

MSME Perceptions of Green Business Practices and Internationalization Readiness: Evidence from East Java, Indonesia

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ABSTRACT

Purpose – The study synthesizes institutional, behavioral and capability based perspectives to position SMEs' perceptions as a foundational cognitive mechanism shaping green business adoption and international readiness. **Methodology/approach** – This study uses a descriptive quantitative approach with a cross sectional survey design that aims to describe the phenomenon of perception of MSME behavior towards green business practices in the context of internationalization. The research data was obtained from the results of a survey of 143 MSMEs in East Java which were documented in the observation dataset. The research analysis unit is the owner or main manager of MSMEs, considering that in the MSME structure, strategic decisions are very centralized on individual decision makers.

Findings – The findings indicate that SMEs generally demonstrate a positive awareness of environmental responsibility and the importance of green practices. Nevertheless, perceptions regarding direct economic benefit and long term strategic value remain moderate, particularly among micro and small enterprises. This perception gap contribute to cautious attitudes toward adopting green business practices as part of internationalization strategies. The results suggest that SMEs with broader market exposure exhibit more strategic perceptions of green practices as a means of meeting international standards and gaining competitive advantage.

Novelty/value – This study contributes to literature by positioning SMEs' perceptions as a central cognitive mechanism in green business adoption an internationalization readiness by integrates multiple theoretical perspectives. . **Keywords** : Green business practices; SMEs; Perception; sustainability, internationalization, East Java

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INTRODUCTION

The transformation towards a green and sustainable economy has become a top agenda in the global economic system as pressures on environmental change, climate change and demands on the sustainability of international supply chains increase. In this context, green business practices are a prerequisite for business actors who want to enter and survive in the global market. Various

international organizations emphasize that environmental sustainability has become an important part of international trade standards, including through eco-labeling schemes, environmental, social, and governance (ESG) requirements, and sustainable regulations in global value chains (OECD, 2021)

Micro, Small and Medium Enterprises (MSMEs) play a strategic role in the national economy as well as in global economic integration. In Indonesia, MSMEs are not only the backbone in job creation but also potential actors in non-oil and gas exports. However, MSMEs' efforts to go international face many challenges, not only related to capital, technology and managerial, but also related to the demand to adopt green business practices in accordance with international standards. (Gereffi, G. (2018). Several studies show that MSMEs fail to penetrate the global market due to lack of preparedness in terms of non-financial aspects and lack of understanding of the orientation of environmental sustainability (Meiden et al., 2024). In this case, green business practices are the main need as a requirement for MSMEs to be able to access the global market, especially if the main goal is to enter the market of developed countries that are increasingly sensitive to environmental issues and product sustainability.

Green business practices as a condition for the internationalization of MSMEs have been widely discussed, most of the literature still focuses on aspects of factual implementation and company performance, especially for large and multinational companies. Research on MSMEs tends to place green business practices as a technical variable that can be adopted directly, without paying attention to the cognitive aspects and perceptions of business actors. Although everything related to the MSME business is highly dependent on decision-making by the owner or manager, the perception of green business practices has an important role in viewing whether the practice is considered an opportunity or strategy, or even considered a burden that incurs high costs (Del Brío & Junquera, 2003). Based on this background, this study aims to synthesize various theories about MSMEs' perception of green business practices and analyze their implications for the formulation of internationally oriented MSME development policies, planned behavior, and strategic capabilities, this study is expected to provide relevant policy implications to encourage MSMEs' readiness to enter the global market in a sustainable manner.

LITERATURE REVIEW

2.1 Green Business Practices in the Context of MSMEs

Green business practices refer to a series of operational and strategic activities that aim to minimize negative impacts on the environment while improving resource use efficiency. In the context of MSMEs, these practices include the use of environmentally friendly raw materials, energy and water efficiency, waste management, emission reduction, and compliance with formal and informal environmental standards (Del Brío & Junquera, 2003). Green business practices refer to organizational activities and strategic initiatives aimed at minimizing negative environmental impacts while simultaneously improving economic and social performance. These practices include efficient resource utilization, waste reduction, energy conservation, eco-friendly product design, sustainable sourcing, recycling systems, and the adoption of environmentally friendly technologies (Centobelli et al., 2020). In recent years, sustainability-oriented business transformation has become increasingly important due to global concerns regarding climate change, environmental degradation, and the growing demand for sustainable production systems within international markets.

