



# The Impact of Entrepreneurial Orientation and Innovation Strategy on MSME Performance in Bali's Apparel Sector

Hifzhan Frima Thousani<sup>1\*</sup>, Mochammad Heri Edy<sup>2</sup>

<sup>1</sup>Politeknik Negeri Madiun Indonesia, [thousani@pnm.ac.id](mailto:thousani@pnm.ac.id)

<sup>2</sup>Politeknik Kelautan Perikanan Sidoarjo Indonesia, [mochammad.edy@kkp.go.id](mailto:mochammad.edy@kkp.go.id)

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## ABSTRACT

This study aims to explore the influence of entrepreneurial orientation on the performance of micro, small, and medium enterprise in the apparel industry in Bali, with innovation strategy as an intervening variable and technological resources as a moderating variable. Using the Resource-Based View (RBV) and Contingency Theory approaches, this study involved 220 randomly selected participants. Data analysis was performed using Structural Equation Modeling-Partial Least Square (SEM-PLS). The results show that entrepreneurial orientation has a significant positive impact on business performance through innovation strategy. Additionally, technological resources strengthen the relationship between entrepreneurial orientation and business performance. These findings highlight the importance of entrepreneurial orientation, innovation strategy, and technological support in enhancing MSME performance in the apparel sector. This research contributes to the literature by providing insights into how the combination of entrepreneurial orientation and technology can be optimized to achieve competitive advantage in the context of micro, small, and medium enterprise in Bali.

### \*Corresponding Author:

Hifzhan Frima Thousani  
Politeknik Negeri Madiun Indonesia  
Email: [thousani@pnm.ac.id](mailto:thousani@pnm.ac.id)

## INTRODUCTION

Entrepreneurship holds the potential to cultivate individuals into entrepreneurs within the realm of Micro, Small, and Medium Enterprises (MSMEs), presenting a promising solution to address the issue of educated unemployment (1). Among the sectors within MSMEs, the apparel industry is anticipated to offer significant employment opportunities. MSMEs operating in the apparel sector play a vital role in fostering economic advancement in Indonesia. However, in Bali, the progress of MSMEs faces challenges such as a scarcity of entrepreneurship-focused initiatives and restricted availability of technology and information. The diminished performance of MSMEs in Bali was further exacerbated by the underutilization of local indigenous knowledge potential (2).

The fluctuating growth trajectory of MSMEs indicates subpar performance, underscoring the significance of effective management in enhancing the economy and curbing unemployment through entrepreneurship-focused initiatives. Entrepreneurial orientation (EO) encompasses the capacity to think and act with creativity and innovation, serving as a foundation and asset for identifying avenues towards success (3). Business owners, including those in MSMEs, must embody entrepreneurial spirit to thrive in competitive markets. Implementing creative and innovative strategies will enable MSMEs to develop products—both goods and services—that meet customer expectations. Entrepreneurial orientation fosters resilient MSME

managers, empowering them to embrace risks and transform uncertainties into opportunities (4–6)

Entrepreneurial orientation is found to have a notable direct influence on firm performance, including within MSMEs, as indicated by various studies (4,5,7–9). However, there are instances where the impact of entrepreneurial orientation on company performance is not consistently significant (10,11). In the hospitality sector, entrepreneurial orientation may not effectively support company growth (9). Furthermore, the combination of entrepreneurial orientation with affective trust may not significantly enhance or diminish the relationship between business network reach and firm performance, despite some studies emphasizing the role of learning orientation (5). It is suggested that entrepreneurial orientation alone may not directly enhance firm performance unless complemented by other factors such as networking (9).

In a highly unpredictable setting, innovation strategy serves as the cornerstone for gaining a competitive edge. The implementation of innovative strategies plays a pivotal role in driving a nation's economic advancement. A strong capacity for innovation directly correlates with competitiveness. The value derived from innovation often manifests in novel approaches or the development of new products and processes, which contribute to value generation. Extensive research on innovation underscores the necessity for enterprises to adeptly navigate environmental changes to remain competitive. The impact of entrepreneurial orientation on innovation performance can vary significantly across different contexts (12). Alongside innovation strategies, adequate technological support serves as a crucial factor influencing organizational performance (13). Technological resources within business organizations encompass the utilization of information technology to achieve specific objectives (14). There exists a close relationship between technological resources and entrepreneurship.

