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ANALYSIS OF THE EFFECT OF VOLATILITY, UNCERTAINTY, COMPLEXITY, AND AMBIGUITY ON THE PERFORMANCE OF CULINARY MSMES IN ENREKANG REGENCY

Zul Rahma Umar[1], Akhmad[2], Edi Jusriadi[3], Andi Jam'an[4], Muchriadi Muchran[5]
Universitas Muhammadiyah Makassar, Indonesia [1,2,3,4,5]
Email: zulrahma46@gmail.com, Akhmad.unismuh@gmail.com, Edi.Jusriadi@unismuh.ac.id, andijaman2023@gmail.com, dr.muchriady@yahoo.com

ABSTRACT

The purpose of this study was to determine and analyze the effect of Volatility, Uncertainty, Complexity, and Ambiguity on the Performance of Culinary MSMEs in Enrekang Regency. The population in this study were culinary MSME players, with data collection techniques through observation, questionnaires and documentation. The data analysis technique uses multiple linear regression analysis. From the results of the research conducted, empirical findings were obtained that volatility has a positive and significant effect on the performance of culinary MSMEs. Uncertainty has a positive and insignificant effect on the performance of culinary MSMEs. Complexity has a positive and significant effect on the performance of culinary MSMEs, and ambiguity has a negative and significant effect on the performance of culinary MSMEs in Enrekang Regency.

KEYWORDS *Volatility, Uncertainty, Complexity, Ambiguity and Performance of Culinary MSMEs*

INTRODUCTION

Rapid technological change and intense business competition have created significant challenges for companies and Micro, Small and Medium Enterprises (MSMEs). In this context, MSMEs have an important role in creating jobs, absorbing labor, and contributing to gross domestic product (GDP) (Romadhoni et al., 2022). However, the success of MSMEs to survive and compete largely depends on their ability to implement good management, especially in marketing and continuous innovation. To improve performance, MSMEs need to leverage digital technology and adopt a management approach oriented towards Volatility,

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Uncertainty, Complexity, and Ambiguity (VUCA), a concept that aids decision-making in the face of uncertainty (Permana & Ellitan, 2020).

VUCA factors affect MSME performance through four main elements. Volatility refers to instability arising from sudden changes, which have a significant impact on the business environment (Weningsih & Sutikno, 2023). Uncertainty adds challenges due to the difficulty of predicting future events, thus making decision-making more complex (Chadha, 2021). In addition, complexity arises due to the many interrelated variables in the business environment, while ambiguity describes unclear information that can complicate business management (Astuti, 2023). Research shows that these four factors have a significant influence on business performance, either positively or negatively, depending on the ability of business actors to adapt (Hiakbar et al., 2023).

In Enrekang Regency, the culinary sector is one of the fastest growing MSMEs thanks to the support of tourist destinations such as Mount Nona, which attracts tourists to enjoy regional specialties. However, this growth is accompanied by various challenges, such as intense competition between businesses, fluctuating raw material prices, and profit pressures that threaten the sustainability of small businesses. While an increase in tourists brings economic benefits, intense competition forces culinary businesses to innovate and utilize digital technology to maintain competitiveness.

To face the challenges of the VUCA era, culinary MSME players in Enrekang need to improve their adaptability by implementing strategies that are responsive to change. Measures such as strengthening business management, innovating in digital marketing and utilizing social media for promotion can help them stay competitive. This approach not only supports business sustainability but also strengthens the contribution of the MSME sector to the regional economy. Therefore, research on the influence of VUCA on the performance of culinary MSMEs in Enrekang Regency is important to identify strategic solutions to this challenge.

Previous research studies have shown that various environmental factors, such as volatility, uncertainty, complexity, and ambiguity, have diverse influences on the performance of MSMEs and business organizations. Some studies, such as Hiakbar et al. (2023) and Rini et al. (2021), found significant positive effects of these factors on business performance, while other studies, such as Birana and Sampe (2022), showed negative or insignificant effects of environmental uncertainty. Research has also highlighted the role of mediation, such as strategic flexibility (Fahmia, 2017) and dynamic capabilities (Permana & Ellitan, 2020), in strengthening the relationship between environmental dynamism and performance. These findings provide a basis for further research to understand the dynamics of the business environment in influencing performance, with a focus on culinary

MSMEs in Enrekang Regency, in order to identify effective adaptive strategies in facing the VUCA era.

