

Original Research Article

Assessing the influence of proactiveness, environmental sustainable innovation, and entrepreneurial behaviors on SMEs performance in Surigao Del Sur

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Abstract: This study examines the influence of proactiveness, environmental sustainable innovation, and entrepreneurial marketing behaviors on the performance of small and medium enterprises (SMEs) in Surigao del Sur. Grounded in a behavioral and applied entrepreneurship perspective, the research conceptualizes entrepreneurial marketing as a set of observable behaviors reflecting entrepreneurs' cognitive, motivational, and decision-making orientations in dynamic and resource-constrained environments. A quantitative, descriptive-correlational research design was employed, drawing data from 250 SME owners and managers across multiple industries in the province. Entrepreneurial behaviors were measured in terms of proactiveness, sustainability-oriented innovativeness, and risk-taking orientation, while SME performance was assessed using multidimensional indicators including profitability, efficiency, reputation, and the attainment of owners' personal business goals. Descriptive statistics and Pearson correlation analysis were used to examine behavioral patterns and relational effects. Results indicate that SMEs demonstrate high levels of proactiveness and environmental sustainable innovation, alongside a moderately strong but cautious risk-taking orientation. Performance indicators reveal generally high satisfaction with financial outcomes and personal goal achievement among SME owners. Correlational analysis shows a statistically significant positive association between entrepreneurial marketing behaviors and SME performance, suggesting that behavior-driven and sustainability-oriented entrepreneurial practices are closely linked to favorable business outcomes. The findings highlight that SME performance in Surigao del Sur is shaped not merely by structural or economic factors but by proactive, innovative, and environmentally responsive entrepreneurial behavior. This study contributes empirical evidence to the entrepreneurial marketing literature by contextualizing SME performance as a behavioral outcome rooted in sustainability-oriented entrepreneurial action within a localized Philippine setting.

Keywords: influence; proactiveness; environmental sustainable innovation; entrepreneurial behaviors; SMEs performance

1. Introduction

Small and medium-sized enterprises (SMEs) constitute a cornerstone of economic development, particularly in developing economies where they generate employment, stimulate innovation, and contribute significantly to productivity and income distribution (KC, 2024; Zhao, 2024). Beyond their macroeconomic contribution, SMEs play a critical role in sustaining local economies by responding swiftly to market changes and consumer demands. In provinces such as Surigao del Sur, where economic activities are shaped by emerging markets and localized business environments, SMEs serve as vital engines of inclusive growth. However, their performance is often constrained by limited financial resources, weak market power, and exposure to environmental uncertainty, highlighting the need for adaptive and behavior-oriented approaches to business development. Sustainability-oriented business practices often emerge through compliance-driven and value-based innovations adopted by SMEs, reflecting behavioral adaptation to environmental, ethical, and regulatory expectations (Chavez & Vicente, 2024).

Entrepreneurial marketing has emerged as a strategic and behavior-driven approach that integrates entrepreneurial thinking with market-oriented actions suited to the operational realities of SMEs.

Unlike traditional marketing practices that rely heavily on formal planning and substantial resources, entrepreneurial marketing emphasizes behavioral dimensions such as proactiveness, opportunity focus, innovativeness, customer intensity, risk-taking orientation, resource leveraging, and value creation (Hasanah & Jannah, 2024). These behaviors allow SMEs to recognize and exploit opportunities, respond proactively to competitive pressures, and create differentiated value for customers. Empirical studies consistently report a positive association between entrepreneurial marketing behaviors and SME performance, particularly in enhancing competitiveness, adaptability, and long-term sustainability across sectors (Chidume & Nenbee, 2022).

Entrepreneurial marketing behaviors represent observable manifestations of underlying cognitive, motivational, and attitudinal processes that shape decision-making and action among SME owners and managers. Entrepreneurial orientation at the individual level have advanced the construct into academic debates across various areas, including strategic management, leadership, organizational behavior, entrepreneurial education, and entrepreneurial process (Covin et al., 2020; Keil et al., 2017;). These tendencies influence how entrepreneurs interpret environmental cues, regulate uncertainty, and translate intentions into strategic actions. Understanding entrepreneurial marketing through a behavioral lens allows the examination of SMEs not merely as economic entities but as outcomes of human cognition and behavior operating within complex social and market environments. Entrepreneurial behaviors such as customer intensity and value creation involve social cognition, empathy, and relationship-oriented behavior, which shape how entrepreneurs perceive customer needs and build trust-based exchanges. Framing entrepreneurial marketing behaviors as psychological mechanisms, this study positions SME performance as a consequence of behavioral patterns driven by individual and collective psychological processes rather than solely structural or economic conditions (Tetteh et al., 2025).

