

Analysis of Employment in Small and Medium Industry (SMEs) in South Sumatra

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Abstract—This study aims to see Labor Absorption in SMEs in the province of South Sumatra. This study uses multiple regression analysis. Processing application in this study using SPSS. After the determination of the exact model than the classical assumption test, the next step necessary to test the validity of the effect, statistical test F and the coefficient of determination or Adjusted R-Square. The wage variable has a significant effect on employment and a negative value 1.87, this shows that an increase of 1 percent for a wage will reduce the number of employment by 1.87 percent. Variable production values have a significant effect on employment and the positive value of 5,26, this shows that every 1 percent increase in the production value will increase the number of employment by 5.26 percent. While the capital variable has no significant effect on employment and the positive value of 5.10, this shows that every 1 percent increase to capital will increase the number of employment by 5.10 percent.

Keywords: Labor, SMEs, capital, wages and production value

I. INTRODUCTION

Non-oil processing industry in Indonesia has become an important contribution to the creation of the Gross Domestic Product (GDP). Until the end of 2016, the contribution of the non-oil processing industry to GDP amounted to 17.82 percent. Of 9 (nine) sub-sectors that exist in the non-oil processing industry, the food and beverage industry provides the largest contribution to GDP of the industrial sector which amounted to 33.16 percent in 2016.

TABLE I. INDUSTRIAL PRODUCTION GROWTH THE MANUFACTURING YEAR 2016 - 2017 (%)

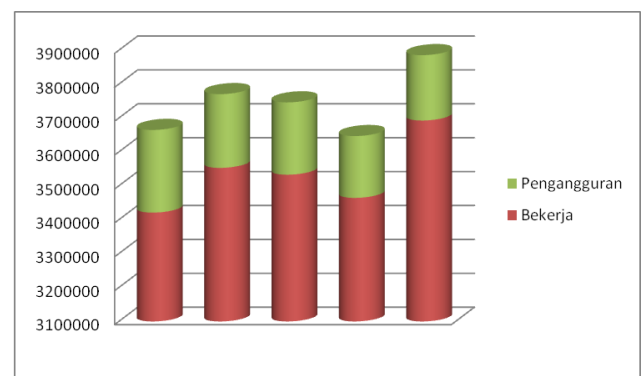
Type of Industry	q-to-q		y-on-y	
	TW IV-16	TW I-17	TW IV-16	TW I-17
Food	-18.08	1.86	-1.85	4.69
beverages	2.60	-28.38	20:51	-12.42
Paper and Articles of Paper	-8.04	15.81	-17.35	-3.49
Rubber	13:01	15.64	16:18	39.66
Large / Medium (IBS)	-15.11	15:55	-14.30	3:13

^a Source: Press Release, BPS, No: 25/05/16 / Th XIX, 2018 [1]

The population of large supported by the domestic economy and purchasing power sufficient strong become key drivers of growth of the food and beverage industry in Indonesia. The same pattern occurred in the province of

South Sumatra (South Sumatra). The food industry in South Sumatra province had the highest contribution to the growth of non-oil processing industry production.

Human resources or human resources containing two senses. First, human resources (HR) implies the work effort or service that can be provided in the production process. In this case, reflects the quality of human resources effort exerted by a person in a certain time to produce goods and services. The second notion of HR regarding the human ability to work and to provide the services or work effort. Physically, the ability to work is measured by age. In other words, people of working age are considered capable of working. Groups of the population of working age are called labor or manpower [8]



^b Source: The Central Statistics Agency (BPS), 2019 [1]

