

Analysis of Factors Affecting the Income of Culinary MSMEs in Medan Tuntungan Sub-District

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ABSTRACT

Development in various sectors aimed at opening new jobs has not been able to fully absorb the entire workforce whose numbers continue to increase. The economy plays an important role in human life because economic stability supports the needs in daily life such as food, drinks, clothing, shelter, and other basic needs. This research was conducted with the aim of studying various variables that affect the income of culinary MSMEs in Medan Tuntungan Sub-district. Indicators used include price, taste, service, number of customers, innovation, promotion, cleanliness, number of workers, convenience, and business location. The approach used is quantitative method, which is based on the positivism paradigm, with data collection through research instruments on certain populations and samples, and statistical data analysis to test hypotheses. According to the results of multiple linear regression, the innovation variable, labor, and price variables have a positive and significant influence or impact on the income of culinary MSMEs in the Medan Tuntungan District area. To increase profits, business actors need to improve the quality of raw materials, minimize production costs, and increase production volume so that sales also increase.

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1. INTRODUCTION

Economics is an important component of human life as economic needs are always present in daily activities. A strong economy is necessary to know the needs such as eating, drinking, clothing, shelter, and others. Since the economy is very important for human life, the state must regulate Indonesia's policies and maintain its economy (Sari & Septyarini, 2018).

Micro, small and medium enterprises (MSMEs) are one of the means to introduce regional creative products while opening business opportunities for local communities. In addition, MSMEs are also expected to contribute to national economic development, especially in supporting economic growth in the North Sumatra region. The role of MSMEs is considered crucial because it is able to encourage an increase in per capita income and strengthen the regional economy (Halim, 2020).

With a dense population, Medan Tuntungan Sub-district has many MSMEs. However, not all MSMEs have high production levels, some have low income, the number of goods produced is increasing, and the space to market MSME products is increasingly limited.

Table 1. Data on the Number of MSMEs in Medan Tuntungan Sub-district

No	Urban Village	Number of MSMEs
1	Tanjung Selamat	75
2	Lau cih	12
3	Sidomulyo	8
4	Namu Gajah	10
5	Kemenangan Tani	24
6	Simalingkar B	34
7	Simpang Selayang	62
8	Baru Ladang Bambu	16
9	Mangga	134
Total		375

Source: Central Bureau of Statistics Medan City, 2024

The population object to be studied by the author has been known that the population in Medan Tuntungan culinary MSMEs totaling 375 businesses. The resilience of small and medium enterprises is driven by the high number of consumers; the more products purchased from culinary MSME players, the greater the income generated. This income allows MSME players to open new jobs and provide wages to their employees (Ilmi, 2021).

In addition to innovation and consumer income, the price factor is also very influential on MSME income. Culinary MSME players who have the most affordable prices are the places most visited by consumers. According to (Handoko, 2017) price is a price comparison with other producers, namely how the product price compares with other competitors' products. Therefore, every producer must provide the best price for the products they sell with other competitors.

Every culinary MSME actor is required to be able to compete and attract consumer interest so that his business can continue to run and develop. This is important because the increasing number of competitors means that there are more diverse product choices for consumers according to their tastes. Therefore, MSME players must be responsive and quick in marketing their products so that they are not left behind by competitors. This study aims to help culinary MSME players in developing their businesses and identify factors that affect the income of culinary MSMEs in Medan Tuntungan District.

2. LITERATURE REVIEW

2.1. Income Theory

Income is the result obtained from economic activities carried out, either through business activities or sales of production factors owned by the company (Boediono, 2000).

Profit is the term used by Sadono Sukirno in Ericson Damanik's article (2014) to describe an entrepreneur's income. All costs are deducted from sales revenue, which results in profit. The term "Income" is usually used to describe the flow of money over a predetermined period of time derived from

the use of factors of production such as capital, labor, and natural resources, each of which generates rewards in the form of rent, wages, and interest.

2.2. Micro, Small and Medium Enterprises (MSMEs)

Based on the provisions of Law No. 20/2008, MSMEs are defined as economic business activities that are productive and stand alone and are carried out by individuals or business entities. UMKM in this case does not include subsidiaries or branches of medium or large businesses, and does not directly or indirectly own, control, or become part of the business.