This study aims to analyze the effect of volatility, uncertainty, complexity, and ambiguity (VUCA) on the performance of culinary MSMEs in Enrekang Regency. The focus is on understanding the extent to which each VUCA factor affects the performance of MSMEs, with the hope of providing new insights in business management in an era full of change. This research also has theoretical benefits in enriching the literature on VUCA and MSME performance, as well as practical benefits for businesses to adopt adaptive and innovative management strategies. In addition, the results of this study are expected to be a valuable reference for academics and MSME players in facing dynamic business challenges.

Hypothesis

Hypotheses are temporary conjectures on problems in research that still have to be tested empirically. The following will describe the relationship between the variables in this study, namely:

H1 = Volatility has a positive and significant effect on the performance of MSMEs

H2 = *Uncertainty* has a negative and significant effect on the performance of MSMEs

H3 = *Complexity* has a positive and significant effect on the performance of MSMEs

H4 = *Ambiguity* has a positive and significant effect on the performance of MSMEs

RESEARCH METHOD

This study uses a quantitative design with an explanatory approach to test the relationship between volatility, uncertainty, complexity, and ambiguity (VUCA) on the performance of culinary MSMEs in Enrekang Regency. Data were collected through questionnaires distributed to 100 culinary MSME respondents using the saturated sampling method, complemented by direct observation to ensure data validity. Data collection techniques involve primary data obtained from respondents and secondary data from related literature, while data analysis is carried out using descriptive statistics, multiple linear regression, and instrument validity and reliability tests (Sugiyono, 2019).

The variables in this study include four independent variables, namely volatility, uncertainty, complexity, and ambiguity, and one dependent variable, namely MSME performance. Each variable is measured using a Likert scale based on relevant indicators, such as regulatory changes, incomplete information, and business structure complexity. Multiple linear regression analysis was used to

measure the partial and simultaneous effects of the independent variables on the performance of MSMEs, with hypothesis testing through the t-test and F-test to assess the significance of the variable relationships.

The results of the study are expected to provide theoretical insights into the impact of VUCA on MSME performance as well as practical benefits for culinary MSME players in Enrekang Regency to manage their businesses more adaptively and innovatively amid dynamic business challenges. By understanding the factors that influence performance, businesses can improve their business strategies for better sustainability and competitiveness in an era of uncertainty.

RESULT AND DISCUSSION

Research Results

Description of Respondent Characteristics

This study involved 100 respondents of culinary MSMEs in Enrekang Regency, who were selected using purposive sampling technique. The data collected included various respondent characteristics, such as gender, age, latest education, marital status, and length of business. Analysis using the SPSS version 26 program helped evaluate the influence of volatility, uncertainty, complexity, and ambiguity on the performance of culinary MSMEs in the region.

The results showed that the majority of respondents were female (60%), aged between 30-39 years old, and had a high school education (46%). Most respondents were married (88 per cent), reflecting family responsibilities as their main driver in managing their businesses. In terms of length of business establishment, the majority of MSME players have been running their businesses for 5.1-10 years, indicating sufficient experience in managing a culinary business.

These findings illustrate that most culinary MSME actors in Enrekang Regency have demographic and experiential backgrounds that support their business continuity. However, these results also provide guidance for the development of more targeted mentoring programs, particularly in the face of business environment challenges as measured through VUCA variables.

Distribution of Respondents' Answers to Research Variables

The distribution of respondents' answers in this study illustrates responses to research variables, namely volatility, uncertainty, complexity, ambiguity, and the performance of culinary MSMEs in Enrekang Regency. The results of measuring the volatility variable show an average score of 3.47, which is included in the high category. Respondents actively follow technological developments and utilize innovation to improve the efficiency of their business operations. This indicates that culinary MSME players in Enrekang have adapted to rapid technological changes, although there are still challenges in dealing with fluctuations in consumer demand.

