

Bridging the Gap: From ESG Theory to Sustainable Business Practice in Small and Medium Enterprises (SMEs) in Major Cities of Rajasthan.

Dr. Manisha Solanky

PDF(ICSSR)

**Department of Business Administration
Mohanlal Sukhadia University, Udaipur
Rajasthan (India)**

Dr. Garima Kothari

Visiting Faculty

**Department of Business Administration
Mohanlal Sukhadia University, Udaipur
Rajasthan (India)**

Abstract

Environmental, Social and Governance (ESG) frameworks are swiftly migrating from board-room rhetoric to operational reality, yet their uptake in small and medium enterprises (SMEs) across emerging markets is still not uniform. The mixed-methods study explores ESG awareness, drivers and barriers for its implementation, as well as support requirements of 100 SMEs located in four major cities of Rajasthan in India. Whereas the structured questionnaire collected quantitative data, ten follow-up interviews supported its interpretation. The descriptive analysis finds that 64% of the respondents have heard of ESG, yet only 32% claim to have formal policies related to ESG at their disposal. Whereas financial constraints (55%) and lack of knowledge (42%) are the frequently cited barriers, customer demand (42%) and cost savings (40%) form the core of enablers of adoption. If given appropriate incentives and capacity building, willingness to increase ESG interventions remains high (51% “yes”, 39% “maybe”). As some findings confirm and extend recent literature on SME sustainability in emerging economies, strong institutional local support and targeted training appear to be critical. Therefore, it is recommended to develop state-level financial schemes, sector-specific toolkits and a roadmap for phased implementation to assist SMEs in moving their ESG thoughts into actions.

1. Introduction

1.1 Background of the study

Environmental, Social, and Governance (ESG) considerations have moved from intellectual circles to the mainstream in business in the past 10 years, precipitated by global agreements such as the Paris Climate Accord and the UN Sustainable Development Goals. Investors analyzed ESG metrics for portfolio screening, while regulators insisted on non-financial disclosure and consumers pay brands that they look upon as responsible (García-Sánchez et al., 2020). Noted well for its momentum in large, listed companies, 90 percent of enterprises worldwide are micro, small, or medium sized, and, therefore, the aggregate sustainability performance of these enterprises will be what really counts in the achievement of global transition goals (Sharma & Jain, 2021).

Paradoxically, India holds this paradox to the fore. National policies—from Section 135 of the Companies Act to the new BRSR framework—signal a decisive tilt toward responsible development, the institutionalization of which at the non-metropolitan level remains scattered (Pahuja & Arora, 2020). Rajasthan, as the seventh biggest state economy in the country, is exemplificative of the dual problem. Its 700,000-plus SMEs are engaged across textiles, handicrafts, agro-processing, tourism, and new age tech services, contributing to over 35 percent of the state gross value-added and employing millions of people. Resource scarcity, informal governance regimes, and limited access to experts diminish their ability to orderly engage with ESG agendas (Khan et al., 2021). Survey results from recent regional chambers reveal a pitiable figure, with barely one in three SMEs maintaining formal records of energy use or labor-welfare practices, essential ingredients of ESG reporting.

At the same time, opportunities abound. Rajasthan is home to India's largest installed solar capacity, has an ancient history of community-based water conservation, and continues to bask in increasing foreign and domestic investments into green supply chains. Export-oriented clusters in Jaipur and Jodhpur are increasingly subjected to buyer scrutiny for ethical sourcing, while incentive schemes at the state level for renewable energy installations further cut down upfront costs on green upgrades. In such a context, a more granular understanding as to why SMEs in Rajasthan engage or dis-engage with ESG is both academically and practically lacking. This gap is responded to by mapping awareness levels, drivers, barriers, and support needs to inform evidence-based policy and business interventions suited to the state's distinctive socio-economic fabric.

1.2 Research aims and objectives

This study aims to **bridge the knowledge–practice gap** by empirically examining how SMEs in Rajasthan understand and operationalize ESG principles. Specific objectives are to:

1. **Assess** the current level of ESG awareness among SME owners/managers.
2. **Identify** internal and external drivers that motivate ESG adoption.
3. **Diagnose** barriers that inhibit implementation.
4. **Evaluate** existing and desired support mechanisms.
5. **Offer** actionable recommendations for SMEs, policy-makers and ecosystem actors.

