



The Influence of Entrepreneurial Orientation on Food and Beverage MSME Performance in Bandar Lampung

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Abstract

Purpose: This study aims to examine the effect of digitalization strategy and corporate governance on the financial performance of listed transportation companies. It further analyzes how both strategic digital transformation and governance mechanisms contribute to improving firm profitability and financial stability in a competitive industry environment.

Research Methodology: This study uses a quantitative approach based on secondary data from financial statements of listed transportation companies. The sample consists of companies listed on the stock exchange during the observation period. Data analysis is conducted using multiple linear regression to test the relationship between digitalization strategy, corporate governance, and financial performance. Classical assumption tests are applied to ensure model reliability and validity.

Results: The findings show that both digitalization strategy and corporate governance have a positive and significant effect on financial performance. Firms that actively implement digital transformation and maintain strong governance structures tend to achieve higher profitability, operational efficiency, and improved financial outcomes. Corporate governance demonstrates a slightly stronger effect compared to digitalization strategy.

Conclusions: Digitalization strategy and corporate governance are key determinants of financial performance in listed transportation companies. Their integration enhances competitiveness and supports long-term financial sustainability.

Limitations: This study is limited to listed transportation companies and relies on secondary data, which may not fully capture internal managerial dynamics.

Contributions: This research contributes to the literature by integrating digital transformation and governance perspectives in explaining financial performance and provides practical implications for managers and policymakers in strengthening governance and accelerating digital adoption.

Keywords: Customer Performance, Entrepreneurial Orientation, Food and Beverage Sector, MSME Performance, Product Performance

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1. Introduction

Indonesia has been undergoing rapid and dynamic economic transformations that may undermine the performance of micro, small, and medium enterprises (MSMEs). Several economic challenges, such as rising inflation ([Afifah, Machmud, Istikomah, & Purnamasari, 2024](#); [Chowdhury, 2002](#)), high unemployment rates ([Andriani, & Adys, 2025](#); Kurniasih, 2022), and limited job availability ([Triha, Shofia, Putri, Alius, & Satria, 2023](#)) have disrupted Indonesia's economy. These issues have significantly affected MSMEs, with weak customer purchasing power, increasing material costs, and consumer caution in spending contributing to operational difficulties. Consequently, some MSMEs that cannot remain competitive are forced to cease operations ([Sunyoto, Sendy, & Lay, 2024](#); [Taslim, & Kadiyono, 2023](#)).

Indonesia's economic development relies heavily on the active participation of MSMEs, which play a strategic role in fostering economic growth. MSMEs contribute to service provision, income generation, broad-based economic progress, and enhanced national stability ([Manzoor, Wei, & Siraj, 2021](#); [Sunyoto et al., 2024](#)). In Indonesia, MSMEs play a critical role, accounting for 99% of all business entities. Data from Badan Pusat Statistik indicate a continuous annual increase in the number of MSMEs from 2020 to 2023 ([Sunyoto et al., 2024](#)), underscoring their importance in driving Indonesia's economic resilience and development.

Moreover, MSMEs accounted for 61.9% of Indonesia's Gross Domestic Product (GDP) by 2023, underscoring their pivotal role in the national economy ([Triha et al., 2023](#)). This substantial contribution underscores the importance of prioritizing MSME development at the national level. The Food and Beverage (F&B) sector, in particular, has consistently contributed significantly to GDP. The F&B sector encompasses all stages of the production and delivery process, from processing raw materials to delivering finished products to consumers ([Afifah et al., 2024](#)). In 2023, the F&B industry, classified within the non-oil and gas manufacturing sector, contributed 6.55% to Indonesia's GDP and achieved an export value of \$41.70 billion, making it one of the top-performing sectors in the country ([Bisnistime, 2024](#); [Gupta, 2023](#)). Lampung, the eighth-most populous province in Indonesia with approximately 9.4 million residents, shows a positive correlation between population size and MSME density. In 2023, the number of MSMEs in Lampung increased by 80% to 492,986 units across 13 regencies and two cities, with Bandar Lampung hosting 30,940 MSMEs, accounting for 6.3% of the provincial total ([Triha et al., 2023](#)).