Fig. 1. Structure Labor Force 2013-2018

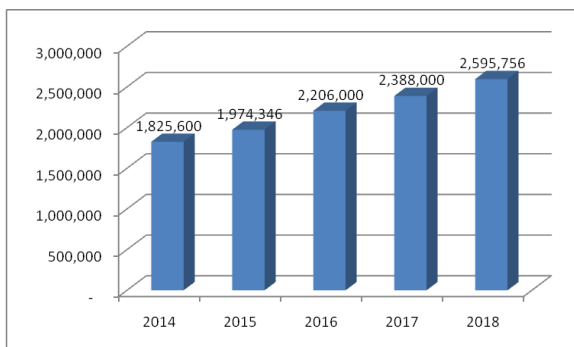
Total labor force that works from year to year increase. This indication is seen in 2013 in which the working population as much as 3.46462 million people increased by 4.193 million in 2018, the increase of the working population is inversely proportional to the number of unemployed in the province of South Sumatra, and in 2013 amounted to 182 376 unemployed people decreased to 175 100 people in 2018. the working-age population that is growing as the population increased from year to year resulting in increased labor supply. This can lead to opportunities to work increasingly smaller jobs currently provided less and less, so the emergence of competition in the world of work both job seekers and workers who need to keep their jobs.

TABLE II. EMPLOYMENT TO POPULATION RATIO WORKING-AGE

Year	Work	Population (15+)	Employment Ratio
2013	3.46462 million	5,246,097	65.21
2014	3692806	5,344,045	66.49
2015	3695866	5,440,915	64.93
2016	3998637	5,536,372	62.58
2017	4.0832 million	5.8855 million	69.38
2018	4.193 million	5.9806 million	70.11

Source: Central Statistics Agency (BPS), 2018 (processed)

Generally, wages have a strategic position, both for the workers and their families, for businesses and the national interest. For workers, the wage necessary to finance himself and his family life as well as an incentive for increased productivity. For companies, the wage is one component of production costs is seen to reduce the profit generated. So companies are trying to suppress the wages to the minimum level so that the profits can be improved.



Source: The Central Statistics Agency (BPS), 2019

Fig. 2. South Sumatera Province Minimum Wage Year 2014 -2018

The minimum wage in several provinces of South Sumatra. Also based on provinces, minimum wages can be determined based on the type of business, which also has different figures. The highest minimum wage was in the year 2018 is Rp2.595.756 located in the city of Palembang, Banyuasin and Musi Banyu Asin, while the lowest minimum wage applicable in the year 2014 amounting to Rp1.8256 million residing in the district Empat Lawang. It is tailored to the needs of different communities in each region and is based on factors that are taken into account in setting the government's minimum wage.

A minimum wage increase for workers would improve their purchasing power which will ultimately drive excitement to work and can improve productivity. But for entrepreneurs who consider the wage costs, this increase leads to them having to adjust the level of wages they should give to the worker with the minimum wage set by the government. So with the minimum wage increase, entrepreneurs tend to reduce the amount of labor they use in the production process. This further reduces the labor market for the labor force in the province of South Sumatra, but on the other hand, workers receive higher wages can increase productivity. From the background that discusses the small and medium businesses and

employment in the province of South Sumatra, the researchers aim to see the effect of capital, wages and the value of production on the absorption of MSME workers in South Sumatra Province.

II. LITERATURE REVIEW

A. Labor Market

According to the classical theory, if the price of labor (wages) is also flexible enough so the demand for labor will always be balanced by offering labor. That there is no possibility of voluntary unemployment, which means that the wage rate (real) prevailing in the labor market all those who are willing to work at wage levels that would get a job.

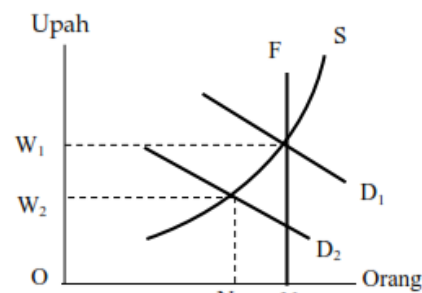


Fig. 3. Classical Theory: The Labor Market

Those who are unemployed, are those who are not willing to work at the prevailing wage rate (unemployment is voluntary). The process of labor demand and supply on the labor market are presented in Figure [7]

B. Labor Demand

Labor demand means the relationship between wages and labor quantity desired by employers to be employed, it is different from consumer demand for goods and services. People buy things because it gives delicious goods (utility) to the buyer. While employers hiring someone for producing goods for sale to the consumer society. Therefore, an increase in employer demand for labor, depending on the increase in public demand for goods produced. Demand for labor as it was called a "derived demand" [8]. Labor demand is affected by changes in wage rates and changes in the factors - other factors affecting demand for production [4].