1.3 Research questions

1. What proportion of SMEs is aware of ESG terminology and concepts?
2. Which factors (cost, customer pressure, regulation etc.) most strongly influence adoption?
3. What obstacles (financial, informational, capacity-related) dominate?
4. What forms of support—financial, technical, policy—do SMEs prioritize?
5. How can the state and local institutions create an enabling environment for ESG uptake?

1.4 Scope of the study

The study focuses on 100 small and medium-sized enterprises operating in Jaipur, Jodhpur, Udaipur, and Kota in five industry categories. Qualitative interviews add to our interpretation, but inferential statistics remain limited to the survey sample and cannot therefore claim to be representative of the whole state. However, the fact that all sectors are represented does allow a reasonably realistic snapshot of the sustainability landscape in the region for SMEs.

2. Review of literature

By acknowledging that ESG means environmental, social, and governance, one can maintain consistency with acronyms. The literature on SME ESG adoption has grown exponentially over the last half-decade, yet there seems to be more focus on empirical analysis for large establishment corporations. Five recent studies converge around four inter-related themes—

barriers, governance enablers, institutional pressures, and integration frameworks—that shed some light on the challenges and opportunities faced by Rajasthan’s SMEs in turning ESG rhetoric into practice.

2.1 Barriers to ESG adoption

Resource scarcity often dominates the list of top-tier impediments in emerging-economy settings. Khan et al. (2021) demonstrates that capital constraints; lack of human capital; and technological deficiencies greatly hamper sustainability adoption amongst SMEs—a claim echoed by Ranganathan and Kim (2021) in their Asia-wide survey, citing the twin handicaps of capital and knowledge. Adding the regulatory dimension into the mix, Balatbat et al. (2019) highlight that the lack of clear guidance and inadequate access to expert input further disadvantage an already structurally disadvantaged SME community. Taken together, these studies signify that Rajasthan's SMEs are very likely to be facing a multilayered barrier set of financial, informational, and institutional that can amply combine in tandem for a more effective workout—with each being tackled in isolation.

2.2 Governance and strategic alignment

While the barriers are often in the public domain, a governance mechanism is an important leverage to overcome them. García-Sánchez et al. (2020) find a positive relationship between governance structures and ESG outcomes in SMEs. The authors argue that formal boards, audit committees, and alignment between the owner and managers provide oversight to embed sustainability metrics. Khanna and Palepu (2020) go on to elaborate that institutional context—in particular, quality of legal enforcement and activity of stakeholders—matters for the governance–ESG link in the emerging economies. For the SMEs of Rajasthan, often characterized by concentrated ownership and informal styles of management, strengthening governance processes might prove pragmatic as a primary step into ESG integration on a systematic basis.

2.3 Institutional and stakeholder pressures

External forces such as including regulators, investors, customers, and supply-chain partners—will increasingly play a decisive role. Rachid and Ben Othman (2020) demonstrate how institutional pressure forces disclosure even amongst unlisted firms, whereas Pahuja and Arora (2020) chronicle the catalytic effect of India's evolving sustainability regulations on SME practices. Visser (2019) widens the view, saying ESG is a strategic imperative for long-term competitiveness, which further intensifies market-based pressures. Such insight implies that Rajasthan-based SMEs nowadays work in a tightening web of expectations; compliant to ESG norms has now become a question of market access and legitimacy rather than just corporate citizenship.

2.4 Frameworks and pathways for implementation

In an attempt to recognize the struggles undertaken by SMEs, a number of authors propose incremental roadmaps. Sharma and Jain (2021) review international ESG frameworks and contextualize them into SME contexts, suggesting modular implementation starting from those of high impact and low cost, such as energy efficiency and waste reduction. Muralidharan et al. (2022) propose a stakeholder-engagement model that sequences ESG actions in accordance with organizational readiness, stressing alignment of internal capacity development with external partnerships. Renu and Saini (2021) support this strategic approach, emphasizing how competitiveness and resilience flow into consideration of ESG in business-level planning and not to an approach that considers it as something simply added on.