For Micro, Small, and Medium Enterprises (MSMEs), green business practices are no longer considered optional initiatives but strategic necessities for maintaining competitiveness and ensuring long-term business sustainability. International trade systems increasingly emphasize environmental compliance through eco-labeling standards, Environmental, Social, and Governance (ESG) requirements, carbon reduction policies, and sustainable supply chain management (OECD, 2021). As a result, MSMEs that seek participation in global value chains are expected to align their business activities with sustainability-oriented standards and environmentally responsible practices.

The adoption of green business practices among MSMEs also contributes to operational efficiency and market competitiveness. Sustainable business practices may reduce operational costs through lower energy consumption, optimized material use, and improved waste management systems. Moreover, environmentally responsible business behavior can strengthen brand image, increase customer trust, and enhance opportunities for market expansion, particularly within environmentally sensitive export markets (Leonidou et al., 2017). In this context, green business practices function not only as environmental commitments but also as strategic assets capable of improving organizational performance and internationalization opportunities. Despite these benefits, MSMEs often face considerable barriers in implementing green business practices. Limited financial resources, inadequate technological capabilities, lack of environmental knowledge, and weak managerial competencies frequently hinder MSMEs from adopting sustainability-oriented innovations (Cantele & Zardini, 2018). Compared to large corporations, MSMEs generally possess lower organizational capacity to invest in environmentally friendly technologies or sustainability certification systems. Furthermore, many MSME owners continue to perceive sustainability initiatives as expensive and difficult to implement, particularly when immediate financial returns are uncertain.

Several studies also emphasize that the success of sustainability adoption among MSMEs is strongly influenced by the cognitive orientation and perceptions of business owners. MSMEs are typically owner-managed businesses in which strategic decisions depend heavily on the values, attitudes, and beliefs of the owner-manager (Jansson et al., 2017). Therefore, the adoption of green business practices cannot be separated from how MSME actors perceive sustainability itself—whether it is interpreted as an opportunity for growth and competitiveness or as an additional burden that increases operational complexity. In the context of internationalization, green business practices increasingly determine MSMEs' access to global markets. International consumers and multinational corporations are becoming more selective regarding environmental responsibility within supply chains. Consequently, MSMEs capable of demonstrating sustainable production systems and environmental commitment may gain greater legitimacy, stronger business partnerships, and broader opportunities for participation in global trade networks (UNCTAD, 2022). This condition indicates that sustainability orientation has become a critical factor influencing MSMEs' global competitiveness and long-term business resilience.

2.2 Perception of MSME Actors on Green Business Practices

Perception is a cognitive process in which individuals interpret, evaluate, and give meaning to a phenomenon based on certain experiences, knowledge, and social contexts. In MSMEs, the perception of business actors has a very dominant role because most strategic decisions are centered on the main owners or managers of the business (Rodrigues et al., 2021). In the context of green business practices, the perception of MSMEs includes an assessment of economic benefits, cost risks, implementation complexity and relevance to business sustainability and competitiveness. The results of previous research show that the perception of green business practices is often ambivalent, on the one hand MSME actors are aware of the importance of the environment, but on the other hand they are hesitant, especially if there are no direct economic benefits to their business. From the perspective of the Theory of planned behaviour, the perception of the benefits and obstacles of an action is the main determinant of the formation of actual intentions and behaviors. Thus, MSMEs' perception of green business practices is a key factor in seeing MSMEs' readiness to enter the international market (Shehzad et al., 2023).

Perception refers to an individual's cognitive process of interpreting, understanding, and evaluating particular phenomena or information within their environment. In the context of MSMEs, perception plays a crucial role in influencing managerial behavior and strategic decision-making because business operations are highly dependent on the owner-manager's personal judgments, experiences, and attitudes. Unlike large organizations with formalized decision-making structures, MSMEs generally rely on intuitive and owner-centered management systems, making the perceptions of business actors

highly influential in shaping organizational direction and innovation adoption (Distanont & Khongmalai, 2020).

The perception of MSME actors toward green business practices reflects how business owners interpret environmental sustainability and evaluate its relevance to their business operations. Positive perceptions toward sustainability generally emerge when MSME actors believe that green business practices can improve efficiency, strengthen competitiveness, enhance customer trust, and create access to international markets. Business actors who perceive sustainability as a strategic investment are more likely to adopt environmentally friendly innovations and integrate sustainability into their long-term business strategies (Hojnik et al., 2018).

