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The Influence of Business Capital, Technology, and Labor On the Income of Food Industry MSMEs in Ponorogo Regency

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Abstract

Introduction: Ponorogo Regency is a region with diverse livelihoods. However, among these many livelihoods, there are 42,720 MSMEs. This study was conducted because there is a difference between theory and reality in the field, especially regarding the factors that influence MSME income. In general, large capital, utilization of technology, and the number of workers are considered to increase business income. However, observations show that not all MSMEs with large capital, adequate technology, and a large workforce generate high income. Therefore, this study aims to examine and analyze the effect of business capital, the role of technology, and labor on the income of MSMEs in the food industry sector in Ponorogo Regency. **Research Methods:** This study uses a quantitative approach with a questionnaire as the data collection method. The analysis technique used is multiple linear regression with the help of SPSS version 22. The sample in this study amounted to 100 randomly selected MSMEs. The results of the study indicate that partially and simultaneously, the variables of business capital, technology, and labor have a positive and significant effect on MSME income. **Result:** Based on the results of the determination coefficient analysis, these three variables have an influence of 61.1% on the income of MSMEs in the food industry sector in Ponorogo Regency, while the remaining 38.9% is influenced by other variables outside this study.

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INTRODUCTION

Ponorogo is a regency in East Java. Many residents work as farmers, traders, livestock breeders, or even businesspeople. It has 21 sub-districts, and each sub-district has MSMEs that contribute to the local economy. The following table shows the number of MSMEs per year (2019-2023) in Ponorogo Regency:

Table 1. Number of MSMEs in Ponorogo Regency 2019-2023

Year	Total number of MSMEs
2019	31,328
2020	35,025
2021	38,387
2022	39,650
2023	42,720

Source: BPS Data for Ponorogo Regency 2024

Table 1 shows the number of MSMEs in Ponorogo Regency from 2019 to 2023. Data processed by the Ponorogo Regency Central Statistics Agency (BPS) shows that the number of MSMEs continues to increase year after year. In Ponorogo Regency, in 2019, the number of MSMEs reached 31,328 business units and continued to grow to 42,720 by 2023, thus increasing labor absorption (BPS, 2025).

Table 2. Average Local Original Income Data in Ponorogo

Information	District		
	Sawoo	Babadan	Ponorogo
Population Percentage	6.38%	7.32%	8.70%
Number of MSMEs	2,973	3,827	4.105
Total Revenue	Rp. 7,368,290,000	Rp. 13,539,830,000	Rp. 9,209,386,000
Average	Rp. 2,478,402	Rp. 3,537,974	Rp. 2,243,455

Source: Data processed in 2025

Table 2 shows the total and average income of MSMEs in the three districts in Ponorogo Regency with the largest number. Of the three regions, Sawoo District has a total of 2,975 MSMEs with a total income of Rp7,368,290,000 and a population percentage of 6.38%. Then, Babadan District has a total of 3,827 MSMEs with a total income of Rp13,539,830,000 and a population percentage of 7.32%. Finally, there are the most MSMEs in Ponorogo Regency. Ponorogo Regency has the largest number of MSMEs, namely 4,105 business units with an average income of Rp2,243,455 and a revenue of Rp9,209,386,000 or 8.70% of the total population. It is known that, although the number of MSMEs in Ponorogo Regency is the largest of the two sub-districts, the income obtained is still below the income of MSMEs in the Babadan Sub-district area.

Basically, income is nothing new in the business world. A person's income is the total amount of money they earn from their activities. Sumitro defines income as the sum of goods

and services that meet a person's quality of life. (Amaroh et al., 2023). Per capita income is the amount of money earned by each individual. Economic development and progress are measured by per capita income (Sumitro, 2010). According to Sukirno, income is the result of compensation for the use of production factors (business capital, technology, labor) owned by the household sector and the corporate sector in the form of salaries/wages, rent, interest, and profits (Sukirno, 2006).

