

RELATIONAL RESILIENCE AND ADAPTIVE INNOVATION: A CASE STUDY OF LEADERSHIP RESPONSES TO SUSTAINABILITY CHALLENGES IN SRI LANKAN MANUFACTURING SMEs

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ABSTRACT

Sustainability is increasingly essential for small and medium-sized enterprises (SMEs), particularly in developing countries where resource constraints and institutional instability challenge formal adoption. In Sri Lanka's manufacturing sector, SMEs play a critical economic role, yet their sustainability practices are rarely explored through a leadership and relational lens. This study investigates how SME leaders navigate environmental, social, and institutional demands while coping with local crises and operational limitations. It aims to uncover how informal, trust-based leadership and adaptive behaviour foster meaningful sustainability outcomes in resource-constrained settings. The research adopts a qualitative multiple case study approach, analysing four certified SMEs in Sri Lanka's Western Province. Drawing on the Triple Bottom Line, institutional theory, and resilience leadership theory, it explores how firms combine compliance with moral commitment, and how relational resilience- leaders' ability to maintain trust and cohesion through emotional support and ethical responsibility, adaptive behaviour - leaders' flexibility in shifting roles and strategies during crises, and frugal adaptation- innovating with minimal resources by repurposing materials or redesigning processes at low cost collectively support operational continuity and innovation. Findings reveal that sustainability is enabled not primarily through formal systems but through role flexibility, emotional support, ethical responsibility, and resource-conscious practices. These informal leadership actions, particularly during crises, were key to embedding sustainability in daily practice. The originality of this study lies in its focus on relational and adaptive leadership in a Global South context, offering a model that challenges dominant Western perspectives centred on policy and technical systems. It contributes to the literature by highlighting that resilience and social legitimacy in SMEs can emerge from informal structures and culturally grounded leadership behaviours. The study also provides policy insights by suggesting that support should promote trust-based networks, incentivise frugal innovation, and strengthen local leadership capacities rather than rely only on compliance mechanisms.

Keywords: SMEs, Sustainability, Resilience Leadership, Adaptive Innovation, Sri Lanka

Introduction

Small and medium-sized enterprises (SMEs) in developing economies play a key role in local production, employment, and export earnings. Yet, their engagement in sustainability remains poorly understood. In particular, manufacturing SMEs face structural and resource challenges that limit their

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capacity to meet environmental, social, and ethical standards. In Sri Lanka, these constraints are intensified by repeated economic and political instability, high buyer expectations, and weak institutional support. Despite these challenges, some SMEs continue to demonstrate strong ethical, environmental, and adaptive behaviour. This study explores how SME leaders respond to sustainability pressures through relational and adaptive strategies. Drawing from the Triple Bottom Line (Elkington, 1997), institutional theory (Scott, 2001), and resilience leadership theory (Duchek, 2020), it examines how sustainability emerges through the interplay of institutional compliance, cultural values, and entrepreneurial flexibility. The key research questions guiding the study are:

(1) How do Sri Lankan manufacturing SMEs practice sustainability under institutional and environmental pressures?

(2) What role does relational leadership and adaptive behaviour play in shaping sustainable outcomes?

The significance of this research lies in its ability to uncover practices that are often hidden in formal metrics. It highlights how social and environmental goals are achieved not just through systems, but through trust-based leadership and informal networks. The findings provide practical value for policy actors and global buyers seeking to strengthen sustainability in SME supply chains.

Methodology

The study used a qualitative multiple case study approach to investigate how SME leaders practise sustainability in real-world settings. Four SMEs operating in Sri Lanka's Western Province were selected, representing both low-tech and semi-automated manufacturing sectors. Each firm held internationally recognised certifications such as ISO 14001 or SA8000, demonstrating some level of formal sustainability engagement. Data collection took place between February and April 2024 and included 20 semi-structured interviews with owners, senior managers, and compliance staff. Supplementary data were gathered through company documents, audit reports, photographs, and direct field observations. Interview transcripts were thematically analysed using an inductive process. First-order codes were grouped into second-order themes and interpreted through the combined lens of TBL, institutional theory, and resilience leadership. Cross-case comparison helped to identify both commonalities and variations in sustainability behaviour. Data triangulation and participant validation ensured the credibility of findings.

