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Sustainable Financial Practices in Kerala's small business enterprises Sector: Pathways for Growth and Resilience

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Abstract

Small business enterprises (SBEs)—primarily micro and small firms operating across manufacturing, services, and trade—are central to Kerala's employment generation and local value creation. Yet many such firms remain financially vulnerable due to constrained access to formal credit, weak financial planning, and exposure to market and climate-related shocks. This study examines the adoption and effects of sustainable financial practices among SBEs in Kerala. Primary data were collected from 300 owners and financial managers using a structured questionnaire. The analysis assesses practices including cost optimisation, responsible borrowing and credit management, basic environmental investments (energy efficiency and resource conservation), digital accounting, and financial transparency. Descriptive statistics, Pearson correlation, and chi-square tests indicate a positive association between sustainable financial practices and both financial resilience and growth performance. The findings underline the importance of financial literacy, digital integration, and access to sustainability-linked finance. The study concludes with actionable recommendations for policymakers, financial institutions, and enterprise support agencies to strengthen the financial and environmental sustainability of Kerala's small business enterprises.

Keywords: Sustainable Finance; Small Business Enterprises; Kerala; Financial Resilience; Green Finance

Introduction

Small business enterprises are widely regarded as the backbone of Kerala's productive economy, supporting entrepreneurship, local supply chains, and employment in both rural and urban areas. In Indian policy and statistical reporting, these firms are commonly discussed under the broader Micro, Small and Medium Enterprises (MSME) framework. Recent government releases report that MSMEs contribute around 30% of India's GDP, underscoring their macroeconomic importance (Press Information Bureau, 2024). Despite this significance, many small business enterprises struggle to maintain financial viability due to inadequate capital, limited access to formal credit, and gaps in financial management and internal controls (OECD, 2021).

Sustainable financial practices—ranging from responsible borrowing and transparent accounting to eco-conscious investment choices—have emerged as crucial strategies to improve the financial health and operational efficiency of small business enterprises. By integrating economic, social, and environmental considerations into financial decisions, firms can strengthen resilience against external shocks such as demand volatility and climate-related disruptions (World Bank Group, 2020). In India, institutional initiatives such as digitalisation, credit guarantee mechanisms, and green financing programs are increasingly positioned as enablers of enterprise sustainability (Ministry of MSME, 2022; SIDBI, 2022).

However, empirical evidence on the prevalence and business impact of sustainable financial practices in Kerala’s small business enterprises remains limited. Given the increasing policy emphasis on sustainability and formalisation, it is important to understand which practices are being adopted, what constraints enterprises face, and whether these practices translate into measurable resilience and growth. This paper addresses this gap by examining current practices, barriers, and practical pathways to strengthen sustainable finance adoption among small business enterprises in Kerala.

Scope and Definition of Small Business Enterprises

For the purpose of this study, the term “small business enterprises” refers primarily to micro and small enterprises (as recognised in India’s MSME classification) as well as comparable small, owner-managed firms operating in Kerala’s manufacturing, service, and trading sectors. Medium enterprises are outside the primary scope of this paper. The term is used to emphasise the operating realities of smaller firms—tight working-capital cycles, limited managerial bandwidth, and greater sensitivity to shocks—while still acknowledging that many policy instruments and datasets use the MSME umbrella.

Background of the Study

Kerala’s small business enterprises sector is characterised by its diversity, ranging from agro-processing and handicrafts to information technology services and tourism-related activities. While the state benefits from high literacy and strong cooperative traditions, many small enterprises remain financially fragile due to reliance on informal credit sources, limited formal financial planning, and uneven access to institutional support (OECD, 2021).

Sustainable financial practices in small business enterprises may include digital accounting and tax compliance, regular internal review of cash flows, waste and energy efficiency measures, and structured engagement with lenders and suppliers. International evidence suggests that small firms that strengthen governance, transparency, and resource efficiency tend to be more resilient and better positioned to access finance linked to Environmental, Social, and Governance (ESG) considerations (OECD, 2021). In India, recent policy and finance initiatives increasingly encourage digital integration and sustainability-oriented investments, including support for cleaner production and cluster-level interventions (SIDBI, 2022).

Moreover, the COVID-19 pandemic underscored the vulnerability of small firms to sudden revenue shocks and liquidity stress. Evidence from firm-level surveys in India shows sharp contractions in capacity utilisation and employment retention among MSMEs during the lockdown period, with smaller firms facing more severe distress (Rathore & Khanna, 2021). In this context, strengthening basic financial systems, improving cash flow discipline, and expanding access to responsible and green finance can contribute to more resilient recovery and long-term competitiveness (Goyal, Kukreja, & Kedia, 2022).