2.3. Objectives of MSMEs

The main objective of MSMEs, according to Article 3 of Law No. 20/2008, is to encourage business growth and development in an effort to build a national economy based on the principles of justice in a democratic economic system. The two main objectives of MSME empowerment are as follows:

1. Creating a balanced and equitable economic structure throughout the country; and
2. Developing and growing the ability of MSMEs to become resilient and independent businesses.
3. Improve how MSMEs contribute to regional development, job creation, income distribution, economic growth, and poverty alleviation.

2.4. Criteria for MSMEs

A type of productive economic business run by individuals or business entities and independently referred to as a medium-sized business. Umkm is not included in subsidiaries and branches of medium or large businesses, and umkm is not directly or indirectly owned or controlled, as well as a certain total net worth or annual turnover.

2.5. Conceptual Framework

According to (Sugiyono, 2013), the conceptual framework serves to explain the theoretical relationship between the variables in the study, especially between the independent variable and the dependent variable. Theoretically, this framework describes the relationship between the variables under study, so it is important to explain the relationship between the independent variable and the dependent variable. The Multiple Linear Regression method applied in this study to examine the variables that influence the income of culinary MSMEs in Medan Tuntungan Sub-district. The conceptual framework of this study is as follows:

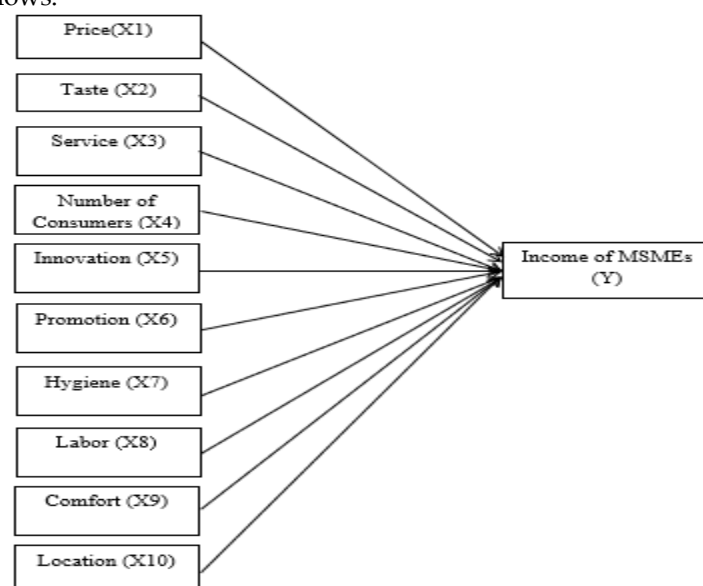


Figure 1. Multiple Linear Regression Conceptual Framework

Hypotheses

Initial statements or temporary statements in response to the formulation of problems in research are called hypotheses, because these answers do not have a basis in empirical facts obtained from the data collection process, but in relevant theories (Hidayat, 2012).

Thus the hypotheses in this study are as follows:

1. All factors (Price, Taste, Service, Number of Consumers, Innovation, Promotion, Cleanliness, Labor, Convenience, and Location) affect the income of culinary small and medium enterprises (MSMEs) in Medan Tuntungan District.
2. The income of culinary MSMEs in Medan Tuntungan Sub-district is strongly influenced by the most important components above.

3. METHODS

According to (P. Sugiyono, 2015), multiple linear regression is an analytical method used to predict changes in the dependent variable (criterion) when two or more independent variables that act as predictor factors change in value. This analysis is performed in cases where there are at least two independent variables. This method is used in research to evaluate the relationship between the independent variable (X) and the dependent variable (Y), namely the income of MSMEs in Medan Tuntungan Sub-district.

The following is the multiple linear regression equation model used in this study:

$$Y = a + b_1.X_1 + b_2.X_2 + b_3.X_3 + b_4.X_4 + b_5.X_5 + b_6.X_6 + b_7.X_7 + b_8.X_8 + b_9.X_9 + b_{10}.X_{10}$$

Description:

Y = Income of MSMEs

a = Constant

b = Regression coefficient

(X₁ = Price)

(X₂ = Taste)

(X₃ = Service)

(X₄ = Number of Consumers)

(X₅ = Innovation)

(X₆ = Promotion)

(X₇ = Hygiene)

(X₈ = Labor)

(X₉ = Comfort)

(X₁₀ = Location)

This research is also supported on several classical assumptions that underlie the regression model must get the limitations that will be explained. There are several ways to modify the model to be examined. Among the assumptions used in this study are normality, multicollinearity, and heteroscedasticity.