A thriving enterprise necessitates proficiency in corporate, business, and functional planning and strategy, thorough financial forecasts, resource allocation, and access to information technology (IT) resources and capabilities. IT capabilities encompass technical expertise, knowledge, and infrastructure utilized to support operational processes. The integration of technology significantly impacts business performance (15,16), with technology playing a crucial role in bolstering MSMEs' performance on an international scale (17). Given the aforementioned context, there is merit in exploring apparel MSMEs, particularly in enhancing their business performance. To this end, a model has been devised, incorporating innovation strategy as an intervening variable to bridge the impact of entrepreneurial orientation on the performance of apparel industry MSMEs. Additionally, the variable of technological resources is introduced as a moderating factor anticipated to reinforce the relationship between entrepreneurial orientation and the business performance of apparel industry MSMEs.

This research adopts the Resource-Based View (RBV) as its primary theoretical framework, supplemented by the Contingency Theory. RBV posits that a company's resources and capabilities are fundamental as they constitute the core of its competitiveness and performance. According to RBV, a company can gain a competitive edge by effectively managing its resources, thereby turning resource management into a source of competitive advantage (18). On the other hand, Contingency Theory, an organizational theory, suggests that there is no universally optimal way to manage a company. Instead, the most suitable policies or decisions depend on both internal and external circumstances (19). These theories are pertinent to the variables examined in the study.

## THEORY DEVELOPMENT

The Resource-Based View (RBV) theory, pioneered by Jay B. Barney in 1991, posits that a company's resources and capabilities are central to its competitiveness and performance. According to RBV, managing these resources and capabilities effectively is key to gaining a competitive advantage over other firms (18). Knowledge-Based View (KBV), an extension of RBV, emphasizes the importance of various forms of knowledge as valuable resources within the organization (20). Contingency Theory, originally formulated by Lawrence and Lorsch in 1967, asserts that there is no universally optimal way to manage a company. Instead, the most effective management decisions depend on both internal and external circumstances (21). The research model is built upon insights from RBV and Contingency Theory. The developed research model is presented in Figure. 1.

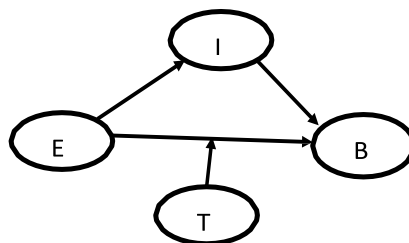


Figure 1. Research Model

Information: EO=Entrepreneurship Orientation; IS=Innovation Strategy; TR=Technology Resource; BP=Business Performance

H1: *Entrepreneurial orientation has a substantial positive influence on business performance.*

Within entrepreneurial orientation, the capacity for innovation, risk-taking, and proactive behavior are pivotal factors affecting company performance (5,6,14,22,23). However, it's noted that entrepreneurial orientation may not consistently lead to a positive impact on enhancing business performance (9–11).

H2: *Entrepreneurial orientation significantly contributes to an innovation strategy.*

A stronger entrepreneurial orientation within a company is likely to lead to the adoption of policies or decisions that align with entrepreneurial principles to enhance overall company performance (12,13,24). Previous studies have consistently found a positive relationship between entrepreneurial orientation and innovation strategies (8,12). However, it's noted that the impact of entrepreneurial orientation on innovation strategy may not be maximized, and innovation strategy itself may not significantly impact business performance (6). Although entrepreneurial orientation has a significant effect on innovation strategy, this effect is relatively modest (23).

H3: *Innovation strategy exerts a considerable and favorable impact on the performance of a business.*

The effectiveness of a company's business performance is greatly influenced by its innovation strategy, as noted by various researchers (12,13,24–26). A superior innovation strategy is associated with enhanced company performance across financial and other domains (27). However, not all innovation strategies equally contribute to business performance achievement (14). For instance, certain corporate innovation strategies like cost strategies do not significantly impact company performance (28).

H4: *Technology resources are expected to result in a notable enhancement of business performance*

The progress of information technology significantly impacts the business performance of the company (14,15,17,18). Approximately one-third of the total investment is allocated towards augmenting its information technology assets (29). However, according to research findings, not all technological resources have a substantial influence on the company's business performance (30).

