

## Research Article

# Determinants of Production in the Bread and Cake Industry in Banyumas District

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**Abstract.**

The industrial sector is a pertinent driving force for economic development in developing countries, including Indonesia. Therefore, the industrial sector more than other industries must be prepared to become a leading sector. One of the industrial sectors growing in the Banyumas district is the food industry, especially cakes and bread. This research aims to analyze the effect of capital, labor, and raw material on the production of the food items and identify the independent variables that influence the production the most. The population of this study is 108 bread and cake business units. The sampling technique used is Stratified Random Sampling based on the number of workers. The data analysis technique used is multiple linear regression which refers to the Cobb-Douglas production function using natural logarithms. The results show that capital, labor, and raw materials partially have a positive and significant effect on production; capital, labor, and raw materials simultaneously have a substantial impact on production; the most influential variable on production is the raw material. The research implies that the bakery industry in Banyumas Regency should use a combination of production factors such as capital, labor, and raw materials optimally to increase production. Furthermore, it is hoped that the Banyumas Regency Government and financial institutions can increase the ease of access to capital to support business development. To increase labor productivity, the government and companies can facilitate to improve their knowledge and skills.

**Keywords:** capital, labor, raw materials, production

## 1. Introduction

The industrial sector is one of the important sectors as a driving force for economic development in developing countries, including Indonesia. Therefore, the industrial sector is prepared to become a leading sector compared to other industries[1]. As one of the drivers of economic activity and a driver of economic growth and development, the role of the industrial sector is significant. It can provide an adequate contribution to the country. One indicator of a country's development success can be measured through economic growth as indicated by the value of the Gross Domestic Product (GDP) and Gross Regional Domestic Product (GRDP). GDP and GRDP consist of various economic sectors, and their growth cannot be separated from the role of each of these sectors [2].

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In line with the explanation that the Gross Domestic Product (GDP) measures a country's economic growth, it is the same as the Gross Regional Domestic Product (GRDP). GRDP has an essential role in increasing the economic development of a region, where the higher the GRDP, the higher the economic growth is also high [3]. According to the Central Bureau of Statistics for Banyumas Regency, over the past five years (2016-2020), the economic structure of Banyumas Regency has been dominated by 5 (five) categories of business fields, including manufacturing industry, wholesale and retail trade, car and motorcycle repair, construction, agriculture, forestry, and fishing, as well as mining and quarrying.

One of the industries that has the potential and is being developed in Banyumas Regency is the food processing industry. According to data from the Office of Industry and Trade of Banyumas Regency, the production value of the food processing industry in 2021 is approximately 14 billion rupiahs and a production volume of approximately 138,100 tons. Meanwhile, there will be 352,842 business units in the food processing industry in 2021, and will be able to absorb a workforce of 71,115 people.

One of the growing food commodities in Banyumas Regency is bread. According to data obtained from the Department of Industry and Trade of Banyumas Regency shows a phenomenon when viewed from the amount of production and the number of business units, the development of the bakery industry has increased every year, but in 2014, 2015, and 2016 it tended to stagnate. It is interesting to study because the existence of bread that is starting to be liked by all levels of society makes the bread industry business opportunities more promising. However, this, of course, can lead to problems faced by bakery entrepreneurs, namely the emergence of market competition, which will later affect the demand faced by each entrepreneur and ultimately affect the amount of production. In line with national industrial development, industrial development, especially in Banyumas Regency, also has a significant role in accelerating development in Banyumas Regency through its ability to create added value, considering that the industrial potential in Banyumas Regency is quite enormous, especially industries based on processing industries, especially bakery and cake product industry.

To produce a product that will be offered to the public, every Industry in its production process requires various production factors to help the production process run[4][5]. Capital, Labor, and raw materials are needed in bread production. The three factors of production are combined in a certain quantity and quality to produce products in optimal quantities and to obtain maximum operating income.

Any increase in the amount of Capital owned by the Industry will increase the business capacity of the Industry; this can be reflected in an increase in its production capacity[6].