4. FINDINGS AND DISCUSSION

The results obtained from the research have to be supported by sufficient data. The research results and the discovery must be the answers, or the research hypothesis stated previously in the introduction part.

4.1. Classical Assumption Test

Before conducting hypothesis testing in this study, the first step taken is the classical assumption test to see whether the multiple linear regression technique used is appropriate or not. If the classic prediction test is met, then multiple linear regression in this study can be used.

Data Normality Test

The data normality test in this case is carried out with the aim of evaluating whether the residuals or residual variables of the regression model are normally distributed. One of the characteristics of a regression model with good test results is if the distribution is normal and / or at least close to normal results. The following presents the results of the analysis of multiple linear regression.

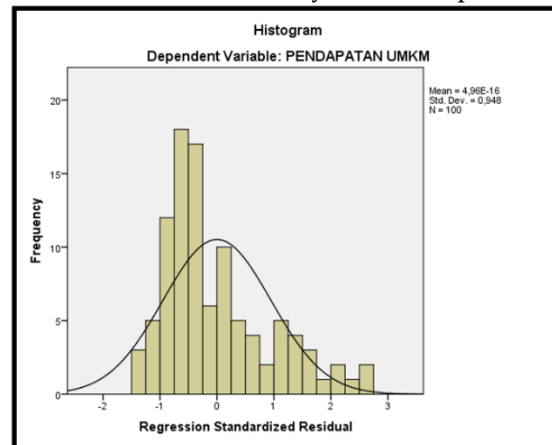


Figure 2. Histogram Test Results Data Normality
Source: SPSS. 22, data processed 2025

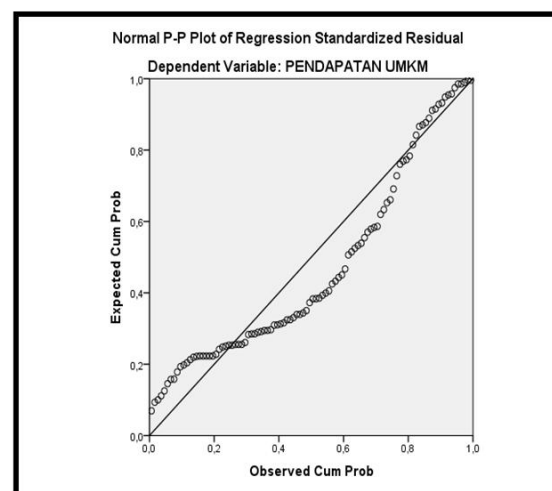


Figure 3. Normal P-P Plot Rgression Standardized Residual
Source: SPSS. 22, data processed 2025

Based on the histogram and normal PP plot above, it is clear that this survey has a normal distribution, convex and balanced in the center, as shown in the normal image with PP graph. Since the points are not far from the diagonal line, it can be concluded that the data distribution is normally distributed.

Multicollinearity Test**Table 2.** Multicollinearity Test Results

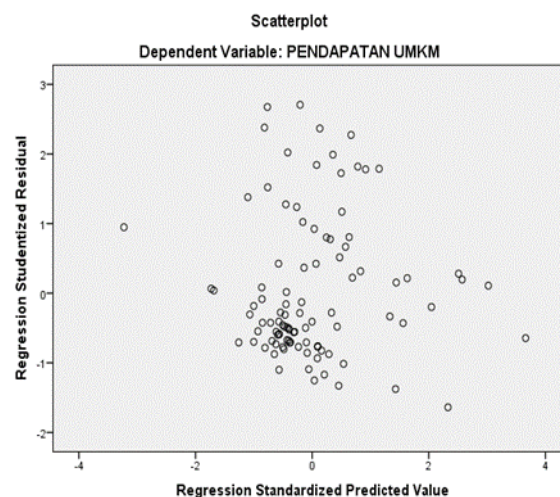
Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7,725	1,978		3,906	,000		
	SERVICE	,482	,322	,263	1,497	,138	,274	3,650
	PRICE	,736	,321	,470	1,293	,004	,202	4,947
	TASTE	,462	,353	,298	1,309	,194	,163	6,132
	NUMBER OF CONSUMERS	,345	,371	,188	,928	,356	,207	4,834
	INNOVATION	,733	,408	,453	1,800	,002	,134	7,476
	PROMOTION	,197	,342	-,118	,575	,567	,203	4,923
	HYGIENE	,481	,366	,293	1,315	,192	,171	5,846
	LABOR	1,008	,384	,571	1,624	,001	,179	5,578
	COMFORT	,059	,364	,037	,163	,871	,167	6,002
	LOCATION	,161	,309	,101	,522	,603	,225	4,453

