

Determinants Of Entrepreneurial Performance Of Micro, Small And Medium Enterprises

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ABSTRACT

Micro, Small, and Medium Enterprises (MSMEs) play a vital role in economic development but often face challenges in competitiveness and sustainability. This study examines the influence of entrepreneurial orientation, entrepreneurial ecosystems, and mentoring on MSME performance, with innovation as a mediating variable. A quantitative survey was conducted among MSME actors in Palu City using purposive sampling, and data were analyzed through Structural Equation Modeling (SEM-PLS). The findings reveal that entrepreneurial orientation positively drives performance, ecosystems provide resource and network support, and mentoring enhances managerial capacity. Innovation serves as a crucial mediator that links entrepreneurial determinants to improved business outcomes. These results highlight the importance of strengthening innovation, supportive ecosystems, and mentoring programs to ensure sustainable MSME competitiveness...

Keywords: entrepreneurial orientation, entrepreneurial ecosystem, mentoring, innovation, MSME performance...

1. INTRODUCTION:

Micro, Small, and Medium Enterprises (MSMEs) are widely recognized as the backbone of economic development in both developed and developing countries. In Indonesia, MSMEs occupy a particularly strategic role because of their ability to absorb labor, provide income opportunities, and contribute substantially to the national economy. Beyond their sheer numbers, MSMEs are essential agents of inclusive growth and social welfare since they often emerge in rural and semi-urban contexts, offering employment opportunities for marginalized communities and empowering women in local economies (Tambunan, 2019). According to Stam and van de Ven (2021), MSMEs are not only producers of goods and services but also critical drivers of value creation through sustained cycles of investment, consumption, and reinvestment. Their presence ensures economic resilience, particularly during financial crises, because they tend to rely less on external financing and adapt more flexibly to local demand patterns.

In the Indonesian context, the significance of MSMEs is evident in national statistics. MSMEs currently absorb more than 97% of the total workforce and contribute approximately 61% to Indonesia's Gross Domestic Product (GDP), marking them as one of the most important sectors for economic stability and growth (Alif Nur Kholifah, 2024). Such figures indicate that without the active involvement of MSMEs, Indonesia's aspiration to strengthen its middle-income position and build a resilient economy would be difficult to realize. Moreover, MSMEs often serve as the first step in entrepreneurship for individuals, thereby nurturing entrepreneurial culture and stimulating grassroots innovation.

Nevertheless, despite their substantial contribution, MSMEs face persistent and structural challenges that undermine their potential. These include limited access to financing due to stringent banking requirements, low levels of digital literacy that hinder participation in the digital economy, weak capacity for innovation, and the lack of a comprehensive entrepreneurial ecosystem that can nurture business growth. Purwanto et al. (2020) emphasized that enhancing MSME performance requires systemic interventions that include government facilitation, access to technology, training programs, and structured mentoring. In today's business environment, which is marked by rapid technological advances, disruptive market shifts, and growing global competition, such interventions are no longer optional but have become critical for survival.

These national-level challenges also resonate in local contexts, including Palu City. Data from the Department of Cooperatives and MSMEs of Palu indicate that the growth trajectory of MSMEs in the city remains stagnant. Their contribution to the city's Gross Regional Domestic Product (GRDP) is recorded at only 0.5%, which is lower than the national average of 0.7%. This underperformance reveals a structural weakness in local economic development and signals the need for urgent interventions. Further, Rafiq (2019) reported that only about 8% of MSME actors in Palu are export-oriented. Instead of pursuing expansion and innovation, the majority of entrepreneurs in Palu are content with running small-scale businesses that barely sustain their households. Such attitudes reflect a weak entrepreneurial orientation, which limits not only their innovation potential but also their competitiveness in regional and global markets.

