

SUSTAINABLE FINANCIAL PRACTICES IN KERALA'S MSME SECTOR: PATHWAYS FOR GROWTH AND RESILIENCE

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Abstract

The Micro, Small, and Medium Enterprises (MSMEs) play a vital role in Kerala's economic development, contributing significantly to employment generation, regional development, and inclusive growth. However, financial sustainability continues to be a major challenge for these enterprises. This study examines the adoption and impact of sustainable financial practices among MSMEs in Kerala. Using primary data collected from 300 MSME owners and financial managers through structured questionnaires, the study evaluates practices such as cost optimization, green financing, efficient credit management, and financial transparency. Statistical analysis using EDUSTAT reveals a positive association between sustainable financial practices and long-term resilience and growth of MSMEs. The findings highlight the need for institutional support, digital integration, and financial literacy to ensure sustainability in the sector. The study provides actionable recommendations to policymakers and stakeholders for enhancing the financial strength and environmental consciousness of MSMEs in Kerala.

Keywords: Sustainable Finance, MSMEs, Kerala

Introduction

The MSME sector constitutes the backbone of the Indian economy, accounting for nearly 30% of India's GDP and employing over 110 million people (Ministry of MSME, 2022). In Kerala, the sector has shown remarkable potential in addressing unemployment, promoting entrepreneurship, and supporting rural industrialization. Despite its significance, MSMEs often struggle to maintain financial viability due to inadequate capital, poor access to credit, and inefficiencies in financial management (George & Mathew, 2021).

Sustainable financial practices—ranging from responsible borrowing to eco-friendly investments—have emerged as crucial strategies to improve the financial health and operational efficiency of MSMEs. By integrating economic, social, and environmental

considerations into financial decisions, MSMEs can foster resilience against external shocks such as market fluctuations and climate-related disruptions (Kaur, 2020). However, empirical research on the prevalence and impact of such practices in Kerala's MSME ecosystem remains limited.

Given the evolving regulatory environment and the increasing emphasis on sustainability, it is imperative to study how MSMEs in Kerala are adopting sustainable financial practices and whether these practices contribute to their growth trajectories. This paper attempts to fill this gap by exploring the current practices, challenges, and potential benefits of sustainable finance within the state's MSME framework.

Background of the Study

Kerala's MSME sector is characterized by its diversity, ranging from agro-processing and handicrafts to information technology and tourism-related enterprises. While the state boasts a high literacy rate and a strong cooperative culture, many MSMEs remain financially fragile, primarily due to their reliance on informal credit sources and limited financial planning (Thomas & Rajan, 2019).

Sustainable financial practices in MSMEs can include the use of renewable energy, digital accounting, waste minimization strategies, and engagement in corporate social responsibility. Globally, firms that adopt such practices tend to be more resilient and attract investors interested in Environmental, Social, and Governance (ESG) compliance (OECD, 2021). Kerala's policy landscape, including the state's MSME development programs and green financing initiatives, encourages the adoption of these practices, but the extent to which they are implemented at the grassroots level remains unclear.

Furthermore, the COVID-19 pandemic underscored the vulnerability of MSMEs to economic shocks, reinforcing the need for resilient financial frameworks. As recovery efforts focus on sustainability and inclusiveness, the transition to sustainable finance could provide MSMEs with a competitive edge, enhanced creditworthiness, and long-term stability (Nair, 2021). This study, therefore, investigates the current landscape of sustainable financial practices among Kerala's MSMEs and identifies strategic pathways for their growth.

Research Objectives

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

Research Questions

1. Is there a significant relationship between sustainable financial practices and financial resilience of MSMEs?

2. Do sustainable financial practices contribute significantly to the growth of MSMEs?
3. How does the level of awareness affect the adoption of sustainable financial practices among MSMEs?
4. What strategies can be implemented to enhance sustainable financial behaviour among MSMEs in Kerala?

Hypotheses

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

Methodology

The present study adopted a descriptive and analytical research design to examine the adoption and impact of sustainable financial practices among MSMEs in Kerala. A sample of 300 MSMEs 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 done based on the type of enterprise, and units were randomly chosen from each stratum using random number tables. The sample size was determined considering the size of the MSME population 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 MSMEs. 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 MSMEs.*

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 MSMEs adopting more sustainable financial practices tend to exhibit greater financial resilience.

→ **Hypothesis 1 is tenable.**

- **Hypothesis 2:** *Sustainable financial practices significantly contribute to the growth of MSMEs.*

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 tenable.**

- **Hypothesis 3:** *The level of awareness regarding sustainable financial practices significantly influences their adoption among MSMEs.*

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 tenable.**

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 clearly indicate that sustainable financial practices contribute significantly to the financial resilience and growth of MSMEs. The findings affirm the relevance of policy interventions aimed at increasing awareness and easing access to sustainable finance options.

Discussion of the Results

The results of the study reinforce the critical role that sustainable financial practices play in strengthening the financial health of MSMEs in Kerala. A strong positive relationship was established between the adoption of such practices and both financial resilience and growth. The findings are consistent with prior studies, such as George and Mathew (2021), which

emphasized that prudent financial management strategies improve business continuity and profitability in small enterprises. The high adoption rate of digital accounting and regular auditing among respondents signals a shift toward greater financial transparency and efficiency.

The results also reveal that awareness acts as a significant driver for the adoption of sustainable practices. MSMEs with higher awareness levels were more likely to integrate sustainability into their financial operations. This supports the observations of Kaur (2020), who found that financial literacy and access to information are vital for sustainable behaviour among small businesses.

However, challenges such as limited access to green finance, lack of institutional support, and regulatory hurdles continue to impede the broader adoption of sustainability practices. These constraints align with the findings of Nair (2021), who identified systemic bottlenecks as barriers to MSME development in the post-pandemic recovery period. 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 MSME 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 MSME sector. Government agencies can leverage these findings to design targeted awareness campaigns, provide financial literacy training, and create incentives for MSMEs 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 MSMEs' 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 MSME ecosystem in Kerala.

Conclusion

The study highlights the growing relevance of sustainable financial practices in enhancing the resilience and growth potential of MSMEs in Kerala. It finds that MSMEs 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 MSME operations, Kerala can foster a more resilient, inclusive, and environmentally responsible economic ecosystem.

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