Besides Capital, Labor as an actor in the production process is no less important. Skilled and expert labor factors influence the amount of goods produced. With a skilled and expert workforce, it can produce good quality products so that the selling price will be higher. Another significant factor is raw materials. An industry that produces an item or product will always need raw materials in its production process. Raw materials are an integral part of the products produced by a company[7]. Raw materials strongly influence production because if raw materials are difficult to obtain, producers will stop the production process, and vice versa. The production process will run smoothly if raw materials are easy to obtain. It is in line with the production function theory put forward by Cobb-Douglas, where  $Q = (AK^\alpha, L^\beta)$ . If Capital and Labor are increased, the output will also increase. This relationship describes the marginal physical productivity, namely the additional output that can be produced if one or more units of specific inputs are added by assuming the other inputs are constant [8].

Several studies relevant to this research have been carried out. [9] showed that Capital, labor, and technology significantly increased production in the salt processing industry in Pati Regency. In line with this, Wibowo [10] also conducted research that showed a significant influence between Capital, Labor, raw materials, and machinery on the production of small convection industries in Padurenan Village, Gebong District, Kudus Regency. Andriani's research results [11] also show that the factors of Production of Capital, Labor, and raw materials significantly affect production results. However, different results were found by Sutra & Ananda's [12] in their research, which shows that Capital has a negative and significant effect on production; another variable, namely Labor, has no effect on production, while the wage rate has a positive and significant effect on production.

Based on initial observations of several bakery entrepreneurs in Banyumas Regency, they were reluctant to borrow Capital from financial institutions. It resulted in entrepreneurs needing more Capital, so they could not produce goods optimally. A skilled workforce also constrains bakers. Along with the increasing industrial investment climate in Banyumas Regency, those who previously worked as workers in bakery factories are now choosing to work in new factories. In addition, another problem faced is the high price of raw materials that require higher costs in the production process. Bread and cake entrepreneurs are not only interested in increasing production but also in increasing income. The bread and cake production level is influenced by the amount of Capital owned, available Labor, and raw materials used. By knowing the production level produced by the bakery and cake industry in Banyumas Regency, the steps that must be taken to increase its productivity can be estimated. In addition, the level of

profit generated can also be used to measure the welfare of the bakery and cake entrepreneurs. Therefore, this study aims to analyze the effect of Capital, Labor, and raw materials on production in the bakery and cake industry in Banyumas Regency.

## 2. Theory, Literature Review, And Hypothesis

According to Sukirno [13], production is a transformation or change of factors of production into goods or a process in which input is converted into output. Production is a series of activity processes covering all activities to create or add value to an item or service, whether a semi-finished or a finished product. The production process requires the support of a theory so that the production carried out by the company can run well so that companies that run the business get optimal profits, product quality, and quantity are met, and consumers are satisfied. The theory of production explains the relationship between the production level and the number of production factors used. In other words, the theory of production teaches a mechanism so that production can achieve the expected goals by maximizing the use of the factors of production that are owned.

In production theory, this is known as the Production Function. The production function shows the technical relationship between the production factors and the resulting production level. While the Production Function, according to [5], is a mathematical relationship between input and output. According to Cobb-Douglas, the production function is expressed in the equation  $Q = AK^\alpha L^\beta$ . However, in practice, the factors of production that have changed are not only the capital and labor factors. There are also other inputs in the production process, including raw material factors. Changes in raw materials can be shown by entering the variable raw materials in the production function so that the production function with the addition of raw material factors can be shown in the following formula:

$$Q = f(K, L, B)$$

Information :

Q = Outputs

K = Capital or Capital

L = Labor or Labor

B = Raw Material

According to Sukirno [13], what is meant by factors of production are objects provided by nature or created by humans that can be used to produce goods and services.

According to Sugiarto et al.[4], the product as the output of the production process is very dependent on the factors of production used. The greater the number of factors of production used in the production process, the greater the number of products produced.