On the uncertainty variable, the results show an average score of 3.07, categorized as moderate. Respondents face challenges in accessing sufficient information, predicting outcomes and making strategic decisions amidst the uncertainty of the business environment. Nonetheless, they still strive to develop flexible policies to cope with the impact of change. Meanwhile, the complexity variable has an average score of 2.74, also in the medium category. Respondents find it difficult to manage complex business structures and adjust to market changes, indicating a need to strengthen understanding of business structures and adaptation to market dynamics.

The ambiguity variable shows an average score of 3.19, which is in the medium category. Respondents reported a lack of clarity in the division of authority, goals and objectives of the business, although they have a good understanding of the culinary business environment. The main challenge is adjusting to changing industry trends and dynamics. For the culinary MSME performance variable, the average score reached 3.27, also in the medium category. Respondents recognize that performance in terms of profit and marketing area is quite good, but profit stability is still a major obstacle. Capital and labor also require more effective management to support business sustainability.

Overall, the distribution of respondents' answers illustrates that culinary MSME players in Enrekang Regency have a good foundation in facing the challenges of the business environment. However, there is a need for improvement in the aspects of adapting to uncertainty, managing business complexity, and understanding ambiguity, in order to encourage more optimal performance in the culinary sector

Research Instrument Test

To find out the data collection method that has been determined, a tool is needed that is used to collect data, that tool is called an instrument. A research instrument is a tool used to measure observed natural and social phenomena. The instrument needs to be tested so that it is known that the instrument is feasible or not to be tested. The research instrument test is divided into two, namely the validity test and the reliability test.

Validity Test

The validity test was carried out to determine the level of validity of the research instrument using the Pearson correlation value. The instrument is declared valid if the Pearson correlation value is (≥ 0.30) and invalid if the value is (≤ 0.30). In this study, the variables tested include volatility, uncertainty, complexity, ambiguity, and MSME performance. The test results show that all statement items from the research variables meet the validity requirements. For example, the

volatility variable has a Pearson correlation value ranging from 0.547 to 0.889, while the ambiguity variable has a correlation value between 0.849 to 0.922. This indicates that all statement items on these variables are valid.

Based on the results of the research instrument test, it is known that with a total of 36 statement items, by looking at the *pearson* correlation value for the variables of *volatility, uncertainty, complexity, ambiguity* and MSME performance in Enrekang Regency, it has a comparative correlation value that is above 0.30. Because the comparison value is above 0.30, so it can be concluded that the statement items for each research variable are valid, and can be used for further analysis.

Reliability Test

Reliability test is a tool to measure the stability and consistency of respondents in answering things related to question constructs which are the dimensions of a variable and are arranged in a questionnaire form. In this case the reliability test is carried out using the *Cronbach's alpha* method, with the criterion that the comparator *alpha* level <0.6 is not good, while 0.6-0.7 is acceptable and 0.8 is good.

The results of the calculation of the alpha level were carried out using the SPSS version 26 program. The following results of the calculation of the reliability test results can be seen in the *output* results below:

Table 1. Reliability Test Results

Variables Research	Number of Items	*Cronbach's alpha*	*Cronbach's alpha* Comparator	Description
Votality	12	0,908	0,60	Good / Reliable
Uncertainty	9	0,952	0,60	Good / Reliable
complexity	6	0,900	0,60	Good / Reliable
Ambiguity	12	0,973	0,60	Good / Reliable
Performance of Culinary MSMEs	12	0,940	0,60	Good / Reliable

Source: Data processed with SPSS version 26

The results of the reliability test can be seen in the *Reliability Statistics output*, it is known that the results obtained from the *Cronbach's Alpha* value for volatility are 0.908, *uncertainty* is 0.952, *complexity* is 0.900, *ambiguity* is 0.973 and MSME

performance is 0.040. Because the results of the *Cronbach,s alpha* value of the comparison *alpha* coefficient value are greater than 0.60. So this can be concluded that the measuring instrument in the study is reliable and can be used for further analysis.