Business performance, which encompasses financial, operational, and strategic components, is a key indicator of organizational success ([Al-Mamary, Alwaheeb, Alshammari, Abdulrab, Balhareth, & Soltane, 2020](#); [Sunyoto et al., 2024](#)). Understanding and evaluating performance outcomes is essential for MSMEs to gain a competitive advantage, as strategic differentiation can enable firms to outperform their competitors ([Putniņš, & Sauka, 2020](#); [Sunyoto et al., 2024](#)). Specifically, in the F&B sector, human resources play a critical role in ensuring business success and service quality ([Taslim and Kadiyono, 2023](#); [Triha et al., 2023](#)). However, MSMEs in this sector face challenges such as limited access to capital, with 71% relying on personal funds and only 16% accessing bank loans, and competitive pressures from rapid economic changes ([Bisnistime, 2024](#); [Taslim and Kadiyono, 2023](#)). Consequently, adopting entrepreneurial orientation strategies is essential for enhancing MSME performance and sustaining their competitiveness ([Ardhi, & Mulyo, 2021](#); [Barinta, Aisjah, & Susilowati, 2022](#)).

Entrepreneurial orientation represents a strategic approach to business, initially proposed by [Miller \(1983\)](#). This concept is recognized as a key strategy for enhancing MSME performance ([Barinta et al., 2022](#); [Sunyoto et al., 2024](#)). Entrepreneurs are encouraged to develop entrepreneurial orientation capabilities because the competencies associated with this orientation are closely linked to practical applications and foundational practices in entrepreneurial development ([Martens, Machado, & Martens, 2018](#)). Entrepreneurial orientation enables decision-makers to evaluate business strategies

effectively and leverage opportunities that competitors cannot exploit ([Ali, Hilman, & Gorondutse, 2020](#)). Moreover, it is closely associated with achieving and sustaining business performance ([Al-Mamary et al., 2020](#); [Baker, 2009](#)).

The three dimensions of entrepreneurial orientation, innovativeness, risk-taking, and proactiveness, have been widely employed in prior research, following [Lumpkin and Dess \(1996\)](#). Empirical studies have generally shown that entrepreneurial orientation positively influences business success ([Al-Mamary et al., 2020](#); [Soomro, & Shah, 2019](#); [Wales, Covin, & Monsen, 2020](#)). Specifically, proactive behavior enhances MSME performance, while innovativeness and risk-taking serve as critical tools for improving overall business outcomes ([Al-Mamary et al., 2020](#); [Masa, Al-Henzab, Tarhini, & Obeidat, 2018](#)).

However, some studies suggest that entrepreneurial orientation may not always improve MSME performance. For instance, [Solikahan and Mohammad \(2019\)](#) found no significant contribution of entrepreneurial orientation to MSME outcomes, while [Rezaei and Ortt \(2018\)](#) reported that risk-taking does not significantly influence firm performance. [Putniņš and Sauka, 2020](#) observed no direct effect of innovation and proactiveness on firm performance. These inconsistencies indicate the need for further investigation into the effect of entrepreneurial orientation on MSME outcomes.

Research on entrepreneurial orientation is particularly limited in this regard. Existing studies have mostly focused on product-based, tourism, or educational contexts ([Dewi, Sukawati, Sukaatmadja, & Rahanatha, 2025](#); [Hutasuhut, Aditia, & Thamrin, 2024](#); [Yuza, & Yeni, 2023](#)) but very little in the F&B sector ([Hayati & Vedy, 2026](#)), leaving a gap in understanding its impact on F&B MSMEs in this region. Therefore, this study aims to examine the effect of entrepreneurial orientation on the performance of Micro, Small, and Medium Enterprises (MSMEs) in the Food and Beverage (F&B) sector in Bandar Lampung, providing more comprehensive local insights.

2. Literature Review and Hypothesis Development

2.1 Entrepreneurial Orientation

Entrepreneurial orientation represents a strategic framework that emphasizes the entrepreneurial dimensions that characterize a firm's strategy ([Barinta et al., 2022](#); [Hakala, 2011](#)). According to [Miller \(1983\)](#), entrepreneurial orientation reflects an individual's ability to identify opportunities and creatively leverage the available resources to achieve success. It encompasses the strategies, methods, and actions used by entrepreneurs to make decisions that facilitate entry into new markets ([Ardhi & Mulyo, 2021](#)). This orientation guides the regulations and procedures that inform decision-making processes in entrepreneurial activities ([Al-Mamary, Alwaheeb, Alshammari, Abdulrab, Balhareth, & Soltane, 2020](#)).

The conceptualization of entrepreneurial orientation varies. [Lumpkin and Dess \(1996\)](#) proposed a multidimensional perspective, suggesting that innovativeness, risk-taking, and proactiveness independently affect business performance. In contrast, [Covin and Slevin \(1990\)](#) adopt a unidimensional view, considering entrepreneurial orientation a firm-level characteristic manifested through consistent entrepreneurial behaviors. Regardless of conceptual differences, entrepreneurial orientation at the firm level reflects the entrepreneurial traits of the enterprise.