Ponorogo is the administrative center of Ponorogo Regency and plays a significant role as one of the most densely populated areas. With an area of approximately 22.31 km² and a population of approximately 77,200 in 2023, this sub-district comprises 19 villages: Bangunsari, Banyudono, Beduri, Brotonegaran, Cokromenggalan, Jingglong, Kauman, Keniten, Kepatihan, Mangkujayan, Nologaten, Paju, Pakunden, Pinggirsari, Purbosuman, Surodikraman, Tamanarum, Tambakbayan, and Tonatan. Each village has its own social and economic characteristics, which collectively shape the dynamic and ever-growing community life of Ponorogo City.

In the economic sector, the Micro, Small, and Medium Enterprises (MSMEs) sector plays a central role in Ponorogo Regency. In 2023, there were 4,105 MSMEs operating in this area, making it the district with the highest number of MSMEs in all of Ponorogo Regency. These MSMEs are spread across three main sectors: trade (63.03%), production (19.07%), and services (17.90%). Despite the high number, the average income per MSME in Ponorogo Regency is still lower than other districts such as Babadan and Sawoo (Ariani & Irawan, 2024).

The food industry MSMEs in Ponorogo District have shown quite rapid development with a total of around 644 businesses, dominated by micro businesses (60%) engaged in the production of jenang dodol, satay, tempeh chips, and various other processed snacks. (Hutomo & Mulyati, 2024). Despite their significant potential, with turnover ranging from IDR 1 million to IDR 100 million per month, MSMEs still face various obstacles, such as limited capital, fluctuating raw material prices, and difficulties in marketing and distribution. The local government has attempted to provide support through various programs such as packaging training, production machine assistance, and certification facilitation, but challenges in production technology and business digitalization remain major obstacles. Food MSMEs in Ponorogo have significant potential for even faster growth (Mardiah et al., 2025). Therefore, more intensive efforts are needed in terms of mentoring, stabilizing raw material prices, and strengthening marketing networks, both offline and online, so that this creative economy potential can be truly optimized (Ragapatni & Widhiyani, 2023).

The large number of MSMEs in Ponorogo Regency indicates that MSMEs influence the income of their business owners. Income is the reward or compensation received by a person as a result of their participation in the production process of goods and services (Romadina, 2018). In Ponorogo Regency, the most widespread businesses are in Aloon-Aloon and Jalan Baru Suromenggolo, which are located in Ponorogo Regency. The majority of businesses there are various culinary businesses, with food and beverage vendors widely distributed there. The total monthly income earned by these businesses varies depending on influencing factors. According to the author's observations, the income earned by business owners in Aloon-Aloon

and Jalan Baru Suromenggolo increases when there are large events that attract large crowds. Furthermore, the type of food and beverage sold can also influence the income of each business owner. Based on these issues, according to Sukirno, several factors influence MSME income.

The first factor is limited capital, which hinders business growth and revenue generation. Small and medium enterprises (SMEs) often face challenges such as limited funds and difficulty finding financing sources (Syahru Rofah Febrianti & Ajeng Pipit Fitriani, 2024). In carrying out business activities, business capital is a crucial factor that must be available before starting. The amount of available capital will impact how well the business can grow and achieve profits. One of the most important factors that can influence MSME revenue is business capital itself, as having business capital allows for optimal business performance. Even today, every business owner strives to increase productivity by investing capital to compete with other entrepreneurs.

Production activities in every economic activity require cash. Naturally, a lack of funds will make it difficult for a business to grow and succeed. If an entrepreneur has limited capital, they can only produce a small number of goods, resulting in lower profits (Sari & Hikmah, 2024). On the other hand, if an entrepreneur has more capital, they can produce more business products, which in turn will generate higher revenues. Therefore, sufficient capital is necessary for business expansion so that the company can operate well and develop in economic and production activities (Sidik & Ilmiah, 2022).