Proactiveness and environmental sustainable innovation are increasingly recognized as critical behavioral drivers of SME performance, particularly in environments characterized by uncertainty and resource constraints. Proactive entrepreneurs do not merely respond to environmental changes but anticipate shifts in market demand, regulatory expectations, and ecological pressures (Tyler et al., 2023). This anticipatory behavior enables SMEs to adopt environmentally sustainable innovations that align business objectives with responsible resource use and long-term viability. Sustainable innovation in SMEs often emerges from daily entrepreneurial practices, such as modifying processes to reduce waste, improving energy efficiency, and designing products that respond to environmentally conscious consumers (Sivaiah & Vinodsn, 2025). These actions reflect not only strategic intent but also behavioral adaptation shaped by continuous interaction with the business environment. Proactiveness supports early recognition of sustainability-related opportunities, allowing SMEs to transform environmental challenges into sources of competitive advantage (Tyler et al., 2024). In this sense, environmental sustainable innovation becomes a behaviorally driven outcome rather than a purely technological or policy-driven initiative. Entrepreneurs who act proactively are more likely to integrate sustainability into their operational and marketing decisions. Such integration strengthens organizational resilience and supports sustained performance under changing environmental conditions. Consequently, SME performance is closely linked to how proactively entrepreneurs embed sustainable innovation within their business practices.

Entrepreneurial behaviors operate within social and environmental systems where teamwork, networks, and customer relationships significantly influence decision-making and performance outcomes. Environmental conditions shape how entrepreneurs interpret risk, allocate resources, and prioritize sustainable actions within their firms (Bu, 2023). Through collaboration with employees, suppliers, and community stakeholders, entrepreneurs gain access to knowledge and resources that support environmentally responsible innovation. Customer relationships further influence entrepreneurial behavior by signaling preferences for ethical, sustainable, and value-driven products and services. These interactions guide entrepreneurs in refining offerings that balance economic performance with environmental responsibility. Risk-taking, when informed by environmental understanding, supports experimentation with sustainable practices while managing uncertainty (Jan et al., 2023). Collectively, these behaviors demonstrate how SME performance emerges from the interaction between entrepreneurial action and environmental context.

The effectiveness of SMEs is influenced by the interaction of internal capabilities and external

environmental forces. Internally, SMEs depend on entrepreneurial competencies, managerial creativity, and the efficient utilization of limited resources to achieve performance objectives (Rodrigues et al., 2021). SMEs account for a significant portion of total business activity and employment. For instance, in developing countries, SMEs contribute up to 60% of total employment and up to 40% of GDP (Amoah et al. 2022). Within such conditions, adaptive and opportunity-focused behaviors become essential for sustaining performance and maintaining relevance in dynamic markets. Value-driven behaviors support improved firm reputation, customer satisfaction, and sustainable growth, particularly when resources are limited. Empirical evidence confirms that value creation serves as a key mechanism through which entrepreneurial marketing behaviors translate into superior performance outcomes among SMEs (Servera-Francés et al., 2020).

Despite growing recognition of entrepreneurial marketing behaviors as drivers of SME performance, empirical evidence remains limited at the provincial level, particularly within localized economic contexts such as Surigao del Sur. Much of the existing literature adopts national or cross-country perspectives, which may overlook the unique psychological, behavioral, and contextual dynamics of SME owners operating in specific regions. Addressing this gap, the present study examines the relationship between entrepreneurial marketing behaviors namely proactiveness, opportunity focus, risk-taking orientation, innovativeness, customer intensity, resource leveraging, and value creation and SME performance measured in terms of efficiency, growth, profitability, reputation, and the owner's personal life goals.

2. Literature review

2.1. Entrepreneurial marketing

Entrepreneurial marketing has been widely recognized as a key driver of small and medium enterprise success. Beyond its strategic and managerial function, entrepreneurial marketing may also be understood as a behavior-driven construct rooted in psychological processes such as entrepreneurial cognition, motivation, and adaptive decision-making. When entrepreneurial marketing is aligned with market orientation, SMEs demonstrate enhanced capacity to cope with uncertainty, complexity, and environmental change. This adaptive capacity reflects how entrepreneurs perceive opportunities, process market information, and regulate behavior under pressure. Empirical evidence suggests that firms exhibiting entrepreneurial attributes perform better in e-marketing contexts, indicating a strong link between entrepreneurial mindset, behavioral capability, and marketing outcomes (Adinata et al., 2023). These findings support the view that entrepreneurship enhances innovation and social capital through behavioral mechanisms such as creativity, relational orientation, and learning, which subsequently improve marketing effectiveness (Zaini & Poernamawati, 2023).

Entrepreneurial competency and mindset characterized by awareness, creativity, and innovation have also been shown to influence SME performance outcomes including sales growth, market share, and employment growth (Yahaya & Nadarajah, 2023). From a psychological standpoint, these competencies reflect individual differences in cognitive flexibility, problem-solving orientation, and motivational persistence, which enable entrepreneurs to respond effectively to environmental uncertainty. When entrepreneurial marketing behaviors are enacted consistently, they function as observable behavioral expressions of entrepreneurial intent, translating psychological tendencies into measurable performance outcomes (Gieure et al., 2020).