Classical Assumption Test

The classic assumption test is carried out to determine whether or not there are deviations in the regression model, to test whether the regression model of the dependent variable and the independent variable both have a normal distribution. In testing the classical assumptions, the normality test, multicolinerity test and heteroscedasticity test were carried out using the SPSS version 26 program where the complete results can be tested one by one as follows:

Normality Test

The normality test aims to test whether the standardized residual values in the regression model are normally distributed or not. The normality test is carried out to be able to test whether the data to be used for hypothesis testing, namely the data from the dependent and independent variables used, is normally distributed or not.

To test whether the data is normally distributed or not, in this study using the Kolmogrov-Smirnov test. Data is said to have a normal distribution if the results of the *Kolmogrov-Smirnov* test on the residual value of multiple linear regression analysis result in a significance value> 0.05. The results of the non-parametric *kolmogorov-smirnov* (K-S) statistical test were selected to test the normality of the residual variable, the test results of which are shown in the following table:

Table 2. Normality Testing Results

Kolmogorov-Smirnov	Asymp.Sig	Criteria	Description
0,063	0,200	> 0,05	Normally Distributed

Source: Primary data processed, 2024

Based on Table 4.9 shows that the value generated through the *Kolmogorov Smirnov test* is 0.063. While the Asymp.sig value is 0.200, because the asymp.sign value. 0.200 is greater than the standard value of 0.05, so it can be concluded that the data has normal distribution.

Multicollinearity Test

The multicollinearity test is carried out to ensure that the independent variables used in the model do not have a relationship (*uncorrelated*). In a good

regression analysis, it is required that there is no multicol between the independent variables. The multicollinearity test can be seen from the *Tolerance* value and *Variance Inflation Factor* (VIF). If the *Tolerance* value> 0.10 and the VIF value < 10 then the regression model is free from multicollinearity. The multicollinearity test results can be seen in the following table:

Table 3. Multicollinearity Test Results

Variables	Tolerance	VIF	Description
Volatility	0,683	1,465	No Multicollinearity
Uncertainty	0,693	1,444	No Multicollinearity
Complexity	0,703	1,423	No Multicollinearity
Ambiguity	0,591	1,691	No Multicollinearity

Source: Primary data processed, 2026

Based on the multicollinearity test results contained in the table above, it can be concluded that there is no multicollinearity between the independent variables in the regression model of this study, because the *Tolerance* value is less than 0.10 (Tolerance> 0.10), which means that there is no correlation between the independent variables whose value is more than 95%. The results of the calculation of the *Variance Inflation Factor* (VIF) value also show the same thing, no single independent variable has a VIF value of more than 10 (VIF < 10). Thus it can be concluded that there is no multicollinearity between the independent variables in the regression model in this study.

Heteroscedasticity Test

Testing for this study will use the Glejser test statistically. For glejser is a hypothesis test to determine whether a regression model has an indication of heteroscedasticity by regressing the absolute value of the residual on the independent variable tested on Abs_Res has a sig value. > 0.05. The results of heteroscedasticity testing will be shown in Table 4 below:

Table 4. Heteroscedasticity Test Results

Variables	t_{count}	Sig.	Description
Votality	0,999	0,320	No Heteroscedasticity
Uncertainty	0,743	0,459	No Heteroscedasticity
Complexity	-1,710	0,091	No Heteroscedasticity
Ambiguity	-1,032	0,305	No Heteroscedasticity

Source: Primary data processed, 2024

Based on table 4, namely the results of the heteroscedasticity test, it can be seen that none of the independent variables, namely *volatility*, *uncertainty*,

complexity and *ambiguity*, have a sig value. <0.05. It can be concluded that the data has passed or heteroscedasticity does not occur.

Multiple Regression and Correlation Equation Analysis

Multiple Linear Regression Equation Analysis

According to Sugiyono (2019: 66) that multiple linear regression analysis is an analytical tool for forecasting the value of the effect of two or more independent variables on the dependent variable to prove whether or not there is a functional relationship between two or more independent variables and one dependent variable. To determine the effect of volatility, uncertainty, complexity and ambiguity on the performance of Culinary MSMEs, data processing is carried out using the computerized system SPSS version 26 program.