Technology, a tool that can help companies accelerate production, is the second factor influencing revenue. It enables employees to produce products easily and increases their productivity, which in turn increases revenue levels. The technological development of MSMEs is influenced by various factors, such as the capacity of human resources in developing technology, the availability of funding for technology acquisition, the function of research institutions in encouraging technology development, and monetary and fiscal policies (Sidik & Ilmiah, 2022). Therefore, technical changes are always made to maximize its use. According to Josua Tarigan and Ridwan Sanjaya, digital marketing that relies on technology is a marketing strategy that includes branding efforts by utilizing various online-based channels such as blogs, websites, advertising, and social media. The development of the digital era has both positive and negative impacts. One positive aspect is the effectiveness of digital marketing in accelerating the sales process and facilitating interactions between consumers and businesses. (Ulfatun Nadhiro et al., 2025). Research has shown that online marketing campaigns have an impact on shaping consumer preferences for certain goods or services. The use of digital technology also enables Micro, Small, and Medium Enterprises (MSMEs) to showcase their products to customers through various digital platforms, which in turn boosts product order volumes, such as on Tokopedia, Bukalapak, and Shopee, thus increasing their revenue (Efendi, 2021).

Labor is the third factor influencing revenue. Having qualified workers will increase productivity, which will benefit businesses because worker productivity will increase production and revenue. To meet consumer demand, labor can assist in the production

process and serve customers. Revenue will increase if consumer demand can be met, indicating a positive relationship between labor and revenue. In other words, more labor will result in higher productivity, which will increase the revenue of small, micro, and medium enterprises (MSMEs) (Laili & Setiawan, 2020).

Micro, Small, and Medium Enterprises (MSMEs) are given crucial support and empowerment because they are a primary source of income and have the potential to significantly improve the local economy. One indicator of a company's success is its revenue; the more money generated, the greater the profits (Wibowo et al., 2023). The selection of the food industry sector as the focus of this research was based on the dominant number of MSMEs operating in this sector, particularly in Ponorogo Regency. The food industry is highly resilient to economic fluctuations because it directly relates to the community's basic needs. Furthermore, this sector is relatively easy for new small- to medium-scale businesses to enter, resulting in rapid growth. In the Aloon-Aloon and Jalan Baru Suromenggolo areas of Ponorogo Regency, the majority of growing MSMEs are food and beverage vendors. This fact indicates that the food sector plays a significant role in contributing to the income of MSMEs in the region (Wulandari, 2021).

The number of MSMEs in Ponorogo Regency continues to grow year after year. Aggregate MSME revenues have also increased, but not all MSMEs have experienced uniform growth. This means that individual MSME growth and revenue increases do not reflect success, necessitating research on factors such as business capital, the role of technology, and labor. This study focuses solely on these three factors because, based on Sukirno's theory and field observations, these factors are the most dominant in influencing MSME revenues in Ponorogo Regency and are relevant to the phenomena occurring in the field.

This research aligns with research conducted by Cosmas Christian Rettob, which states that business capital, technology, and labor significantly influence the entrepreneurial income of the Kanjeran Smoked Fish MSME Center in Bulak District, Surabaya City. In this study, business capital is the primary foundation for business development, while technology drives productivity and efficiency. On the other hand, a competent and adequate workforce is the primary driver of company operations (Rettob, 2021). Based on the findings of previous studies, it can be concluded that business capital, the role of technology, and labor have a significant influence on MSME revenue. Furthermore, the author's research differs from previous studies in that it focuses more on the influence of business capital, the role of technology, and labor on the revenue of MSMEs in the food industry in Ponorogo Regency. When compared to previous studies, this study shares several similarities, such as the use of business capital, the role of technology, and labor as factors influencing revenue and a quantitative approach to analyzing the relationship between the variables used (Sidik & Ilmiah, 2022). However, this study also has its own uniqueness, particularly in terms of the research location, which was conducted in Ponorogo Regency, which is known to have characteristics of MSMEs in the food industry that differ from previous research locations.

High revenue is influenced by customer satisfaction, which is a crucial factor that can influence revenue. Customers who are satisfied with the products and services provided by

MSMEs are more likely to make repeat purchases and recommend them to others (Efendi, 2021). This will increase MSME revenue. Micro, Small, and Medium Enterprises (MSMEs) must pay attention to consumer needs to improve customer satisfaction through several strategies outlined above. This is crucial because customer satisfaction directly impacts total sales. If customers are satisfied with a product, demand for that product will increase, which in turn will impact sales turnover. Conversely, demand will decrease if customers are dissatisfied with the product offered, which will also impact sales turnover (Yolanda & Wijayanti, 2020).