The production process is closely related to the Industry. According to the Law of the Republic of Indonesia Number 3 of 2014 concerning Industry, the definition of Industry is all forms of economic activity that process raw materials and utilize industrial resources to produce goods with added value or higher benefits. According to BPS, industrial classification based on the number of workers and business scale is divided into four classifications:

#### 1. Big Industry

Large industries have a workforce of more than 100 people. Another characteristic is that they already have significant Capital. They recruit workers with various educational backgrounds and qualified skills, and company leaders are selected through a fit and proper test.

#### 2. Medium Industry

The medium Industry has a workforce of around 20-99 people. Medium industries have large enough Capital; their workforce is also relatively skilled. Company leaders usually have specific managerial abilities.

#### 3. Small Industry

Small industries have a workforce of between 5-19 people. This Industry has relatively small Capital, and the workforce generally comes from the surrounding environment.

#### 4. Domestic Industry

Home industries have a workforce of between 1-4 people. Home industries are usually under the control of a family, and the owner of this Industry is usually the head of the household or a family member, so they have relatively limited Capital.

The role of Capital in a business is significant in supporting the process of creating goods and services. A business without Capital will not work. According to Prathama & Mandala [14], building a business requires Capital. A business that is built will only develop with the support of Capital. Capital is the heart of a business that is built. It also follows the research of Ramadhani et al. [15], which shows that the capital variable significantly positively affects production results.

Another factor of Production is Labor. The workforce is the population who are of working age. According to Law No. 13 of 2003, it is stated that Labor is everyone who can do work to produce goods or services to meet their own needs and for the community. According to Mulyadi (2005), Labor is a population of working age (aged 15-65 years) or the total population in a country that can produce goods and services.

Other factors of Production besides Capital and Labor are raw materials. Raw materials can be interpreted as staple materials or basic materials used to produce finished products. According to Guritno [16], Raw materials are materials that are still raw or unprocessed and are used to make products. Raw materials inventory companies purchase to be processed into semi-finished goods and finally into finished goods or final products from the company [17].

The framework of this research can be described as follows. Production is an activity carried out in order to produce goods and services. Resources are needed to carry out this production. Effective and efficient utilization of existing resources is the key to achieving objectives in the industrial sector, where the production process takes place.

The bakery and cake product industry is one of the potential industries in Banyumas Regency. Consumption of bread, at first, was only for certain groups of people; now, bread is often used as breakfast, snack, and ready-to-eat meals when needed. The existence of bread that is starting to be liked by all levels of society makes this bread industry business opportunity even more promising. This situation makes the scale of businesses engaged in the bread business vary, ranging from small-scale or home *industries* to medium to large industries. Factors of production are needed to increase bread production, which is explained as follows.

The first factor is Capital. Capital is a factor of production that is very important for every business. The size of the Capital can affect the business's production capacity and the amount of production produced. Research by Winarsih et al. [9] shows that Capital significantly influences increasing production in the salt processing industry in Pati Regency. Production can be increased by using adequate and efficient Capital. Research by Nugroho & Budianto [18] shows that the capital variable partially affects milk production. In line with the two existing studies, Andriani's research [11] concluded that the capital variable significantly affects PT—Indonesian New Charisma production results.

The second factor is Labor. Labor has a significant role in business activities, namely as a factor of production capable of processing and organizing other factors. The bread production process itself still requires a large number of workers, especially in factories that still rely on human Labor. The number of workers and the ability of workers play

an essential role in increasing the amount of product produced so that it will also impact increasing productivity. Thus the number of workers can undoubtedly affect the amount of production daily. It is in line with research conducted by Fachrizal [19], which shows that Labor significantly positively affects production in the leather craft industry in Merauke Regency. It means that if the workforce increases, production will increase and vice versa. Other appropriate studies have also been carried out by Amlauni et al. [20], which show that the labor variable significantly positively affects the production of wooden crafts. Ramadhani et al. [15] also indicate that the labor variable has a significant positive effect on production results.

The third factor is raw materials. This raw material is essential because it is a production factor that directly affects production. The greater the amount of raw materials used, the greater the amount of production that can be produced. The appropriate research that has been carried out is Wardani [21] shows that raw materials positively affect the production of the banana stem-twisting household industry in Prambanan Village, Balen District, Bojonegoro Regency. The results of this study are also in line with Andriani's research [11].