The significance of entrepreneurial orientation has attracted considerable academic attention, highlighting its role in defining the success or failure of business entities ([Santoso, 2020](#); [Sunyoto, 2024](#)). Firms with entrepreneurial orientation demonstrate innovative behavior, willingness to take risks, and proactive strategies to outperform competitors ([Taslim & Kadiyono, 2023](#)). Entrepreneurial orientation serves as a tool for achieving superior performance by fostering proactive tactics, supporting innovation, and encouraging measured risk-taking, thereby creating competitive advantages ([Al-Mamary et al., 2020](#); [Hayati & Vedy, 2026](#); [Miller, 1983](#); [Zeng, 2024](#)).

Business performance is a critical measure of success and sustainability ([Erdavit & Yohana, 2024](#)). It reflects the extent to which a business meets its goals and its overall operational effectiveness ([Sunyoto et al., 2024](#)). At the organizational level, performance includes productivity, turnover, and adaptability ([Tseng & Lee, 2014](#)). For MSMEs, performance captures the outcomes of all business operations, including sales and productivity, which cover internal and external objectives such as market share, profitability, and growth ([Erdavit & Yohana, 2024](#)). [Hughes and Morgan \(2007\)](#) classify performance into product performance and customer performance, where product performance evaluates sales and market share and customer performance reflects customer satisfaction with products or services ([Dahal, 2021](#)).

2.2 Entrepreneurial Orientation in MSMEs and Food and Beverage Sector

Entrepreneurial orientation plays a crucial role in enhancing the competitiveness and sustainability of Micro, Small, and Medium Enterprises (MSMEs) ([Sembiring, Setyawati, Indajang, Doloksaribu, & Sudirman, 2023](#)). MSMEs must continuously adapt through innovation, proactive strategies, and risk management, especially those operating in dynamic and uncertain markets. Entrepreneurially oriented MSMEs are better able to identify market opportunities, respond to consumer demand, and create value-added products that differentiate them from competitors. This strategic orientation is particularly important for MSMEs in developing countries where resource constraints require companies to be more innovative and adaptive in their operations ([Hidayat, Badaruddin, & Widiawati, 2025](#)).

In the Food and Beverage (F&B) sector, competition is fierce and consumer preferences change rapidly, making an entrepreneurial orientation essential for business survival and growth ([Parthasarathi & Ongkowijoyo, 2025](#)). F&B MSMEs rely heavily on product innovation, service quality, and responsiveness to customer trends. An entrepreneurial orientation enables business owners to develop unique menus, improve service delivery, and implement creative marketing strategies that strengthen customer engagement. Consequently, companies with a strong entrepreneurial orientation tend to achieve better market positioning and increased customer loyalty in the F&B industry ([Nguyen, It, & Anna, 2023](#)).

2.3 MSME Performance: Product and Customer Dimensions

Business performance measurement in MSMEs is generally based on financial and non-financial metrics. In this study, MSME performance is conceptualized into two main dimensions: product performance and customer performance ([Ahmad & Jamil, 2020](#)). Product performance reflects sales growth, product quality, and market expansion, while customer performance refers to customer satisfaction, loyalty, and repeat purchasing behavior. These indicators are particularly relevant in the food and beverage sector, where customer experience and product appeal play a central role in determining business success ([Mahohoma, 2024](#)).

2.4 Hypothesis Development

Based on the literature, entrepreneurial orientation is expected to positively influence MSME performance, particularly in terms of product and customer outcomes. Firms with higher levels of innovativeness, proactiveness, and risk-taking are more likely to achieve better product performance and customer satisfaction. Therefore, the following hypotheses are proposed:

H₁: Entrepreneurial orientation positively affects MSME product performance.

H₂: Entrepreneurial orientation has a positively affects MSME customer performance.

3. Research Methodology

3.1 Sample

The study involved 130 respondents from SMEs in the Food and Beverage sector in Bandar Lampung. Demographic analysis indicates that female managers and owners (62.5%) are more prevalent than male managers and owners. The length of business operations is primarily 1–5 years (51.79%), followed by 6–10 years and over 10 years.