2.2. SME performance

SME performance is influenced not only by structural and institutional factors such as government support, resource management, and financial literacy but also by the behavioral and psychological capabilities of business owners. Financial literacy, for instance, enhances performance by strengthening cognitive skills related to risk evaluation, decision-making, and financial judgment (Amoah & Mungai, 2020; Barno et al., 2021). Effective resource management similarly reflects psychological attributes such as planning ability, self-regulation, and strategic thinking (Cahyono et al., 2023; Oktasavira & Ismanto, 2022). Economically, SMEs contribute to value-added and employment by 40-88% and 35-71% with the average of 51.8% and 67%, respectively (Di Bella et al., 2022). The existence of SMEs boosts the international

market entry by export and trade (Haddoud et al., 2021). SMEs have also contributed to the production processes of large companies by supporting the connection of supply of goods and services that is crucial for the overall functioning of the economy in developed countries (Tassabehji et al., 2019). Importantly, SME performance is increasingly conceptualized as a multidimensional outcome that includes both objective and subjective indicators, such as efficiency, growth, profitability, reputation, and the personal goal attainment of business owners. These dimensions reflect not only organizational success but also the psychological satisfaction, self-efficacy, and perceived achievement of entrepreneurs. Examining SME performance through a behavioral and psychological lens therefore provides a more holistic understanding of how entrepreneurial actions and internal dispositions contribute to sustained success.

2.3. Proactiveness

Proactiveness is a central entrepreneurial behavior that reflects an entrepreneur's tendency to anticipate future conditions, initiate strategic action, and actively shape the business environment rather than merely respond to external pressures. In the context of SMEs, proactive behavior enables entrepreneurs to recognize emerging trends, environmental challenges, and sustainability-related expectations that influence market dynamics. Proactiveness is grounded in future-oriented cognition, intrinsic motivation, and self-directed behavior, which guide how entrepreneurs interpret environmental cues and translate them into purposeful action. Entrepreneurs who exhibit proactive tendencies are more likely to identify sustainability-driven opportunities and integrate them into business strategies before such practices become industry norms (Dellyana et al., 2024). This anticipatory orientation allows SMEs to align operations with environmental regulations, ecological constraints, and evolving customer preferences. Proactiveness also influences how entrepreneurs manage uncertainty by framing environmental change as an opportunity rather than a threat (York & Venkataraman, 2013). Empirical studies suggest that proactive behavior enhances SME performance by improving responsiveness, innovation readiness, and strategic adaptability (Hanaysha & Al-Shaikh, 2022a).

Proactive entrepreneurs are better positioned to initiate environmentally responsible practices that contribute to long-term performance and resilience. In this sense, proactiveness serves as a behavioral bridge between environmental awareness and entrepreneurial action. The effectiveness of proactive behavior is particularly evident in dynamic and resource-constrained environments where SMEs must continuously adjust to external pressures. Environmental uncertainty further reinforces the importance of proactive decision-making in sustaining competitiveness (Ahmed et al., 2021). Proactiveness thus supports the alignment of entrepreneurial intent with environmentally informed strategic choices. As a result, SME performance outcomes are shaped not only by market conditions but also by the proactive behavioral orientation of entrepreneurs. Entrepreneurs who actively engage with customers are more likely to proactively adapt offerings and processes to align with sustainability values. Social norms within business networks also encourage proactive adoption of environmentally sustainable innovations. These relational influences strengthen entrepreneurs' confidence in initiating change despite uncertainty. Consequently, proactive behavior reflects both individual agency and socially informed decision-making. When entrepreneurs engage proactively within their social and environmental context, SMEs are better positioned to achieve sustainable performance outcomes. Proactiveness thus emerges as a dynamic behavioral capability shaped by continuous interaction between entrepreneurs, their networks, and the environment.

2.4. Risk taking

In environmentally dynamic , risk-taking increasingly involves decisions related to the adoption of sustainable and environmentally responsible innovations. Entrepreneurs face uncertainty when investing in eco-friendly technologies, sustainable materials, or green marketing practices due to unclear short-term financial returns (Lee et al., 2021). Environmental regulations, ecological risks, and market volatility shape how entrepreneurs perceive and evaluate these risks. Environmental awareness influences risk perception by reframing sustainability-related risks as long-term strategic investments rather than immediate costs (Suhatmi et al., 2024). Social interactions with customers, suppliers, and business networks further moderate risk-taking behavior by providing information, reassurance, and normative support for sustainable practices. Entrepreneurs embedded in strong social networks are more likely to

engage in calculated sustainability-related risk-taking. Customer demand for environmentally responsible products also encourages entrepreneurs to accept higher levels of uncertainty in pursuit of sustainable value creation (Criado-Gomis et al., 2020). Entrepreneurs learn to balance economic objectives with environmental responsibility through experience and feedback. As a result, risk-taking contributes to SME performance by enabling innovation that aligns with environmental and social expectations. The ability to tolerate uncertainty becomes critical in sustaining environmentally oriented entrepreneurial action. Risk-taking therefore serves a supportive role in linking entrepreneurial behavior with sustainable performance outcomes.