H5: *Entrepreneurial orientation positively influences business performance via its impact on innovation strategy*

The influence of entrepreneurial orientation and innovation strategy on business performance is substantial (12,13,24). Both entrepreneurial orientation and innovation strategies are typically required for generating precise ideas, although the intermediary function of innovation strategies lacks significance (31,32). Entrepreneurial orientation may occasionally enhance business performance, but this outcome depends on the presence of an appropriate business strategy (33).

H6: *Technologies moderate the impact of entrepreneurial orientation on business performance*

Entrepreneurial orientation significantly enhances company performance (5,6,34). When coupled with adequate technological resources, entrepreneurial orientation significantly boosts business performance (Nurmadewi & Mahendrawathi (2019) and Siregar et al. (2017)). However, some research findings indicate that information technology does not moderate the relationship between entrepreneurial orientation and business performance, (Liao et al. (2020)). Additionally, technology has not been shown to moderate the impact of increasingly dynamic customers on company performance (Park & Ryu (2015)).

## RESEARCH METHOD

The study focused on small and medium-sized apparel businesses in Bali, involving 220 randomly selected participants. Analysis of the data was performed using Structural Equation Modeling-Partial Least Square (SEM-PLS) methodology. Table 1 displays the variables examined in the research.

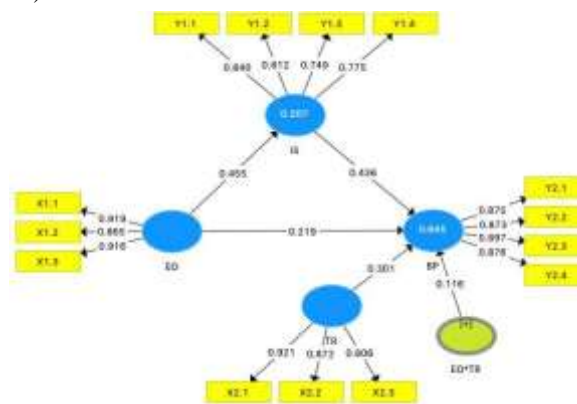
**Table 1.** List of variables

Variable	Indicator	Sources
Entrepreneurial orientation	Innovative (x1.1)	(Rofiaty, 2019)
	Risk-taking (x1.2)	
	Proactive (x1.3)	
Technology resources	Investment in Information Technology (X2.1)	(Bianchi, 2017; Wijoyo et al., 2020):
	Ability to operate Information Technology (X2.2)	
	Own Technology Infrastructure (X2.3)	
Innovation strategy	Business process improvement (Y1.1)	(AlQershi, 2021; Telagawathi et al., 2022; Ulubeyli et al., 2018):
	Developing new value from customers (Y1.2)	

	Developing new methods (Y1.3) Rapid Responsive (Y1.4)
Business Performance	Business process improvement (Giantari <i>et al.</i> , 2022; Yasa <i>et al.</i> , 2021): (Y1.1) Developing new value from customers (Y1.2) Developing new methods (Y1.3) Rapid Responsive (Y1.4)

**DISCUSSION**

Figure 2 illustrates the outcomes of the data analysis concerning the factors influencing and their impacts on the performance of small and medium-sized enterprises (MSMEs) in the apparel sector, using Partial Least Squares (PLS).



**Figure 2.** Estimation Results

The assessment of the outer model, also known as the measurement model, evaluates the validity of the model. In Partial Least Squares (PLS), two main criteria are used: composite reliability and discriminant validity. Composite reliability is assessed through internal consistency reliability and convergent validity.

A commonly employed measure for internal consistency reliability is Cronbach's Alpha. A Cronbach's Alpha value and Composite Reliability exceeding 0.7 indicate a strong level of reliability for the construct (35). The findings of the composite reliability assessment are presented in Table 2.

**Table 2.** Cronbach's Alpha Test Value and Composite Reliability

Construct	Alpha Cronbach's	Composite Reliability
BP	0.903	0.932
EO	0.883	0.928
EO×TR	1.000	1.000
IS	0.809	0.872

Source: Data analysis

Table 2 displays Cronbach's alpha and composite reliability values exceeding 0.7, indicating high reliability for the constructs. Convergent validity assesses how well an indicator correlates positively with other indicators within the same construct. In evaluating convergent validity for reflective constructs, researchers examine factor loadings of indicators and the Average Variance Extracted (AVE), as shown in Table 3.