RESEARCH METHODS

This research employed a quantitative approach with a survey method. Primary data was collected through questionnaires distributed to Micro, Small, and Medium Enterprises (MSMEs) in the food industry. The sampling technique used was random sampling, with a sample size of 100 MSMEs across Ponorogo Regency.

Ponorogo Regency was chosen as the research location due to its significant economic potential, particularly in the food industry's MSME sector. According to data from the Central Statistics Agency (BPS), the number of MSMEs in Ponorogo Regency has increased significantly year after year, reaching a total of 42,720 in 2023. Furthermore, the Ponorogo Regency government is actively promoting MSME development through various policy programs such as business training, production equipment assistance, and digitalization facilitation. This makes Ponorogo Regency a relevant and strategic location for researching the factors influencing MSME income, particularly in the context of the food industry, which is the dominant sector in this region.

The research instrument was tested using validity and reliability tests to ensure data quality. Furthermore, data analysis was performed using multiple linear regression using SPSS version 22 software. To ensure the validity of the model, classical assumption tests were also conducted, including tests for normality, multicollinearity, heteroscedasticity, linearity, and autocorrelation. The independent variables in this study include business capital (X1), technology (X2), and labor (X3), while MSME income is the dependent variable (Y).

RESULTS AND DISCUSSION

RESULTS

1. Validity Test

Validity testing is a test conducted by comparing the calculated r value with the table r value. If the calculated r value is smaller than the table r value with a significance value of 0.05, the statement item is considered valid. In this validity test, the researcher used 50 respondents with a total of 26 statements. These statements are detailed with 8 statements on the business capital variable, 6 statements on the technology variable, 6 statements on the labor variable, and 6 statements on the income variable. The table r value for the 50 respondents in this study is 0.273.

Table 3. Results of Validity Test of Business Capital Variable (X1)

Statement	r count	r table	Information
X1.1	0.598	0.273	Legitimate
X1.2	0.566	0.273	Legitimate
X1.3	0.593	0.273	Legitimate
X1.4	0.552	0.273	Legitimate
X1.5	0.550	0.273	Legitimate
X1.6	0.556	0.273	Legitimate
X1.7	0.568	0.273	Legitimate
X1.8	0.599	0.273	Legitimate

Source: Processed Primary Data, 2025

Based on the table, it can be seen that the calculated r for each statement regarding business capital is greater than the table r (0.273). Thus, all statements in the technology variable are said to be valid.

Table 4. Results of the Validity Test of the Technology Variable (X2)

Statement	r count	r table	Information
X2.1	0.670	0.273	Legitimate
X2.2	0.646	0.273	Legitimate
X2.3	0.658	0.273	Legitimate
X2.4	0.634	0.273	Legitimate
X2.5	0.622	0.273	Legitimate
X2.6	0.627	0.273	Legitimate

Source: Processed Primary Data, 2025

Based on the table, it can be seen that the calculated r for each technology-related statement is greater than the table r (0.273). Thus, all statements in the technology variable are said to be valid.

Table 5. Results of the Validity Test of the Workforce Variable (X2)

Statement	r count	r table	Information
X3.1	0.799	0.273	Legitimate
X3.2	0.736	0.273	Legitimate
X3.3	0.723	0.273	Legitimate
X3.4	0.748	0.273	Legitimate
X3.5	0.714	0.273	Legitimate
X3.6	0.722	0.273	Legitimate

Source: Processed Primary Data, 2025

The results of the validity test for the workforce variable show that all calculated r values for each statement are greater than the table r value (0.273). Thus, all statements in the workforce variable can be said to be valid.

Table 6. Results of the Validity Test of the Income Variable (Y)

Statement	r count	r table	Information

Y.1	0.793	0.273	Legitimate
Y.2	0.777	0.273	Legitimate
Y.3	0.714	0.273	Legitimate
Y.4	0.680	0.273	Legitimate
Y.5	0.774	0.273	Legitimate
Y.6	0.762	0.273	Legitimate

Source: Processed Primary Data, 2025

Based on the table, it shows that the results of the validity test of the calculated r for each profit and loss report exceed the table r value (0.273) so it can be said to be valid.