Based on the theoretical basis and framework above, the hypotheses in this study are:

$H_1$  = Capital has a significant positive effect on production results.

$H_2$  = Labor has a significant positive effect on production results.

$H_3$  = Raw materials have a positive effect significant effect on production.

### 3. Research Methods

This quantitative descriptive research places more emphasis on measuring variables with numbers, and the analysis uses statistical analysis in hypothesis testing.

Based on data from the One-Stop Investment and Services Agency (DPMPSTP), in 2022, the bread and cake product business population in Banyumas Regency is 108 units, consisting of home, small, and medium industries. Because the data is heterogeneous, the sampling technique uses *Proportionate Stratified Random Sampling*. *Stratified Random Sampling* is a method of sampling where samples are taken from each stratum. The strata in this study are based on the number of workers, and proportionally, some business units are taken as the research sample. To determine the number of samples in this study, that is, by using the Taro Yamane formula to obtain a total sample of 52 business units. In order for the population to be represented as a whole, the sampling for each business stratum is determined as follows:

1. Home Industry =  $\frac{17}{108} \times 52 = 8.18$  rounded up to 8 industries
2. Small Industry =  $\frac{79}{108} \times 52 = 38.03$  rounded up to 38 industries
3. Medium Industry =  $\frac{12}{108} \times 52 = 5.7$  rounded up to 6 industries

The data used in this study are primary and secondary data. Primary data was obtained through direct interviews with respondents using a questionnaire. At the same time, secondary data is collected through materials and data related to the subject matter obtained from reports compiled in archives from the Banyumas District Investment and One-Stop Services Agency (DPMPTSP) and the Central Bureau of Statistics.

The analytical method used in this study is based on the Cobb-Douglas production function with the essential functions:  $Q = AK^\alpha L^\beta B^\gamma$ . Furthermore, in order to be able to perform calculations using the OLS method, the primary function equation is transformed into a natural logarithmic function so that the Multiple Linear Regression equation is obtained as follows:

$$\text{Ln}Y = \beta_0 + \beta_1 \text{Ln}X_1 + \beta_2 \text{Ln}X_2 + \beta_3 \text{Ln}X_3 + e$$

Information:

Y: Bread and Cake Production

$\beta_0$ : Constant

$X_1$ : Variable Capital

$X_2$ : Labor variable

$X_3$ : Raw material variable

$\beta_1, \beta_2, \beta_3$ : Regression Coefficient of each variable

e: Error

The normality test, multicollinearity test, and heteroscedasticity test were performed on the model. A good regression is a regression that has normally distributed data. The multicollinearity test aims to identify whether there is a correlation between the independent variables in the regression model. A good regression model should not correlate with the independent variables. The heteroscedasticity test was carried out to identify whether, in the regression model, there is an inequality of variance from the residuals of one observation to another. If the variance from the residual of one observation to another remains, then it is called homoscedasticity; if it is different, it is called heteroscedasticity. A good regression model if there is no heteroscedasticity

Further statistical tests are the F test and t-test. The F test was conducted to determine how much influence the independent variables had on the dependent variable together



at  $\alpha = 5\%$ . The partial significance test (t-test) is used to partially test the effect of the independent variables on the dependent variable and can also be used to test the hypothesis of each variable [22].

In the calculation of multiple linear regression, it can also be seen that the magnitude of the Coefficient of Determination ( $R^2$ ) shows how much the ability of the independent variable to explain the variation of the dependent variable. The closer to 1, the higher the  $R^2$  value, indicating the higher the ability and vice versa.

The advantage of the regression model using the natural logarithm is that it can simultaneously identify the independent variables that have the most influence on the dependent variable because the regression coefficient values of each of these variables indicate their elasticity values. [23].