From the processed data of SPSS version 26, the following will be presented the results of multiple linear regression calculations as shown in the following table:

Table 5. Multiple Linear Regression Calculation Results

Research Variables		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	10.202	5.965		1.710	0,090
	Volatility	0,572	0,102	0,499	5.628	0,000
	Uncertainty	0,156	0,097	0,142	1.617	0,109
	Complexity	0,448	0,197	0,199	2.273	0,025
	Ambiguity	0,169	0,078	-0,206	-2.168	0,033

a. Dependent Variable: Performance of Culinary MSEs

Source: Results of processed data SPSS version 26

Table 5 is the result of multiple linear regression data processing on the variables of volatility, uncertainty, complexity and ambiguity in relation to improving the performance of culinary MSMEs in Enrekang Regency, which is processed using the SPSS version 26 program, the processed regression data results are obtained using the following equation:

$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_{(3)} + \beta_4X_4 + \varepsilon$, Or

$Y = 10.202 + 0.499X_1 + 0.142X_2 + 0.199X_3 + -0.206X_{(4)} + \varepsilon$

Based on the multiple linear regression equation above, it can be described as follows:

a) The constant value (b_0) is 10.202, which means that in the presence of *volatility*, *uncertainty*, *complexity* and *ambiguity*, the value of the performance of real culinary MSMEs is 10.202%.

b) The regression coefficient value of the *volatility* variable is 0.499, this means that if the *volatility* increases by 1 unit, it will have a positive effect on the performance of Culinary MSMEs in Enrekang Regency, where the higher the volatility, the performance of MSMEs will increase.
c) The regression coefficient value of the *uncertainty* variable is 0.142, which means that uncertainty does not have an influence in improving the performance of umkm because from the perception of culinary MSME business actors that the uncertainty felt is not large enough to hinder operations so that generally business actors can continue to operate and develop in their business development.
d) The regression coefficient value of the *complexity* variable is 0.199, this means that if *complexity* increases by 1 unit, it has a positive effect on the performance of culinary MSMEs in Enrekang Regency, which indicates that the higher the *complexity*, the performance of culinary MSMEs will increase.
e) The regression coefficient value of the *ambiguity* variable is -0.206, this means that if *ambiguity* increases by 1 unit, it will have a negative effect on the performance of culinary MSMEs in Enrekang Regency, which means that if *ambiguity* increases, the performance of culinary MSMEs in Enrekang Regency will decrease.

Correlation and Determination Coefficient Analysis

To determine the correlation or relationship between the independent variables (*volatility*, *uncertainty*, *complexity* and *ambiguity)* and the dependent variable (performance of culinary MSMEs) in Enrekang Regency, it can be seen from the Model Summary table, which is as follows:

Table 6. Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,700	0,491	0,469	6,68430

Source: Results of processed data SPSS version 26

Based on table 6, namely the results of the calculation of the correlation coefficient, a correlation value or R value = 0.700 is obtained, this means that *volatility*, *uncertainty*, *complexity* and *ambiguity* have a strong relationship with the performance of Culinary MSMEs in Enrekang Regency. While the coefficient of determination (*adjusted Rsquare*) is 0.469. this shows that changes that occur in the dependent variable (performance of Culinary MSMEs) of 46.9% are influenced by *volatility*, *uncertainty*, *complexity* and *ambiguity*, while the remaining 53.1% is

caused by other variables outside of the independent variables not included in this research model.