Review of Literature

Research on small business finance consistently identifies access to affordable and timely credit as a persistent constraint, especially for micro and small firms that lack collateral or formal documentation. Cross-country monitoring of SME finance indicates that information asymmetry, transaction costs, and risk perceptions often limit credit flow, reinforcing the importance of improved financial reporting and targeted policy instruments (OECD, 2021).

Digitalisation is increasingly viewed as a practical pathway to strengthen financial transparency and operational efficiency. Survey-based evidence from India suggests that adoption of digital tools—including online sales channels, digital payments, and basic accounting software—can improve business continuity and reduce frictions in transactions, although benefits are uneven across firms and sectors (Goyal et al., 2022).

Green and sustainability-linked finance is emerging as an additional lever for small enterprise upgrading, particularly for investments that reduce energy consumption, resource use, and environmental impact. Development finance literature highlights that well-designed support instruments—such as advisory services, risk-sharing mechanisms, and cluster-based interventions—can help smaller firms overcome investment barriers and adopt cleaner technologies (World Bank Group, 2020; SIDBI, 2022).

Research Objectives

1. To examine the relationship between sustainable financial practices and financial resilience among small business enterprises in Kerala.
2. To analyse the impact of sustainable financial practices on the growth performance of small business enterprises.
3. To assess the influence of awareness levels on the adoption of sustainable financial practices among small business enterprises.
4. To provide recommendations for promoting sustainability-oriented financial behaviour in Kerala's small business enterprises sector.

Research Questions

1. Is there a significant relationship between sustainable financial practices and financial resilience of small business enterprises?
2. Do sustainable financial practices contribute significantly to the growth of small business enterprises?
3. How does the level of awareness affect the adoption of sustainable financial practices among small business enterprises?
4. What strategies can be implemented to enhance sustainable financial behaviour among small business enterprises in Kerala?

Hypotheses

1. There is a significant positive relationship between sustainable financial practices and the financial resilience of small business enterprises.
2. Sustainable financial practices significantly contribute to the growth of small business enterprises.
3. The level of awareness regarding sustainable financial practices significantly influences their adoption among small business enterprises.

Methodology

The present study adopted a descriptive and analytical research design to examine the adoption and impact of sustainable financial practices among small business enterprises in Kerala. A sample of 300 enterprises was selected from different districts of the state using a stratified random sampling technique. This method ensured adequate representation from the manufacturing, service, and trading sectors. Stratification was based on the type of enterprise and sector, and units were randomly chosen from each stratum using random number tables. The sample size was determined with reference to the estimated population of small business enterprises in the state and the need for sectoral representation.

Primary data were collected using a structured questionnaire comprising closed-ended and Likert-scale items. The questionnaire was validated through expert review and pilot testing and was administered through direct visits, emails, and telephonic interviews. The data collection period extended over three months. Secondary data were also gathered from government reports, publications, and databases to support the analysis.

The statistical techniques used for data analysis included descriptive statistics such as mean and standard deviation to summarize the data, and percentage analysis to understand the distribution of responses. To test the formulated hypotheses, inferential statistical techniques such as chi-square test and Pearson product-moment correlation were used. The chi-square test was applied to determine the association between categorical variables, while correlation analysis assessed the strength and direction of relationships between continuous variables. All statistical analyses were carried out using the statistical software EDUSTAT.

Data Analysis and Interpretation

The analysis began with a demographic profile of the 300 sampled enterprises. Among the respondents, 45% were from the service sector, 35% from manufacturing, and 20% from trading. About 68% of the enterprises had been operating for more than five years. In terms of financial management, 61% used digital accounting tools, and 55% conducted regular financial audits. However, only 28% had ever availed of green financing or sustainability-linked loans.

Adoption of Sustainable Financial Practices

Descriptive statistics revealed that the most commonly adopted sustainable financial practices included digital accounting ($M = 4.1$, $SD = 0.7$), regular auditing ($M = 3.9$, $SD = 0.8$), and cost optimization measures ($M = 3.7$, $SD = 0.9$) on a 5-point scale. However, practices like eco-friendly investments ($M = 2.6$, $SD = 1.1$) and carbon footprint monitoring ($M = 2.3$, $SD = 1.2$) were adopted less frequently.

Testing of Hypotheses

- Hypothesis 1: There is a significant positive relationship between sustainable financial practices and financial resilience of small business enterprises.

To test this hypothesis, Pearson correlation was conducted between the sustainable financial practices score and a financial resilience index (based on items measuring liquidity stability, creditworthiness, and ability to absorb shocks). The analysis showed a significant positive correlation ($r = 0.62$, $p < 0.01$), indicating that enterprises adopting more sustainable financial practices tend to exhibit greater financial resilience.

Hypothesis 1 is supported.