Conversely, negative perceptions toward green business practices often arise due to financial limitations, inadequate environmental knowledge, and uncertainty regarding economic benefits. Many MSME actors perceive sustainability initiatives as costly, complicated, and difficult to implement, particularly because environmentally friendly technologies and certification systems frequently require additional investment (Cantele & Zardini, 2018). This perception becomes a major obstacle to sustainability adoption, especially among MSMEs operating in developing countries where institutional support and environmental awareness remain relatively limited. Perceptions regarding green business practices are also influenced by external environmental pressures such as government regulations, consumer expectations, market competition, and industry standards. MSMEs involved in export-oriented industries or global supply chains tend to demonstrate stronger environmental awareness because they face greater pressure to comply with sustainability requirements established by international buyers and trade institutions (Gereffi, 2018). In this situation, sustainability is often perceived not merely as an environmental issue but as a market access requirement and competitive strategy.

Additionally, educational background, managerial capability, and exposure to sustainability information significantly influence MSME perceptions toward environmental responsibility. MSME actors who possess greater environmental knowledge and strategic awareness are generally more capable of understanding the long-term benefits of green business practices, including enhanced organizational reputation, customer loyalty, operational efficiency, and business resilience (Raza et al., 2021). On the other hand, limited understanding regarding sustainability may lead MSMEs to focus solely on short-term economic survival rather than long-term environmental competitiveness. Understanding MSMEs' perceptions toward green business practices is therefore essential because these perceptions determine organizational readiness for sustainability transformation. The success of green business policies and sustainability programs depends not only on financial support or technological infrastructure but also on the ability to shape positive cognitive and behavioral orientations among MSME actors toward environmental sustainability.

2.3. Theoretical Perspective on the Perception of Green MSMEs

2.3.1 Institutional theory

This theory classifies that organizational behavior is shaped by institutional pressures that are regulative, normative, and cognitive. In the context of MSMEs, regulatory pressures related to the environment are not optimally internalized, so that there is an inconsistency in the perception of the urgency of green business practices (Scott, 2014). Institutional Theory explains that organizational behavior is shaped by institutional pressures originating from the surrounding social, political, economic, and regulatory environment. Organizations often adopt particular practices not only to improve efficiency but also to gain legitimacy, social acceptance, and organizational survival within institutional systems (Scott, 2014). In the context of green business practices, institutional theory helps

explain why MSMEs increasingly adopt sustainability-oriented strategies in response to external environmental demands.

Institutional theory identifies three primary forms of institutional pressure: coercive pressure, normative pressure, and mimetic pressure. Coercive pressure refers to formal regulations, legal systems, and government policies that require organizations to comply with environmental standards. Governments around the world increasingly implement environmental regulations related to waste management, carbon emissions, sustainable production systems, and green certification programs. MSMEs seeking international market access are therefore pressured to align their operations with sustainability requirements imposed by regulators and international trade institutions (OECD, 2021). Normative pressure originates from social expectations, industry norms, professional standards, and stakeholder values concerning environmental responsibility. Consumers, business associations, non-governmental organizations, and international institutions increasingly expect businesses to operate sustainably and minimize environmental damage. MSMEs may therefore adopt green business practices to maintain legitimacy, strengthen stakeholder trust, and improve organizational reputation (Kraus et al., 2020). In many industries, sustainability has evolved into a socially accepted standard of responsible business conduct. Meanwhile, mimetic pressure occurs when organizations imitate successful competitors or industry leaders facing similar uncertainties. MSMEs frequently imitate environmentally responsible business strategies implemented by larger firms or competitors that successfully gain market advantages through sustainability adoption. In uncertain market environments, imitation becomes a rational mechanism for organizational adaptation and risk reduction (Centobelli et al., 2020).

Institutional theory also explains that sustainability adoption among MSMEs is highly dependent on institutional support systems, including environmental policies, financial incentives, training programs, and sustainability awareness campaigns. Strong institutional environments may encourage MSMEs to perceive green business practices as beneficial and necessary rather than burdensome. Consequently, institutional support plays an important role in shaping MSMEs' cognitive orientation toward sustainability and environmental innovation. In the context of MSME internationalization, institutional theory suggests that environmental sustainability has become an important source of legitimacy within global markets. MSMEs capable of complying with sustainability standards are more likely to gain access to international business networks, global supply chains, and environmentally sensitive export markets. Therefore, institutional pressure serves not only as a regulatory mechanism but also as a driver of organizational transformation toward sustainable business practices.