a. Dependent Variable: INCOME OF MSMES

Source: SPSS. 22, data processed 2025

The table information above states that the tolerance value meets the requirements, which must be smaller than 0.10. In this study, it can be seen that the tolerance value on the variables of price, taste, service, number of consumers, innovation, promotion, hygiene, labor, convenience, location, all variables have met the multicollinearity test requirements.

The VIF number has a requirement that the value must be smaller than 10.0, it can be seen that the value (price, taste, service, number of consumers, innovation, promotion, hygiene, labor, convenience, location) of all variables is free from multicollinearity.

Heteroscedasticity Test**Figure 4.** Revenue Scatterplot

Source: SPSS. 22, data processed 2025

The scatterplot above shows that the pattern in the dots formed is not randomly scattered, but rather forms a certain pattern or trend line. In addition, the graph shows that the distribution of data is

not limited to zero, which indicates that this regression model does not experience heteroscedasticity problems.

3.2. Multiple Linear Regression

Table 3. Multiple Linear Regression Results

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7,725	1,978		3,906	,000		
	SERVICE	,482	,322	,263	1,497	,138	,274	3,650
	PRICE	,736	,321	,470	1,293	,004	,202	4,947
	TASTE	,462	,353	,298	1,309	,194	,163	6,132
	NUMBER OF CONSUMERS	,345	,371	,188	,928	,356	,207	4,834
	INNOVATION	,733	,408	,453	1,800	,002	,134	7,476
	PROMOTION	,197	,342	-,118	,575	,567	,203	4,923
	HYGIENE	,481	,366	,293	1,315	,192	,171	5,846
	LABOR	1,008	,384	,571	1,624	,001	,179	5,578
	COMFORT	,059	,364	,037	,163	,871	,167	6,002
	LOCATION	,161	,309	,101	,522	,603	,225	4,453

a. Dependent Variable: INCOME OF MSMES

Source: SPSS. 22, data processed 2025

The multiple linear regression equation above can be explained as follows:

$$Y = a + b_1.X_1 + b_2.X_2 + b_3.X_3 + b_4.X_4 + b_5.X_5 + b_6.X_6 + b_7.X_7 + b_8.X_8 + b_9.X_9 + b_{10}.X_{10}$$

$$Y = 2,777 + (0,125).X_1 + (0,071).X_2 + (0,125).X_3 + (0,007).X_4 + (0,139).X_5 + (0,053).X_6 + (0,633).X_7 + (0,095).X_8 + (0,059).X_9 + (0,039).X_{10}$$

1. The constant value (a) of 7.725 and a positive sign indicates a unidirectional relationship between the independent variables (such as price, taste, service, number of consumers, innovation, promotion, cleanliness, labor, convenience, and location) with the dependent variable, namely the income of culinary MSMEs. This means that if all independent variables are zero or have not changed, then MSME revenue is estimated at 7,725.
2. All regression coefficients for the independent variables are positive, which indicates that every 1% increase in each of these variables will lead to an increase in MSME revenue, with other independent variables assumed to remain constant. This positive sign indicates a unidirectional relationship between the independent variable and the dependent variable.