2. Test Reliability

Based on reliability theory, if the Cronbach's Alpha value is more than 0.60 then it can be said to be reliable.

Table 7. Reliability Test Results

Variables	Crobach's Alpha	Limit	Information
Venture capital	0.688	0.6	Reliable
Technology	0.715	0.6	Reliable
Labor	0.833	0.6	Reliable
Income	0.844	0.6	Reliable

Source: Processed Primary Data, 2025

This reliability test shows that all statements on the business capital, technology, and labor variables are more than 0.60 so they can be said to be reliable.

3. Classical Assumption Test

a. Normality Test

This study used the One Sample Kolmogorov-Smirnov normality test method. The researchers used the significance value results to determine whether the data were normally distributed. If the significance value is >0.05, the variable is normally distributed; conversely, if the significance value is <0.05, the variable is considered non-normally distributed.

Table 8. Normality Test Results

Test Statistics	Unstandardized Residues
N	100
Means	0.000
Standard Deviation	1.992
Kolmogorov-Smirnov Z	1.109
Assimilation. Sig. (2-tailed)	0.171

Source: Processed Primary Data, 2025

Based on Table 8, the three variables, namely business capital, the role of technology, and normally distributed workforce, have a significance value of 0.171, which means more than 0.05.

b. Heteroscedasticity Test

This test aims to examine the difference in residual variance from one observation period to another. In this heteroscedasticity test, there is a basis for decision making, namely if the test results show a significance value of more than 0.05 (r> 0.05) then heteroscedasticity does not occur, and conversely if the significance value of all independent variables is less than 0.05 (r < 0.05) then heteroscedasticity occurs.

Table 9. Heteroscedasticity Test Results

Variables	Significance	Information
Venture capital	0.331	No Heteroscedasticity Occurs
Technology	0.065	No Heteroscedasticity Occurs
Labor	0.988	No Heteroscedasticity Occurs

Source: Processed Primary Data, 2025

The significance results for all independent variables were >0.05, namely the business capital variable (0.331), the technology variable (0.065), and the labor variable (0.988). This indicates that there are no symptoms of heteroscedasticity in the data.

c. Multicollinearity Test

The purpose of the multicollinearity test is to determine whether the regression model detects a relationship between the independent variables. This test method has a decision rule that states that if the tolerance value is > 0.100 and the VIF value is < 10, then there is no multicollinearity. The basis for decision-making in this test is seen from the tolerance value and VIF. This test method has a decision rule that if the tolerance value is > 0.100 and the VIF value is < 10, then there is no multicollinearity.

Table 10. Multicollinearity Test Results

Variables	Tolerance	VIF
Venture capital	0.987	1.013
Technology	0.907	1.103
Labor	0.901	1.110

Source: Processed Primary Data, 2025

Based on the test results table, it can be seen that the tolerance value of each variable is > 0.100 and the VIF value is < 10 so that all variables used in this study do not experience multicollinearity.

d. Linearity Test

This linearity test aims to determine whether or not there is a linear relationship between the independent and dependent variables. The independent and dependent variables must have a linear relationship for a strong correlation to exist. The basis for this test is that if the deviation from linearity is >0.05, then there is a

linear and significant relationship between the independent and dependent variables. Conversely, if the deviation is <0.05, then there is no linear relationship.

Table 11. Linearity Test Results

Variables	*Deviation from Linearity*	Information
Income and Business Capital	0.319	Linear
Income and Technology	0.197	Linear
Income and Labor	0.230	Linear

Source: Processed Primary Data, 2025

Based on the test results, it can be seen that the linearity deviation value between the business capital, role of technology, and labor variables on the income variable obtained a value of more than 0.05, so it can be concluded that there is a linear and significant relationship between the business capital, role of technology, and labor variables on the income variable.

e. Autocorrelation Test

This autocorrelation test was conducted on three independent variables: business capital, technology, and labor. The autocorrelation test used the Durbin-Watson value, which is the basis for decision-making: DU < DW < 4-DU. In this study, the sample size was 100 respondents, so the DU value used was 1.60 and the 4-DU value was 2.40. The results of the DW values can be seen in the table below.