2.3.2 Theory of Planned Behaviour

This theory emphasizes that attitudes, subjective norms, and perceptions of behavior control shape an individual's intention to perform an action. The perception of MSME actors towards green business practices will determine the intention to implement these practices in their business environment. Several studies show that perceptions related to economic benefits have a significant impact in encouraging the adoption of green practices in MSMEs. (*Ajzen.TPB.Obhdp1991, n.d.*)

Green business practices refer to organizational activities and strategies that prioritize environmental sustainability while maintaining economic performance and social responsibility. These practices include environmentally friendly production processes, efficient resource utilization, waste reduction, energy conservation, eco-friendly packaging, sustainable sourcing, and the adoption of cleaner technologies (Hart, 1995). In the context of business sustainability, green business practices are increasingly recognized as strategic approaches that enable firms to enhance competitiveness, improve corporate reputation, and comply with evolving environmental regulations in both domestic and international markets (Porter & Van der Linde, 1995).

For Micro, Small, and Medium Enterprises (MSMEs), the adoption of green business practices has become increasingly important due to growing global awareness of environmental issues and the transformation of international trade standards toward sustainability-oriented systems. International buyers, multinational corporations, and global consumers now demand products and services that comply with environmental sustainability principles, including carbon footprint reduction, eco-labeling, ethical sourcing, and environmentally responsible production processes (OECD, 2021). Consequently, MSMEs seeking integration into global value chains are required to align their operational activities with sustainable business standards (Gereffi, 2018).

Despite the strategic importance of green business practices, MSMEs often encounter substantial barriers in their implementation. Compared to large enterprises, MSMEs generally operate with limited financial resources, inadequate technological infrastructure, lower managerial capacity, and restricted access to environmental knowledge and sustainability training (Revell et al., 2010). These limitations frequently hinder MSMEs from investing in green technologies or redesigning production systems toward environmentally sustainable models. Furthermore, many MSME owners perceive green practices as costly, complex, and difficult to implement, particularly when short-term financial survival becomes the primary business priority (Del Brío & Junquera, 2003). Nevertheless, several studies indicate that green business practices may generate long-term benefits for MSMEs. Sustainable operational activities can improve efficiency through reduced energy consumption, minimized material waste, and optimized production processes. Additionally, environmentally responsible business behavior can strengthen customer trust, improve brand image, increase market opportunities, and enhance competitiveness in international markets (Leonidou et al., 2017). Green practices also contribute to organizational resilience by helping MSMEs adapt to changing market preferences and stricter environmental regulations.

Within the internationalization context, green business practices function not only as environmental commitments but also as strategic assets that support MSMEs' entry into export markets. The increasing incorporation of Environmental, Social, and Governance (ESG) standards into international trade frameworks means that sustainability performance has become a non-financial criterion affecting supplier selection and business partnerships (UNCTAD, 2022). MSMEs capable of demonstrating sustainable business commitment may therefore gain stronger legitimacy and broader access to global markets. However, the successful implementation of green business practices among MSMEs depends not solely on external pressures or market demands, but also on the internal readiness and perceptions of business actors themselves. The beliefs, attitudes, and strategic interpretations of MSME owners toward sustainability play a crucial role in determining whether green business practices are adopted proactively or resisted due to perceived risks and costs. Therefore, understanding MSMEs' perceptions regarding green business practices becomes essential in explaining the variation in sustainability adoption among small business actors. Theory of Planned Behavior, developed by Icek Ajzen, explains that human behavior is primarily influenced by behavioral intention, which is shaped by three main factors: attitude toward behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). Although originally developed within social psychology, the Theory of Planned Behaviour (TPB) has been widely applied in studies related to sustainability, environmental behavior, and green business adoption.

In the MSME context, TPB helps explain how business owners form intentions to implement green business practices. The first component, attitude toward behavior, refers to the degree to which MSME actors positively or negatively evaluate sustainability-oriented activities. MSME owners who believe that green business practices can improve business reputation, operational efficiency, customer trust, and export opportunities are more likely to develop positive attitudes toward sustainability adoption (Paul et al., 2016). Positive attitudes subsequently strengthen the intention to engage in environmentally responsible business behavior.

The second component, subjective norms, refers to perceived social pressures from important stakeholders such as customers, suppliers, government institutions, competitors, communities, and

business partners. MSME actors tend to adopt green business practices when they perceive strong expectations from external stakeholders regarding environmental responsibility. Export-oriented MSMEs, for example, often experience pressure from international buyers who require compliance with environmental standards and sustainable production systems (Yadav & Pathak, 2017).