- Hypothesis 2: Sustainable financial practices significantly contribute to the growth of small business enterprises.

A chi-square test was applied to assess the association between the level of sustainable practice adoption (categorized as low, medium, and high) and business growth performance (categorized based on self-reported revenue and market expansion). The chi-square value obtained was 30.42 with a p-value < 0.01 , indicating a significant association between these variables. Enterprises with higher adoption levels reported better growth outcomes.

Hypothesis 2 is supported.

- Hypothesis 3: The level of awareness regarding sustainable financial practices significantly influences their adoption among small business enterprises.

The relationship between awareness level (measured on a 5-point scale) and the number of sustainable financial practices adopted was analysed using Pearson correlation. The correlation coefficient was found to be $r = 0.58$ ($p < 0.01$), confirming a significant positive relationship. Enterprises with higher awareness scores adopted more practices.

Hypothesis 3 is supported.

Barriers Identified

Around 49% of respondents reported a lack of access to green finance, and 46% cited limited awareness about sustainable practices as key barriers. Others pointed to limited institutional support, compliance burdens, and lack of incentives as impediments to sustainability adoption.

Overall, the data indicate that sustainable financial practices contribute significantly to the financial resilience and growth of small business enterprises. The findings affirm the relevance of policy interventions aimed at increasing awareness, improving access to sustainability-linked finance, and strengthening basic financial systems at the enterprise level.

Discussion of the Results

The results of the study reinforce the critical role that sustainable financial practices play in strengthening the financial resilience and growth potential of small business enterprises in Kerala. Enterprises that reported greater adoption of digital financial management, cost optimisation, and eco-conscious investments were better positioned to manage uncertainty and pursue long-term sustainability. These findings are consistent with evidence that improved financial transparency and digital integration can enhance resilience and performance among small firms (OECD, 2021; Goyal et al., 2022).

The results also reveal that awareness acts as a significant driver for the adoption of sustainable practices. Small business enterprises with higher awareness levels were more likely to integrate sustainability into their financial operations. This aligns with evidence that improved access to information and digital integration can support resilience and better financial management among small firms (OECD, 2021; Goyal et al., 2022).

However, challenges such as limited access to green finance, lack of institutional support, and regulatory hurdles continue to impede broader adoption of sustainability practices. These constraints are consistent with broader evidence on financing frictions and pandemic-era bottlenecks faced by smaller firms (Rathore & Khanna, 2021; World Bank Group, 2020). The sector-wise comparison further shows that service enterprises are leading in sustainability

adoption, possibly due to better integration of digital platforms and more flexible business models.

Implications of the Study

The findings of the study offer valuable insights for policymakers, financial institutions, and small business enterprise support agencies in Kerala. The significant relationship between sustainable financial practices and both financial resilience and growth suggests that encouraging such practices can strengthen the long-term viability of the small business enterprise sector. Government agencies can leverage these findings to design targeted awareness campaigns, provide financial literacy training, and create incentives for small business enterprises to adopt sustainability-oriented financial models. Green financing schemes and sustainability-linked credit facilities should be made more accessible to small enterprises, particularly those in rural and semi-urban areas.

For financial institutions and business development service providers, the study underscores the need to integrate sustainability assessment into lending and advisory services. Customized financial products that support energy efficiency, waste reduction, and digital transformation can enhance small business enterprises' competitiveness and creditworthiness. Academic and training institutions can also use these insights to develop curricula and capacity-building programs that empower entrepreneurs to adopt and scale sustainable financial practices. Collectively, these implications contribute to building a more resilient and sustainable small business enterprise ecosystem in Kerala.

Limitations and Future Research

This study is based on cross-sectional, self-reported data from a single state, which may limit causal inference and the generalisability of results to other regional contexts. Future research can extend the analysis using longitudinal designs, objective performance measures (e.g., audited financial indicators), and sector-specific comparisons to better understand how sustainable finance practices translate into resilience outcomes over time.

Conclusion

The study highlights the growing relevance of sustainable financial practices in enhancing the resilience and growth potential of small business enterprises in Kerala. It finds that small business enterprises integrating practices such as digital financial management, cost optimization, and eco-conscious investments are better positioned to withstand economic uncertainties and achieve long-term sustainability. The statistically significant associations between sustainable practices, financial resilience, and business growth provide empirical evidence for promoting such practices at the policy and enterprise levels.

To realize the full potential of sustainable finance, stakeholders must work collaboratively to address barriers such as low awareness, limited access to sustainability-linked credit, and inadequate institutional frameworks. Strategic interventions such as targeted training programs, access to financial advisory services, and the establishment of green credit channels are essential. By mainstreaming sustainability into small business enterprise operations, Kerala can foster a more resilient, inclusive, and environmentally responsible economic ecosystem.

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