Table 12. Linearity Test Results

Model Summary					
Model	**R**	**R Square**	**Adjusted R Squared**	**Standard Error of Estimate**	**Durbin-Watson**
1	0.782 [a]	0.611	0.595	1.656	2.206

Source: Processed Primary Data, 2025

From the table above, it can be seen that the DW value is 2.206, so the value is in the middle of the DU and 4-DU values with the result 1.7364 < 2.206 < 2.2636. Thus, it can be concluded that there is no autocorrelation in the regression model.

4. Hypothesis Testing Results

a. Multiple Linear Regression Test

This analysis is used with the aim of determining how much influence the independent variables, namely business capital, the role of technology, and labor, have on the dependent variable, namely income.

Table 13. Multiple Linear Regression Test Results

Model	B	Signature.
(Constant)	2,302	0.000
Venture capital	0.134	0.000
Technology	0.413	0.000
Labor	0.316	0.000

Source: Processed Primary Data, 2025

Based on the regression model that has been processed, it can be interpreted as follows:

$$Y = 2.302 + 0.134X_1 + 0.413X_2 + 0.316X_3 + \varepsilon$$

1. The constant value of 2.302 means that if all independent variables, namely business capital, the role of technology, and labor, have a value of zero (0), then the consistent value of income is 2.302.
2. The coefficient value of the business capital variable of 0.134 indicates that the income of MSMEs in the food industry sector in Ponorogo Regency will increase by 0.134 for every 1% increase in business capital and vice versa.
3. The coefficient value of the technology variable is 0.413, which means that every 1% increase in the technology level will increase the income of MSMEs in the food industry sector in Ponorogo Regency by 0.134 and vice versa.
4. The coefficient value of the workforce variable is 0.316, which means that every 1% increase in the workforce will increase the income of MSMEs in the food industry sector in Ponorogo Regency by 0.316 and vice versa.

From the description above, it can be concluded that business capital, the role of technology, and labor influence income.

b. t-test (partial)

The partial t-test is used to determine the effect of each independent variable on the dependent variable. The basis for determining this partial t-test is that if the calculated t-value is greater than the t-value, then H0 is rejected, and vice versa. If the significance value is less than 0.05, then H0 is rejected, and vice versa. In this study, the authors used a sample of 100, so the t-value used is 1.984.

Table 14. Results of the t-test

Model	t	Signature.
(Constant)	3.767	0.000
Venture capital	7.872	0.000
Technology	21.021	0.000
Labor	16.331	0.000

Source: Processed Primary Data, 2025

1. Effect of Business Capital on Income
   Based on the results of the primary data test in the table above, the t value is 7.872 and the t table used is 1.984. Based on the results of the predetermined decision, 7.872 > 1.984, then H0 is rejected. The significance value of the business capital variable is 0.000 < 0.05, so H0 is rejected. Thus, business capital has a positive effect on the income of MSMEs in the food industry sector in Ponorogo Regency .
2. The influence of technology on income
   Based on Table 14, it can be seen that the t-value for the technology variable is 21.021, which is greater than the t-table value of 1.984, so H0 is rejected. The significance value for the technology variable is 0.000 < 0.05, so H0 is rejected. Based on these results, it can be concluded that technology has a positive effect on the income of MSMEs in the food industry sector in Ponorogo Regency .
3. Effect of Labor on Income
   Based on the results in Table 14, the t-value obtained for the labor variable is 16.331, where the t-value is greater than the t-table of 1.984, so H0 is rejected. And based on the labor significance value of 0.000 <0.05, so H0 is rejected. Thus, it can be concluded that Ha3 is accepted, meaning that labor influences the income of MSMEs in the food industry sector in Ponorogo Regency.

c. F-test (simultaneous)

The F-test or simultaneous test is used to determine how much influence the independent variables, namely business capital, the role of technology, and labor, together or simultaneously influence income (Sugiyono, 2013).