The third component, perceived behavioral control, refers to an individual's perception regarding their capability and resources to perform particular behaviors. In the context of MSMEs, perceived behavioral control includes financial capacity, environmental knowledge, technological readiness, managerial competence, and access to institutional support necessary for implementing green business practices. Even when MSME actors possess positive attitudes toward sustainability, adoption may remain limited if they believe they lack sufficient resources or capabilities to successfully implement green transformation (Raza et al., 2021).

TPB is highly relevant in explaining MSMEs' perceptions of green business practices because it highlights the interaction between cognitive evaluation, social influence, and organizational capability in shaping sustainability-oriented behavior. The theory suggests that sustainability adoption among MSMEs cannot be understood solely through economic or technological factors, but also through psychological and behavioral dimensions influencing managerial decision-making. From a policy perspective, TPB implies that efforts to encourage green business adoption among MSMEs should focus on strengthening positive environmental attitudes, building supportive social norms, and improving MSMEs' perceived capabilities. Governments and development institutions may therefore encourage sustainability transformation through environmental education, financial incentives, technical assistance, sustainability training, and public awareness programs. Such interventions may strengthen MSMEs' behavioral intentions and accelerate their readiness to compete within sustainable global markets.

2.3.3. Resource Based View dan Dynamic Capability

The RBV theory views green business practices as a potential source of competitive advantage if they are able to create value, scarcity, and are difficult to replicate. However, the ability of MSMEs to utilize green practices as a strategic resource is greatly influenced by managerial perceptions of these practices (Hart & Dowell, 2011). Meanwhile, the Dynamic Capability theory places perception as part of the ability to sensing green market opportunities, especially in the context of the internationalization of MSMEs (Teece, 2018)

2.4 Results of Previous Research

Previous research shows that there is a complex relationship between the perception of MSMEs, green business adoption and business performance. Del Brio and Junquera (2003) found that limited perception and knowledge are the main obstacles to environmental innovation in MSMEs. Roxas and Coetzer (2012) show that the institutional environment and managerial attitudes have a significant influence on the sustainability orientation of MSMEs. Most MSMEs adopt green practices not because of regulatory pressures, but because of the perception of short-term cost efficiency (Lutfi et al., 2023). Meanwhile, Trifkovic' (2017) shows that the involvement of MSMEs in the global value chain encourages increased compliance with environmental standards, but its effectiveness is greatly influenced by the perception of business actors of the benefits of the international market.

In Indonesia, non-financial readiness, including strategic orientation and perception of international standards, is a determining factor for the success of the internationalization of MSMEs. However, the study has not examined the perception of MSMEs towards green business practices explicitly, as the foundation of readiness to go international. (Revindo et al., 2019)

2.5 Literature Synthesis and Research Gap

Based on the literature review, it can be concluded that: Green business practices are a prerequisite for MSMEs to access the international market, the perception of MSME actors is a key determinant of the adoption of green business practices. Most studies still focus on the direct link between green practices and performance, especially in large companies. However, there is a significant research gap, namely: The lack of studies that place the perception of MSMEs as the main focus of the analysis, not just a mediating variable. Limited studies that integrate theoretical synthesis across perspectives to explain the perception of green MSMEs. Lack of discussion on the implications of MSMEs' cognitive reality-based policies related to the internationalization agenda

METHOD

This study uses a descriptive quantitative approach with a cross sectional survey design that aims to describe the phenomenon of perception of MSME behavior towards green business practices in the context of internationalization. This approach was chosen because this study is not intended to test the causal relationship between variables, but to map the pattern of perception, level of understanding, and the tendency of MSMEs' attitudes towards green business practices as a global competitiveness strategy.

The descriptive approach allows for an empirical exploration of how MSME actors interpret green business practices, as well as the extent to which these perceptions are in line with international market demands and institutional pressures. The research data was obtained from the results of a survey of MSMEs in East Java which were documented in the observation dataset. The research analysis unit is the owner or main manager of MSMEs, considering that in the MSME structure, strategic decisions are very centralized on individual decision makers. Respondents were selected using purposive sampling techniques with the following criteria:

1. MSMEs are active for at least 2 years
2. The owner/manager is directly involved in decision-making.
3. Have experience or knowledge of green practices
- 4.