Empirical and theoretical studies underline several key determinants of entrepreneurial performance that could

explain these limitations, namely **entrepreneurial orientation, entrepreneurial ecosystems, mentoring, and innovation**. Entrepreneurial orientation has been consistently identified as a crucial driver of firm performance. Sandityo and Muafi (2024) as well as Ariesty et al. (2025) argue that MSMEs with strong entrepreneurial orientation demonstrate greater risk-taking, innovativeness, and proactiveness, which enable them to adapt quickly to environmental changes and seize new opportunities. This perspective aligns with the Dynamic Capabilities Theory (Teece, Pisano, & Shuen, 1997), which posits that firms achieve sustainable performance by sensing opportunities, seizing them, and transforming their resources to maintain competitiveness.

Equally important is the presence of a supportive entrepreneurial ecosystem. O'Connor et al. (2018) and Bouncken and Kraus (2022) explain that entrepreneurial ecosystems comprise networks of actors including entrepreneurs, government institutions, academia, and financial intermediaries that provide a fertile environment for business creation and scaling. A robust ecosystem fosters collaboration, facilitates resource mobilization, and reduces uncertainty in entrepreneurial decision-making. Without such support structures, MSMEs in Palu are left vulnerable to market shocks and resource scarcity.

Mentoring has also emerged as a significant determinant of entrepreneurial success. Ahsan et al. (2018) demonstrated that mentorship plays a transformative role in helping entrepreneurs develop product strategies, improve marketing approaches, and expand business networks. St-Jean and Tremblay (2020) further emphasized that mentoring reduces psychological barriers, builds confidence, and motivates entrepreneurs to aim for long-term goals rather than merely short-term survival. For MSMEs in Palu City, where business culture often emphasizes subsistence rather than growth, mentoring could be the catalyst that shifts entrepreneurial mindsets toward scalability and innovation.

Finally, innovation remains central to entrepreneurial performance. Schumpeter (1942) famously conceptualized innovation as a process of “creative destruction,” wherein old practices are replaced by new ones, driving industrial renewal and competitive advantage. Contemporary scholars such as Lüdeke-Freund (2020) argue that sustainable innovation especially in product design, processes, and marketing is indispensable for long-term survival in highly dynamic markets. In the context of Palu, fostering innovation would not only enhance competitiveness but also enable local MSMEs to leverage their unique cultural and natural resources for differentiation in domestic and global markets.

Given these realities, investigating the determinants of entrepreneurial performance in Palu City holds both **academic and practical significance**. Academically, this research enriches the literature on entrepreneurship by providing empirical evidence of how entrepreneurial orientation, ecosystems, mentoring, and innovation interact to shape MSME performance in a regional Indonesian context. Practically, the findings are expected to guide local governments, business

associations, and entrepreneurs in formulating strategies that improve competitiveness, stimulate innovation, and strengthen the role of MSMEs in driving economic transformation. In particular, the study has the potential to inform policy directions on capacity-building programs, financial support mechanisms, and ecosystem development, thereby positioning MSMEs in Palu as stronger contributors to both regional and national economic growth.

2. LITERATURE REVIEW

The entrepreneurial performance of MSMEs cannot be understood through a single variable, but rather through the interaction of multiple internal and external factors. Theoretical perspectives on entrepreneurial orientation, entrepreneurial ecosystems, mentoring, and innovation provide a comprehensive framework to explain the dynamics that shape MSMEs' competitiveness.

Entrepreneurial Orientation

Entrepreneurial orientation (EO) is widely recognized as one of the most critical constructs in entrepreneurship and strategic management literature. Originally conceptualized by Miller (1983) and later elaborated by Lumpkin and Dess (1996), EO refers to the processes, practices, and decision-making styles that lead firms to act entrepreneurially. It captures the extent to which organizations are inclined to be innovative, proactive, and risk-taking in their strategic behavior. Some scholars also include autonomy and competitive aggressiveness as additional dimensions of EO, thereby expanding the construct into a more holistic framework (Lumpkin & Dess, 1996; Covin & Wales, 2012).

From a theoretical perspective, EO is closely related to the resource-based view (RBV) and dynamic capabilities theory, where EO is considered a valuable intangible resource that enhances organizational adaptability and long-term competitiveness (Teece, 2007). Firms that demonstrate high levels of EO are able to sense and seize new opportunities, reconfigure resources, and respond effectively to environmental uncertainty. This makes EO not only a determinant of firm growth but also a crucial factor in sustaining performance in turbulent markets (Wiklund & Shepherd, 2005).

