

The Influence of Wage on Productivity and Inflation in the Manufacturing Industry Sector in Palembang

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Abstract—This study aims to analyze the influence of wages on productivity and inflation in the manufacturing industry sector in the city of Palembang. The data used in this research is labor industry wage data manufacturing, productivity data in the form of sectoral GDP of constant prices per number of workers and data Inflation Rate of Palembang in 2012-2016. The data analysis model uses two-stage ordinary least square (OLS). The result shows that the significant value of inflation to productivity is 0.194 which means that wage does not have a significant effect on the productivity of industrial sector in Palembang City, while the value of wage significance to inflation in Palembang is 0.907. This means that wages have no significant effect on the inflation of the industrial sector in Palembang.

Keywords—wage, productivity, inflation

I. INTRODUCTION

Wages are a central issue for every country, especially developing countries like Indonesia. The vast majority of Indonesians who are workers are not infrequent even every year demanding wage increases, on the other hand, entrepreneurs and business firms do not want a wage increase because it can increase production costs, so the role of government as a decision maker that sets the minimum wage becomes very important.

Establishment of minimum wage in Indonesia is determined based on Decent Living Needs with regard to productivity and economic growth. Although it has an essential determination of the minimum wage but there are still some problems that occur such as business people who pay below the minimum wage for workers in the field of non-formal as well as the high demand for wage increases that are still common in cities of Indonesia and specially in Palembang, the basic demands for various wage increases ranging from wages that are now received are considered inadequate to meet a decent standard of living, an increase in some basic needs as well as based on the argument that with rising wages will lead to increased productivity of workers this is reinforced by efficiency wage theory which states that the high paid will pay (above equilibrium) will directly increase the opportunity cost so that the opportunity to work will lose and trigger workers to be more productive.

However according to the data of *Asian Productivity Organization* (APO) the productivity of labor in Indonesian is on the order of 18 from 27 countries of Asia. The productivity of Indonesian labor is only 9.500 USD in 2011, far below the countries in Southeast Asia such as Singapore USD 92.000, Malaysia USD 33.300, and Thailand USD 15.400. This is in contrast to provincial minimum wage rates in Indonesia which tend to increase, with average growth of regional minimum wage (UMR) in 2013-2014 recorded 17,21% (YoY).

In addition to being a factor driving the increase in productivity, Negative potentials that can arise due to the number of wages one of them is the movement of inflation [1]. Higher wages will lead to increased supply of goods and services that will ultimately raise the rate of inflation. Previous research by [2] proves that there is a two-way relationship between labor and inflation in Indonesia, but wage increases were putting pressure on inflation are not always valid as long as wage increases aim to boost productivity [3].

Higher wages have the potential to increase labor productivity (Sumarlin, 2010), but on the other hand, the negative potential that can be generated if wages rise is the potential for an increase in inflation, but if wages tend to be low it will undoubtedly be able to decrease productivity and harming labor.

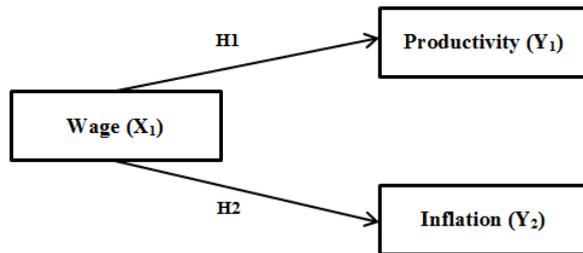
II. METHOD

The type of this research is quantitative descriptive research that is discussing the influence of independent variable (wages) with the dependent variable (productivity and inflation).

Types of data used in this study are secondary data while data collection techniques are documentation. The data in this study were in the form of productivity, inflation, and wages in the industrial sector in Palembang in 2007-2016

The model of this research hypothesis is as follows :

Figure 1. Framework Research



The data of the analysis model used in this research is two-stage ordinary least square (OLS). To see the effect of wages on the productivity of the industrial sector in Palembang, the equation is used as follows:

$$\ln Y_1 = a + b \ln X + e$$

where :

$\ln Y_1$ = Log Natural Productivity of Industrial sector in Palembang
 a = Constants
 b = Variable Regression Coefficient X
 $\ln X$ = Log Natural Actual Wage of Industrial Sector

Meanwhile, to see the effect of wages on inflation in Palembang, the following equation is used:

$$\ln Y_2 = a + b \ln X + e$$

where :

$\ln Y_2$ = Inflation Rate in Palembang
 a = Constants
 b = Variable Regression Coefficient X
 $\ln X$ = Log Natural Actual Wages of the Industrial Sector

In linear regression test preceded by a normality test and autocorrelation test. Hypothesis testing using t-test and determination.

III. RESULT AND DISCUSSION

A. Wage Sector of Manufacturing Industry in Palembang

Actual wages are the rights of workers who are accepted and expressed in the form of money in return for employers or employers to workers stipulated and paid in accordance with employment agreements, agreements or statutory regulations, including workers and workers' allowances for work and / or services that have been or will be done [5]. Based on data from BPS (2017) it is known that the actual wage rate for manufacturing industry sector is as follows:

Table 1. Actual Wage Manufacturing Industry Sector in Palembang Year 2007-2016 (in Rupiah)

Year	Wages Amount (Rupiah)
2007	662.000,-
2008	743.000,-
2009	824.730,-
2010	927.825,-
2011	1.048.440,-
2012	1.195.220,-
2013	1.630.000,-
2014	1.825.000,-
2015	1.974.346,-
2016	2.206.000,-

Based on the data in Table 1 it is known that the actual wage amount of manufacturing industry sector increased every year, where the most significant increase occurred in 2013 where wages increased by 36.37% compared to the previous year.