C. Against Wage Labor Absorption

The rise in the wage rate will increase production costs, which will further increase the prices per unit of goods produced. Usually, consumers will provide a rapid response in case of an increase in prices of goods, which is to reduce consumption or even no longer willing to buy goods. As a result, a lot of unsold goods, and forced manufacturers cut output. The fall in production targets, resulting in reduced labor required. Decrease the amount of labor needed for the effect of the decline in production scale is called the effect of production scale or scale effect. If wages rise (assuming the price of other capital goods does not change), then some entrepreneurs prefer to use capital-intensive technology for the production process and replaces the need for labor with the demand for capital goods such as machinery and others. Decrease

the amount of labor needed for the replacement or addition of the use of machines is called the substitution effect of labor (substitution effect) [11].

D. Absorption Against Labor Productivity

Labor productivity can also be seen from the value of production. The value of production is the production rate or overall amount of goods that are the result in the production process of a business unit which would then be sold or to consumers. The ups and downs of market demand for products from the companies concerned. If the request for production of the company or industry has increased, manufacturers tend to increase their production capacity. For that purpose, the manufacturer would add the use of its workforce [9].

E. Against Capital Labor Absorption

Capital is the substitution of labor. It is based on a production function is $Q = f(K, L, R, T)$ where K is the amount of capital stock, L is the amount of labor and this includes various types of labor and entrepreneurial expertise, R is a wealth of nature, and T is the level of the technology used. While Q is the amount of production generated by different types of factors of production, which together are used to produce goods that are being analyzed nature of the production. To a certain production level, we can use a combination of different factors of production [10].

F. Previous Studies

Research conducted [6], concluded that the variable capital., Has a significant influence and is positive on employment in the small industry of food and beverages. For variable productivity has a significant influence and are positive on employment in the small industry of food and beverages.

Research about employment in the informal small business ever conducted which researches plan performance and factors affecting employment in the Mochi small industrial town of Sukabumi [2]. Research results that the performance of Mochi small industries is very nice, benefits greatly affected by the amount of sales volume and the level of wages received by workers is already more than the regional minimum wage (UMR).

"Analysis of Factors Affecting Labor Absorption in the Small Industries Development Efforts in Malang". In this study found that overall small industries in Malang, a factor unit and production value has a positive effect on employment, while capital factors negatively affect employment in small industry in Malang [12].

Analysis of factors affecting employment in the manufacturing industry sector of West Sumatra". In this study aims to analyze the influence of investment, wages, the GDP of the industry and total industry employment. The results of this study are simultaneously the four independent variables in the study affect the dependent [3].

III. RESEARCH METHODS

This research emphasis on the employment of SMEs in the province of South Sumatra. The reason for choosing food SMEs in the province of South Sumatra large enough

role in absorbing labor. This study uses data that is Cross-Sectional Primary, obtained from various SMEs in the province of South Sumatra. To analyze the effect of capital, wages and the value of production on employment in SMEs in South Sumatra, this study uses multiple regression analysis. Multiple regression model can be formulated as follows

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \tag{1}$$

Where:

- Y : Workforce at SMEs
- A : *intercept*
- X1 : Capital SMEs
- X2 : Wages in the Food industry
- X3 : Value of Production in the Food industry
- $\beta_1, \beta_2, \beta_3$: Regression coefficient of each coefficient
- ϵ : Error Factor

IV. RESULTS AND DISCUSSION

A. Overview of Respondents

TABLE III. TOTAL LABOR SMALL AND MEDIUM ENTERPRISES (SMES) IN SOUTH SUMATRA PROVINCE

Effort	Amount of Labor		Percentage (%)
	interval	Frequency	
UK	1-7	180	91.84
	8-14	15	7.65
	15-21	1	0:51
	amount	196	100.00

Source: Fields (processed)

Based on the above table it can be seen that the small and medium industries in South Sumatra province as much as 91.84 percent of the workforce between 1-7 people per business, as 7.65 percent while the number of workers in small and medium enterprises of South Sumatra Province between 8- 14 workforce in 2018. this means that the business is still small scale,

TABLE IV. EXPENDITURES FOR WAGES ON SMALL AND MEDIUM ENTERPRISES (SMES) IN SOUTH SUMATRA PROVINCE

Effort	Wage		Percentage (%)
	interval	Frequency	
UK	1,000,000-17,166,669	186	94.90
	17,166,670-33,333,338	8	4:08
	33,333,339-49,500,008	2	1:02
	amount	196	100.00

Source: Fields (processed)

In Table 4. the business owners taking out some advantage to provide labor wages to small and medium enterprises amounted to 94.90 percent of 1000000-17166669 per month with the composition of the workforce between 1-7 people per month. Whereas at 4:08 percent of business owners to pay wages by17166670-33333338 labor for between 8-14 people per month.

