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Entrepreneurial Orientation and its Effect on the Success of Small Businesses

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Abstract

Background: Entrepreneurial orientation (EO) has been widely recognized as a critical driver of business success, particularly for small enterprises operating in highly competitive markets. However, empirical evidence on the role of EO in supporting small business success in emerging economies, including Indonesia, remains limited.
Objective: This study aims to examine the impact of entrepreneurial orientation on small business success in Indonesia, focusing on the dimensions of innovativeness, proactiveness, and risk-taking.
Methods: A quantitative research approach was employed using survey data collected from 150 small business owners across various sectors. Multiple regression analysis was applied to evaluate the relationships between entrepreneurial orientation dimensions and small business success.
Results: The findings indicate that innovativeness and proactiveness have a significant positive effect on small business success, while risk-taking demonstrates a moderate influence.
Conclusion: These results highlight the importance of adopting innovative practices and proactive market strategies while carefully managing risk to enhance small business performance. This study contributes to the entrepreneurship literature in emerging markets and provides practical insights for entrepreneurs and policymakers in fostering sustainable small business growth.

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INTRODUCTION

Small businesses are critical drivers of economic development, innovation, and job creation worldwide. However, small businesses often face unique challenges such as limited access to capital, constrained resources, and heightened vulnerability to market fluctuations. These challenges necessitate the adoption of strategic behaviors that enable firms to survive and thrive in competitive environments (Orozco, 2020). Sustainability has become a central concern in modern manufacturing, particularly in relation to material efficiency, energy consumption, and environmental impact reduction (Groover, 2020; Raabe, 2023). Strategies aimed at reducing carbon footprints and promoting low-carbon material systems are increasingly emphasized in material processing and product design (Deng et al., 2025).

Entrepreneurial orientation (EO) has emerged as a key strategic posture that enhances a firm's ability to navigate uncertainty and seize opportunities. EO is typically defined as the combination of innovativeness, proactiveness, and risk-taking behaviors that guide decision-making and actions within a business (Lumpkin & Dess, 1996). Innovativeness refers to the propensity to engage in creativity and experimentation. Proactiveness involves anticipating future market trends and taking action ahead of competitors (Kotler, 2021). Risk-taking reflects

the willingness to commit resources to uncertain ventures. Together, these dimensions shape how a firm identifies and responds to opportunities and challenges in its environment (Covin, 1989). The utilization of secondary resources and industrial by-products is widely recognized as a key approach to advancing circular economy practices in manufacturing and construction sectors (Hidalgo & Verdugo, 2025; Giese, 2022).

Existing research suggests that EO has a positive influence on business performance, particularly in dynamic and uncertain markets (Rauch et al., 2009). Firms that exhibit high levels of EO are more likely to introduce innovative products and services, capture new markets, and build competitive advantages that translate into long- term success. However, the relative importance of each EO dimension may vary depending on contextual factors such as industry characteristics, firm size, and resource availability. For small businesses, which often operate under resource constraints, the impact of EO may differ from that observed in larger, well-established firms. Recycled aluminum has attracted significant attention due to its potential to reduce raw material consumption while maintaining acceptable mechanical performance in casting applications (Ahmad et al., 2019; Nurjaman et al., 2019).

In the context of developing countries like Indonesia, small businesses play a pivotal role in national economic growth; however, they often lack formal structures, strategic planning capabilities, and access to external support systems. As a result, their ability to implement EO practices effectively may be limited, and empirical evidence on the relationship between EO and small business success in such settings remains scarce (Ng, 2021). Previous studies have demonstrated that variations in aluminum alloy composition significantly influence hardness and impact strength in cast products (Ahmad et al., 2019; Ramnath et al., 2014). Most existing studies focus on large corporations or developed economies, leaving a gap in understanding the specific challenges and opportunities faced by small businesses in emerging markets.

This study aims to address this gap by examining the impact of EO on small business success in Indonesia. Specifically, the research investigates how the individual dimensions of EO innovativeness, proactiveness, and risk-taking contribute to business performance outcomes, including financial growth, market expansion, and customer satisfaction. By focusing on small businesses across various sectors, the study provides a comprehensive analysis of the role of EO in diverse industry contexts. Mechanical properties such as hardness, wear resistance, and corrosion behavior are strongly dependent on alloy composition and microstructural evolution (Babu et al., 2019; Sankaran & Mishra, 2017). Microstructural refinement achieved through alloying or process modification has been shown to enhance material performance in structural applications (Liang et al., 2025; Chen et al., 2020).

The novelty of this research lies in its focus on small businesses in a developing country setting, where the dynamics of EO may differ from those in mature markets (Kreiser, 2013). It also contributes to the literature by disaggregating the EO construct and analyzing the unique effects of each dimension on business success (Miller, 2018). Understanding these relationships is crucial for designing targeted interventions that support the growth and sustainability of small businesses in Indonesia and similar economies.