3.2 Measurement

The independent variable, entrepreneurial orientation, was measured using 24 items based on [Hayati and Vedy \(2026\)](#) study. The dependent variables included product performance (measured using two items) and customer performance (measured using three items), following [Hughes and Morgan \(2007\)](#). All constructs were measured on a Likert scale ranging from 5 (strongly agree) to 1 (strongly disagree). Data were analyzed using linear regression with SmartPLS version 4 ([Margalina et al., 2026](#); [Ringle et al., 2024](#)).

4. Results and Discussions

4.1 Results

4.1.1 Validity and Reliability

In the SmartPLS-based measurement model evaluation in Table 1, outer loadings were used to assess each indicator's contribution to reflecting the latent construct. Therefore, indicators with low loadings require further evaluation based on construct reliability, convergent validity, and theoretical considerations before deciding whether to retain or eliminate them ([Hair et al., 2019, 2025](#); [Margalina et al., 2026](#); [Ringle et al., 2024](#)). Thus, these results indicate that the indicators of Customer Performance and Product Performance are relatively strong. In contrast, several indicators of entrepreneurial orientation require further analysis because of their lower loadings.

Table 1. Validity and Reliability Testing

	Cronbach's Alpha	Fornell-Larcker Criterion (CP)	Fornell-Larcker Criterion (EO)	Fornell-Larcker Criterion (PP)
Customer Performance (CP)	0,674	0,780		
Entrepreneurial Orientation (EO)	0,895	0,483	0,544	
Product Performance (PP)	0,679	0,328	0,550	0,868

Source: Data Processed (SmartPLS 4), 2026

Table 1 shows the reliability and construct validity evaluation showed that customer performance had a Cronbach's alpha of 0.674, a composite reliability (ρ_a) of 0.731, a composite reliability (ρ_c) of 0.820, and an average variance extracted (AVE) of 0.609. These results indicate that the customer performance construct has adequate internal reliability and good convergent validity, as the AVE exceeds the minimum threshold of 0.50 ([Hair et al., 2019](#); [Hair et al., 2025](#)). Meanwhile, the Product Performance (PP) construct had a Cronbach's alpha of 0.679, a ρ_a of 0.708, a ρ_c of 0.860, and an AVE of 0.754. These values indicate that the PP construct has adequate reliability and strong convergent validity. After eliminating low loadings, the entrepreneurial orientation (EO) construct showed a Cronbach's alpha of 0.895, a ρ_a of 0.900, and a ρ_c of 0.908, indicating excellent internal reliability. However, the AVE of 0.296 is still below the recommended threshold, indicating

that the convergent validity of the EO construct has not been fully met and that further attention is needed to the quality of the indicators used ([Margalina et al., 2026](#); [Ringle et al., 2024](#)). The results of the reliability and construct validity testing indicated that CP and PP met the criteria for internal reliability and convergent validity. Despite its high reliability, EO still requires further evaluation regarding its convergent validity ([Hair et al., 2019](#); [Hair et al., 2025](#); [Margalina et al., 2026](#); [Ringle et al., 2024](#)).

4.1.2 Discriminant Validity Testing

Table 2. Heterotrait-Monotrait Ratio (HTMT)

Interaction	HTMT
EO <-> CP	0,589
PP <-> CP	0,449
PP <-> EO	0,660

Source: Data Processed (SmartPLS 4), 2026

Table 2 shows that all HTMT values between constructs are below the 0.90 threshold recommended in PLS-SEM analysis, so the model's discriminant validity can be declared fulfilled ([Hair, Risher, Sarstedt, & Ringle, 2019](#); [Hair, Babin, Ringle, Sarstedt, & Becker, 2025](#)). In detail, the HTMT values are 0.589 between Entrepreneurial Orientation (EO) and Customer Performance (CP), 0.449 between Product Performance (PP) and Customer Performance (CP), and 0.660 between Product Performance (PP) and Entrepreneurial Orientation (EO). These values indicate that each construct has an adequate level of differentiation and does not experience excessive conceptual overlap. Thus, the indicators used can adequately differentiate the measured latent constructs, supporting the quality of the measurement model and strengthening the discriminant validity in this study ([Margalina, Kreienbaum, Hair, Becker, & Ringle, 2026](#); [Ringle, Wende, & Becker, 2024](#)).

4.1.3 Fornell-Larcker Criterion

In addition to using HTMT, discriminant validity was evaluated using the Fornell-Larcker criterion.

