

The Influence of Human Resource Competence on Business Performance by Mediating Innovation Capabilities in MSMEs in Ternate City

Yuli Setyowati, Abdullah W. Jabid, Sulfi Abdul Haji

Universitas Khairun, Indonesia

Email: yulisetyowati668@gmail.com, abdullah.jabid@unkhair.ac.id, sulfi@unkhair.ac.id

ABSTRACT

This study aims to examine the influence of human resource (HR) competence on business performance mediated by innovation capabilities in MSMEs in the food and beverage processing sector in Ternate City. This study uses a quantitative approach with a survey method of 176 MSME actors. The analysis method uses SEM-PLS with the help of the SmartPLS 4.0.25 application. The results of the study show that: (1) HR competence has a significant effect on MSME business performance, (2) HR competence has a significant effect on innovation capabilities, (3) innovation capabilities have a significant effect on MSME business performance, and (4) innovation capabilities are able to significantly mediate the influence of HR competencies on MSME business performance. This research identifies the main challenges faced by MSME actors, including the need to improve human resource competencies through technical trainings and strengthening innovation capabilities to improve MSME business performance. The practical implications of this research are expected that the government pays attention to indicators that can encourage the improvement of MSME business performance, including human resource competence and how to encourage MSME innovation capabilities.

KEYWORDS

HR competence, innovation capabilities, business performance, MSMEs



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INTRODUCTION

In the era of globalization and rapid technological advancement, Micro, Small, and Medium Enterprises (MSMEs) worldwide face intense competitive pressures that demand continuous adaptation and innovation (Naradda Gamage et al., 2020). According to the International Labour Organization (ILO), MSMEs contribute approximately 70% of global employment and 50% of global GDP, making them a critical pillar of economic development across nations (Tekola & Gidey, 2019). However, the sustainability and competitiveness of MSMEs remain challenged by various factors, particularly in developing countries where access to resources, technology, and skilled human capital is often limited (Prasanna et al., 2019). The ability of MSMEs to compete in both domestic and international markets increasingly depends on their capacity to leverage internal resources, particularly human resource competencies and innovation capabilities, to create sustainable competitive advantages (Harini, Gemina, & Yuningsih, 2020).

In the context of international trade, MSMEs from developing countries face significant barriers to entering global export markets (Rahman, Uddin, & Lodorfos, 2017). The World Trade Organization (WTO) reports that MSMEs account for only 30% of global exports, despite representing over 90% of all businesses worldwide. This disparity highlights the urgent need to strengthen MSME capabilities to enhance their export competitiveness and participation in global value chains. Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in the Indonesian economy. Based on data from the Ministry of Cooperatives and SMEs of the Republic of Indonesia, MSMEs contribute 60.5% to the national Gross Domestic

Product (GDP) and absorb 96.9% of the total national workforce. In Ternate City, there are 14,692 units of MSMEs with 2,888 units engaged in the processing industry sector, of which 852 units focus on food and beverage processing (BPS Ternate City, 2024).

Despite having a vital role, the performance of MSMEs in Indonesia is still not optimal. This is reflected in the low contribution of MSME exports to national non-oil and gas exports, which only reaches 15.6% (Ministry of Cooperatives and SMEs of the Republic of Indonesia, 2023). In North Maluku, the export participation of MSMEs has not even been recorded significantly in official publications, indicating that there are still many challenges that MSMEs must face in improving competitiveness and business performance (Sitaniapessy, Usmanij, & Ratten, 2022).

Various studies show that the competence of human resources (HR) is a key factor in determining the performance of MSMEs. Klepic (2021) in his study on 234 SMEs in Bosnia Herzegovina found a significant positive influence of the level of competence on the business performance of SMEs. Similarly, Khan et al. (2020), who researched SMEs in Pakistan, concluded that entrepreneurial competence plays an important role in improving SME performance.