Table 15. F Test Results

Analysis of variance		
Model	F	Signature.
Regression	376.368	0.000

Source: Processed Primary Data, 2025

Based on the processed data in Table 15, it can be seen that the calculated F is 376.368 and the significance value is 0.000. In this F-test , there is a basis for decision making, namely the calculated F> F table, so H0 is rejected and the significance value <0.05, so H0 is rejected and vice versa. In this study, the researcher used a sample of 100 samples and it is known that the F table value is 2.70. So in this study, the calculated F (376.368)> F table (2.70) and the significance value is 0.000 <0.05, so H04 is rejected and Ha4 is accepted. So it can be concluded that business capital, the role of technology, and labor have a significant effect on the income of MSMEs in the food industry sector in Ponorogo Regency.

d. Coefficient of Determination Test

The coefficient of determination (R^2) analysis is used to measure the extent to which independent variables jointly influence the dependent variable.

Table 16. Results of the Determination Coefficient Test

Model Summary	
Model	*R Square*
1	0.611

Source: Processed Primary Data, 2025

The R-square value in this test is 0.611, as shown in the table above. This indicates that the variables of business capital, the role of technology, and labor have a 61.1% influence on the income of MSMEs in the food industry in Ponorogo Regency, while additional variables not included in this study have a 38.9% influence.

DISCUSSION

Figure 1 below shows the contribution of each independent variable to MSME income based on the regression coefficient value:

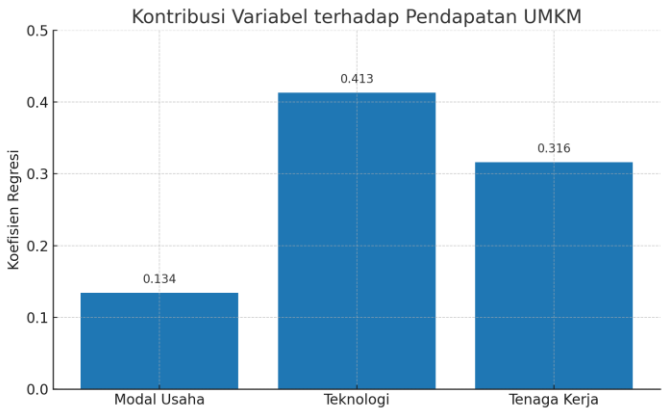

Figure 1. Graph of variable contributions to MSME income

Chart This show that variables technology own the biggest contribution to MSME income with coefficient regression of 0.413, followed by by power work of 0.316, and business capital of 0.134. This matter show that utilization effective technology capable push improvement MSME income in general more significant compared to factor other . Visualization This support findings analysis regression which states that third variables the influential significant to MSME income in the sector industry food Regency Ponorogo.

a. The Effect of Business Capital on Income

Based on the results of the primary data testing that has been processed, the calculated t value is 7.872 and the t table used is 1.984. Based on the existing decision basis that 7.872 > 1.984 then Ho1 is rejected and with a significance value on the business capital variable of 0.000 < 0.05 then Ho1 is rejected. So it means that the value of business

capital has a significant positive effect on the income of MSMEs in the food industry sector in Ponorogo Regency . From the results above, business capital has a positive effect on income. Because labor costs, purchasing raw materials, and purchasing equipment are part of the production process, this shows that the more capital available, the more production results that can be achieved. Income will increase because the production produced is greater because more can be sold. Where by increasing business capital, the quantity will also increase, so the income will also increase. Conversely, if reducing business capital, income will also decrease.

b. Impact of Technology on Income

Based on the test results, it shows that the calculated t value for the technology variable is 21.021, which is greater than the t table value of 1.984, with the decision Ho2 being rejected. Then, based on the significance value of the technology variable, which is 0.000, which is smaller than 0.05, Ha2 is accepted. This means that technology can be decided to influence the income of MSMEs in the food industry sector in Ponorogo Regency. As technology advances, new products often appear to replace old products, and the emergence of new competitors means that consumers have more choices in terms of price, quality, and service, and their preferences can change at any time. Then, with advances in information technology such as the development of social media, it will also help MSMEs in marketing their products to the wider community. This will also affect the income of MSMEs because with this technology, the wider community will be familiar with their products so that they will get new consumers.