Findings from Algeria demonstrate that risk-taking activities explain a meaningful proportion of performance variation among micro-enterprises, highlighting their positive role in growth and sustainability (Messiah, 2022). Risk-taking has also been conceptualized as comprising opportunity spotting and opportunity grabbing, both of which rely on cognitive evaluation and behavioral commitment to uncertain actions (Guo & Jiang, 2020). These psychological processes enable entrepreneurs to move beyond risk avoidance and instead engage in calculated experimentation. Within entrepreneurial marketing, calculated risk-taking allows SMEs to pursue innovation and opportunity exploitation while managing potential exposure. A balanced risk-taking behavior enhances performance when guided by customer insights and market intelligence, reinforcing its role as a performance-enhancing behavioral orientation. From a behavioral psychology standpoint, effective risk-taking reflects adaptive judgment rather than impulsivity, contributing to sustained entrepreneurial action and firm performance.

2.5. Environmental sustainable innovation

Environmental sustainable innovation extends traditional concepts of innovativeness by integrating ecological responsibility into entrepreneurial and marketing practices. Rather than focusing solely on novelty or efficiency, sustainable innovation emphasizes minimizing environmental impact while maintaining competitiveness. Entrepreneurs' perceptions of environmental challenges and opportunities shape how innovation efforts are directed toward sustainable outcomes (Paiba et al., 2024). Sustainable innovation reflects underlying values, beliefs, and cognitive orientations toward environmental stewardship. Customers increasingly act as drivers of sustainable innovation by expressing preferences for ethical and environmentally friendly products. Feedback from customers and communities helps entrepreneurs refine sustainable offerings and marketing strategies. Team collaboration also supports sustainable innovation by facilitating shared learning and collective problem-solving. Sustainable innovation is therefore both a behavioral and socially embedded process. Entrepreneurs rely on cognitive flexibility and learning to integrate sustainability into innovation decisions. These innovations enhance SME performance by strengthening legitimacy, reputation, and long-term viability. Environmental sustainable innovation thus represents a critical pathway through which entrepreneurial behaviors translate into sustained performance within environmentally sensitive contexts (Javed et al., 2026).

Innovation is a critical driver of SME and MSME performance, encompassing advancements in products, processes, and marketing practices. Such innovations provide firms with competitive advantage and enable market expansion. Product, process, and marketing innovations are particularly important in meeting customer expectations and improving customer satisfaction (L et al., 2022). A substantial proportion of SME performance improvement is attributable to creativity and innovation, underscoring the behavioral contribution of innovative thinking to organizational success (Amin, 2021). Innovativeness is also closely linked to entrepreneurial orientation and dynamic capabilities, which enhance firms' ability to sense, seize, and transform opportunities (Octasyuva et al., 2022). These capabilities reflect psychological readiness to learn and adapt under uncertainty. Innovation further extends to digital platforms, where innovative marketing behaviors enhance brand image and customer engagement through interactive and customer-oriented strategies (Ghobadi Saki et al., 2023). In entrepreneurial marketing, innovativeness reflects continuous behavioral adaptation rather than isolated creative acts. Suherlan and Okombo (2023) supports the view that innovative marketing behaviors contribute to improved competitiveness, operational efficiency, and long-term performance, particularly in environments characterized by rapid technological change and digitalization.

3. Methodology

Survey participants were owners or managers of SMEs from a variety of industries in Surigao del Sur. These participants were selected because they were actively involved in the day-to-day operational management of their businesses while also participating in long-term strategic decision-making processes. Such dual involvement allowed them to provide informed perspectives on entrepreneurial behaviors, marketing practices, and performance outcomes within their business environments. In addition, their roles positioned them to assess how environmental conditions, market dynamics, and sustainability-related considerations influence entrepreneurial decision-making and firm performance. The sample was purposively selected to ensure that participants possessed the competencies, dispositions, and managerial experience necessary to provide valid, reliable, and meaningful responses relevant to the study objectives. This sampling approach was appropriate given the study's focus on behaviorally driven entrepreneurial practices within specific environmental and social contexts.

The intent of the survey was to determine the relationships between key entrepreneurial marketing behaviors specifically proactiveness, creativity, risk-taking, and customer orientation and the performance indicators of SMEs. These behavioral dimensions were examined as manifestations of entrepreneurs' strategic responses to market uncertainty, environmental conditions, and evolving customer expectations. The survey instrument employed Likert-scale items to capture respondents' perceptions of marketing strategies, behavioral practices, and business performance outcomes. These items were designed to reflect how entrepreneurial actions, including environmentally informed and sustainability-oriented practices, are associated with firm performance. SME performance was measured using multiple indicators to capture both objective outcomes and subjective evaluations of business success. This approach allowed for a more comprehensive assessment of performance within environmentally and socially embedded business settings.

The collected data were analyzed using a combination of descriptive and correlational statistical techniques. Descriptive statistics, including mean, standard deviation, frequency, and percentage distributions, were used to summarize respondents' profiles and characterize patterns in entrepreneurial behaviors and SME performance. Pearson correlation coefficients were employed to examine the strength and direction of relationships between entrepreneurial marketing behaviors and performance indicators. This analytical approach enabled the researchers to assess how proactive behavior, risk-taking, creativity, and customer orientation relate to SME performance within the context of environmental uncertainty and sustainability-related considerations. Focusing on relational analysis, the methodology supports an understanding of SME performance as an outcome of interaction between entrepreneurial behavior and environmental context. The methodological design therefore aligns with the study's objective of examining behaviorally and environmentally grounded influences on SME performance.