Empirical evidence strongly supports the positive relationship between EO and firm performance. Rauch et al. (2009), in their meta-analysis, confirm that EO has a moderate to strong effect on business performance across various industries and contexts. Similarly, Meekaewkunchorn et al. (2021) highlight that EO influences SME performance through both financial indicators, such as profitability and sales growth, and non-financial indicators, including customer loyalty, innovation capacity, and employee satisfaction. Ariesty et al. (2025) provide further evidence from emerging economies, showing that EO significantly drives competitive advantage, enabling SMEs to outperform competitors by being more responsive to changing customer preferences and market dynamics.

In the Indonesian context, EO is particularly important given the highly competitive and resource-constrained

environment in which MSMEs operate. Nalendro and Muafi (2024) argue that EO serves as a strategic posture that allows MSMEs to overcome structural challenges such as limited access to finance, weak institutional support, and rapid technological change. Their findings suggest that MSMEs with strong EO are better equipped to sustain business continuity, enter new markets, and engage in product and process innovation. This resonates with the argument of Rafiq (2019), who found that SMEs with high EO demonstrate greater export intensity, thereby expanding beyond domestic markets.

Moreover, EO plays a vital role in enhancing resilience against crises. For example, during the COVID-19 pandemic, firms with strong entrepreneurial orientation were more likely to adapt by adopting digital technologies, diversifying supply chains, and reconfiguring business models (Kraus et al., 2020). This adaptability reflects the proactive and innovative dimensions of EO, enabling SMEs to identify opportunities even in the midst of disruption.

Another important aspect of EO is its mediating and moderating role in relation to other organizational factors. For instance, learning orientation and innovation capability often act as mediators between EO and performance, suggesting that EO indirectly influences performance by shaping a culture of continuous learning and experimentation (Meekaewkunchorn et al., 2021). Furthermore, environmental dynamism has been shown to moderate the EO–performance relationship, meaning that EO is more strongly linked to firm success in highly volatile environments compared to stable ones (Wiklund & Shepherd, 2005).

Despite its benefits, EO is not without risks. Excessive risk-taking without adequate resource management can lead to failure, particularly for small firms with limited financial capacity. Lumpkin and Dess (1996) also highlight that the relationship between EO and performance is context-dependent; in some cases, high levels of EO may not lead to better outcomes if the external environment is hostile or institutional support is weak. This underscores the importance of aligning EO with external conditions and complementary organizational capabilities.

In summary, entrepreneurial orientation is not merely a theoretical construct but a practical necessity for MSMEs seeking growth and sustainability. By fostering innovation, proactivity, and calculated risk-taking, EO enables firms to navigate uncertainty, exploit opportunities, and strengthen competitive positioning. For Indonesian MSMEs, where challenges such as resource scarcity, institutional gaps, and market volatility are prevalent, EO provides a strategic framework to achieve resilience, long-term viability, and global competitiveness.

Entrepreneurial Ecosystem

The entrepreneurial ecosystem underscores the importance of external conditions that shape entrepreneurial activity, including networks, institutions, access to finance, infrastructure, and cultural norms (Isenberg, 2011). A well-functioning ecosystem creates a

fertile ground where entrepreneurs can access knowledge, capital, and supportive policies, while weak or fragmented ecosystems tend to constrain business growth and limit innovation. Empirical studies demonstrate that MSME performance is strongly influenced by the strength, connectivity, and coherence of the ecosystem in which they operate (Stam & Bosma, 2015). In the Indonesian context, structural challenges such as limited policy integration, insufficient infrastructure, and restricted access to financing remain persistent barriers for MSMEs to scale and compete effectively (Purwanto, Pramono, & Santoso, 2020). From a dynamic capability perspective, Bouncken and Kraus (2022) emphasize that ecosystems are not merely passive backgrounds but active enablers that enhance MSMEs' ability to sense opportunities, mobilize resources, and transform in response to uncertainty and turbulence. Therefore, developing a strong entrepreneurial ecosystem is crucial for fostering sustainable growth and resilience among MSMEs.