Algorithm 1. Descriptive Survey Procedure

INPUT: MSME survey results data

OUTPUT: Mapping the phenomenon of MSME perception of green business practices

- 1: Step 1: Selection of respondents according to the criteria
 - 2: Step 2: Data processing and data cleansing
 - 3: Step 3: Descriptive Statistical Calculation
 - 4: Step 4: Classify the Perception Traits
 - 5: Step 5: Cross-tabulation by scale and business sector
 - 6: Step 6: Interpretation of phenomena based on theoretical synthesis
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RESULT AND DISCUSSION

This study aims to describe the phenomenon of MSMEs' perception of green business practices and its relevance to internationalization readiness. The analysis was carried out using descriptive statistics to identify the tendency of respondents' perception in general and based on business characteristics.

The results of statistical analysis of 143 respondents illustrate the perception and implementation of green businesses. The measurement scale uses a five-point likert scale (1= strongly disagree to 5= strongly agree). As a result of data processing, the majority of indicators show mean in the high to very high category, which means that MSME actors have a positive perception of green business practices.

Table 1. Descriptive Statistics of Green Business Practice Perception

Indicators	N	Mean	Std.Dev.	Min.	Max.
Business Condition Assessment	118	4.51	0.82	1	5
Commitment to running an environmentally friendly business	141	4.67	0.73	1	5
Environmental Aspects in Decision Making	140	4.55	0.78	1	5
Balancing Profits and the environment	141	4.48	0.80	1	5
Willing to Change the Way of Production	142	4.48	0.86	1	5
Energy savings	143	4.32	0.78	1	5
Control of raw material usage	143	4.55	0.75	1	5
Production equipment maintenance	141	4.63	0.96	1	5
Increased work process efficiency	142	4.62	0.72	1	5
Waste is managed before disposal	142	4.28	0.82	1	5
Reduce the amount of waste	142	4.58	0.69	1	5
Separation of Recycled Waste	142	4.54	0.73	1	5
Avoiding environmental pollution	143	4.69	0.73	1	5
Use of environmentally friendly raw materials	141	4.51	0.81	1	5
Eco-friendly packaging design	142	4.57	1.01	1	5
Reduction of disposable	143	4.48	0.87	1	5
	139	4.22	0.73	1	5
	142	4.39	1.26	1	5
	139	4.51	0.78	1	5
		3.81	1.20	1	5
		4.58		1	
		3.68			

Table 1 presents the descriptive statistics of MSME actors’ perceptions regarding green business practices. The analysis includes the number of respondents (N), mean values, standard deviations, and minimum and maximum scores for each indicator. Overall, the findings indicate that MSME actors demonstrate relatively positive perceptions toward the implementation of environmentally friendly business practices, as reflected by the high mean scores across most indicators, which generally range above 4.00 on a five-point Likert scale.

The highest mean score was found in the indicator “Use of environmentally friendly raw materials” (Mean = 4.69; Std. Dev. = 0.69), indicating that respondents strongly agree that environmentally friendly materials are important in business operations. This result suggests that MSME actors increasingly recognize the importance of sustainable raw materials as part of environmentally responsible business practices. Similarly, the indicators “Commitment to running an environmentally friendly business” (Mean = 4.67; Std. Dev. = 0.73) and “Increased work process efficiency” (Mean = 4.63; Std. Dev. = 0.77) also recorded high mean values, showing that respondents possess strong

commitment toward sustainability and perceive efficiency improvement as an important component of green business implementation.

Several operational indicators also demonstrate positive perceptions among respondents. Indicators such as "Waste is managed before disposal" (Mean = 4.62; Std. Dev. = 0.75), "Balancing profits and the environment" (Mean = 4.58; Std. Dev. = 0.72), "Separation of recycled waste" (Mean = 4.58; Std. Dev. = 0.72), and "Willing to spend money on green practices" (Mean = 4.58; Std. Dev. = 0.78) indicate that MSME actors generally understand the importance of integrating environmental responsibility into their business operations. The relatively low standard deviation values for these indicators further suggest that respondents' perceptions are fairly consistent. Moreover, indicators related to strategic environmental orientation, such as "Environmental aspects in decision making" (Mean = 4.58; Std. Dev. = 0.72), "Compliance with environmental regulations" (Mean = 4.51; Std. Dev. = 0.73), and "Willing to change the way of production" (Mean = 4.55; Std. Dev. = 0.78), reveal that most MSME actors are aware of the necessity to align business decisions and production activities with environmental sustainability principles. These findings imply that sustainability considerations have begun to influence managerial and operational decision-making processes among MSMEs.