TABLE V. INITIAL CAPITAL SMALL AND MEDIUM ENTERPRISES (SMES) IN SOUTH SUMATRA PROVINCE

Effort	Initial capital		Percentage (%)
	interval	Frequency	
UK	500,000-47,000,000	181	92.35
	47,000,001-93,500,000	9	4.59
	93,500,001-140,000,000	6	3.06
	amount	196	100.00

^e Source: Fields (processed)

The average business owner has an initial capital of 500000-47000000 where as many as 181 people or 92.35 percent obtained from a family loan, sell land and borrow money in the bank. While as many as 9 and 6 or 4.59 and 3.06 percents of business owners have an initial capital of 140,000,000 47.000.001- where owners of capital are already established business owners and sell the crops outside of the village to the district center.

TABLE VI. ORIGIN OF LABOR AND SMALL AND MEDIUM ENTERPRISES (SMES) IN SOUTH SUMATRA PROVINCE

Effort	Origin of Labor	Frequency	Percentage (%)
UK	in the village	145	73.98
	Rural Affairs	51	26.02
	amount	196	100.00

^f Source: Fields (processed)

Origin workers in small and medium enterprises of South Sumatra province there is only detected in 2 indicators, namely in the village and outside the village, where the majority of workers coming from the village as much as 73.98 percent, or 145 workers, while labor which come from outside the village of 51 people or 26.02 percent of which consists of outside the village closest to the center of small and medium enterprises

TABLE VII. EMPLOYMENT STATUS OF SMALL AND MEDIUM ENTERPRISES (SMES) IN SOUTH SUMATRA PROVINCE

Effort	Status Labor	Frequency	Percentage (%)
UK	Family	117	59.69
	neighbor	64	32.65
	Other residents	15	7.65
	amount	196	100

^f Source: Fields (processed)

In Table 7. a comparison between how much workers coming from the family and outside the family, based on the results of field observations recorded that there were 117 workers or 59.69 percent of the workforce coming from families and 32.65 percent came from neighbors, while 15 workers or 7.65 percent of all observations workers whose status is other residents outside the village.

TABLE VIII. LABOR EDUCATION FOR SMALL AND MEDIUM ENTERPRISES (SMES) IN SOUTH SUMATRA PROVINCE

Effort	Education	Frequency	Percentage (%)
UK	SD	105	53.57
	SMP	76	38.78
	High School	14	7.14
	> High School	1	0.51
	amount	196	100

^f Source: Fields (processed)

Education workers in the food industry in South Sumatra province is dominated by primary and junior labor many as 181 workers or by 92.35 percent, where labor is labor as a commodity raw material processing is ready to sell, while as much as 7.65 percent, or 15 workers, who have a high school education, the labor market or the business owner.

TABLE IX. REASONS LABOR WORKING FOR SMALL AND MEDIUM ENTERPRISES (SMES) IN SOUTH SUMATRA PROVINCE

Effort	Reason Working	Frequency	Percentage (%)
UK	In accordance Capabilities	37	18.88
	Economic factors	62	31.63
	become Entrepreneurs	7	3.57
	As a Top Job	33	16.84
	Adding Revenue	18	9.18
	Market demand	10	5.10
	Hereditary	29	14.80
	amount	196	100

^g Source: Fields (processed)

Based on the results of the survey on small and medium enterprises South Sumatra there are various reasons why workers decide to work on the small and medium enterprises, where labor is the main reason for 31.63 percent of economic factors relating to the education of the labor force of elementary and junior high so they do not have many opportunities to work in other sectors. And then, 18.88 percent and 16.84 percent of the workforce chose the reason for according to ability and as the main job, respondents who chose the second reason are labor and owner of the business.