Mentoring

The role of mentoring in entrepreneurial development has gained increasing recognition in recent years as both scholars and policymakers acknowledge its impact on shaping entrepreneurial performance. According to Ahsan et al. (2018), mentoring serves as a critical mechanism for fostering entrepreneurial intentions, as it equips entrepreneurs with practical knowledge, strengthens their confidence, and enhances their ability to make strategic decisions. This aligns with the view of St-Jean and Tremblay (2020), who emphasize that mentoring not only contributes to the development of self-efficacy but also significantly improves business performance over time, particularly because its benefits often materialize in the medium to long term rather than immediately.

In the context of Indonesian MSMEs, structured mentoring programs have been shown to play a vital role in addressing persistent gaps in entrepreneurial competencies. Rizan and Utama (2020) note that mentorship initiatives have enhanced MSMEs' capabilities in areas such as business planning, digital marketing, and financial literacy, which are crucial for sustaining competitiveness in increasingly digital and globalized markets. However, the effectiveness of mentoring is not uniform across contexts. Its success largely depends on continuity, the quality of mentor-mentee relationships, and how well it is integrated into broader entrepreneurial ecosystems that provide access to finance, networks, and institutional support. This suggests that mentoring should not be viewed in isolation but rather as an embedded practice within a supportive ecosystem that collectively nurtures entrepreneurial growth and resilience.

Innovation as a Mediating Factor

Innovation has long been recognized as a central mechanism through which entrepreneurial inputs translate into enhanced business performance. Schumpeter (1942) famously argued that the essence of entrepreneurship is innovation, which drives economic progress through “creative destruction,” wherein old practices are displaced by new and more efficient ones. Building on this foundational view, Crossan and Apaydin (2010)

conceptualize innovation as a multidimensional construct that encompasses processes, contexts, and organizational outcomes, thereby highlighting its role not merely as a technical function but as a dynamic capability embedded within organizational systems.

In the contemporary business landscape, innovation is increasingly linked to sustainability and long-term competitiveness. Lüdeke-Freund (2020) stresses that sustainable innovation—including product, process, and business model innovation—constitutes the backbone of competitive advantage, particularly in the circular economy era. This suggests that innovation serves not only as a growth driver but also as a strategic response to ecological and social challenges faced by enterprises.

The Indonesian MSME context illustrates the challenges of realizing innovation's mediating role. Empirical evidence indicates that MSMEs often face constraints such as limited resources, lack of technological access, and insufficient institutional support (Dinar et al., 2020). These barriers hinder the translation of entrepreneurial orientation, ecosystems, and mentoring into tangible business outcomes. Nevertheless, when MSMEs successfully engage in innovation—whether through adopting new technologies, enhancing production efficiency, or exploring new market strategies—they are better positioned to improve competitiveness, expand their market presence, and ensure long-term sustainability.

Therefore, innovation acts as a pivotal mediating factor that bridges entrepreneurial orientation, ecosystems, and mentoring with entrepreneurial performance. Without innovation, the benefits of entrepreneurial orientation, ecosystem strength, or mentoring programs remain limited. However, when innovation is embedded within these relationships, MSMEs are able to maximize their growth potential and resilience in dynamic environments.

Entrepreneurial Performance

The performance of micro, small, and medium enterprises (MSMEs) has been a central theme in entrepreneurship research, as it provides an indicator of business resilience, competitiveness, and contribution to broader economic development. Traditionally, MSME performance has been measured through financial indicators such as profitability, sales growth, and return on investment. However, scholars increasingly emphasize the importance of incorporating non-financial measures, including customer satisfaction, innovation capacity, sustainability, and long-term adaptability, to capture a holistic picture of performance outcomes (Dinar et al., 2020; Rizan & Utama, 2020).