3.3. Hypothesis Test

Partial Test (*t* Test)

Table 4. Partial Hypothesis Test Results

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7,725	1,978		3,906	,000		
	SERVICE	,482	,322	,263	1,497	,138	,274	3,650
	PRICE	,736	,321	,470	1,293	,004	,202	4,947
	TASTE	,462	,353	,298	1,309	,194	,163	6,132
	NUMBER OF CONSUMERS	,345	,371	,188	,928	,356	,207	4,834
	INNOVATION	,733	,408	,453	1,800	,002	,134	7,476
	PROMOTION	,197	,342	-,118	,575	,567	,203	4,923
	HYGIENE	,481	,366	,293	1,315	,192	,171	5,846
	LABOR	1,008	,384	,571	1,624	,001	,179	5,578
	COMFORT	,059	,364	,037	,163	,871	,167	6,002
	LOCATION	,161	,309	,101	,522	,603	,225	4,453

a. Dependent Variable: INCOME OF MSMES

Source: SPSS. 22, data processed 2025

Based on the table above, it can be explained as follows:

1. The effect of price on the income of culinary MSMEs: Although the t-table value of 1.999 is greater than the t-count value of 1.293, the significance value is 0.004 less than 0.05. Thus, price has a significant influence on MSME revenue because Ha2 is accepted and H02 is rejected.
2. The effect of innovation on the income of culinary MSMEs: The t-count value of 1.800 is smaller than the t-table of 1.999, with a significance value of 0.002 < 0.05. Thus, Ha5 is accepted and H05 is rejected, which indicates that innovation has a significant effect on MSME income.
3. The effect of labor on the income of culinary MSMEs: The t-count value of 1.624 is smaller than the t-table of 1.999, and the significance value is 0.001 < 0.05. Therefore, Ha8 is accepted and H08 is rejected, meaning that labor has a significant effect on MSME income.

Simultaneous Hypothesis Test

Table 5. Simultaneous Hypothesis Test Results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1091,760	10	109,176	2,889	,004 ^b
	Residual	3363,550	89	37,793		
	Total	4455,310	99			

a. Dependent Variable: INCOME OF MSMES

b. Predictors: (Constant), LOCATION, SERVICE, PROMOTION, HYGIENE, NUMBER OF CONSUMERS, PRICE, LABOR, TASTE, COMFORT, INNOVATION

Source: SPSS. 22, data processed 2025

The table information above, concludes that H0 is rejected and H1 is accepted based on the results of the F-count value of 2.889 and a significance value of 0.004, which is smaller than the significance limit of 0.05. Thus, this multiple linear regression model is considered valid and can be used. This means that independent variables such as price, taste, service, number of consumers, innovation, promotion, cleanliness, labor, convenience, and location simultaneously or together have a significant influence on the dependent variable, namely the income of culinary MSMEs.

Coefficient of Determination Test

Table 6. Coefficient of Determination Test Results

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,495 ^a	,245	,160	6,14758	,805
a. Predictors: (Constant), LOCATION, SERVICE, PROMOTION, HYGIENE, NUMBER OF CONSUMERS, PRICE, LABOR, TASTE, COMFORT, INNOVATION					
b. Dependent Variable: INCOME OF MSMEs					

Source: SPSS. 22, data processed 2025

From the results of R-square Adjustment of 0.160 or 16.0%, this means that changes in the income of culinary MSMEs can be explained or obtained from (price, taste, service, number of consumers, innovation, promotion, hygiene, labor, convenience, location). This means that these variables are very appropriate and have an effect on the income of culinary MSMEs in Medan Tuntungan sub-district.

5. CONCLUSION

Based on the results of the previous analysis and discussion, the following conclusions can be drawn:

1. Of the ten variables tested in the study, only three variables were proven to feasibly affect the income of culinary MSMEs, namely price, innovation, and labor.
2. As shown by the multiple linear regression results, the most relevant factors are labor, innovation, and price which have a positive and significant impact on the income of culinary small and medium enterprises (MSMEs) in Medan Tuntungan Sub-district.

After conducting the research, the author offers recommendations for the community, government, and other researchers to consider. Such as restaurant entrepreneurs in Medan Tuntungan sub-district are expected to maintain the cleanliness of the stall not only occasionally but every time, in order to attract customers or consumers, and it is expected that culinary entrepreneurs of restaurants in Medan Tuntungan sub-district to improve the quality of raw materials and optimize production costs for sale, the more sales made affect the amount of profit.

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