**Table 3.** Nilai AVE

Variable	Average Variance Extracted (AVE)
BP	0.775
EO	0.811
EO×TR	1.000
IS	0.631
TR	0.753

Source: Data analysis

In the convergent validity assessment, it's essential for all indicators to have statistically significant factor loadings of 0.70 or higher. Additionally, an Average Variance Extracted (AVE) value of 0.50 or above indicates that more than half of the variance of the indicators can be explained by existing constructs (35). Table 3 indicates that all variables meet these criteria, with AVE values exceeding 0.5 and factor loadings of each indicator surpassing 0.7.

Discriminant validity is tested using the Fornell-Larcker criterion, which compares the square root value of AVE with the correlation between latent variables. Discriminant validity is established if the square root value of AVE is greater than the correlation value between latent variables. The findings of discriminant validity testing using Fornell-Larcker are presented in Table 4.

**Table 4.** Results of Discriminant Validity Testing with Fornell-Larcker

	BP	EO	EO*TR	IS	TR
BP	0.880				
EO	0.538	0.900			
EO×TR	0.077	-0.015	1.000		
IS	0.729	0.455	-0.038	0.795	
TR	0.668	0.406	-0.071	0.657	0.867

Source: Data processed

Table 4 indicates that the correlation between latent variables is lower than the square root of AVE, confirming that discriminant validity has been achieved.

The testing of the structural model, also known as the inner model, examines the relationships between latent variables based on substantive theory. This testing is conducted through R-Square (R<sup>2</sup>), which demonstrates the strengths and weaknesses of the research model, revealing the extent to which exogenous variables influence endogenous variables. The results of the structural model testing, including R<sup>2</sup> values, are presented in Table 5.

**Table 5.** Distribution of R-Square Values

Variable	R Square	R Square Adjusted
BP	0.645	0.639
IS	0.207	0.203

Source: Data processed

Table 5 presents the R<sup>2</sup> values, indicating the proportion of variance explained by exogenous variables for endogenous variables. For instance, the Innovation Strategy variable has an R<sup>2</sup> value of 0.207, meaning that 20.7 percent of changes in innovation strategies can be attributed to changes in entrepreneurial orientation, while 79.3 percent of the variance is influenced by variables outside the model. Similarly, the R<sup>2</sup> value for the business performance variable is 0.645, indicating that 64.50 percent of changes in MSME performance can be explained by entrepreneurial orientation, innovation strategies, and technological resources, with 35.50 percent of variance influenced by external factors.

Additionally, the Q-Square Predictive Relevance (Q<sup>2</sup>) value assesses how well the model predicts observations. A Q<sup>2</sup> value above 0 signifies predictive relevance, with a value of 0.7185 indicating that 71.85 percent of the relationship between variables can be explained by the model, while the remaining 28.15 percent is attributed to factors not included in the model.

Furthermore, significance of the path coefficient values demonstrates the strength of the influence of exogenous constructs on endogenous constructs. Hypothesis testing, conducted using Partial Least Squares (PLS) with bootstrapping procedures, employs a significance level of 0.05 and a two-sided test, yielding a t-table value of 1.96 (Hair Jr et al., 2017, p. 206). Table 6 presents the results of testing the significance of the direct effects on the model.

**Table 6.** Coefficient and Significance of Direct Effect

Path Relationship	(O)	(M)	(STDEV)	T Statistics	P Values	Information
EO → BP	0.219	0.221	0.057	3.818	0.000	Accepted
EO → IS	0.455	0.461	0.053	8.504	0.000	Accepted
EO×TR → BP	0.116	0.113	0.047	2.452	0.015	Accepted
IS → BP	0.436	0.435	0.067	6.505	0.000	Accepted
TR → BP	0.301	0.301	0.068	4.403	0.000	Accepted

Source: Data processed

Table 6 presents the direct effect coefficients and their corresponding levels of significance, indicating that all direct relationships have a significant positive influence. Indirect effects refer to the pathway of

influence from the exogenous latent variable to the endogenous latent variable through a mediating variable. In this research, the mediation relationship focuses on the impact of the exogenous latent variable of entrepreneurial orientation (EO) on MSME business performance via the latent variable of innovation strategy. The specific coefficients for the indirect effects are provided in detail in Table 7.