4. Results

The profile of the businessmen is shown in **Table 1**. This profile includes business nature, number of years in operation, and business ownership.

The data shows that the majority of the firms polled are in the Wholesale and Retail Trade category, accounting for 47% of the overall sample. This dominance shows that the wholesale and retail sector is important to the local economy, maybe due to customer demand and accessibility. On the other side, the Real Estate Industry and Education, Culture, Sports, and Entertainment sectors had no representation (0%), suggesting a lack of existence or limited involvement of SMEs in these areas within the examined region. Furthermore, enterprises with 1-5 years of existence account for the highest percentage, at 32%. This reflects a reasonably youthful and vibrant business climate, with many businesses still in the early phases of growth.

Notably, 0% of enterprises had been in existence for 21 years or more, indicating either a younger market or possible difficulties in maintaining long-term operations. Finally, the results suggest that single ownership/proprietorship is the most frequent form of firm ownership, accounting for 49% of all respondents. This implies a large presence of sole proprietorships, which are frequently more adaptable and easier to start. In contrast, 0% of respondents selected "Others" as an ownership type category, indicating that the firms polled use more traditional forms of ownership.

Table 1. The business profile of the respondents.

Indicators	Frequency	Percent (%)	Rank
Nature of Business			
Wholesale and retail trade	118	47%	1
Accommodation and food Services	15	6%	5
Manufacturing Industry	9	4%	7
Construction and Repair Industry	17	7%	6
Transportation and Storage Industry	8	3%	8
Information and communication Industry	19	8%	4
Financial Industry	37	15%	2
Mining Industry	2	1%	9
Real Estate Industry	0	0%	10.5
Leasing and Business Services	25	10%	3
Education, Culture, Sports and Entertainment	0	0%	10.5
Total	250	100%	
Number of Years in Operation			
1 – 5 years	81	32%	1
6 – 10 years	68	27%	2
11 – 15 years	55	22%	3
16 – 20 years	46	18%	4
21 years and above	0	0%	5
Total	250	100%	
Business Ownership			
Single Ownership/Proprietorship	122	49%	1
Partnership	36	14%	3
Incorporated	64	26%	2
Cooperative	26	10%	4
Others, please specify	0	0%	6
Prefer Not to Say	2	1%	5
Total	250	100%	

Table 2. Proactiveness.

Indicators	Weighted Mean	Verbal Description
1.I constantly look for new environmentally sustainable ways to improve my company's operations.	4.71	Strongly Agree
2.I am always searching for greener and more efficient approaches to accomplish tasks in my company.	4.74	Strongly Agree
3.I excel at identifying sustainability-driven opportunities that can enhance my company's competitiveness.	4.54	Strongly Agree
4.I am great at turning environmental challenges in my company into opportunities for sustainable innovation.	4.40	Strongly Agree
5.I prefer taking action early to adopt eco-friendly practices rather than waiting for environmental problems to arise.	4.56	Strongly Agree
6.Nothing is more exciting in my company than seeing my sustainable ideas and eco-innovations implemented successfully.	4.37	Strongly Agree
<i>Grand Mean</i>	4.55	Strongly Agree

The results in **Table 2** demonstrate that SMEs in Surigao del Sur show a strong level of proactiveness, particularly in seeking and adopting environmentally sustainable innovations within their business operations. Respondents strongly agree that improving processes through greener, more efficient approaches is a priority, indicating a behavioral shift toward sustainability-driven opportunities. The highest-rated statement, "I am always searching for greener and more efficient approaches to accomplish tasks," highlights how SMEs increasingly integrate environmental considerations into routine decision-

making. This aligns with the literature emphasizing that sustainability-oriented innovation strengthens long-term competitiveness and resilience (Suominen & Pihlajamaa, 2022).

Entrepreneurs also indicated a strong ability to convert environmental challenges such as waste, inefficiency, or resource constraints into opportunities for sustainable improvement. This behavior reflects the role of proactiveness in fostering eco-innovation, as supported by Schulze and Pinkow (2020), who emphasize that leaders who create "adaptive spaces" encourage innovation that contributes to environmental responsibility. The proactive anticipation of environmental issues suggests that entrepreneurs do not merely comply with sustainability demands but initiate early actions that reduce ecological risks and operational inefficiencies. The grand mean of 4.55 affirms that SMEs are forward-thinking in integrating sustainability into daily business practices. Such proactive environmental behavior is consistent with recent academic perspectives that highlight the increasing importance of environmental sustainable innovation as a driver of competitiveness and SME resilience. Integrating sustainability into entrepreneurial behavior enables firms to address market expectations, regulatory pressures, and ecological concerns simultaneously, making proactiveness a key behavioral catalyst for environmentally aligned performance improvements.

Table 3. Risk-taking orientation.