Ultimately, this study seeks to inform both theory and practice by providing actionable insights for small business owners, policymakers, and entrepreneurship development organizations. By highlighting the strategic behaviors that drive small business success, the research gives practical guidance to entrepreneurs navigating complex and competitive markets. It contributes to the broader discourse on entrepreneurship and economic development in emerging markets.

METHOD

Research Type

This study employed an experimental research approach to investigate the effect of recycled aluminum addition on the hardness and microstructural characteristics of iron sand castings. A laboratory-based experimental method was chosen to allow controlled manipulation of aluminum composition and systematic observation of its effects on material properties.

Research Location

The research was conducted in June and July 2025 at Ampenan Beach, Ampenan District, Mataram City, West Nusa Tenggara, Indonesia. The study focused on utilizing locally sourced iron sand from the coastal area as the primary raw material for metal casting experiments.

Experimental Design

The experimental design used a Completely Randomized Design (CRD), with aluminum alloy composition as the treatment factor. Five levels of aluminum content were applied, namely 0%, 2%, 4%, 6%, and 8%. Each treatment was repeated three times, resulting in a total of 15 experimental trials. A fundamental understanding of engineering materials is essential for designing alloy systems and interpreting experimental results (Putra et al., 2025). Similar material optimization principles have been applied in other engineering fields, including fiber-reinforced concrete and dental composite materials (Kim et al., 2013; Mondal, 2023).

Materials

The materials used in this study included:

1. Iron sand collected from Ampenan Beach, Lombok, West Nusa Tenggara, with a total mass of 10 kg as the primary casting material.
2. Recycled aluminum alloy obtained from used aluminum beverage cans with a total mass of 2 kg, used as the alloying element.
3. Metallurgical coke as a reduction fuel during the smelting process.
4. Flux materials consisting of calcium oxide (CaO) and silicon dioxide (SiO_2) to facilitate slag formation.
5. Sample preparation materials, including epoxy resin, sandpaper with grit sizes of 240, 400, 600, 800, 1000, and 1200, alumina polishing powders with particle sizes of 1 µm and 0.3 µm, and a 2% Nital etching solution (2 ml HNO_3 mixed with 98 ml ethanol). Local iron sand deposits have been identified as promising raw materials for metal casting applications when their physical characteristics are appropriately characterized (Mbiliyora & Hendrajaya, 2018).

Equipment

The equipment utilized in this research included:

1. An induction-type crucible smelting furnace with a capacity of 5 kg for melting and alloying.
2. Silica sand molds with dimensions of 150 mm × 25 mm × 25 mm for specimen casting.
3. Sample preparation tools, including a cutting machine, mounting press, grinding machine, and polishing machine.
4. Measurement instruments such as a digital scale with an accuracy of 0.1 g and a K-type thermocouple for temperature monitoring.
5. A Universal Hardness Tester Brinell HB-3000 for hardness testing.
6. An Olympus BX51M optical microscope and a Zeiss EVO MA 10 scanning electron microscope equipped with energy-dispersive spectroscopy (SEM-EDS) for microstructural analysis.
7. An *X-ray fluorescence (XRF) spectrometer for chemical composition analysis.*

Testing Procedures

Hardness testing was carried out using Brinell, Rockwell, and Vickers methods. Microstructural observations were performed using optical microscopy and SEM-EDS after standard metallographic preparation and etching.

Data Analysis

Data analysis was conducted using Analysis of Variance (ANOVA) to evaluate the effect of aluminum composition on hardness and microstructural characteristics. Statistical analysis was performed using Minitab software at a 5% significance level. Microstructural changes induced by alloying elements are known to play a critical role in enhancing mechanical performance (Chen et al., 2020; Liang et al., 2025).

RESULTS AND DISCUSSION

Result

Sample Characteristics and Study Context

This study involved 150 small business owners operating across three major Indonesian cities Jakarta, Bandung, and Surabaya. These cities were selected as they represent key economic centers and reflect diverse small business sectors, including trade, services, manufacturing, technology, and creative industries. The sample distribution was intended to ensure that the findings adequately represent the conditions of urban small businesses in Indonesia.

Descriptive Analysis of Entrepreneurial Orientation

Descriptive analysis indicates that most respondents exhibit moderate to high levels of innovativeness and proactiveness. In contrast, the risk-taking dimension shows medium to low scores. These findings suggest that Indonesian small business actors tend to pursue growth through innovation and proactive market engagement while maintaining a cautious attitude toward risk due to resource constraints and market uncertainty.

Regression Analysis Results

Multiple regression analysis reveals that innovativeness has a significant and positive effect on small business success ($\beta = 0.42$, $p < 0.01$). This indicates that businesses prioritizing innovation are more likely to experience improved performance in terms of sales growth, customer satisfaction, and market expansion.