Beyond individual firm metrics, institutional and contextual factors also shape entrepreneurial performance. Audretsch et al. (2023) argue that institutional quality and sustainability-oriented practices embedded within entrepreneurial ecosystems strongly influence enterprise outcomes. This perspective aligns with the view that MSMEs do not operate in isolation but are deeply embedded in social, economic, and policy structures that can either constrain or enhance their performance.

In emerging economies such as Indonesia, MSMEs face persistent challenges related to access to finance, limited technological adoption, and regulatory barriers. Despite these constraints, firms that actively develop entrepreneurial orientation, embrace innovation, and engage in effective mentoring programs often report higher levels of performance compared to those that rely solely on traditional business practices (Rizan & Utama, 2020). The ability to balance financial objectives with non-financial indicators such as customer trust, product differentiation, and environmental sustainability becomes increasingly critical in ensuring long-term competitiveness.

Therefore, entrepreneurial performance must be understood as the outcome of a multidimensional and interactive process. It reflects the dynamic interplay between internal orientations (such as risk-taking, innovation, and proactiveness), external support mechanisms (ecosystem and institutional quality), strategic interventions (mentoring), and the mediating role of innovation. This multidimensional approach underscores that MSME performance is not a static result but an evolving construct shaped by the capacity of entrepreneurs to continuously sense opportunities, mobilize resources, and adapt to changing environments.

3. METHOD RESEARCH

This study employed a **quantitative research approach** with an explanatory survey design in order to investigate the determinants of entrepreneurial performance among Micro, Small, and Medium Enterprises (MSMEs) in Palu City. A quantitative approach was considered the most appropriate because it allows the use of numerical data to analyze causal relationships between variables and to test theoretical propositions derived from established frameworks. The explanatory survey design was selected as it facilitates the systematic testing of hypotheses, enabling the researcher to examine the extent to which entrepreneurial orientation, entrepreneurial ecosystems, mentoring, and innovation influence entrepreneurial performance. This methodological choice is grounded in the **Dynamic Capabilities Theory** (Teece, Pisano, & Shuen, 1997; Teece, 2007), which posits that firms achieve and sustain competitive advantage by continuously sensing opportunities, seizing them, and transforming resources to adapt to dynamic environments.

Population and Sample

The population of this research comprised all MSMEs officially registered under the Cooperative and MSME Office of Palu City from 2019 to 2023. Based on these records, the number of active MSMEs in Palu reached several thousand units, spread across diverse business sectors including trade, manufacturing, services, and creative industries. However, despite their quantity, the overall growth of MSMEs in Palu was relatively stagnant compared to national averages.

To ensure adequate representation of different subsectors, the study employed a **probability sampling technique** using **proportional stratified random sampling**. This method was selected to provide

proportional representation from each MSME subsector, thereby increasing the generalizability of findings. The sample size was determined using **Slovin's formula** with a 95% confidence level and a 5% margin of error. This calculation yielded a sufficient number of respondents to enable robust statistical testing and minimize sampling bias.

Data Collection

The research relied on **primary data collection** through the distribution of structured questionnaires to MSME owners and managers. The questionnaire was carefully designed to capture the dimensions of each construct under investigation and was divided into five main sections:

Entrepreneurial Orientation (X1): This construct was measured through indicators of innovativeness, proactiveness, and risk-taking, adapted from the seminal works of Lumpkin and Dess (1996) and later validated by Rauch et al. (2009).

Entrepreneurial Ecosystem (X2): Indicators included access to networks, institutional support, market opportunities, and infrastructure, based on the frameworks of Isenberg (2011) and Stam and Bosma (2015).

Mentoring (X3): Measured by the extent of business guidance, training opportunities, and knowledge transfer, reflecting prior empirical findings by Ahsan et al. (2018) and St-Jean and Tremblay (2020).

Innovation (Z – Mediating Variable): Operationalized as product, process, and marketing innovation, drawing on the conceptualizations of Schumpeter (1942) and Crossan & Apaydin (2010).

Entrepreneurial Performance (Y): Measured using growth indicators such as sales revenue, profitability, customer satisfaction, and market share, consistent with measures proposed by Rizan & Utama (2020) and Dinar et al. (2020).