B. Results and Discussion

Based on the model estimates of the variable capital, the level of wages and the production value of the dependent variable as described in Chapter III Methodology of the study, the estimation results obtained using a multiple regression model.

$$Y = 1,72 + \text{Capital } 5,10 - 1,87 \text{ Wages} + 5.26 \text{ Value of Production}$$

The coefficient of capital variables positive value of 5.10, this shows that every 1 percent increase to capital will increase the number of employment by 5.10 percent. The coefficient of the variable wage a negative value of 1.87, this shows that every 1 percent reduction for wage will increase the number of employment by 1.87 percent,

whereas an increase of 1 percent for a wage will reduce the number of employment by 1.87 percent. The coefficient of the variable production value positive value of 5.26, this shows that every 1 percent increase in the production value will increase the number of employment by 5.26 percent, whereas a decrease of 1 percent of the value of production will reduce the number of employment amounted to 5, 26 percent.

C. Classical Assumption Deviation Test

1. Autocorrelation Test

The autocorrelation test is intended to test whether in the linear regression model there is a correlation between the error of the intruder in a certain period and the error of the previous period. Autocorrelation test detected using the Durbin Watson test. Based on the results of tests conducted found DW figure of 1,961. DW in the table for K = 4 and N = 196 obtained lower limit value (dl) of 1.7247 and the upper limit value (du) of 1.8079. DW value in condition between Du and 4-Du amounted to 1,961. This shows that there is no autocorrelation DW value, in this study, it can be concluded that there is no problem of autocorrelation in regression models test autocorrelation test is intended to test whether in the linear regression model there is a correlation between the error of the intruder in a certain period and the error of the previous period.

2. Heteroscedasticity Test

The heteroscedasticity test aims to test whether the regression model occurred inequality residual variance from one observation to another observation. To detect the presence or absence of heteroscedasticity, it can be seen by looking at data on the spread of the scatterplot graph.

In the image scatterplot that the dots randomly spread and spread both above and below the number 0 on the Y-axis, It can be concluded not happen heteroscedasticity in regression models, so the regression model unfit to test the independent variable on the dependent variable.

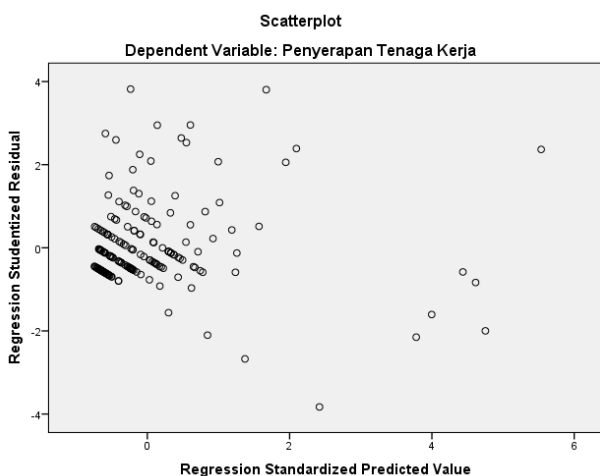


Fig. 4. The Scatterplot

3. Multicollinearity Test

Multicollinearity test aims to test whether the regression model found a correlation between independent variables or independent. A good regression model is not going on the correlation between the independent variables. Multicollinearity test was known to use the value of Tolerance and VIF. If the tolerance values > 0.10 and VIF < 10, then there is no multicollinearity. Based multicollinearity test has been done, then obtained the following results.

TABLE X. RESULTS MULTICOLLINEARITY TEST

Model	COEFFICIENTS	
	collinearity Statistics	
	tolerance	VIF
(Constant)		
Capital	.980	1,020
Wage	.833	1,200
value of Production	.834	1,199

h. Source: Adapted

From the test results in Table 4:10 shows that all independent variables have a value of Tolerance is above 0.10 and VIF is far below the number 10. It can be concluded that in this model there is no multicollinearity problem or there is a relationship or a strong correlation between the independent variable.

