text{CSRIntensity}_{it} + \beta_2 \text{GDPpc}_{it} + \varepsilon_{it}$$

where i denotes the state and t denotes the year. Standard errors are specified to be clustered at the state level. Alternative fixed-effects and instrumental-variable specifications are proposed to address unobserved heterogeneity and potential endogeneity. Intermediate outcomes are used to examine possible channels through which CSR may be related to development.

6. Statistical Integrity

The available source provides selected descriptive statistics and qualitative statements about estimated relationships but does not provide a complete regression-output table. Accordingly, this rewritten paper reports only source-supported numerical values. No p -values, t -statistics, regression coefficients, confidence intervals or sample-size figures have been created without source evidence.

Statistical Analysis and Results

1. Descriptive Statistics of CSR Intensity

The source reports an average CSR intensity of 0.90, described as approximately 9% of net profits. State-level CSR intensity ranges from 0.60 to 1.28. The resulting observed range is 0.68 intensity points. This demonstrates meaningful geographic variation in CSR intensity.

Statistic	Reported value	Interpretation
Mean CSR intensity	0.90	Average intensity reported for the study period
Approximate equivalent	9% of net profits	Source description of average intensity
Minimum state intensity	0.60	Lowest reported state average
Maximum state intensity	1.28	Highest reported state average
Observed range	0.68	1.28 – 0.60
Education share of aggregate CSR	Nearly 50%	Dominant sectoral allocation

Note: The table reproduces and organizes numerical information explicitly reported in the source. The range of 0.68 is calculated directly from the reported minimum and maximum.

2. Sectoral Distribution of CSR

CSR expenditure is uneven across sectors. Education is identified as the dominant recipient

and contributes nearly half of aggregate disbursements. Education and health also show higher CSR intensity relative to several other sectors. Construction and transport are reported to have comparatively lower CSR intensity.

Sector / area	Reported pattern
Education	High CSR intensity; nearly half of aggregate disbursement
Health	High CSR intensity
Financial intermediation	Relatively high CSR intensity
Professional services	Relatively high CSR intensity
Construction	Lower CSR intensity
Transport	Lower CSR intensity

3. Regional Variation

The source reports substantial geographical variation. Northern and north-eastern states generally exhibit high CSR levels, southern states show intermediate levels, the western region shows

a declining gradient, and eastern states record the lowest state averages. These patterns indicate that national averages can conceal important regional differences.

Region	Reported CSR pattern
Northern India	Generally high
North-Eastern India	Generally high
Southern India	Intermediate
Western India	Declining gradient
Eastern India	Lowest state averages

4. Socio-Economic Outcomes

The socio-economic analysis covers education, health and income inequality. The study uses literacy as an education indicator, health-scheme coverage as the health indicator and the

Gini coefficient as the inequality indicator. The source reports a positive association between CSR intensity and socio-economic development after controlling for potential confounding factors.

Outcome	Measure used	Source-supported finding
Education	Overall literacy rate	CSR positively associated with socio-economic development
Health	Population covered by a health scheme	Included in socio-economic assessment
Income inequality	Gini coefficient of monthly per capita expenditure	Included as a socio-economic outcome

5. Environmental Outcomes

Environmental analysis considers material consumption, industrial effluents, residential effluents, air pollution and biodiversity. The conclusion reports that CSR intensity is negatively correlated with certain environmental indicators.

This finding suggests that the environmental consequences of CSR require more careful interpretation and that increased CSR spending does not automatically guarantee improved environmental performance.

Environmental indicator	Measurement concept	Reported implication
Material consumption	Estimated using CGE/Input-Output framework	Included in environmental assessment
Industrial effluents	Waste-water discharged by industry	Environmental outcome
Residential effluents	Waste-water from domestic sector	Environmental outcome
Air pollution	Particulate emissions from industry, households and services	Environmental outcome
Biodiversity	Biological species richness	Environmental outcome

6. Statistical Interpretation

The descriptive evidence establishes three important patterns. First, CSR intensity varies

substantially between states, with a reported minimum of 0.60 and maximum of 1.28. Second, CSR allocation is concentrated in education and health, with education alone accounting for nearly

half of aggregate disbursements. Third, the reported econometric interpretation indicates a positive relationship between CSR intensity and socio-economic development but negative relationships with selected environmental indicators. These findings should be interpreted as associations rather than definitive causal effects. The source itself notes that the cross-sectional nature of the design limits identification of causal channels. Therefore, the appropriate conclusion is that CSR intensity is statistically and substantively related to selected development outcomes within the study framework, while causal magnitude remains to be established through stronger designs.

Discussion

The results reinforce the view that CSR can operate as a complementary development mechanism. The concentration of CSR expenditure in education and health is consistent with the importance of human capital and basic services in socio-economic development. At the same time, regional differences imply that corporate investment does not occur uniformly across India. The environmental findings require particular attention. A negative relationship with selected environmental indicators may reflect the scale and composition of economic activity, differences in industrial structure, or the possibility that CSR expenditure is not sufficiently targeted toward pollution prevention and ecological restoration. It would therefore be inappropriate to evaluate environmental CSR solely by total spending. The evidence also supports the importance of outcome-based CSR evaluation. Companies and regulators should track measurable outputs and outcomes, distinguish short-term project completion from long-term development impact, and align projects with local environmental and socio-economic priorities.