Indicators	Weighted Mean	Verbal Description
1. My management approach looks beyond current customers and markets to explore environmentally sustainable opportunities for our company.	4.19	Agree
2. I am good at recognizing and pursuing sustainability-oriented opportunities that can benefit my company.	4.28	Strongly Agree
3. I would characterize my company as opportunity driven.	4.09	Agree
<i>Grand Mean</i>	<i>4.19</i>	Agree

The findings in **Table 3** indicate that SMEs in Surigao del Sur demonstrate a moderate to high level of risk-taking orientation, particularly when it involves exploring opportunities linked to environmentally sustainable innovation. While respondents express confidence in identifying sustainability-oriented opportunities (with a weighted mean of 4.28), the willingness to fully pursue or invest in such innovations remains more cautious, as reflected in the lower mean ratings on being opportunity-driven toward sustainability.

The highest-rated indicator "I am good at recognizing and pursuing sustainability-oriented opportunities that can benefit my company" suggests that entrepreneurs possess awareness and cognitive readiness to engage in environmentally aligned decisions. This supports Messikh (2022), who found that risk-taking contributes meaningfully to micro-enterprise performance, especially when aligned with strategic opportunity recognition. Similarly, Guo and Jiang (2020) explain that recognizing and acting on opportunities involves cognitive evaluation and behavioral commitment, both of which are essential in advancing sustainable innovation in SMEs. However, the overall grand mean of 4.19 ("Agree") indicates that risk-taking remains measured rather than aggressive. SMEs appear willing to embrace sustainable innovation but prefer to minimize exposure to financial uncertainties commonly associated with eco-friendly technologies, green materials, and environmentally compliant processes. This aligns with literature that views sustainable risk-taking as calculated and strategic rather than impulsive, particularly in resource-constrained contexts where environmental investments may have longer payback periods.

From a behavioral perspective, environmental awareness influences how entrepreneurs interpret and evaluate risks. When sustainability is viewed as a long-term strategic investment rather than an immediate cost entrepreneurs are more inclined to initiate eco-innovative actions. Social interactions with customers and networks further strengthen sustainability-oriented risk-taking, as market preferences shift toward ethical, green, and responsible products. As Guo and Jiang (2020) emphasize, such external validation supports entrepreneurs in making bolder decisions. Furthermore, the results position sustainability-oriented risk-taking as a critical behavioral mechanism that enables SMEs to experiment with eco-friendly innovations, enhance competitiveness, and contribute to long-term performance improvements. The interplay of environmental awareness, social norms, and strategic judgment shapes how SMEs adopt sustainable practices, reinforcing the behavioral foundation of the study's framework.

Table 4. Environment sustainability & innovativeness.

Indicators	Weighted Mean	Verbal Description
1.My company uses innovative and eco-friendly approaches when it helps improve efficiency.	4.45	Strongly Agree
2.Being innovative in adopting environmentally sustainable practices gives my company a competitive advantage.	4.43	Strongly Agree
3.My company is more environmentally innovative than most of my competitors	4.22	Strongly Agree
4.I create an atmosphere that encourages creativity, sustainability, and environmentally responsible innovativeness.	4.32	Strongly Agree
<i>Grand Mean</i>	4.36	Strongly Agree

Table 4 displays the data on innovativeness. All indicators are in the "Strongly Agree" category, indicating a common view in the importance of innovation as a key driver of company success, particularly when it involves environmentally sustainable practices. The most highly scored indication is "My company tries to use innovative approaches if it will help them get the job done more efficiently," with a weighted mean of 4.45. This indicates that respondents prioritize the practical use of new and eco-friendly ways to improve operational efficiency, seeing innovation as a crucial facilitator of productivity, sustainability, and effectiveness in their business processes.

The lowest-rated indicator is "My company tends to be more innovative than most of my competitors," with a weighted mean of 4.22. Despite being the lowest, this score demonstrates a significant conviction in their firms' relative innovativeness in comparison to others in the market, suggesting that respondents view their enterprises as competitive and forward-thinking in adopting sustainable and environmentally responsible innovations. The grand mean of 4.36 underscores the general focus on innovativeness, implying that respondents regard environmentally sustainable innovation as a competitive advantage and a key value inside their company. This is backed by Delhi's (2024) results, which show that innovation has a direct influence on corporate management and strategy, resulting in long-term competitive advantages. This commitment to innovation likely drives continuous improvement, sustainability-focused adaptations, and strategic responsiveness, enabling companies to stay ahead in a rapidly changing business environment.

Table 5. Profitability.

Indicators	Weighted Mean	Verbal Description
1.My firm is usually satisfied with return on sales.	4.26	Strongly Agree
2.My firm is usually satisfied with gross profit margins	4.18	Agree
3.My firm is usually satisfied with net profit margins	4.17	Agree
<i>Grand Mean</i>	4.20	Strongly Agree

Table 5 reveals that the firm's financial performance indicators show a generally high level of satisfaction, as reflected by the grand mean of 4.20, which indicates "Strongly Agree." The highest rating is for satisfaction with return on sales, with a weighted mean of 4.26 described as strongly agree, implying that the firm is particularly pleased with the returns generated from its sales activities, most likely due to effective sales strategies and pricing practices. The lowest grade, "Agree" (4.17), is for satisfaction with net profit margins. This small difference indicates that, while the company is satisfied with its overall profitability, there may be room for improvement in cost management or operational efficiency to raise net profit margins.