**Table 7.** Coefficient and Significance of Indirect Effect

Relationship Latent Variable	(O)	(M)	(STDEV)	T Statistics	P Values	Info.
EO → IS → BP	0.198	0.200	0.037	5.300	0.000	Accepted

Source: Data processed

Table 7 displays that the indirect effect coefficient of the entrepreneurial orientation variable (EO) on MSME business performance (BP) through the innovation strategy variable (IS) is 0.198, with a significance level of 0.000. These findings suggest that the innovation strategy variable significantly mediates the impact of entrepreneurial orientation on MSME business performance. Moreover, entrepreneurial orientation exhibits a significant positive influence on MSME business performance, indicating its crucial role in enhancing MSME performance. These results are consistent with prior studies examining the relationship between entrepreneurial orientation and MSME performance (6,36,37).

Additionally, the analysis reveals a significant positive effect of entrepreneurial orientation on innovation strategy, highlighting the importance of entrepreneurial orientation in fostering the innovation strategies of MSME owners and managers. These findings are supported by previous research examining the impact of entrepreneurial orientation on innovation strategy (12,26). Innovation strategy, defined as a company's approach to utilizing limited resources in a complex and challenging environment, plays a crucial role in MSME development. This study's results are consistent with prior research, which also yielded significant findings (38–40).

The specific influence of entrepreneurial orientation on MSME performance in this study is to instill confidence or self-confidence in MSME owners or managers. Entrepreneurial orientation must be able to build confidence in their competencies so that MSMEs have good business performance. This means that confidence in one's own competence will facilitate MSME business performance and economic growth. Technology resources have a significant positive impact on MSME business performance. This result is in line with several research studies that show technology resources strongly impact improving MSME performance (13,26,38). The better the technological resources owned by MSME owners and managers, the higher the performance of MSMEs (10,14,15,17). Technological resources in business organizations refer to the use of information technology to achieve certain targets (14).

The results of testing the hypothesis of the indirect effect of the entrepreneurial orientation construct on MSME business performance through the innovation strategy are unidirectional and significant. The mediating role of the innovation strategy variable is partial. This means that part of the effect of entrepreneurial orientation on MSME performance is intervened by innovation strategy (37,41). The model was developed by including innovation strategy variables as mediators. The aim is to find out how the direct effect and indirect effect of entrepreneurial orientation on improving MSME business performance. Entrepreneurial orientation directly improves the business performance of MSMEs. This means that MSME owners and managers must improve their innovation, risk-taking, and proactive capabilities.

In addition to its direct impact, entrepreneurial orientation also influences MSME business performance indirectly through innovation strategies. This implies that enhancing the business performance of MSMEs entails boosting entrepreneurial orientation to affect innovation strategies positively. Subsequently, innovation strategies will contribute to improving MSME business performance. The analysis and hypothesis testing results reveal that the construct of technological resources significantly moderates the relationship between entrepreneurial orientation and MSME performance. Technological resources act as a quasi-moderator, not only significantly moderating the relationship between entrepreneurial orientation and MSME performance but also serving as an exogenous construct that notably influences MSME performance. Therefore, MSME owners and managers need to remain attentive to technological advancements to enhance their business performance. Information technology brings numerous benefits to company operations, with nearly all fields of work relying on its assistance. For instance, computer-based applications can aid clothing design in apparel production activities, while internet technology facilitates monitoring competitors' activities. Consequently, innovation and opportunity identification become more accessible. Given the international reach of internet information, it facilitates broader market insights. Overall, the findings of this study align with Resource-Based View (RBV) theory and Contingency Theory. RBV posits that effective resource management enhances competitive advantage, while Contingency Theory underscores that optimal decision-making depends on internal and external circumstances (21)

## CONCLUSION

The study on the development of the business performance concept within the Micro, Small, and Medium Enterprises (MSMEs) operating in the apparel industry in Bali highlights critical factors that affect the sustainability and success of these businesses. Through an investigation of entrepreneurial orientation, innovation strategy, and technological resources, the research provides valuable insights into improving business performance in this sector. The results indicate that entrepreneurial orientation plays a significant and positive role in shaping the performance of MSMEs in the apparel industry. Moreover, entrepreneurial orientation notably influences innovation strategy, which, in turn, positively impacts MSME business performance. Furthermore, technological resources were found to enhance the impact of entrepreneurial orientation on MSME business performance. Overall, these findings underscore the significance of entrepreneurial orientation, innovation strategy, and technological resources in determining the sustainability and success of MSMEs in the apparel industry in Bali.

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