Results and Discussion

The analysis revealed three major themes that illustrate how Sri Lankan manufacturing SMEs embed sustainability through relational, adaptive, and value-based leadership. The first theme was ***resilience through role flexibility and relational trust***. SME owners and senior leaders often took on multiple roles ranging from technical supervision to emotional counselling. This role fluidity allowed firms to function smoothly even when faced with labour shortages, price fluctuations, or external disruptions. Employees relied on leaders not just for instructions but for psychological support, especially during periods of national crisis. As one SME owner explained, "*When fuel and power were cut, we didn't panic-we changed work shifts, helped workers get transport, even cooked meals for those who couldn't go home.*"

The second theme was ***institutional compliance reinforced by local ethics***. All firms showed active participation in global audits, yet their motivation extended beyond buyer expectations. Leadership grounded in moral responsibility led firms to improve workplace safety, avoid worker exploitation, and minimise environmental harm even in areas not strictly audited. In one firm, the decision to switch from chemical-based solvents to safer alternatives was framed not as a cost-benefit decision, but as a "duty to the young women who work near that section." This demonstrated that sustainability compliance was shaped as much by local ethics as by institutional rules. The third theme was ***adaptive innovation in response to constraints***. While capital investment in high-end technology was rare, leaders introduced

low-cost innovations to meet sustainability goals. These included waste separation systems, water reuse for cleaning, eco-friendly packaging, and solar-powered lighting in common areas. Innovation was viewed as an ongoing process driven by necessity. In one medium-scale firm, leftover machine parts were repurposed to create energy-efficient equipment, a move that cut both emissions and energy costs. These findings are summarised in table 1.

Table 1: Leadership Practices Enabling Sustainability in Sri Lankan Manufacturing SMEs

Theme	Leadership Response	Sustainability Outcome
Role Flexibility & Trust	Multi-tasking leaders, staff care, informal support	Staff retention, operational continuity
Compliance + Local Ethics	Beyond-audit safety, moral commitments to wellbeing	Enhanced social legitimacy, ethical reputation
Constraint-led Innovation	Low-cost eco-adaptations, reuse of materials, frugal design	Environmental gains, process efficiency

To illustrate these dynamics, the figure 1 presents a simplified model based on the study's findings.

Figure 1: Interdisciplinary Model of SME Sustainability in Sri Lanka



This model places leadership at the centre of a sustainability system shaped by local values, institutional expectations, crisis responses, and creative adaptation. Leadership interprets and translates external pressure into local solutions, using trust, ethics, and flexibility as core tools. The looped arrows show how crisis and resource constraints feed back into innovation and learning, reinforcing long-term sustainability behaviour. A notable and original insight from this study is that resilience and social sustainability were not achieved through formal structures but through informal, relational leadership. Actions such as emotional support, role-sharing, and ethical decision-making shaped outcomes far more than budgeted programmes or external incentives. This challenges conventional thinking in sustainability scholarship, which often focuses on technical systems or policy instruments. Furthermore, the findings show that adversity whether political, economic, or climatic can act as a trigger for positive innovation and long-term sustainability thinking when interpreted through a relational leadership lens.

One of the most surprising findings of this study was that resilience and sustainability were not advanced through formal strategies or external funding, but through deeply relational, morally grounded leadership actions. Even without structured HR departments or sustainability officers, SME leaders promoted social and environmental goals through everyday behaviours such as flexible roles, personal accountability,

and informal mentoring. These findings contrast sharply with dominant Western literature that emphasises systems, reporting metrics, and investment-led transitions. Another original insight was that crises acted not only as threats but as catalysts for sustainability innovation. In the face of extreme constraints, SMEs turned to ingenuity- repurposing waste, restructuring shifts, and fostering decentralised decision-making. This suggests that crisis contexts in developing countries may offer fertile ground for practical innovation when interpreted through adaptive leadership frameworks.

The most novel contribution of this research is the conceptualisation of “relational resilience”- a form of leadership that blends emotional intelligence, moral obligation, and operational agility. This extends the resilience leadership literature by grounding it in the Global South context, where informal systems and value-based action play a central role. Furthermore, it adds to institutional theory by showing how local ethics can work alongside (and sometimes ahead of) global compliance structures to foster sustainable change. This study demonstrates that sustainability in SMEs is not solely a result of structural capability or policy alignment, but is deeply connected to how leaders think, feel, and act in relation to their people and environment. By offering a new model of relational and adaptive leadership, this study provides a grounded, context-sensitive contribution to the literature on sustainability in developing country SMEs.

Conclusions

This study provides fresh insight into how manufacturing SMEs in Sri Lanka practise sustainability by drawing on leadership flexibility, informal ethics, and adaptive behaviour. Rather than relying solely on formal systems, firms created internal cultures of trust, care, and innovation to meet sustainability goals under pressure. The research makes three key contributions. First, it presents an interdisciplinary leadership model that connects cultural values, institutional frameworks, and post-crisis learning. Second, it shows how sustainability can thrive in low-resource settings through relational leadership and frugal innovation. Third, it contributes to Southern theory by showing that informal leadership behaviours can produce measurable sustainability outcomes. While based on four cases in one region, the findings have broader implications for supply chain partners and development organisations. Support efforts must go beyond compliance checklists to include leadership training, crisis preparedness, and trust-based management models. Future research should test this framework in other sectors and regions to deepen its explanatory power.

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