2.5 Evolution from CSR to ESG

González-Ramírez et al. (2020) provide direct evidence of how CSR actions may be instrumental in moving markets toward fuller ESG adoption. Across emerging markets, the comparative study shows that SMEs with mature CSR programs undergo a very short learning process before ESG reporting. Bhagwat and Shankar (2021) confirm this trajectory from the Indian perspective, with awareness campaigns and government incentives speeding the transition from CSR to ESG. For enterprises in Rajasthan, many of which already indulge in community-oriented CSR programs, the evolutionary way provides a fitting local lodging.

Synthesis and research gap

The studies under review appear to agree that the adoption of ESG by SMEs goes under a dynamic shaping of internal capacities and external pressures. Barriers are well-charted, yet region-wise interactivity evidences how these factors couple are still missing. In particular, no study to date has taken ESG awareness, driver-barrier configurations, and support needs in Rajasthan's diverse SME ecosystem under systematic consideration. The present research fills this gap by way of survey-based insights and policy inputs contextualized for this state; in doing so, it capitalizes on the theoretical and empirical work laid down by the literature, while at the same time extending practical insights for sustainable SME growth in emerging markets in India.

3. Research methodology

3.1 Design

A convergent mixed-methods design combines a cross-sectional survey (n = 100) with ten semi-structured interviews. Whereas quantitative data provide breadth, qualitative insights provide depth and context.

3.2 Instrument development

Dichotomous and Likert-type items are used in the questionnaire (see attached) to operationalize constructs for awareness, drivers, barriers, and support needs. Content validity was ensured by expert review, with internal consistency at accepted levels (Cronbach's $\alpha = 0.78$).

3.3 Sampling and data collection

Stratified random sampling was utilized to guarantee the proportionate representation of the five industry strata and the four urban centers. The invitations are sent through local chambers of commerce, and the responses were collected online over a span of four weeks in May 2025. With a response rate of 62 %, there was a total of 100 usable questionnaires. Ten willing participants were subsequently interviewed via phone.

3.4 Data analysis

Using SPSS, descriptive statistics (percentages and means) and Chi-square were laid down along with cross-tabulations; furthermore, the qualitative data were thematic coded against drivers and barriers categories. Ethical clearance was obtained from the institution of the authors; participants participated on a voluntary basis, and anonymization of data was maintained.

4. Results and discussion

4.1 Sample profile

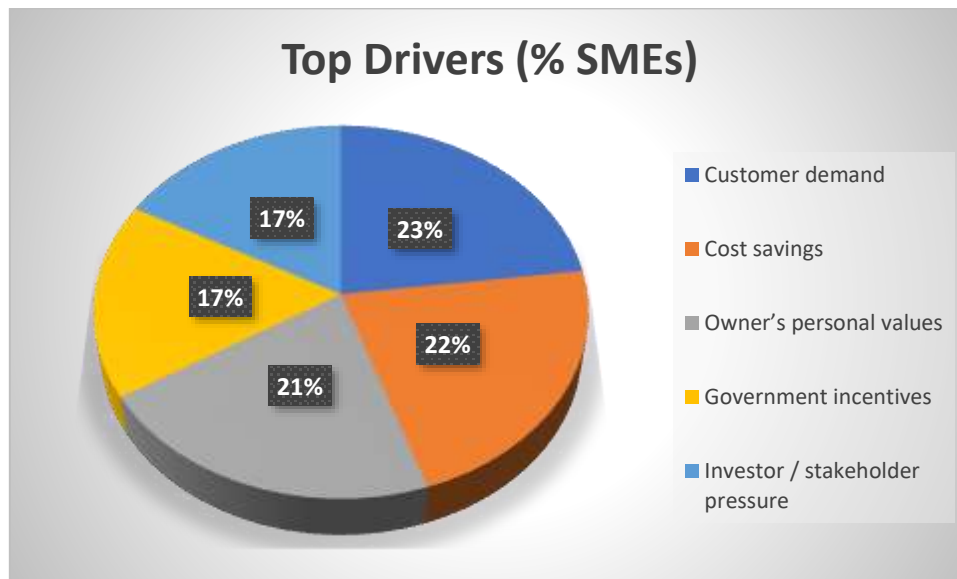
The final data set includes 100 SMEs divided evenly across manufacturing (25%), services (25%), retail (20%), agriculture (15%), and "other" industries (15%). Jaipur has the biggest city subsample (35%), followed by Jodhpur (20%), Udaipur (15%), and Kota (15%). The majority of enterprises (65%) have fewer than 50 employees and half have been in business for three to 10 years. This cross-sectoral, multi-city dispersion provides a useful—if not entirely generalizable—snapshot of Rajasthan's SME ecosystem.