Table 6. Owner's personal goal.

Indicators	Weighted Mean	Verbal Description
1.I'm satisfied with my personal financial situation	4.24	Strongly Agree
2.My status in society is improved	4.23	Strongly Agree
3.My standard of living is improved	4.25	Strongly Agree
4.I have achieved all my startup goals create an atmosphere that encourages creativity, sustainability, and environmentally responsible innovativeness.	4.15	Agree
<i>Grand Mean</i>	4.22	Strongly Agree

Table 6 displays statistics on the owner's personal objectives, which reflect a high degree of satisfaction with many elements of personal success and financial well-being. The indicators show respondents' overall favorable self-assessment, with the majority of measures falling into the "Strongly Agree" group. The highest-rated indicator is "My standard of living has improved," which has a weighted mean of 4.25. This score indicates that respondents are quite optimistic about improving their standard of life, reflecting a

high degree of personal satisfaction in this area. The lowest-rated indicator, despite being highly rated, is "I have achieved all my startup goals," with a weighted mean of 4.15 and a verbal description of "Agree." This indicates that, while respondents generally believe they have made significant progress toward their startup goals, there is a slight gap in fully achieving them when compared to other personal and financial improvements. The grand mean of 4.22 indicates a good overall agreement with personal goal fulfillment, showing a favorable outlook on economic position, societal status, and standard of life increases.

5. Discussion

The analysis of entrepreneurial marketing behavior dimensions shows that SMEs in Surigao del Sur consistently demonstrate strong levels of proactiveness, environmental sustainable innovation, and risk-taking orientation. These dimensions reflect not only strategic tendencies but also psychological and behavioral orientations that influence how entrepreneurs perceive their market environment and regulate decision-making. Entrepreneurial marketing behaviors are enacted through observable communicative and persuasive actions that reflect underlying cognitive and motivational processes (Gossel, 2022). The high ratings across the tables indicate that SME owners actively anticipate market conditions, respond to challenges through creative problem-solving, and adopt sustainability-driven practices that align operational decisions with environmental expectations.

Proactiveness is strongly evident in the way SMEs seek opportunities and take early action to address business needs. Respondents consistently expressed agreement that anticipating changes and acting ahead of competitors forms a key component of their approach. This aligns with applied behavioral interpretations of entrepreneurial decision-making, where anticipation of opportunities and early action are rooted in cognitive alertness and adaptive thinking. Environmental factors also influence these behaviors, as entrepreneurs working in resource-constrained or ecologically sensitive contexts adjust their strategies to minimize waste, optimize efficiency, and ensure long-term viability. The environmental pressures surrounding SMEs encourage proactive planning and the integration of sustainable practices that reduce risk exposure and enhance operational performance. (Iqbal et al., 2025). Social networks and customer relationships also exert strong influence on entrepreneurial decision-making and business performance by providing information, support, and market insights. Entrepreneurs rely on social networks to gather intelligence about market trends, supplier conditions, and competitive behavior, enabling more informed strategic decisions. Zhu et al. (2024) highlight that opportunity recognition and action are shaped by social interactions that supply entrepreneurs with cues, validation, and resources. These network connections help reduce uncertainty in decision-making by offering guidance, mentorship, or collaborative opportunities that strengthen business stability.

Customer relationships further shape decision-making by providing continuous feedback on needs, expectations, and product performance, supporting adaptive strategies aligned with market demands. Additionally, customer-driven communication and branding behaviors reinforce perceived value and strengthen business reputation. These relational dynamics also encourage sustainable innovation when consumers express preferences for environmentally responsible products or services, prompting entrepreneurs to modify processes or offerings accordingly. Trust-based customer engagement enhances performance outcomes by stabilizing revenue and increasing loyalty. Through the combined influence of social networks and customer relationships, SMEs strengthen decision quality, adapt more effectively, and achieve higher performance across efficiency, reputation, and growth metrics. Environmental sustainable innovation also received strong approval in the results, emphasizing that SMEs are increasingly adopting environmentally conscious approaches in improving efficiency and maintaining competitiveness. Respondents reported that innovation becomes meaningful when it contributes to sustainability, efficiency, and differentiation. This aligns with Delhi's (2024) assertion that innovation supports strategic performance and long-term competitive advantage. Such innovation is not limited to technology but includes process improvements, resource conservation, adaptation to customer preferences, and the redesign of workflows to reduce environmental impact. These behaviors indicate a growing awareness that sustainability is not an external obligation but an internal strategic driver that strengthens resilience and market positioning.