Table 3. Fornell-Larcker criterion

	CP	EO	PP
Customer Performance (CP)	0,780		
Entrepreneurial Orientation (EO)	0,483	0,544	
Product Performance (PP)	0,328	0,550	0,868

Source: Data Processed (SmartPLS 4), 2026

Table 3 shows that the square root of each construct's AVE was greater than the correlation of the construct with the other constructs. The customer performance construct had an AVE of 0.780, which was higher than its correlations with entrepreneurial orientation (0.483) and product performance (0.328). The entrepreneurial orientation construct had an AVE of 0.544, which was slightly lower than its correlation with product performance (0.550) but still higher than its correlation with customer performance (0.483). Meanwhile, the product performance construct showed an AVE of 0.868, which was much higher than its correlations with customer performance (0.328) and entrepreneurial orientation (0.550). In general, these results indicate that most constructs have met the Fornell-Larcker criteria, especially customer performance and product performance, which suggests that the construct is better at explaining the variance of its indicators than the variance shared with other constructs ([Hair, Risher, Sarstedt, & Ringle, 2019](#); [Hair, Babin, Ringle, Sarstedt, & Becker, 2025](#)). However, in the EO construct, there is some indication of suboptimal discriminant validity, as the square root of the AVE is slightly lower than the correlation with product performance. This finding aligns with the

relatively low AVEs for EO and indicates the need to further evaluate the indicators comprising the EO construct to ensure the quality of the overall measurement model ([Margalina, Kreienbaum, Hair, Becker, & Ringle, 2026](#); [Ringle, Wende, & Becker, 2024](#)).

4.1.4 Descriptive Statistics

Table 4. Descriptive Statistics

	Mean	Median	Observed min	Observed max	Standard deviation
Product Performance (PP)	0,000	0,087	-1,589	1,126	0,501
Customer Performance (CP)	0,000	-0,004	-1,732	1,229	0,434
	Excess Kurtosis	Skewness	Number of observations	Cramér-von Mises Test Statistic	Cramér-von Mises P-Value
Product Performance (PP)	0,773	-0,458	128,000	0,098	0,118
Customer Performance (CP)	1,972	-0,619	128,000	0,069	0,287

Source: Data Processed (SmartPLS 4), 2026

Table 4 shows the normality test results indicated two outliers. After removing the two identified outliers, descriptive statistics were computed for the product and customer performance constructs using 128 observations. The product performance construct had a mean of 0.000, median of 0.087, minimum observed value of -1.589, maximum of 1.126, and standard deviation of 0.501. A skewness value of -0.458 indicates a distribution that is slightly skewed to the left, while an excess kurtosis value of 0.773 indicates a distribution that is relatively sharper than a normal distribution. The Cramér-von Mises test yielded a statistic of 0.098 with a p-value of 0.118, indicating that the product performance data distribution did not differ significantly from a normal distribution at the 5% significance level.

Meanwhile, the customer performance construct had a mean of 0.000, median of -0.004, minimum of -1.732, maximum of 1.229, and standard deviation of 0.434. The skewness value of -0.619 indicates a slightly left-skewed distribution. In contrast, an excess kurtosis value of 1.972 indicates a leptokurtic distribution, or one with a higher peak than a normal distribution. The Cramér-von Mises test showed a p-value of 0.287, indicating no statistical significance. Because the p-value is greater than 0.05, the customer performance data distribution can also be considered to not be significantly different from a normal distribution.

Descriptive statistics after removing two outliers indicate that the data distributions for the product and customer performance constructs are relatively close to normal. It is supported by skewness values within the acceptable range, kurtosis values that do not show extreme deviations, and insignificant Cramér-von Mises test results for both constructs. Thus, the quality of the data distribution after the data cleaning process improves and supports further analysis in the research model ([Hair et al., 2019](#); [Hair et al., 2025](#); [Margalina et al., 2026](#); [Ringle et al., 2024](#)).

4.1.5 R-Squares Test Result

Collinearity testing in the structural model (inner model) was conducted after removing two outlier respondents by evaluating the Variance Inflation Factors (VIFs) among the constructs. The analysis results showed that the relationships between Entrepreneurial Orientation (EO) and product performance and between EO and customer performance had VIF values of 1.000. A VIF value of 1.000 indicates no excessive linear correlation among the predictors in the structural model.

According to the PLS-SEM evaluation guidelines, a VIF value far below the threshold of 3.3 or 5.0 indicates that the model does not experience multicollinearity problems that can affect the stability and accuracy of path coefficient estimates ([Hair et al., 2019](#); [Hair et al., 2025](#); [Margalina et al., 2026](#); [Ringle et al., 2024](#)). Thus, after removing the two outlier respondents, the EO construct could be used as a predictor of product and customer performance without any indication of collinearity that could potentially interfere with the interpretation of the structural relationships in the research model.