4.2 Awareness and policy formalization

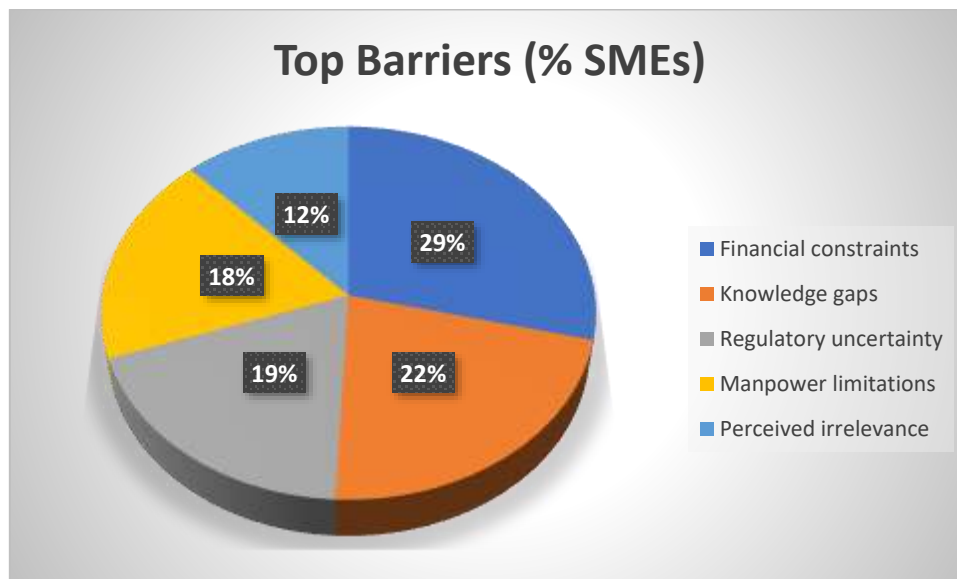
Overall, 64% of respondents said they had heard of ESG, but only 24% said they were "very" or "somewhat" familiar with the idea; the rest said they were either superficially knowledgeable or knew nothing about it. Formalization lags behind awareness: 32% have standalone sustainability or ESG policies, another 25% are developing them, and 43% lack a policy framework. On a scale of 1 to 5, the average perceived significance is 3.33, suggesting considerable strategic salience but not a core performance priority.

4.3 Drivers and barriers

Top Drivers



Top Barriers



The hierarchy of drivers validated Visser's (2019) proposition that, for SMEs, market-pull forces often prevail against regulatory push. Contrarily, shortages of funding and know-how override all other factors, thus validating Khan et al.'s (2021) observation that tangible resource deficits are the main choke-points in the realization of sustainability among emerging-economy enterprises.

4.4 Chi-square analysis: Does industry matter for ESG awareness?

To test whether awareness varies systematically by industry category, a **Chi-square test of independence** was run on the 5×2 contingency table of *industry* (manufacturing, services, retail, agro-based, other) versus *heard of ESG* (yes/no). The results are shown below.

STATISTIC	VALUE
X²	3.282
DEGREES OF FREEDOM	4
P-VALUE	0.512

Because p-value = 0.512 is greater than 0.05, the null hypothesis of independence cannot be rejected: data provide no statistically significant evidence in the hypothesis of whether ESG awareness is different across the types of industry. Two practical implications are drawn. First, in awareness-raising campaigns, no particular sectors need to be singled out; broad-based awareness campaigns could be equally effective. Second, as awareness appears to be homogeneous across industries, other variables (such as firm size, export orientation, or owner education) may offer more discriminating possibilities for ESG engagement and thus may well require further multivariate exploration in future studies.