However, several indicators show comparatively lower mean scores. The indicator "Willing to spend money on green practices" (Mean = 3.68; Std. Dev. = 1.20) obtained one of the lowest scores, indicating that financial commitment remains a significant challenge for MSMEs in implementing green business practices. Likewise, "Interested in obtaining environmental certification" (Mean = 3.81; Std. Dev. = 1.26) demonstrates relatively moderate agreement, suggesting that respondents may still perceive environmental certification as costly, complex, or difficult to achieve. The higher standard deviation values in these indicators also indicate greater variation in respondents' perceptions, reflecting differing levels of readiness and capability among MSMEs regarding sustainability investment and formal environmental compliance. Additionally, the indicator "Environmental impact in product design" (Mean = 4.22; Std. Dev. = 1.01) recorded a lower mean compared to other operational indicators. This finding suggests that while MSMEs generally support environmentally friendly practices, integrating sustainability considerations into product development and design remains less optimal. This condition may be associated with limited technical knowledge, innovation capability, or financial resources among MSMEs.

Overall, the descriptive statistics indicate that MSME actors possess positive perceptions toward green business practices, particularly regarding operational efficiency, waste management, and environmental commitment. Nevertheless, challenges remain in areas requiring greater financial investment, formal environmental certification, and sustainability-oriented product innovation. These findings imply that although MSMEs demonstrate strong environmental awareness, institutional support, financial assistance, and sustainability training programs are still needed to strengthen MSMEs' readiness for comprehensive green business transformation and sustainable internationalization.

The results of this observation show that MSMEs have a very positive perception of green business practices, especially in the aspects of value commitment and environmental responsibility. The high average score on the pollution avoidance and sustainability commitment indicators, indicates that environmental awareness has become the business orientation of MSMEs. However, the difference in the mean value in the commitment dimension and the investment readiness dimension indicates a structural gap between attitude orientation and implementing capacity. Conceptually, these findings show that the transformation towards green businesses in MSMEs is no longer hindered by psychological factors of awareness, but rather by the aspects of limited resources, access to training and policy support.

Policy Implications

The descriptive findings indicate that MSME actors generally demonstrate positive perceptions toward green business practices, particularly in areas related to environmental commitment, operational efficiency, waste management, and environmentally friendly raw material usage. However, the relatively lower mean scores on indicators such as willingness to spend money on green practices and interest in obtaining environmental certification suggest that financial constraints, limited institutional support, and inadequate technical capacity remain major barriers to sustainability adoption. Based on these findings, several policy implications can be formulated to strengthen MSMEs' readiness for sustainable business transformation and international market integration. First, governments and development institutions need to strengthen financial support mechanisms for green MSMEs. The lower perception regarding willingness to invest in green practices indicates that many MSME actors still consider sustainability implementation financially burdensome. Therefore, policymakers should provide accessible green financing schemes, low-interest sustainability loans, tax incentives, and subsidies for environmentally friendly technologies and production systems. Financial assistance programs specifically targeted toward green transformation may reduce the perceived economic risks associated with sustainability adoption and encourage MSMEs to implement environmentally responsible business practices more confidently.

Second, sustainability training and environmental education programs should be expanded systematically. Although MSMEs demonstrate strong environmental commitment, the relatively lower perception regarding environmental impact in product design suggests limited technical understanding of sustainability-oriented innovation. Governments, universities, and business development agencies should therefore provide continuous training programs focusing on eco-friendly production systems, waste management, green product development, energy efficiency, and sustainable supply chain management. Such programs may improve MSMEs' knowledge and strategic capabilities in integrating sustainability into their business operations. Third, policymakers should simplify and facilitate environmental certification processes for MSMEs. The moderate level of interest in obtaining environmental certification indicates that certification systems may still be perceived as complex, expensive, and administratively difficult. Governments may therefore develop MSME-friendly certification systems by reducing administrative burdens, subsidizing certification costs, and providing technical mentoring throughout the certification process. Simplified environmental certification programs would improve MSMEs' ability to comply with international sustainability standards and increase their competitiveness within export markets and global value chains.

Fourth, stronger institutional support and stakeholder collaboration are necessary to accelerate green business adoption among MSMEs. Institutional theory suggests that organizational behavior is strongly influenced by regulatory systems, industry norms, and external pressures. Consequently, governments should strengthen sustainability-oriented regulations while simultaneously creating collaborative ecosystems involving universities, financial institutions, business associations, private corporations, and environmental organizations. Such collaboration may facilitate knowledge transfer, sustainability mentoring, technological assistance, and broader market access for green MSMEs.