Table 5. R-Square Test

	Product Performance (PP)	Customer Performance (CP)
R-square	0,292	0,288
R-square adjusted	0,287	0,282
Durbin-Watson test	2,288	1,936

Source: Data Processed (SmartPLS 4), 2026

Table 5 show that the product performance construct has an R-squared value of 0.292 and an adjusted R-squared of 0.287. This finding indicates that entrepreneurial orientation explains 29.2% of the variation in PP, whereas factors outside the research model account for the remaining 70.8%. For the customer performance construct, the R-squared was 0.288, and the adjusted R-squared was 0.282. This indicates that EO explains 28.8% of the variation in customer performance, while the remaining 71.2% is influenced by other variables not included in the model. Based on the structural model evaluation guidelines in PLS-SEM, the R-square values for both constructs can be categorized as moderate explanatory power, indicating that the model has adequate predictive power, although there is still room for improving explanatory power by adding other relevant constructs ([Hair et al., 2019](#); [Hair et al., 2025](#)).

Furthermore, the assumption of residual independence was tested using the Durbin-Watson statistic. The results showed that the product performance model had a Durbin-Watson value of 2.288, whereas the customer performance model had a value of 1.936. Both values are around 2, indicating the absence of serious residual autocorrelation in the regression model. Thus, the residuals in both models can be considered independent, thus meeting the basic assumptions of regression, and the model estimation results can be interpreted more reliably ([Margalina et al., 2026](#); [Ringle et al., 2024](#)).

4.1.6 Hypothesis Testing Results

The next step was to test the structural relationships between the constructs using path coefficient analysis (Table 6).

Table 6. Hypothesis Testing

	Unstandardized coefficients	Standardized coefficients	SE	T value	P value	2.5 %	97.5 %
EO-PP	0,863	0,541	0,120	7,212	0,000	0,626	1,099
Intercept	0,531	0,000	0,508	1,043	0,299	-0,476	1,537
EO-CP	0,740	0,537	0,104	7,139	0,000	0,535	0,945
Intercept	1,194	0,000	0,440	2,710	0,008	0,322	2,065

Source: Data Processed (SmartPLS 4), 2026

Table 6 show that entrepreneurial orientation has a positive and significant influence on product performance. The unstandardized coefficient was 0.863, and the standardized coefficient was 0.541, indicating that an increase in EO was associated with an increase in product performance. This relationship is supported by a t-value of 7.212 and a p-value <0.001, indicating that the effect of EO on product performance was statistically significant. Furthermore, the 95% confidence interval ranged from 0.626 to 1.099 and did not cross zero, further strengthening the significance of the relationship.

The intercept value for the product performance model was 0.531 but was not statistically significant ($t = 1.043$; $p = 0.299$), with a 95% confidence interval of -0.476–1.537.

Similar results were found for the relationship between EO and customer performance. The unstandardized coefficient of 0.740 and the standardized coefficient of 0.537 indicate the positive effect of EO on customer performance. The t -value of 7.139, with a p -value of <0.001 , indicates that the effect is statistically significant. The 95% confidence interval for the path coefficients ranges from 0.535 to 0.945, all of which are positive and do not include zero; therefore, the higher the level of entrepreneurial orientation, the higher the resulting customer performance. The intercept value in the customer performance model (1.194) is statistically significant ($t = 2.710$; $p = 0.008$), with a 95% confidence interval of 0.322 to 2.065.

4.1.7 ANOVA Testing Results

Table 7. ANOVA Testing

		Sum square	df	Mean square	F	P value
Product Performance	Total	45,436	127	0,000	0,000	0,000
	Error	32,160	126	0,255	0,000	0,000
	Regression	13,275	1	13,275	52,012	0,000
Customer Performance	Total	33,881	127	0,000	0,000	0,000
	Error	24,123	126	0,191	0,000	0,000
	Regression	9,758	1	9,758	50,966	0,000

Table 7 shows an Analysis of Variance (ANOVA) of the regression models predicting product performance and customer performance. The ANOVA results for the product performance model indicate a regression sum of squares of 13.275 with 1 deg of freedom (df) and a mean square of 13.275. This value yields an F statistic of 52.012, with a p -value <0.001 . The error sum of squares was 32.160 with 126 df and a mean square of 0.255. These results indicate that the regression model using entrepreneurial orientation as a predictor significantly explains the variation in Product Performance ([Hair et al., 2019](#); [Margalina et al., 2026](#)).