## 4. Results and Discussion

### 4.1. Descriptive Statistical Analysis

In carrying out the previous regression with a sample of 52, it was found that the data were not normally distributed. So, the researchers overcame this by reducing the number of samples to 51. One of the respondent's omitted data was small industries with the amount of Capital and raw materials that had too far a gap compared to other data (outliers). It follows the statement put forward by Algifari [24], which states that overcoming abnormal data can be overcome by increasing or decreasing the number of samples. The descriptive statistical results of the research data used can be seen in Table 1.

TABLE 1: Descriptive Statistics Results.

	N	Minimum	Maximum	Means	std. Deviation
Ln_Capital	51	13.86	19.80	17.5341	1.28541
Ln_Labor _	51	.69	3.40	2.0957	.62646
Ln_Raw Materials	51	11.46	14.29	12.8027	.67652
Ln_Production	51	5.25	7.39	6.2886	.51140
Valid N (listwise)	51				

Source: SPSS Output Results

Based on Table 1 shows that the standard deviation value of each independent variable is lower than the average value, so the distribution of data values is relatively even.

## 4.2. Classic assumption test

### 4.2.1. Normality test

TABLE 2: Normality Test Results.

Variable	Kolmogorov Smirnov value	Asymp. Sig.	Information
Standardized Residuals	0.091	0.200	Normal Distributed

Source: SPSS Output Results

Based on the data normality test output, the value can be known asymp. Sig. (2-tailed) and the Kolmogorov-Smirnov Z test for standardized residual variables is more than 0.05, so it can be concluded that the data used are normally distributed.

### 4.2.2. Multicollinearity Test

TABLE 3: Multicollinearity Test Results.

Variable	VIF value	Information
Ln_Capital	1,601	no multicollinearity
Ln_Labor	1,916	no multicollinearity
Ln_Raw Material	1,461	no multicollinearity

Source: SPSS Output Results

Based on Table 3 shows that the *Variance Inflating Factor* (VIF) value of each variable is <10. It shows that in this study, there are no symptoms of multicollinearity.

### 4.2.3. Heteroscedasticity Test

TABLE 4: Heteroscedasticity Test Results.

Variable	VIF value	Information
Ln_Capital	0.085	No Heteroscedasticity
Ln_Labor	0.362	No Heteroscedasticity
Ln_Raw Material	0.244	No Heteroscedasticity

Source: SPSS Output Results

Based on the results of the heteroscedasticity test output using the Glejser method, it can be seen that the value of the t-test on the variables capital, Labor, and raw materials

each value is greater than (0.05). Based on these results, there is no heteroscedasticity in the regression model.

#### 4.2.4. Multiple Linear Regression Analysis

The results of multiple linear regression calculations can be seen in Table 5.

TABLE 5: Multiple Linear Regression Results.

Model	Coefficients <sup>a</sup>				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	std. Error	Betas		
Constant	-1,137	.696		-1,634	.109
Ln_Capital	.163	.028	.410	5,758	.000
Ln_Labor	.237	.064	.291	3,732	.001
Ln_Raw Material	.318	.051	.420	6.175	.000

Source: SPSS Output Results

From the results of the regression carried out on the variables capital, Labor, and raw materials on production using SPSS 24 software, the regression equation is obtained as follows:

$$\text{Ln}Y = -1.137 + 0.163\text{Ln}X_1 + 0.237\text{Ln}X_2 + 0.318\text{Ln}X_3$$

The above equation can be described as follows:

1. The constant value is -1.137, meaning that if the variables Capital ( $X_1$ ), labor ( $X_2$ ), and raw materials ( $X_3$ ) are considered constant, then the product amount will be -1.137%.
2. The regression coefficient of the Capital variable ( $X_1$ ) with a value of 0.163 shows a positive value, meaning that if Capital ( $X_1$ ) increases by 1%, the total Production (Y) will increase by 0.163% assuming the variable Labor ( $X_2$ ) and Raw Materials ( $X_3$ ) are fixed.
3. The regression coefficient of the Labor variable ( $X_2$ ) with a value of 0.237 shows a positive value, meaning that if Labor ( $X_2$ ) increases by 1%, the total Production (Y) will increase by 0.237% assuming the variable Capital ( $X_1$ ) and Raw Materials ( $X_3$ ) are fixed.