In addition to human resource competence, innovation capabilities are also an important determinant of MSME business performance (Surjanti, Mulyantomo, & Triyani, 2024). Fitriati et al. (2020) prove that innovation has a significant positive effect on the performance of SMEs. Innovation capabilities allow MSMEs to create new products, improve production processes, and adapt to market changes.

However, the results of previous studies show inconsistent findings. Sirat et al. (2023) in their research in North Maluku found that entrepreneurial competence does not significantly and directly impact business performance. Srimulyani et al. (2023) also found that entrepreneurial innovative behavior does not have a significant effect on business performance. The inconsistency of the results of this study shows the need for a more in-depth study of the relationship between human resource competence, innovation capabilities, and MSME business performance (Taleb, Hashim, & Zakaria, 2023).

This study uses the Resource-Based View (RBV) theory approach, which emphasizes that the company's internal resources, including human resource competence, are a source of sustainable competitive advantage. RBV theory explains that valuable, scarce, and hard-to-replicate resources and capabilities can help businesses achieve success and improve performance.

The local context of Ternate City as a trade center in North Maluku and the rapid development of the mining industry in this region provide great opportunities for MSMEs in the food and beverage processing sector. Mining companies such as Indonesia Weda Bay Industrial Park (IWIP) have partnered with local MSMEs with a contract value of more than Rp. 700 billion in the last three years (Kompas, 2024). This requires MSMEs to improve their innovation competencies and capabilities to meet the standards set by the industry.

Based on the identified research gap and the critical need to understand the mechanisms linking HR competence to business performance, this study aims to examine the influence of human resource competence on MSME business performance through the mediating role of innovation capabilities in the food and beverage processing sector in Ternate City. The findings of this research are expected to contribute significantly to both theoretical development and

practical application. Theoretically, this study extends RBV theory by providing empirical evidence of the synergistic interaction between HR competence and innovation capabilities as strategic resources. Practically, the results will inform policymakers and MSME practitioners about specific competency dimensions and innovation mechanisms that require targeted investment and development. For local government and supporting institutions, this research offers evidence-based guidance for designing more effective training programs, innovation support systems, and capacity-building initiatives that can enhance the competitiveness and sustainability of MSMEs in Ternate City and similar contexts throughout Indonesia.

METHOD

This study used a quantitative approach with a survey design. The research population consisted of all MSMEs in the food and beverage processing sector in Ternate City, totaling 2,836 units. The sample was determined using the Hair formula for the analysis of Structural Equation Modeling (SEM), which is the number of indicators multiplied by 10, so that a minimum sample of 120 respondents was obtained. In this study, the sample that was successfully collected comprised 176 respondents who were selected using purposive sampling.

Data were collected through a structured questionnaire that was shared online using Google Forms. The questionnaire used a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The variables for HR competence were measured using 7 indicators referring to Edison et al. (2016), including knowledge, abilities, and skills. Innovation capability variables were measured using 8 indicators based on Mulyana and Sutapa, including product innovation, market, service, and technology. The MSME business performance variables were measured using 10 non-financial indicators based on Velu and Manxhari (2017), including market share, new products, product quality, market effectiveness, and added value.

Data analysis was conducted using Structural Equation Modeling with Partial Least Squares (SEM-PLS) through the SmartPLS 4.025 application. The stages of analysis included: (1) descriptive statistical analysis, (2) evaluation of measurement models (outer models) which included tests of convergent validity, discriminant validity, and reliability, (3) evaluation of structural models (inner models) which included R-squared analysis and predictive relevance (Q^2), and (4) hypothesis tests through bootstrapping to assess the significance of direct and indirect influences.

RESULT AND DISCUSSION

1. Respondent Characteristics

The results showed that 85.2% of respondents were women and 14.8% were men, with the dominance of the 41-50 years age group (38.1%). As many as 52.8% of respondents had a high school education and 36.4% were undergraduates. The majority of respondents (47.7%) have been running a business for more than 5 years, and 44.3% have participated in training 1-5 times.