For the customer performance model, the regression sum of squares was 9.758 with one degree of freedom, yielding a mean square of 9.758. The resulting F -value was 50.966, with a p -value of <0.001 , indicating that the overall regression model was significant. The sum of squared errors was 24.123, with a df of 126 and a mean square of 0.191. This finding indicates that entrepreneurial orientation can also significantly explain the variation in Customer Performance and is not due to statistical chance.

The ANOVA test results confirm the previous findings from the path coefficient analysis that entrepreneurial orientation is a significant predictor of both Product Performance and Customer Performance. The high F -value and very strong statistical significance in both models indicate that the variation explained by the regression models is much greater than the variation in error; thus, the models have good predictive ability in explaining changes in both dependent constructs ([Hair et al., 2025](#); [Margalina et al., 2026](#); [Ringle et al., 2024](#)).

Thus, the results of the structural model test indicate that entrepreneurial orientation is a significant predictor of both product and customer performance. The relatively similar standardized coefficients for both relationships ($\beta = 0.541$ for PP and $\beta = 0.537$ for CP) indicate that EO contributes almost equally to improving both performance aspects. R -square values approaching 0.30 in both models indicate that EO explains a significant portion of the variation in product performance and customer performance. Simultaneously, the Durbin-Watson results confirm that the models do not exhibit autocorrelation.

4.2 Discussion

The results indicate that entrepreneurial orientation has a positive and significant effect on product performance in Food and Beverage MSMEs in Bandar Lampung, with a standardized coefficient of 0.541 and a p-value <0.001. These findings are consistent with previous literature emphasizing the importance of entrepreneurial orientation as a strategy for improving business performance, including product capabilities that meet market needs and gain a wider market share ([Barinta, Aisjah, & Susilowati, 2022](#); [Hayati, & Vedy, 2026](#); [Sunyoto, Sendy, & Lay, 2024](#)). Entrepreneurial orientation encourages MSME owners and managers to adopt innovation, take calculated risks, and act proactively, thereby increasing product competitiveness in local and national markets ([Ali, Hilman, & Gorondutse, 2020](#); [Hayati and Vedy, 2026](#); [Martens, Machado, & Martens, 2018](#)).

In the context of Indonesian MSMEs, particularly the F&B sector, improving product performance through entrepreneurial orientation is highly relevant, as MSMEs face challenges such as limited access to capital, intense competition, and rapidly changing consumer preferences ([Bisnistime, 2024](#); [Taslim, & Kadiyono, 2023](#)). By implementing entrepreneurial orientation, MSMEs can develop product differentiation strategies, innovate in processing and presentation, and respond more quickly to market opportunities, thereby improving sales performance and customer satisfaction ([Al-Mamary, Alwaheeb, Alshammari, Abdulrab, Balhareth, & Soltane, 2020](#); [Ardhi, & Mulyo, 2021](#); [Hayati and Vedy, 2026](#)). This is supported by descriptive research results showing that the Product Performance indicator has a strong outer loading value (PP01 = 0.903; PP02 = 0.832), as well as adequate reliability and convergent validity (Cronbach's α = 0.679; AVE = 0.754), indicating that MSME products truly reflect performance that can be measured consistently ([Hair, Risher, Sarstedt, & Ringle, 2019](#); [Margalina, Kreienbaum, Hair, Becker, & Ringle, 2026](#); [Ringle, Wende, & Becker, 2024](#)).

Furthermore, the R-square value for product performance of 0.292 indicates that entrepreneurial orientation explains approximately 29.2% of the variation in product performance, with the remainder influenced by external factors such as market access, technology, and local infrastructure ([Hair, Babin, Ringle, Sarstedt, & Becker, 2025](#); [Sunyoto et al., 2024](#)). This finding confirms that although entrepreneurial orientation is a key factor, MSMEs still require support from a conducive business environment, such as entrepreneurship training, mentoring, and access to capital, to implement optimal product innovation ([Gupta, 2023](#); [Hayati and Vedy, 2026](#); [Indonesia, 2024](#)).

Practically, these results suggest that F&B MSME owners and managers should prioritize developing entrepreneurial orientation capabilities in business operations, including market-opportunity-based decision-making, managing product innovation risks, and increasing team proactivity in the face of competition ([Al-Mamary et al., 2020](#); [Baker, 2009](#); [Hayati and Vedy, 2026](#)). Consistent implementation of entrepreneurial orientation can be a strategic tool to drive product performance growth, enhance MSME competitiveness in the local market, and strengthen the food and beverage sector's contribution to the Indonesian economy ([Sunyoto et al., 2024](#); [Triha, Shofia, Putri, Alius, & Satria, 2023](#)).