The regression coefficient of the Raw Material variable ( $X_3$ ) is 0.318. It shows a positive value, meaning that if the Raw Material ( $X_3$ ) increases by 1%, the total Production

(Y) will increase by 0.318%, assuming the variable Capital ( $X_1$ ) and Labor ( $X_2$ ) are permanent.

#### 4.2.5. Statistic test

#### 4.2.6. F-test

The results of the F-test calculations can be seen in Table 6.

TABLE 6: F-Test Results.

ANOVA <sup>a</sup>						
Model		Sum Squares	of df	Mean Square	F	Sig.
1	Regression	11.128	3	3,709	89,487	.000 <sup>b</sup>
	residual	1948	47	041		
	Total	13,077	50			

Source: SPSS Output Results

Based on Table 6, it can be seen that the results of the F test on the regression equation. It can be seen that the calculated F-value is 89.487 > the F-table value is 2.81 or sig. (0.00 0 ) <  $\alpha$  (0.05). The results of the F test showed that the variables capital, Labor, and raw materials simultaneously significantly influence production.

#### 4.2.7. t-test

The results of the partial significance test of each independent variable on the dependent variable can be seen in Table 5. Based on the results of the data processing at  $\alpha = 0.05$  and *degrees of freedom* ( $n - k$ ), where  $n = 51$  and  $k = 4$ , it can be seen that the t-table value in the one-tailed test is 1.678. Thus the effect of each independent variable on the dependent variable can be described as follows:

1. It is known that the t value of the variable is calculated Capital of 5.758 > t table 1.678 and sig. (0.0 00) <  $\alpha$  (0.05). The results of this statistical test show that the Capital variable has a positive and significant effect on production, so H1 is accepted.
2. It is known that the calculated t value of the Labor variable is 3.732 > t table 1.678 and sig. (0.001) <  $\alpha$  (0.05). The results of this statistical test show that the labor variable has a positive and significant influence on production, so H<sub>2</sub> is accepted.

3. It is known that the value of t counts the variable Raw material of  $6.175 > t$  table  $1.678$  and  $\text{sig. } (0.000) < \alpha (0.05)$ . The results of this statistical test show that the raw material variable has a positive and significant influence on production, so the  $H_3$  is accepted.

#### 4.2.8. Coefficient of Determination ( $R^2$ )

The results of the calculation of the Coefficient of Determination can be seen in Table 7.

TABLE 7: Calculation of the Coefficient of Determination.

Summary model				
Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	.923 <sup>a</sup>	.851	.842	.20360

Source: SPSS Output Results

Based on Table 7, it can be seen that the Adjusted R Square value is 0.842. It means that the ability of the variable Capital, Labor, and raw materials to explain variations in the variable changes in the amount of bread and cake production in the Banyumas Regency is 84.20%, while the remaining 15.80% is influenced by other variables not examined.

The coefficients resulting from the regression model in the form of natural logarithms show the elasticity value of each variable. If it is compared the coefficient values of the three independent variables, it can be seen that the raw material variable has the most significant value. It is shown in Table 8.

TABLE 8: Elasticity Value.

No	Variable	Regression Coefficient
1.	Capital (X1)	0.163
2.	Labor (X2)	0.237
3.	Raw materials (X3)	0.318

Source: Primary Data Processed

Based on Table 8, the three independent variables have a coefficient value of less than 1. It means that changes in the amount of production are inelastic to changes in Capital, Labor, and raw materials in the bread and cake industry in Banyumas Regency. The highest regression coefficient value is the raw material variable, with a value of 0.318. It shows that if the use of raw materials increases by 1%, production will increase

by 0.318%. Thus, the raw material variable is the variable that has the most significant influence on the amount of bread and cake production in Banyumas Regency.