Environmental factors shows an influential role across these behavioral dimensions. Market fluctuations,

ecological vulnerabilities, and resource constraints shape how entrepreneurs interpret information and determine appropriate strategies. When external pressures intensify, entrepreneurs adapt through proactive planning, sustainable innovation, and careful risk assessment. Social and organizational environments also shape these behaviors. Teamwork within SME structures supports coordinated decision-making and strengthens the implementation of innovative and sustainable practices. Social networks and community relationships expand access to information, resources, and support mechanisms that reduce uncertainty and strengthen strategic choices. The SME performance indicators confirm positive outcomes in efficiency, growth, profitability, reputation, and the fulfillment of owners' business goals. When interpreted alongside entrepreneurial marketing behaviors, the results show that SMEs demonstrating higher engagement in proactiveness, sustainable innovation, and calculated risk-taking tend to achieve stronger performance outcomes. Customer relationships and social networks enhance this effect by supporting trust-building and encouraging continual adaptation in response to environmental and market conditions (Kartomo, 2024). Opportunity recognition, innovation, and cautious risk-taking interact to shape performance-related behaviors that translate into measurable improvements. Performance outcomes are reinforced by confidence-driven branding behaviors that build stakeholder trust and perceived value (Cuong, 2020).

Teamwork serves an essential role in shaping entrepreneurial decision-making by facilitating information sharing, cooperative problem-solving, and coordinated action within SMEs. Small teams allow entrepreneurs to quickly assess situations, interpret feedback, and implement solutions that address operational challenges and market opportunities. Huang et al. (2022) emphasize that leaders who cultivate collaborative work environments create adaptive spaces that support collective creativity and innovation. This collaborative structure improves decision quality because diverse perspectives enhance the accuracy of environmental scanning and risk evaluation. Such engaged communication reflects deeper cognitive and motivational processes that support decisive entrepreneurial action. Team-based decision-making also strengthens the ability to respond proactively, enabling SMEs to act ahead of competitors and adapt rapidly to changing conditions. Al-Ayed (2024) argues that innovation thrives in environments where employees contribute insights that expand strategic possibilities. Gregorio and Chavez (2025) further illustrate that internal collaboration contributes to stronger branding behaviors, enhancing stakeholder trust and business credibility. Through these mechanisms, teamwork integrates cognitive, social, and operational elements that significantly influence entrepreneurial decision-making patterns and behavioral consistency. The statistically significant association between entrepreneurial marketing behaviors and SME performance underscores the behavioral foundations of business success. Although the analysis does not establish causality, the patterns indicate that SMEs exhibiting stronger entrepreneurial behaviors are better positioned to navigate uncertainty, leverage opportunities, and maintain competitive advantage. These behaviors influence how entrepreneurs process information, allocate resources, and respond to environmental pressures, demonstrating that performance outcomes emerge from the interaction of cognition, social engagement, environmental conditions, and strategic action. The results support viewing SME performance as a behavioral outcome rooted in entrepreneurial cognition and action, thereby strengthening the study's contribution to applied and organizational psychology and providing a robust basis for the conclusions and implications that follow.

6. Conclusion

This study assessed the influence of proactiveness, environmental sustainable innovation, and entrepreneurial behaviors on the performance of SMEs in Surigao del Sur. The findings clearly show that entrepreneurs in the province demonstrate high levels of proactiveness and environmental sustainable innovativeness, supported by moderately strong but cautious risk-taking orientations. These behavioral patterns reflect an emerging shift among SMEs toward sustainability-conscious decision-making, early opportunity recognition, and strategic responsiveness to environmental and market changes. It revealed that proactiveness particularly the tendency to anticipate trends, identify sustainability-driven opportunities, and adopt eco-friendly practices ahead of competitors was strongly evident among respondents. Environmental sustainable innovation also emerged as a dominant behavioral strength, with SME owners demonstrating willingness to integrate eco-friendly methods and efficiency-enhancing solutions into their operations.

Risk-taking orientation, while present, was more measured, suggesting that SMEs carefully balance environmental investments with financial constraints and market uncertainties. This combination of proactive and sustainable behavior, tempered by calculated risk assessment, reflects a realistic behavioral pattern for SMEs operating in resource-limited environments.

The analysis further supports that these entrepreneurial behaviors are positively associated with SME performance. Firms exhibiting stronger proactiveness and sustainable innovativeness reported higher levels of profitability satisfaction, improved standard of living for owners, and enhanced business reputation. These outcomes show that sustainable behavior-driven practices can strengthen both operational and personal performance indicators. While the study does not claim causation, the consistent trends across behavioral and performance measures indicate that SMEs adopting proactive and sustainability-oriented strategies tend to achieve more favorable outcomes in growth, profitability, and owner satisfaction. Practically, the study suggests that SME owners can further strengthen performance by enhancing capabilities in opportunity recognition, sustainable innovation, and evidence-based risk evaluation. The study acknowledges its limitations, including its correlational design and reliance on self-reported data, which may introduce bias. Future research may apply longitudinal approaches to examine how behavioral tendencies evolve over time and how sustainability practices influence long-term firm performance. Further studies can also incorporate mediating or moderating factors such as environmental uncertainty, digital capability, or industry differences. Overall, the study contributes a validated and contextually grounded understanding of how entrepreneurial behaviors especially proactiveness and sustainable innovation shape SME performance within a localized Philippine setting.

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