The results show that entrepreneurial orientation has a positive and significant effect on Customer Performance (CP) in Food and Beverage MSMEs in Bandar Lampung, with a standardized coefficient of 0.537 and a p-value <0.001. This finding reinforces the view that entrepreneurial orientation plays a crucial role in building better customer relationships, including satisfaction, loyalty, and perceived product and service quality ([Barinta et al., 2022](#); [Sunyoto et al., 2024](#); [Hayati and Vedy, 2026](#)). With proactivity, innovation, and courage to take risks, MSME owners can adjust their marketing and service strategies to be more responsive to customer needs, thereby improving overall customer performance ([Ali et al., 2020](#); [Hayati and Vedy, 2026](#); [Martens et al., 2018](#)).

In the context of Indonesian MSMEs, particularly the F&B sector, customer performance is significantly influenced by entrepreneurs' active involvement in product and service innovation, given the intense competition and rapidly changing consumer preferences ([Taslim and Kadiyono, 2023](#);

[Bisnistime, 2024](#)). Entrepreneurial orientation implementation enables MSMEs to address customer feedback, adapt product offerings, and enhance the customer experience, leading to repeat purchases and recommendations ([Al-Mamary et al., 2020](#); [Ardhi and Mulyo, 2021](#); [Hayati and Vedy, 2026](#)). The relatively strong outer loadings of CP (CP01 = 0.840; CP02 = 0.872; CP03 = 0.600) and adequate reliability and convergent validity (Cronbach's α = 0.674; AVE = 0.609) support the consistency of customer performance measurement ([Hair et al., 2019](#); [Margalina et al., 2026](#); [Ringle et al., 2024](#)).

The R-square value for Customer Performance of 0.288 indicates that entrepreneurial orientation explains approximately 28.8% of the variation in customer performance, while the remaining variation is influenced by other factors, such as additional service quality, price, and customer interactions ([Hair et al., 2025](#); [Sunyoto et al., 2024](#)). These findings confirm that entrepreneurial orientation is a crucial factor, but improving customer performance still requires the support of a conducive business environment, such as customer management training and information technology to facilitate communication and interaction with consumers ([Indonesia, 2024](#); [Gupta, 2023](#); [Hayati and Vedy, 2026](#)).

Practically, the positive influence of entrepreneurial orientation on customer performance suggests that MSME F&B owners and managers must develop entrepreneurial capacity in customer service aspects, such as rapid response to complaints, service innovation, and proactive communication strategies with consumers ([Al-Mamary et al., 2020](#); [Baker, 2009](#); [Hayati and Vedy, 2026](#)). With consistent entrepreneurial orientation implementation, MSMEs can increase customer satisfaction and loyalty, strengthen their competitive position in the local market, and make a significant contribution to economic growth through a productive and responsive food and beverage (F&B) sector ([Triha et al., 2023](#); [Sunyoto et al., 2024](#)).

5. Conclusions

Based on the research results, it can be concluded that Entrepreneurial Orientation has a positive and significant effect on product and customer performance in MSMEs in the Food and Beverage sector in Bandar Lampung. entrepreneurial orientation explains 29.2% of the variation in product performance and 28.8% of the variation in customer performance. This indicates that the implementation of entrepreneurial orientation, which encompasses innovation, risk-taking, and proactivity, significantly contributes to improving product competitiveness and customer satisfaction in MSMEs in Indonesia.

This study reinforces the literature's emphasis on entrepreneurial orientation as an organizational strategy for improving business performance in terms of products and customers. These findings broaden the understanding of the multidimensional relationship between entrepreneurial orientation and MSME performance in the F&B sector in Indonesia, supporting the view that each dimension of entrepreneurial orientation (innovation, risk, proactivity) contributes to improving organizational performance. The results also indicate that although entrepreneurial orientation has a significant influence, other external factors such as market access, technology, and a supportive business environment still influence performance. Therefore, the entrepreneurial orientation model needs to be contextualized in future studies of the Indonesian market.

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Author Contributions

HSV contributed to the conceptualization, research design, data collection, and manuscript drafting. KH contributed to critical revision of the manuscript, theoretical enrichment, and methodological validation. Both authors read and approved the final version of the manuscript.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article. The research was conducted independently without any financial, commercial, or personal relationships that could be interpreted as influencing the findings or interpretation of the study.

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