Hypothesis Testing

Hypothesis testing can be done in 2 ways, namely: F test (simultaneous test) and t test (partial test) which can be described one by one, namely:

F test (simultaneous test)

The F test is to test the effect of *volatility*, *uncertainty*, *complexity* and *ambiguity* variables on jointly or simultaneously on the performance of Culinary MSMEs in Enrekang Regency, which can be done by comparing the significant value with the standard value. If the sig. value is smaller than 0.05, it means that it has an influence simultaneously. The results of simultaneous testing can be seen through the following table:

Table 7. Simultaneous Test (F Test)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4088.162	4	1022.041	22.875	0.000[b]
	Residuals	4244.588	95	44.680		
	Total	8332.750	99			

a. Dependent Variable: Performance of Culinary MSEs

b. Predictors: (Constant), Ambiguity, Complexity, Uncertainty, Volatility

Source: Results of processed data SPSS version 26

Based on the data above, the sig value is obtained. 0.000, because the sig. value is smaller than the standard value of 0.05, then as the basis for decision making in the F test, it can be concluded that *volatility*, *uncertainty*, *complexity* and *ambiguity* together or simultaneously affect the performance of Culinary MSMEs in Enrekang Regency.

Test t (partial test)

The partial test (t test) aims to test the effect of each variable, namely: *volatility*, *uncertainty*, *complexity* and *ambiguity* on the performance of Culinary MSMEs in Enrekang Regency, which can be done by comparing the significant value with the standard value. If the significant value is less or smaller than the standard value (0.05), it means that it has a significant effect. Partial test results can be seen through the following table:

Table 7. Partial Test Results

Research Variables	Sign Value.	Standard Value	Decision
Volatility	0,000	0,05	Significant
Uncertainty	0,109	0,05	Significant
Complexity	0,025	0,05	Significant
Ambiguity	0,033	0,05	Significant

Source: Results of processed data SPSS version 26

Based on the partial test results, it can be seen that :

1. The significant value of the *volatility* variable (X_1) is 0.000, because it is smaller than the standard value of 0.05 (0.021 <0.05), it can be concluded that *volatility* has a significant effect on the performance of culinary MSMEs in Enrekang Regency.
2. The significant value of the *uncertainty* variable (X_2) is 0.109, because the sign value. greater than the standard value of 0.05 (0.109> 0.05), it can be concluded that *uncertainty* does not have a significant effect on the performance of culinary MSMEs in Enrekang Regency. The reason is because the indicators that are observed in this study such as lack of information, inability to know the results, and inability to determine the possibility, are all at a level that is not too worrying. so that culinary MSME business actors can operate and develop even in conditions that are not fully predictable. so that in this study it is rejected.
3. The significant value of the *complexity* variable (X_3) is 0.025, because the sign value. smaller than the standard value of 0.05 (0.025 <0.05), it can be concluded that *complexity* has a significant effect on the performance of culinary MSMEs in Enrekang Regency.
4. The significant value of the *ambiguity* variable (X_4) is 0.033, because the sign value. smaller than the standard value of 0.05 (0.033 <0.05), it can be concluded that *ambiguity* has a significant effect on the performance of culinary MSMEs in Enrekang Regency.

From the results of the regression analysis, it can be said that of the four variables mentioned above, it is known that the dominant variable that affects the performance of culinary MSMEs in Enrekang Regency is *volatility*, the reason is because it has the largest beta value and has the smallest probability value when compared to the *uncertainty*, *complexity* and *ambiguity* variables.

Discussion

From the results of the analysis that has been carried out related to the effect of *volatility*, *uncertainty*, *complexity*, and *ambiguity* on the performance of Culinary MSMEs in Enrekang Regency, from the results of the analysis of processed data,

empirical findings are obtained which can be seen through the following research discussion:

The effect of volatility on the performance of culinary MSMEs in the Enrekang Regency

Based on the results of the analysis of perceptions of *volatility* in Culinary MSME business actors in Enrekang Regency, where from the perception of business actors regarding volatility is classified as high or good, this can be seen from the first indicator regarding changes in government regulations that are perceived as good, the reason is because changes in government regulations have an impact on the operations of business actors' Culinary MSEs, besides that business actors feel that information about changes in government regulations is easily accessible.

Then in the consumer demand indicator, it is perceived to be high, because changes in consumer trends and preferences have an impact on sales turnover in culinary MSEs, and MSME actors have a strategy to overcome the decline in consumer demand. For technology indicators, it is perceived as high, where business actors have a policy of using flexible technology to deal with changes, and technological changes have an impact on the operational efficiency of MSEs that MSME actors have run so far.