## 5. Discussion

### 5.1. The Influence of Capital on Production in the Bread and Cake Products Industry in Banyumas Regency

Based on the results of the tests, Capital has a significant positive effect on the amount of production in the bread and cake industry in Banyumas Regency. It means that if the business capital is getting bigger, producers can increase their production capacity, which will impact the amount of production they produce. It follows the Cobb- Douglas theory, which states that production results are influenced by the factors of production, including Capital. The results of this study are also in line with the results of Winarsih et al. [9], Amlauni et al.[20], Nugroho & Budianto [18], and Andriani [11].

### 5.2. The Effect of Labor on Production in the Bread and Cake Products Industry in Banyumas Regency

The results of the tests show that the workforce positively and significantly influences production in the bakery and cake product industry in Banyumas Regency. It means that if the workforce increases, production will also increase because we know that Labor is a factor of production that has an essential role as a driving force for other factors of production. In addition, the quality of the workforce, both in terms of knowledge and skills, will determine work productivity. The greater the number of qualified workers, the more productive they will be, so the greater the amount of production produced. The results of this study are in line with research conducted by Fachrizal [19], Amlauni et al. [20], and Ramadhani et al. [15].

### 5.3. The Effect of Raw Materials on Production in the Bread and Cake Product Industry in Banyumas Regency

The tests' results show that raw materials positively affect production in the bakery and cake product industry in Banyumas Regency. It shows that raw materials are a factor of production needed in every production process, so each company must have sufficient raw material supplies to support its production activities.

Raw materials are the most influential factor in the amount of production. It is understandable because raw materials are the primary variable in the bread and cake industry and one of the variable inputs. Changes in the amount of raw materials used will directly affect the output produced. The rawer materials used in the production process, the more output will be produced. This study's results align with research conducted by Mufattiro [25], which shows that raw materials are the most dominant variable influencing the production of the small and medium kretek rambak industry in Ward District, Mojokerto Regency. The results of this study are also relevant to research conducted by Sisdiyantoro & Lestari [26], which shows that raw materials have a positive and significant effect on the production of the SMB convection industry in Tulungagung, which is also in line with the research results of Wardani ([21] and Andriani [11].

## 6. Finding and Conclusion

Based on the research results, the variables of Capital, Labor, and raw materials significantly positively affect the total production of the bread and cake industry in Banyumas Regency. Raw materials are the most influential variable in the number of products produced.

The results of this study are empirical evidence that strengthens the validity of the production theory, which shows that the production of goods and services is influenced by the factors of production used. The amount of raw materials used is the most significant determining factor in the bread and cake industry production in Banyumas Regency. Raw materials as variable inputs directly affect the amount of output. The greater the raw material used, the greater the output produced, and vice versa.

The results of this study can provide economic benefits in the form of input materials for related stakeholders in the development of the bread and cake industry in Banyumas Regency, so it is hoped that this situation will increase entrepreneur income, open employment opportunities, and improve people's welfare.

This research can be a reference for further research on the bakery and cake industry or other research to analyze aspects such as the efficiency of the use of each production factor and business efficiency as well as the impact of the development of the bakery and cake industry on the welfare of working families.

## 7. Implications, Limitations, and Suggestions

This research implies that the Government of Banyumas Regency and financial institutions are expected to increase the ease of access to Capital to support business development, especially the bakery and cake product industry in Banyumas Regency. Companies that are growing will be able to absorb a larger workforce. For the existence of this workforce to further increase business productivity, the government and or companies can facilitate efforts to increase the knowledge and skills of the workforce. Furthermore, because raw materials are the factor that most influence the amount of production, the government also needs to carry out intensive and continuous monitoring of the availability of quantity and quality of raw materials at affordable prices so that the bread and cake industry in Banyumas Regency can maximize its production.

This research has several limitations, including:

Independent variables are still limited to only three variables. For further research, it is hoped to develop more broadly regarding variables that affect production, such as information resource technology, length of business, and entrepreneurial factors.

It has limited research sample data due to the limited availability of population data available from data sources at the Investment and One-Stop Services Office (DPMPTSP) of Banyumas Regency. Therefore, it is hoped that future research can also use population data from other alternative sources, which can provide more data with a wide range of research objects so that future research implications and contributions can be more broadly generalized and better.

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