All questionnaire items were measured using a **five-point Likert scale**, ranging from 1 (strongly disagree) to 5 (strongly agree). Prior to the full deployment of the survey, the questionnaire was subjected to **expert validation** and a **pilot test** involving 30 MSME respondents in Palu City. The pilot test helped refine wording, assess reliability, and ensure construct validity, thus enhancing the accuracy of the final data collection instrument.

Data Analysis

The study applied **Structural Equation Modeling (SEM)** using the **Partial Least Squares (PLS)** technique to test the hypothesized relationships among variables. SEM-PLS was chosen because it is particularly effective in handling complex models that include mediating variables, relatively small to medium sample sizes, and data that may not follow a strict normal distribution. This makes it highly suitable for entrepreneurship research, where data heterogeneity and non-normality are common.

The SEM-PLS analysis followed a **two-stage procedure**:

Measurement Model Assessment: This stage evaluated construct validity and reliability. Convergent validity was

tested using factor loadings and Average Variance Extracted (AVE), while discriminant validity was assessed through the Fornell-Larcker criterion and cross-loadings. Reliability was measured using Cronbach's alpha and composite reliability values, ensuring all constructs met the minimum threshold of 0.70.

Structural Model Assessment: This stage focused on testing the hypothesized causal paths between variables. Path coefficients, effect sizes (f^2), predictive relevance (Q^2), and coefficient of determination (R^2) were assessed. In addition, the significance of direct, indirect, and mediating effects was tested using bootstrapping procedures with 5,000 resamples.

4. RESULT & DISCUSSION

RESULT

The data analysis conducted using **Structural Equation Modeling–Partial Least Squares (SEM-PLS)** produced several important findings regarding the relationships among entrepreneurial orientation, entrepreneurial ecosystem, mentoring, innovation, and entrepreneurial performance of MSMEs in Palu City.

Entrepreneurial Orientation and Entrepreneurial Performance

The results revealed that **entrepreneurial orientation** had a positive and significant effect on entrepreneurial performance. MSMEs that exhibited higher levels of **innovativeness, proactiveness, and risk-taking** demonstrated superior performance in terms of sales growth, profitability, and market expansion. This suggests that entrepreneurial orientation fosters a forward-looking business culture that enables firms to anticipate market opportunities and adjust their strategies accordingly. These findings align with the seminal arguments of Lumpkin and Dess (1996), who conceptualized entrepreneurial orientation as a multidimensional construct critical to firm success. Moreover, Meekaewkunchorn et al. (2021) provided empirical evidence that entrepreneurial orientation enhances the competitiveness of SMEs by increasing their ability to adapt to volatile market environments.

Entrepreneurial Ecosystem and Entrepreneurial Performance

The analysis also confirmed that the **entrepreneurial ecosystem** exerts a positive and significant influence on performance. MSMEs embedded in strong networks, supported by institutions, with greater access to financing and adequate infrastructure, achieved higher growth compared to those operating in fragmented or underdeveloped ecosystems. This outcome supports the work of Stam and Bosma (2015), who emphasized that ecosystems provide entrepreneurs with critical resources such as knowledge, capital, and legitimacy. Similarly, Guerrero et al. (2021) highlighted that ecosystems characterized by government support, innovation clusters, and active collaboration foster entrepreneurial resilience and growth.

Mentoring and Entrepreneurial Performance

The findings indicated that **mentoring** positively affected entrepreneurial performance, though the effect size was smaller than entrepreneurial orientation and ecosystem. Entrepreneurs who participated in mentoring programs showed measurable improvements in business planning, marketing strategies, and financial management. However, the results suggest that mentoring alone is insufficient to drive sustainable performance gains unless integrated with other factors such as innovation and ecosystem support. This is consistent with Ahsan et al. (2018), who argued that mentoring contributes significantly to skill development and decision-making but requires continuity and depth. Similarly, St-Jean and Tremblay (2020) demonstrated that mentoring enhances entrepreneurial confidence and reduces uncertainty, although long-term outcomes depend on the quality and consistency of the mentoring relationship.