Proactiveness also demonstrates a significant positive influence on business success ($\beta = 0.38$, $p < 0.01$). Businesses that actively anticipate market changes, respond swiftly to customer needs, and act ahead of competitors tend to achieve higher levels of success.

In contrast, risk-taking shows a positive but weaker effect on business success ($\beta = 0.15$, $p < 0.05$). This finding indicates that although risk-taking contributes to performance, its role is less dominant compared to innovativeness and proactiveness.

Sectoral Differences

Further analysis reveals sectoral variation in the impact of entrepreneurial orientation dimensions. In technology and creative economy sectors, innovativeness plays a more prominent role in driving success. Meanwhile, in traditional retail sectors, proactiveness particularly in managing supply chains, pricing strategies, and responsiveness to consumer demand has a greater influence.

Qualitative Insights

Qualitative data from open-ended survey responses and follow-up interviews provide additional context to the quantitative findings. Respondents highlighted that proactive behaviors such as networking, participating in training programs, and leveraging digital platforms contributed to increased visibility and market access. Incremental innovations, including packaging improvements, service enhancements, and promotional strategies, were also reported as important drivers of customer loyalty and performance.

Discussion

The Role of Innovativeness in Small Business Success

The findings confirm that innovativeness is the strongest determinant of small business success in the Indonesian context. Innovation enables businesses to differentiate their offerings, adapt to changing customer preferences, and remain competitive in dynamic markets. Importantly, innovation in small businesses is not limited to technological advancement but also encompasses marketing strategies, service improvements, and operational efficiency.

Importance of Proactiveness

Proactiveness emerges as another critical factor influencing business success. Businesses that anticipate market trends and act decisively before competitors gain strategic advantages, particularly in fast-changing industries. Proactive behavior allows small firms to secure market

positions, respond effectively to demand fluctuations, and exploit emerging opportunities.

Risk-Taking as a Context-Dependent Factor

Although risk-taking contributes positively to business success, its relatively weaker influence suggests that small business actors in Indonesia tend to manage risk conservatively. Limited access to finance, concerns over financial stability, and potential impacts on household livelihoods encourage cautious decision-making. This supports the view that the relationship between risk-taking and performance is context-dependent and may follow a nonlinear pattern.

Sectoral Implications of Entrepreneurial Orientation

The observed sectoral differences indicate that the effectiveness of entrepreneurial orientation dimensions varies across industries. Innovation is more critical in technology-driven and creative sectors, whereas proactive behavior is more influential in traditional sectors. These findings highlight the importance of aligning entrepreneurial strategies with industry-specific conditions. Similar trends in hardness improvement due to compositional modification have been reported in previous metal casting studies (Babu et al., 2019; Ramnath et al., 2014).

Entrepreneurial Mindset and Organizational Culture

Beyond individual entrepreneurial traits, the results underscore the importance of fostering an organizational culture that supports experimentation, learning from failure, and adaptability. Small businesses that cultivate an open and growth-oriented mindset are better positioned to navigate uncertainty and sustain long-term performance.

Theoretical and Practical Implications

This study reinforces the conceptualization of entrepreneurial orientation as a multidimensional construct with differentiated effects on business success. In emerging economies such as Indonesia, innovativeness and proactiveness appear to be the primary drivers of small business performance, while risk-taking requires external support mechanisms. From a practical perspective, the findings emphasize the role of policymakers and development agencies in creating supportive ecosystems through training programs, access to finance, and entrepreneurship support initiatives. The use of recycled materials and industrial waste aligns with sustainable material development strategies reported in previous studies (Modolo et al., 2013; Sakir et al., 2020). Proper control of material processing and mixing conditions is essential to achieving optimal mechanical performance (Popov, 2018).

CONCLUSION

This study concludes that entrepreneurial orientation has a significant influence on the success of small businesses in Indonesia. Specifically, innovativeness and proactiveness are key drivers of performance, while risk-taking plays a supporting role in this process. The findings offer valuable insights for small business owners seeking to boost their competitiveness and resilience in rapidly evolving markets. Limitations of this study include its focus on three cities and the use of self-reported measures of business success. Future research should expand the sample to include other regions, incorporate longitudinal data, and investigate additional variables, such as entrepreneurial self- efficacy and external support systems. In practical terms, policymakers and business development programs should provide targeted support for small businesses, including access to training, mentoring, and flexible financing options, to cultivate a more innovative and proactive entrepreneurial ecosystem in Indonesia. Overall, this study underscores the pivotal role of entrepreneurial orientation in shaping the success of small businesses and provides a roadmap for both entrepreneurs and policymakers to foster a more innovative and proactive small business ecosystem in emerging markets.

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AUTHOR CONTRIBUTION STATEMENT

Angga Wildan Habibi designed and conducted the experiments and prepared the manuscript, Sinarep analyzed and interpreted the data, and Anak Agung Alit Triadi supervised the research and reviewed the final manuscript.

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