Policy and Managerial Implications

1. Implications for Corporate Stakeholders
 1. Prioritize CSR projects using state-level needs assessments rather than uniform national allocation.
 2. Increase outcome measurement in education, health and environmental programmes.
 3. Develop multi-year CSR programmes where social outcomes require sustained intervention.
 4. Strengthen environmental CSR through pollution prevention, resource efficiency, restoration and biodiversity protection.
 5. Publish transparent expenditure and outcome indicators that allow year-to-year evaluation.
2. Implications for Government and Regulators
 1. Strengthen standardization of CSR reporting across firms.

2. Encourage geographic and sectoral coordination between CSR projects and public development programmes.
3. Develop common outcome indicators for education, health and environmental interventions.
4. Improve the accessibility and consistency of state-level CSR and development datasets.
5. Encourage independent impact assessment for large or multi-year CSR projects.

3. Implications for Civil Society and Investors

Civil society organizations can improve project-level monitoring and beneficiary feedback, while investors can incorporate CSR effectiveness into broader assessments of corporate sustainability and governance.

Robustness, Validity and Limitations

The methodology proposes clustered standard errors, fixed-effects specifications and instrumental-variable approaches as robustness strategies. However, the source does not provide the full output of these models. Consequently, this paper does not claim specific statistical significance for individual coefficients. The study has several limitations. First, publicly available data may understate total CSR expenditure because non-mandated expenditures are not comprehensively captured. Second, measurement error may exist in CSR intensity and outcome indicators. Third, several potentially important outcomes, including safe drinking water, child malnutrition and forest cover, could not be incorporated because of data limitations. Fourth, the cross-sectional/state-year framework limits causal interpretation. A further limitation is the inconsistent period description in the source: the methodology specifies 2014–2019 annual observations, whereas the conclusion refers to 2014–2020. A future version should reconcile the observation window and report the exact number of state-year observations.

Future Research Directions

1. Construct a longer state-year panel covering the full post-Companies Act period.
2. Estimate fixed-effects models with transparent coefficient tables, confidence intervals and model diagnostics.
3. Use propensity-score, difference-in-differences or other causal designs where appropriate.
4. Examine CSR spending per beneficiary and per unit of development outcome rather than aggregate spending alone.
5. Disaggregate CSR by education, health, rural development, women's empowerment and environmental categories.
6. Compare mandatory CSR with voluntary CSR and examine differences in effectiveness.

7. Integrate outcomes such as water access, nutrition, forest cover, employment and household welfare.

Conclusion

CSR has become an integral component of corporate activity in India, particularly following the introduction of mandatory CSR provisions for qualifying companies. This study provides a national-level empirical framework for examining the relationship between CSR intensity and socio-economic and environmental development. The source-supported statistics show an average CSR intensity of 0.90, approximately described as 9% of net profits, with state-level values ranging from 0.60 to 1.28. Education is the dominant recipient of CSR expenditure and accounts for nearly half of aggregate disbursements, while education and health receive comparatively strong attention. The reported empirical interpretation indicates a positive association between CSR intensity and socio-economic development, while certain environmental indicators show negative associations. The principal implication is that CSR effectiveness should be judged not only by expenditure but by measurable developmental outcomes. India's CSR framework can generate greater social value if corporations, government agencies, civil society and investors strengthen geographic targeting, outcome measurement, transparency and environmental integration. Because the available source does not provide complete regression statistics, the findings should be treated as evidence of association rather than definitive causal impact.

Acknowledgement

The author also acknowledges the Government of India, Ministry of Corporate Affairs, World Bank,

and other published research sources for providing valuable data and information used in the study.

Financial support and sponsorship

Nil.

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

References

1. Singh, A., & Verma, P. (2014). From Philanthropy to Mandatory CSR: A Journey towards Mandatory Corporate Social Responsibility in India.
2. Rath, J. (2010). Corporate Social Responsibility Orientation: Exploring the Williamson Framework and Government Policy Drivers.
3. Sharma, E., & Sathish, M. (2022). "CSR leads to economic growth or not": An evidence-based study to link corporate social responsibility (CSR) activities of the Indian banking sector with economic growth of India.
4. Kaur, P., Talwar, S., Madanaguli, A., Srivastava, S., & Dhir, A. (2022). Corporate social responsibility (CSR) and hospitality sector: Charting new frontiers for restaurant businesses.
5. Government of India. (2014). Companies (Corporate Social Responsibility Policy) Rules.
6. Government of India / Ministry of Corporate Affairs. CSR reporting and expenditure information.
7. World Bank. (2021). Development indicators and socio-economic data referenced in the study.

Appendix A: Statistical Data Summary

Measure	Value / description
Study framework	National-level, state-year
Methodological period	2014–2019 (source methodology)
Conclusion period	2014–2020 (source conclusion)
Mean CSR intensity	0.90
Approximate profit equivalent	9%
Minimum state CSR intensity	0.60
Maximum state CSR intensity	1.28
Calculated range	0.68
Dominant CSR sector	Education
Education share	Nearly 50% of aggregate disbursements
Higher-intensity sectors	Education, health, financial intermediation, professional services
Lower-intensity sectors	Construction, transport
Socio-economic outcomes	Education, health, income inequality
Environmental outcomes	Material consumption, industrial effluents, residential effluents, air pollution, biodiversity
Main reported relationship	Positive with socio-economic development; negative with certain environmental indicators

Appendix B: Note on Statistical Reporting

This rewritten version deliberately distinguishes reported statistics from derived arithmetic. The only derived statistic added is the CSR-intensity range ($1.28 - 0.60 = 0.68$). No artificial observations, regression coefficients, p-values, standard errors, correlations or significance claims have been introduced. For journal submission, the authors should insert the original regression output or raw state-year dataset so that a complete statistical analysis can be reproduced.