2. Descriptive Analysis

The descriptive analysis showed that the average value of HR competency variables was 4.19 (high category), innovation capability was 4.06 (high category), and MSME business

performance was 3.94 (high category). This indicates that MSME actors have a positive perception of their human resource competencies, innovation capabilities, and business performance.

3. Evaluation of Measurement Models

The results of the measurement model evaluation showed that all constructs met the criteria of convergent validity with an outer loading value of > 0.7 and an Average Variance Extracted (AVE) value of > 0.5 . The validity of the discriminator was met based on the cross-loading and Fornell-Larcker criteria. The reliability of the construct is also met with Cronbach's Alpha and Composite Reliability values > 0.7 .

Table 1. Measurement Model Evaluation Results

Variable	Cronbach's Alpha	Composite Reliability	AVE
HR Competencies	0,864	0,866	0,597
Innovation Capabilities	0,858	0,862	0,585
MSME Business Performance	0,920	0,923	0,612

4. Structural Model Evaluation

The evaluation of the structural model showed an R-square value for innovation capability of 0.381 (38.1%) and MSME business performance of 0.584 (58.4%), indicating that the model has moderate to strong predictive capabilities. The Q-square value of $0.420 > 0$ indicates that the model has good predictive relevance.

5. Hypothesis Test

The results of the hypothesis test through bootstrapping with 5,000 bootstrap samples showed that all hypotheses were accepted with a t-statistical value of > 1.96 and a p-value of < 0.05 .

Table 2. Hypothesis Test Results

Hypothesis	Path Coefficient	T-Statistics	P-Value	Information
H1: HR Competence → Business Performance	0,359	4,773	0,000	Accepted
H2: Human Resource Competencies → Innovation Capabilities	0,617	9,934	0,000	Accepted
H3: Innovation Capabilities → Business Performance	0,488	6,400	0,000	Accepted
H4: HR Competencies → Innovation Capabilities → Business Performance	0,301	5,524	0,000	Accepted

Discussion

The first hypothesis examining the direct relationship between human resource competence and MSME business performance was confirmed with a significant positive effect ($\beta = 0.359$, $p < 0.05$). This finding corroborates the theoretical framework of Resource-Based View (RBV), which posits that valuable and rare internal resources constitute sources of

competitive advantage. The empirical support aligns with recent studies by Klepic (2021), who demonstrated through research on 234 SMEs in Bosnia Herzegovina that competence levels significantly influence business performance outcomes. Similarly, Khan et al. (2020) established in their Pakistani context that entrepreneurial competence plays a pivotal role in performance enhancement. The magnitude of the effect ($\beta = 0.359$) suggests that approximately 35.9% of the variance in business performance can be attributed to HR competence, indicating that human capital dimensions—encompassing knowledge, abilities, and skills—serve as foundational elements driving operational effectiveness and strategic goal achievement. This finding is particularly relevant in the context of Ternate City's MSMEs, where the majority of owners possess secondary education levels, suggesting that targeted competency development programs could yield substantial performance improvements.

The second hypothesis revealed a robust positive relationship between human resource competence and innovation capabilities ($\beta = 0.617$, $p < 0.05$), representing the strongest path coefficient in the model. This substantial effect size demonstrates that HR competence explains 38.1% of the variance in innovation capabilities ($R^2 = 0.381$), confirming that competent human resources possess superior capacity to identify innovation opportunities and implement creative solutions. These findings resonate with the dynamic capabilities perspective articulated by Teece et al. (2016), which emphasizes that organizational capabilities emerge from the integration of individual competencies and organizational processes. The research by Prasetya and Aini (2021) provides parallel evidence, demonstrating that HR competencies enable organizations to reconfigure resources and develop innovative responses to market challenges. However, the R^2 value of 38.1% also indicates that 61.9% of innovation capability variance remains unexplained by HR competence alone, suggesting the influence of additional factors such as organizational culture, leadership style, access to technology, and external network relationships. This finding underscores the complexity of innovation processes and the need for holistic approaches to capability development in MSMEs. In the Ternate City context, where MSMEs increasingly serve mining industry supply chains, this relationship highlights the critical importance of continuous competency upgrading to sustain innovation momentum.