D. Test statistic

1) Simultaneous Significance Test

F test is used to determine the effect of independent variables (Capital, Wages, and Production Value) together have a significant influence on the dependent variable (Labor Absorption). The regression results indicate that the probability (F-statistic) is 0.0000 less than the alpha level of 0.05. The independent variables significantly influence the dependent variable (significant), in other words, changes in the dependent variable (Absorption of Labor) can be explained by changes in the independent variable (Capital, Wage, and Production Value).

2) Partial Test

Partial test (t-test) was used to determine the significant influence of each independent variable on the dependent variable, to explain the changes in the independent variable on the dependent variable is real. The results of the T-test in this study showed a significant value below 0.05 Wages variable means that the variable pay and the value of production has a significant impact on employment variables. While the capital variables have a significant value above 0.05 is equal to 0.695, meaning that the variable capital has no significant effect on employment

3) The Coefficient of Determination Test

The coefficient of determination (R²) to measure how far the model's ability to explain the variation of the dependent variable indicated by the coefficient of determination R² between 0 and 1. Based on the result of the regression coefficient of determination (R²) equal to 0.513, which means 51.3 percent of employment in

industry small and medium-together can be explained by the variation of the three independent variables, namely capital, wages, and production value. While the remaining 48.7 percent is explained by other variables outside the model that are not included in the study

B. Discussion

1) Relationship Between Capital against Labor Absorption

The value of the regression coefficient of 5.10 indicates an increase of 1 percent of capital will increase the number of employment by 5.10 percent. so small and medium business capital has a positive effect on employment in small and medium enterprises. This is because each additional raw materials and capital will need the amount of manpower to do the production process. This is following the opinion research conducted [6] that capital variables have a significant influence and are positive on employment in small food and beverage industry.

2) Relationship Between Wage Labor Absorption Against

The value of regression coefficient of 1.87 indicates a 1 percent increase in wages in small and medium enterprises will reduce the number of employment by 1.87 percent, whereas an increase of 1 percent of wages in small and medium enterprises will increase the number of employed amounted to 1.87 percent, so the labor costs on small and medium enterprises have negative effect on employment in small and medium enterprises. This is because the wages are considered the cost for companies to decrease the wage rate will benefit the company because of lower production costs. But the small and medium enterprises' relative wage changes are not frequent and are still in the nominal change is not large. This is following the opinion research conducted [3] "Analysis of factors affecting employment in the manufacturing industry sector of West Sumatra". that the variable salary has a significant influence and highly negative impact on employment in the sectors of the manufacturing industry in West Sumatra.

3. Relationship Between Production Value Of Manpower Absorption,

Regression coefficient value of 5.26 percent showed an increase of 1 percent of the value of production in small and medium enterprises will increase the number of employment amounted to 15.26 percent, on the contrary decrease of 1 percent of wages in small and medium enterprises will increase the number of employment by 1, 87 percent. so the value of labor in the production of small and medium enterprises has a positive effect on employment in small and medium enterprises. Following the theory that it is necessary to increase output increase of the inputs used in this case is labor. So the higher the productivity of labor, the higher the number of possessions produced. Assuming other factors of production remains the production value will also increase. In line with the research [8] the High-low number of workers requested by employers affected by the high or low quantity of goods produced by the labor force. The level of goods produced depending on the high

or low demand by consumers. The higher the number of goods requested by consuming the higher the number of goods produced so that the higher the quantity of labor demanded by the company

V. CONCLUSION

From these results, it can be concluded that for small and medium enterprises have several labors between 1-7 people per industry, with wage levels between 1000000-1716669 per month. Labor in the food industry comes from the village, of 196 respondents where as many as 145 of its workforce come from the village, who is a family of 117 people and neighbors as much as 64 people. Some workers believe that the reason they work in the food industry is due to economic factors, according to ability and as the main occupation.

The wage variable is significant for the labor movement and has a negative value of 1.87, indicating that a 1 percent increase in wages will reduce the amount of labor by 1.87 percent. The variable value of production is significant to the movement of labor with a positive value of 5.26, this indicates a 1 percent increase in the value of production will increase the amount of labor gained by 5.26 percent. While the capital variable is not significant on employment and is positive at 5.10 this shows that each 1 percent increase in capital will increase the amount of labor savings by 5.10 percent.

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