Meanwhile, the product innovation indicator is perceived as good, because culinary MSME actors view that MSE culinary product innovation can compete in the market, and business actors have a team or process that can be implemented to develop product innovation.

From the analysis of the regression equation, empirical findings are obtained that volatility has a positive and significant effect on the performance of culinary MSMEs in Enrekang Regency. Where the higher the volatility, it will affect the increase in Culinary MSMEs in Enrekang Regency. The findings of this study are reinforced by the theoretical study put forward by Safithri (2022) that the performance or activities of a business can also be a cause of volatility. In other words, volatility can occur in certain companies, depending on the activities that take place, such as the successful launch of new products, increasing company revenue, and so on. The impact that occurs with this volatility affects all aspects starting from the external environment or the internal environment of the organization.

In addition, the findings of this study are supported by empirical studies conducted by Hiakbar *et al.*, (2023) that environmental volatility has a significant effect on business performance. Then Hadi (2022) that environmental volatility or dynamism has a significant positive effect on MSME business performance. This

means that in this study the higher the environmental volatility, the more business performance will improve.

The effect of uncertainty on the performance of culinary MSMEs in the Enrekang Regency

Based on the results of distributing questionnaires to every culinary MSME actor in Enrekang Regency, the perceptions of respondents were obtained, most of which gave moderate or fairly good answers. This can be seen from the first indicator, namely the lack of information, where the lack of information can make it difficult for MSME actors to make strategic decisions, besides that MSME actors feel a lack of information regarding market and industry changes.

Then in the indicator of the inability to know the results that are perceived as moderate, this can be seen that the uncertainty in the results often makes MSME players hesitate in taking action, besides that culinary MSME players find it difficult to predict the results and strategic decisions that MSME players take. As for the indicator of the inability to determine the possibility, which is perceived as moderate, the reason is because technological changes have an impact on the operational efficiency of MSEs that culinary MSME players in Enrekang Regency have been running so far, besides that culinary MSME players have a flexible technology use policy to deal with changes.

From the results of analyzing the regression equation, empirical findings are obtained that *uncertainty* is positive and insignificant on the performance of culinary MSMEs in Enrekang Regency. The reason is because of the observed indicators that show a low influence. Lack of information, inability to know the results, and inability to determine the possibilities are all at a level that is not too worrying. This indicates that the uncertainty felt by MSMEs is not great enough to hinder current operations. Thus, although there is an element of uncertainty, the impact on the performance of MSMEs is not too great, so that culinary umk actors in Enrekang district can still operate and develop even though the conditions are not fully predictable. The results of this study are supported by theoretical studies as stated by Lasmiatun (2023) that *uncertainty* or *uncertainty* is the lack of information obtained (unclear) about an event, how likely it is to occur, and how much impact it will have on the target. Uncertainty is an important point for companies in ensuring business performance because uncertainty is defined as the absence of certainty, causing entrepreneurs to worry about handling these changes.

The findings of this study are reinforced by empirical studies conducted by Fahmia (2017) showing that environmental uncertainty has a significant effect on business performance. While the results of research by Birana and Sampe (2022) and Hiakbar *et al.*, (2023) show that the uncertainty of the business environment has a negative and insignificant effect on organizational performance. So that this

research is in line with research conducted by Birana and Sampe (2022) and Hiakbar *et al.,* (2023)

The effect of complexity on the performance of culinary MSMEs in Enrekang Regency

Based on the results of the perception of respondents' answers related to complexity, the average distribution of respondents' answers is moderate. This can be seen from the first indicator, namely the level of difficulty is perceived as moderate, where MSME actors find it difficult to handle the complex operational challenges of the culinary MSE business, and culinary MSME actors face problems that are difficult to identify and overcome in running the culinary MSE business that I currently manage.

Then on the business structure indicator, which is perceived by moderate culinary MSME actors, the reason is because the business structure of culinary MSEs is complex and requires in-depth understanding, besides that culinary MSME actors find it difficult to adjust the business structure of culinary MSEs to market changes that have occurred so far.