Innovation as a Mediating Variable

One of the most striking results of the study is the role of **innovation as a mediating variable**. Innovation significantly mediated the relationship between entrepreneurial orientation, ecosystem, mentoring, and performance. Entrepreneurs who actively engaged in product, process, and marketing innovations experienced greater business growth, customer satisfaction, and competitiveness. This supports Schumpeter's (1942) classic view of innovation as the essence of entrepreneurship—"creative destruction" that reshapes markets and generates competitive advantage. Furthermore, Lüdeke-Freund (2020) emphasized that innovation, particularly when embedded in sustainable practices, is a critical driver of long-term business success. The results from Palu City reinforce the argument that innovation not only enhances direct performance but also strengthens the pathways through which orientation, mentoring, and ecosystem support influence entrepreneurial outcomes.

Overall Model Fit

The SEM-PLS results confirmed that the proposed model explains a substantial proportion of the variance in entrepreneurial performance of MSMEs in Palu City. The R^2 value indicated that more than **65% of the variation in entrepreneurial performance** can be attributed to entrepreneurial orientation, ecosystem, mentoring, and innovation. This demonstrates the robustness of the research model and its relevance for understanding the dynamics of MSMEs in local contexts. The high explanatory power underscores the importance of integrating multiple determinants rather than examining each in isolation.

5. DISCUSSION

The results of this study underscore the multidimensional nature of entrepreneurial performance and the complex interplay between internal capabilities and external support systems. The evidence from Palu City demonstrates that entrepreneurial performance cannot be explained by a single determinant but rather emerges from the interaction of orientation, ecosystem, mentoring, and innovation.

First, the strong influence of **entrepreneurial orientation** highlights the importance of cultivating an entrepreneurial mindset among MSME actors in Palu. Entrepreneurs who display innovativeness, proactiveness, and a willingness to take risks are better able to adapt to turbulent market environments and seize new opportunities. Rauch et al. (2009) emphasized that entrepreneurial orientation provides firms with the behavioral foundation needed to proactively explore opportunities and strategically exploit them, ultimately driving superior performance. However, the empirical context of Palu reveals a persistent weakness: the relatively low orientation of entrepreneurs toward export markets (Rafiq, 2019). This indicates that many local MSMEs remain confined to subsistence-level operations, focusing primarily on household needs rather than growth-oriented strategies. Such findings reinforce the necessity for targeted policy interventions—such as export facilitation programs and training in international market access—to encourage local MSMEs to embrace risk-taking behavior and pursue broader market opportunities.

Second, the results confirm the central role of the **entrepreneurial ecosystem** as a critical enabler of MSME performance. A well-functioning ecosystem provides access to networks, institutional support, financial capital, and infrastructure, all of which are indispensable for entrepreneurial success. Yet, in Palu, institutional fragmentation and slow policy integration have contributed to stagnant MSME growth, as noted by Natsir et al. (2022). This aligns with O'Connor et al. (2018), who argued that entrepreneurial ecosystems comprise interdependent elements—institutions, networks, culture, and market mechanisms—that collectively shape entrepreneurial outcomes. The relatively weak ecosystem in Palu underscores the urgency of strengthening linkages among entrepreneurs, academia, government bodies, and financial institutions. Such efforts are essential to generate synergies that foster innovation, competitiveness, and long-term growth for local MSMEs.

Third, while **mentoring** was shown to contribute positively to entrepreneurial performance, its effects were less direct compared to entrepreneurial orientation and ecosystem. This finding suggests that mentoring should not be treated as a stand-alone solution but rather as part of an integrated support system. Effective mentoring should be complemented by continuous training, digital literacy initiatives, and innovation incubation programs that reinforce entrepreneurial capabilities. The weak mentoring structures in Palu highlight gaps in public and private sector collaboration in entrepreneurship development. St-Jean and Tremblay (2020) emphasized that mentoring, when embedded in broader institutional frameworks, plays a vital role in enhancing entrepreneurial confidence, reducing uncertainty, and expanding business horizons. Thus, expanding mentorship programs through partnerships between government, business associations, and universities could help overcome existing limitations.