B. The magnitude GDP manufacturing sector in Palembang

Gross Domestic Product (GDP) is one of the crucial indicators to know the economic condition in an area in a certain period, either based on current price or constant price. Based on data from BPS (2017) [6] it is known that the size of GDP of the manufacturing sector in Palembang is as follows:

Table 2. GDP Manufacturing Sector in Palembang Year 2007-2016 (in Rupiah)

Year	GDP Manufacturing Industry Sector
2007	19.875.762,30
2008	20.889.378,20
2009	22.854.390,60
2010	24.184.150,80
2011	25.594.553,30
2012	26.524.152,30
2013	30.636.666,10
2014	33.293.445,90
2015	27.486.061,80
2016	39.401.406,70

Based on the data in Table 2 it is known that the GDP of the manufacturing industry sector in Palembang tends to go up and down which in 2016 is the peak of the GDP of the industrial sector, wherein 2016 GDP industrial sector in the Palembang achieved Rp. 39.401.406,70.

C. The inflation rate in Palembang

Inflation is the tendency for prices to rise generally and continuously Based on data from BPS (2017) it is known that the inflation rate in Palembang is as follows:

Table 3. Inflation in Palembang (in percent)

Year	Inflation
2007	1,57
2008	3,56
2009	1,85
2010	6,02
2011	3,78
2012	2,72
2013	7,04
2014	8,38
2015	3,05
2016	3,63

Based on Table 3 it is known that the inflation rate in Palembang 2007-2016 period tends to fluctuate where the year 2014 became the year with the highest inflation rate of 8.38% and in 2007 became the year where the inflation rate of Palembang was the smallest were only 1.57%.

D. The influence of wages test on the industrial productivity in Palembang

T-test analysis is conducted to see how the influence of wages variable (X) on productivity (Y1) Industrial Sector in Palembang. The results test is in Table 4. below:

Table 4. Analysis t-Test of Wage Influence on Productivity Industrial Sector in Palembang

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	10.000	3.748			2.668	.028
LnUpah	.500	.280	.535		1.789	.111

This simple linear regression equation can be interpreted and has the following meanings: (1) Constant value of 10,000, meaning the magnitude of Productivity in this case PDRB without any other variables such as wages is equal to 10,000; (2) The value of wage regression coefficient (X) 0,500, and value of significance equal to 1,11 (> 0,05) and t value equal to 1,789 meaning that Ho1 accepted, and Ha1 rejected. This means that there is no significant influence between wages on the productivity of the industrial sector in Palembang.

The absence of wage effect on productivity caused by the wage system that prevailed in most industrial companies in Palembang generally still use monthly wage system for permanent employees and daily wage for non-permanent employee either contractor or freelancer.

Wages with a monthly or daily system is allegedly causing no effect of wages on productivity because the wage is not calculated based on the amount of output generated by the employee itself, meaning how much output generated by employees on a particular month or day, the value of wages received is not will increase.

In addition, the monthly or daily wage system is also mostly applied to workers who are not directly related to the production process, regardless of the output produced, the wages will remain the same because the status of the workforce is the administrative workforce that is not directly related to the industry, Such work works on companies whose core business is industry.

This is in line with the results of research conducted [7] which states that the system of daily and monthly wages does not affect the productivity of employees because the amount of wages is not seen from the amount of output produced.

E. The influence of wages on inflation in Palembang

Inflation is the tendency of prices to rise generally and continuously [8]. The inflation rate is used to describe changes in prevailing prices from one period to another. (Suharyadi and Purwanto, 2003). T-test analysis is done to see how the influence of wage variable (X) to inflation (Y1) in Palembang. Test results are in Table 5. below:

Table 5. T-Test Analysis Influence of Wages on Inflation

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
1	(Constant)	-6.917	4.417			-1.566	.156
	LnUpah	.583	.329	.531		1.771	.115

□

This simple linear regression equation can be interpreted and has the following meanings: (1) Constant value -6.917, meaning that inflation rate in the absence of other variables such as wages amounted to -6.971. (2) The value of the wage regression coefficient (X) 0,583, and significance value equal to 0,115 (> 0,05) and t value count 1,771 meaning that Ho2 accepted and Ha2 rejected. This means that there is no significant influence between wages on inflation in Palembang.

The absence of influence of wages on the inflation of industrial sector in Palembang caused by manufacturing industry sector is not dominant industry sector in Palembang, besides based on the report of Central Bureau of Statistic year 2018 the most dominant sector as contributor of inflation in Palembang that is food and beverage industry sector , banking and hospitality. □

IV. CONCLUSION

Based on the research results obtained conclusion as follows:

1. Wage does not influence the productivity of the industrial sector in Palembang City because The majority of manufacturing companies in

Palembang use monthly wage system for permanent employees and daily wage for non-permanent employee either contractor or freelancer.

2. Wage does not influence inflation in the industrial sector in Palembang City because the manufacturing industry sector is not a dominant industry sector in Palembang

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