The third hypothesis confirmed that innovation capabilities exert a significant positive influence on MSME business performance ($\beta = 0.488$, $p < 0.05$). This finding provides strong empirical support for innovation-based competitive advantage theories articulated by scholars such as Porter (1985) and Schumpeter (1934), who argued that innovation constitutes a fundamental driver of business success. Contemporary research by Fitriati et al. (2020) and Hwang et al. (2019) corroborates this relationship, demonstrating that innovation across multiple dimensions—product, process, service, and technology—enables MSMEs to build sustainable competitive positions. The path coefficient of 0.488 indicates that innovation capabilities account for nearly half of the explained variance in business performance, highlighting the substantial practical importance of innovation investment. Theoretically, this finding aligns with the market-based view, which suggests that innovation enables firms to create unique value propositions, differentiate offerings, and respond effectively to evolving customer needs (Day, 2011). In practical terms, for Ternate City MSMEs operating in the food and beverage processing sector, this relationship emphasizes the necessity of systematic innovation management—including market research, product development, process

optimization, and technology adoption—as core strategic activities rather than peripheral concerns.

The fourth and most theoretically significant finding of this study concerns the mediating role of innovation capabilities in the relationship between HR competence and business performance ($\beta = 0.301$, $p < 0.05$). The significant indirect effect through innovation capabilities, combined with the significant direct effect (H1), indicates partial mediation—a finding that offers important theoretical and practical insights. From a theoretical perspective, this partial mediation suggests that HR competence influences business performance through dual pathways: a direct route reflecting immediate operational efficiencies and an indirect route through innovation capabilities that generate longer-term strategic advantages. This finding extends the work of Pranowo et al. (2020), who documented innovation capability as a mediator in the competence-performance relationship within Indonesia's footwear industry. The partial mediation model is consistent with the complementary resources perspective within RBV theory, which argues that synergistic combinations of resources produce superior outcomes compared to individual resources operating independently (Barney & Arikan, 2001). The practical implication is substantial: MSME development programs should adopt integrated approaches that simultaneously develop HR competencies and create organizational conditions conducive to innovation, rather than treating these as separate developmental tracks. The total effect of HR competence on performance (direct effect 0.359 + indirect effect 0.301 = 0.660) demonstrates that when innovation capabilities are activated as a mediating mechanism, the overall impact of HR competence increases substantially, nearly doubling the direct effect alone.

Integrating these findings within the broader theoretical framework, the results provide robust empirical validation of Resource-Based View propositions in the MSME context of a developing region. The study demonstrates that HR competence and innovation capabilities function as strategic resources meeting Barney's (1991) VRIN criteria—they are valuable, rare, inimitable, and non-substitutable within the Ternate City MSME ecosystem. Furthermore, the mediating relationship suggests that these resources do not operate in isolation but rather interact synergistically, creating a multiplicative effect on business performance. This systemic perspective aligns with recent developments in RBV theory that emphasize resource orchestration and capability integration as sources of sustained competitive advantage (Sirmon et al., 2011). For practitioners and policymakers, these findings underscore the importance of holistic interventions that recognize the interdependencies among different organizational resources and capabilities, rather than implementing fragmented, single-dimension development programs.

CONCLUSION

This study provides empirical evidence that human resource competencies have a positive and significant effect on the business performance of MSMEs, both directly and through the mediation of innovation capabilities. These findings confirm the importance of investment in the development of human resource competencies and innovation capabilities to improve the business performance of MSMEs in the food and beverage processing sector in Ternate City. The practical implication of this research is the need for continuous training programs and government support in developing an innovation ecosystem for MSMEs.

Research limitations include focusing on one sector and one region, as well as the use of non-financial measures for business performance. Further research can broaden the scope of sectors and regions, as well as integrate measures of financial and non-financial performance.

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