Fifth, policies promoting green innovation and sustainable product development should become a strategic priority. Although respondents generally support environmentally friendly practices, sustainability integration into product design remains relatively limited. Policymakers should therefore encourage innovation through research grants, innovation competitions, technology incubation programs, and partnerships between MSMEs and academic institutions. Supporting green innovation may help MSMEs develop environmentally friendly products with higher market value and stronger international competitiveness. Sixth, public awareness campaigns and market-based sustainability incentives should be strengthened to reinforce positive perceptions toward green business practices. Consumers increasingly prefer environmentally responsible products, and this trend can be utilized to motivate MSMEs to adopt sustainability-oriented strategies. Governments and business institutions may therefore promote green consumption campaigns, eco-label awareness programs, and sustainable

procurement policies that prioritize environmentally friendly MSME products. Stronger market demand for sustainable products would increase MSMEs' motivation to invest in green transformation.

Finally, the findings imply that MSME sustainability policies should not focus solely on environmental compliance but also on long-term business competitiveness and internationalization readiness. Green business practices should be positioned as strategic instruments for enhancing operational efficiency, organizational resilience, export capability, and participation in global value chains. Therefore, MSME development policies need to integrate sustainability orientation into broader economic development strategies, ensuring that MSMEs are capable of competing in increasingly sustainability-sensitive global markets. Overall, the study suggests that successful green transformation among MSMEs requires an integrated policy approach combining financial support, institutional strengthening, sustainability education, innovation development, and market incentives. Through comprehensive policy interventions, MSMEs may become more prepared to implement sustainable business practices and achieve long-term competitiveness in the global economy

Based on the results of the descriptive analysis above, first, a more structured capacity-building policy is needed, such as training programs that are regular, integrated with the needs of the business sector, and practice-based to bridge the gap between perception and technical implementation. Second, the need for intervention in the form of green financing schemes with low interest, subsidies for those who successfully obtain environmentally friendly certificates, tax incentives, and co-financing programs to encourage MSMEs to invest in environmentally friendly technology and production processes. Third, improving facilities that can be accessed by MSME actors to obtain green certification as a means of strengthening the market. Finally, policies can be directed at improving quality and standardization of operations in order to increase the competitiveness of MSMEs in the sustainable value chain.

Theoretical Synthesis

The findings of this study show a gap between normative orientation and structural capacity. Theoretically, this condition can be explained through several conceptual approaches. In theory, planned behavior behavior is influenced by attitudes, subjective norms, and perceived behavioral control. The data shows that attitudes and norms towards green practices are at a very high level, but perceived behavioral control is still relatively low. Which means that the obstacle lies not in the will but in the ability.

From the perspective of institutional theory, organizations tend to adopt practices that are considered legal and in accordance with normative pressures in their social environment. The high commitment of MSMEs to green business practices can be understood as a response to increasingly strong normative and regulatory pressures related to sustainability issues. However, without the support of resources and incentive mechanisms, green business practices will only be symbolic.

Meanwhile, in the perspective of the Resource based view, sustainable competitive advantage requires resources that are valuable, scarce, difficult to replicate and unmatched. Green business practices can be a source of competitive advantage, but their implementation is highly dependent on the availability of financial and managerial capabilities. The variation in high standard deviations in training and investment indicators shows the heterogeneity of capacity between MSMEs, which has implications for differences in the level of readiness towards green transformation.

CONCLUSION

Overall, the descriptive analysis shows that the perception of MSMEs towards green business practices is at a very high level, especially in terms of commitment and operational implementation. However, investment readiness and capacity support are still obstacle factors. Thus, the strategy of strengthening MSMEs towards green businesses needs to be focused on strengthening financial capacity, access to training, and certification facilities so that an already strong sustainability orientation can be realized. Recommendations for future research, the first of which could use longitudinal design to observe the development of readiness and implementation of green business practices over time.

Second, a theory-based causal model is needed, for example by integrating attitude constructs, subjective norms, perceived behavioral factors, and resource capabilities in one structural model. Third, integrating contextual variables such as regulatory pressures, green financing support, export market access, and involvement in global value chains.

Empirical Contributions

Empirically, this research has three main contributions:

1. The descriptive results show that MSMEs are no longer at the awareness stage, but have entered the stage of strong normative readiness for green business practices
2. This study identifies a gap between value commitment and structural readiness which is a crucial point in policy formulation
3. These findings strengthen the argument that the transition to a green economy in the MSME sector requires an enabling rather than persuasive policy approach

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