4.5 Support mechanisms and willingness to deepen ESG activity

Despite challenges, 51 % of enterprises asserted to be ready to expand ESG actions, and 39 % were "maybe." When respondents were asked about the kind of help that would accelerate progress most, they gave their priorities as follows:

1. **Policy clarity (65 %)**—simple, SME-specific compliance guidelines;
2. **Training workshops (60 %)**—hands-on sessions covering metrics and reporting;
3. **Financial incentives (55 %)**—soft loans, tax rebates or green-credit guarantees;
4. **Practical toolkits (50 %) and specialist consultancy (45 %).**

Following the preferences established by Pahuja and Arora (2020), regulatory certainty and capacity-building are said to weigh more on a positive motivation for SME sustainability action than mere punishment. The qualitative inquiry again emphasized peer learning: owners gained more confidence after seeing their competitors achieve tangible cost savings through energy-efficient equipment, thereby conforming to Muralidharan et al.'s (2022) incremental adoption framework.

4.6 Synthesis against objectives

Objective 1—Awareness: Moderately high headline awareness masks shallow conceptual depth; educational primers are essential.

Objective 2—Drivers: Customer demand and cost efficiency dominate; thus, market-aligned incentives could unlock rapid uptake.

Objective 3—Barriers: Funding and knowledge deficits remain the biggest hurdles, compounded by manpower shortages in smaller firms.

Objective 4—Support needs: Clear policy road-mapping, subsidized training and targeted finance rank highest.

Objective 5—Actionable insights: Because industry is not a differentiator of awareness, support programs should be **sector-agnostic but size-sensitive**, offering micro-grants and simplified

toolkits for very small enterprises while encouraging medium-sized firms to formalize governance structures.

4.7 Discussion

The Rajasthan evidence broadly supported the barrier-driver constellation that Khan et al. (2021) and Ranganathan and Kim (2021) conceived across Asia, yet slightly modified nuances surface. On the first point, cost savings tie with customer demand as top motivators, indicating that resource-constrained SMEs look at the ESG measures from a pragmatic angle—a sort of efficiency play—rather than as some image-building exercise. Second, the non-significant industry-effect goes against the line of reasoning in Balatbat et al. (2019) that manufacturing SMEs are uniquely burdened by compliance. Service-sector firms in Rajasthan seem equally alert to sustainability discourse, perhaps because tourism and IT customers increasingly want their partners to have some ethical credentials. Third, the demand for policy clarity based on the level of the state underlines the need for state-level guidance, furthering Pahuja and Arora's call for SME-friendly sustainability regulations in India.

Overall, findings corroborate global trends but shed light on levers linked specifically to context—the state's renewable-energy incentives and export-oriented pressures from buyers, that policymakers can tap. A larger sampling and a logistic regression may mark the next stage for research; these will uncover whether factors such as firm age, export share, or the maturity of the city-level ecosystem tend to better predict ESG policy adoption than industry alone.

5. Conclusion and recommendations

Over the last few decades, Environmental, Social and Governance evaluations have been becoming increasingly aware and responsive to the very industries on the ground in Rajasthan. The owners will at times express the broad theory and refer to sustainability certifications from some customers. However, in harnessing the practical reality, shortages in finance, skilled labor and technical know-how pose real constraints to formal implementation. Buyers, supply-chain codes-of-conduct and competitive cost-imperatives may be accounted for as competitive market dynamics moving them forward. If there is some further incentive, which is not very explicit but definitely unwilling, this produces a timely policy window for the introduction of finely tuned, sector-agnostic support programs and capacity-building interventions.

5.1 Practical recommendations

STAKEHOLDER	RECOMMENDED ACTION
STATE GOVERNMENT	Launch a green-credit guarantee plan; include SME-specific ESG provisions into Rajasthan Industrial Policy; and establish an online one-stop shop for ESG toolkits.
INDUSTRY ASSOCIATIONS	Provide sector-specific seminars and peer learning circles; provide template policy texts and KPI dashboards.

FINANCIAL INSTITUTIONS	Simplify financing documentation for energy-saving renovations and offer interest refunds based on provable ESG milestones.
SMES (OWNERS/MANAGERS)	Begin with no-cost/low-cost wins (e.g., trash segregation, fair-wage audits) and progressively formalize governance through monthly ESG reviews.
ACADEMIA & CONSULTANTS	Collaborate on carbon footprint calculators and social impact indicators tailored to textile, tourist, and agricultural processing SMEs.

5.2 Limitations and future research

The studied sample size, while suitable for descriptive purposes, limits advanced inferential modelling. Future studies could extend the sample to rural SMEs and include time-series tracking of ESG performance indicators.

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