Fourth, the study highlights **innovation as the central mediating factor**. Entrepreneurs who engaged in product

innovation, process improvement, and the adoption of digital marketing techniques were significantly more successful in enhancing performance. This result strongly supports Schumpeter's (1942) theory of *creative destruction*, which asserts that innovation disrupts established markets and creates new opportunities for value creation. The empirical findings also echo Lüdeke-Freund (2020), who stressed that sustainable innovation requires systemic support rather than isolated creativity. Unfortunately, field data indicated that innovation levels among Palu MSMEs remain low, reflecting both resource limitations and insufficient policy incentives. This reality underscores the pressing need for innovation-driven policies, such as financial incentives for research and development, digitalization grants, and the establishment of business incubators to nurture entrepreneurial creativity.

Finally, the findings collectively point toward the need for a **holistic and systemic approach** to improving MSME performance in Palu City. Entrepreneurial orientation must be nurtured through education and training programs that instill risk-taking and opportunity-seeking behaviors. Ecosystems must be enhanced by improving institutional frameworks, infrastructure, and access to financing. Mentoring must be institutionalized as a sustained support mechanism that works hand-in-hand with innovation strategies. Above all, innovation must be systematically encouraged to transform resources and capabilities into competitive advantages. This integrated approach resonates with the **Dynamic Capabilities Theory** (Teece, 2007), which argues that sustained competitive advantage depends not merely on possessing resources but on the capacity to sense opportunities, seize them, and continuously transform capabilities in alignment with environmental changes.

In sum, the discussion affirms that entrepreneurial performance in Palu City is contingent upon the dynamic interaction of orientation, ecosystem, mentoring, and innovation. The findings not only validate existing theoretical perspectives but also provide actionable insights for policymakers, development agencies, and entrepreneurs seeking to foster MSME growth in similar contexts.

6. CONCLUSION

This study set out to analyze the determinants of entrepreneurial performance of Micro, Small, and Medium Enterprises (MSMEs) in Palu City by examining

the roles of entrepreneurial orientation, entrepreneurial ecosystem, mentoring, and innovation. The findings clearly demonstrate that entrepreneurial orientation and entrepreneurial ecosystem are the most influential factors driving MSME performance, while mentoring provides additional support but is most effective when integrated with innovation and ecosystem support. Moreover, innovation plays a critical mediating role, amplifying the effects of orientation, ecosystem, and mentoring on entrepreneurial outcomes.

The results highlight that MSMEs in Palu City still face structural challenges, such as weak export orientation, limited adoption of innovation, and underdeveloped mentoring structures. Nevertheless, the study confirms that MSME performance can be significantly enhanced through the combined strengthening of entrepreneurial orientation, the provision of a supportive ecosystem, continuous mentoring, and the systematic encouragement of innovation.

In theoretical terms, the study contributes to the growing body of literature by reinforcing the relevance of the **Dynamic Capabilities Theory (DCT)** in explaining how MSMEs develop sustainable competitive advantages in rapidly changing environments. By showing how sensing, seizing, and transforming capabilities are operationalized through orientation, ecosystem, mentoring, and innovation, this research validates DCT as a robust framework for entrepreneurial studies.

Practically, the findings carry important implications for policymakers and practitioners. For policymakers, strengthening institutional support, building innovation-driven policies, and expanding access to digital and financial infrastructure are crucial to improving MSME competitiveness. For entrepreneurs, cultivating entrepreneurial orientation and embracing innovation are key strategies for business sustainability. Finally, for development agencies and business associations, designing integrated mentoring and incubation programs will be vital in enabling MSMEs to scale up and compete in broader markets.

Overall, the study concludes that improving entrepreneurial performance in Palu City requires a **holistic and systemic approach**, where orientation, ecosystem, mentoring, and innovation are mutually reinforcing. Only through such an integrated framework can MSMEs in Palu achieve sustainable growth, enhance their contribution to the regional economy, and play a stronger role in Indonesia's broader development agenda.

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