From the analysis of the regression equation, empirical findings are obtained that *complexity* has a positive and significant effect on the performance of culinary MSMEs in Enrekang Regency. Where the higher the *complexity*, it will affect the improvement of culinary MSMEs in Enrekang Regency. This means that the higher the environmental complexity, the higher the level of performance achievement of culinary MSMEs in Enrekang Regency. The results of this research finding are supported by theoretical studies as stated by Bairizki (2022) that *complexity* is a difficult situation that organizations continue to face in their business activities. This situation occurs due to the protracted omission of a work system which eventually spreads to other parts or units of the work system, so that the solution must be intact and comprehensive (complex). In addition, supported by empirical studies conducted by Hiakbar *et al.,* (2023) environmental complexity has a significant effect on business performance. Likewise with research Rini *et al.*, (2021) where environmental complexity has a positive and significant effect on the performance of Medium Enterprises. Where the higher the environmental complexity, the more business performance increases.

The effect of ambiguity on the performance of culinary MSMEs in Enrekang Regency

Based on the results of the analysis of perceptions of *ambiguity* in culinary MSME business actors in Enrekang Regency, where the perceptions of business actors regarding ambiguity are classified as moderate, this can be seen from the first indicator regarding clear authority which is perceived as moderate, because

resources and decisions related to the culinary MSE business that are currently managed are easy to access by employees who work in these MSMEs, besides that MSME actors are confused by the hierarchical structure related to the division of authority and responsibility in managing the culinary MSE business that is currently managed.

Then in the indicators of clear goals and objectives, it is perceived as moderate, because culinary MSME actors feel confused about how to contribute to managing the culinary MSME business in achieving the goals and objectives that will be achieved at this time, besides that culinary MSME actors feel confused about compiling the goals and objectives that will be carried out in managing the MSE culinary business.

For indicators of clear responsibility, it is perceived as moderate because each actor or individual in culinary MSEs has clear responsibilities in managing their business, and culinary MSME players do not know for sure what is expected in running the current culinary MSE business. As for the indicator of mastering the business environment which is perceived as moderate, the reason is because culinary MSME players do not understand the trends and dynamics in the culinary MSE industry, in Enrekang Regency, besides that culinary MSMEs find it difficult to follow and adjust to changes in the business environment of culinary MSEs in Enrekang district.

The results of the regression equation analysis showed that ambiguity has a negative and significant effect on the performance of culinary MSMEs in Enrekang Regency. Where the higher the ambiguity or the less clarity, it will affect the Culinary MSMEs in Enrekang Regency. The results of this study are supported by theoretical studies as stated by Astuti (2023) that *ambiguity* is the level of uncertainty about existing situations and information. In today's business environment and society, a lot of information is unclear and difficult to understand, such as unclear communication, conflicting information, and incomplete information. Ambiguity is an important point for companies in ensuring business performance because ambiguity describes something that happens suddenly and there is no clarity. With the world facing a state of ambiguity, there is still hope for companies by involving creativity in decision making.

In addition, the findings of this study are supported by empirical studies conducted by Hiakbar *et al.*, (2023) that ambiguity has a positive and significant effect on business performance. Then research Aribowo and Wirapraja (2018) that ambiguity affects business performance. This means that the higher the ambiguity of the environment, the more it will improve business performance.

CONCLUSION

The results showed that volatility and complexity have a positive and significant influence on the performance of culinary MSMEs in Enrekang Regency. Volatility encourages businesses to be more flexible in the face of change, while complexity demands a deeper understanding of the business structure. In contrast, uncertainty has a positive but insignificant effect, indicating that uncertainty is still a challenge for MSME actors. Ambiguity, on the other hand, shows a negative and significant effect, which means that vagueness in authority, goals, or responsibilities adversely affects the performance of MSMEs.

As advice, MSME players are advised to be more responsive to market trends, such as adjusting culinary products to popular consumer demands. In addition, paying attention to current and relevant information can help reduce uncertainty in business decision-making. Facing complexity, MSME players need to strengthen operational management to handle emerging challenges, and to face market competition, having clear goals and objectives is key in improving competitiveness and business sustainability.

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