c. The Effect of Labor on Income

Based on the test results, it can be seen that the calculated t value for the labor variable is 16.331, which is greater than the t table value of 1.984, so H03 is rejected. Likewise, based on the significance value of the labor variable <0.05, which is 0.000, H03 is rejected. Therefore, from these results, it can be decided that Ha3 is accepted. This means that labor has a positive effect on the income of MSMEs in the food industry sector in Ponorogo Regency. Based on the results above, it means that the more MSMEs empower their workforce, the more money they can earn. Likewise, the smaller the income that can be obtained, the less labor is empowered by MSMEs. Because labor is the driver of other production inputs, this shows the importance of labor in production. Increasing labor productivity will in turn spur greater production, thereby increasing income.

d. The Influence of Business Capital, Technology, and Labor on Income

Based on the processed data, the significance value is 0.000 and the calculated f is 376.368. The basis for this f-test decision has the rule that Ho is rejected if the calculated f value is greater than the table f and the significance value is less than 0.05, and vice versa. In this study using 100 samples, the table f value is 2.70. From the test results, the decision is obtained that the calculated f > f table (376.368 > 2.70) and the significance value < 0.05 (0.000 < 0.05). Thus, it can be concluded that business capital, the role of technology, and labor together have an impact on the income of MSMEs in the food

industry sector in Ponorogo Regency. This means that the success and growth of MSME income in the Ponorogo region are greatly influenced by these three factors. In business development, business capital is the main foundation, while technology is the driver of productivity and efficiency. On the other hand, competent and adequate labor is the main driver of company operations. Based on this research, efforts are needed to expand access to capital, adopt better technology, and train human resources to increase the income of MSMEs in Ponorogo. Therefore, the combination of these three factors could be key to increasing MSME income and driving economic growth in Ponorogo Regency.

CONCLUSION

The analysis results show that business capital has a positive and significant effect on the income of MSMEs in the food industry sector in Ponorogo Regency. This is evidenced by the calculated t value (7.872) > t table (1.984) and a significance of 0.000 < 0.05, so the null hypothesis (H_o) is rejected and the alternative hypothesis (H_a) is accepted. Thus, the value of business capital has a positive and significant effect on the income of MSMEs in the food industry sector in Ponorogo Regency.

The analysis results show that the t-value of the technology variable, which is 21.021, is greater than the t-table value of 1.984, so Ho2 is rejected. Then, based on the significance value of the technology variable, which is 0.000 less than 0.05, Ha2 is accepted. This means that technology can be concluded to have an effect on the income of MSMEs in the food industry sector in Ponorogo Regency.

The analysis results show a t-value for the labor variable of 16.331, greater than the t-table value of 1.984, so H03 is rejected. Similarly, based on the significance value of the labor variable <0.05, which is 0.000, H03 is rejected. Therefore, from these results it can be concluded that Ha3 is accepted. This means that labor has a positive effect on the income of MSMEs in the food industry sector in Ponorogo Regency.

The results of the analysis show a significance value of 0.000 and a calculated f of 376.368. The basis for this f test decision has a rule that Ho is rejected if the calculated f value is greater than the f table and the significance value is less than 0.05, and vice versa. In this study using 100 samples, it is known that the f table is 2.70. From the test results, the decision is obtained that the calculated f > f table (376.368 > 2.70) and the significance value < 0.05 (0.000 < 0.05). Thus, it can be concluded that business capital, the role of technology, and labor together have an influence on the income of MSMEs in the food industry sector in Ponorogo Regency.

Implications practical from results study This show that effort improvement MSME income needs focused on expansion access capital, adoption the right technology use , and improvement competence power Work . By Because that , the government area expected can strengthen policy mentoring MSMEs through training programs based technology , convenience access financing , and improvement quality of human resources, so that growth economy local based on MSMEs can walk more optimal and sustainable.

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