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Determinants of Formal Sector Labor Absorption in West Nusa Tenggara in 2023

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ABSTRACT

In the province of West Nusa Tenggara, the purpose of this study is to investigate the extent to which salary levels, educational levels, and working hours have an impact on the capacity of the formal sector to absorb labor. From 2013 to 2023, this analysis makes use of secondary data in the form of time series derived from publications by the Bureau of Public Statistics. This research was conducted utilizing the OLS (ordinary least square) approach, which was carried out with the help of the Eviews 12 software. According to the findings of the research, the influence of independent variables on the dependent variable only accounts for 99.5% of the total, while the remaining 5% is influenced by other variables that are not related to this study. It is possible to draw the conclusion that the salary level variable has a positive and substantial influence on the formal sector labor absorption variable in NTB. On the other hand, the education level and working hours variables do not have a positive and significant effect on this variable. At the same time, it is possible to draw the conclusion that the salary level variable has a substantial influence simultaneously (at the same time), whereas the education level and working hours variables do not have an effect and are not significant on the capacity of the formal sector to absorb labor in NTB.

Keywords: *Labor Absorption, Formal Sector, Wages, Education, Working Hours.*

1. INTRODUCTION

West Nusa Tenggara Province is one of the provinces with the lowest percentage of formal workers in Indonesia. According to BPS data, the percentage of formal workers in West Nusa Tenggara in 2021 was 26.11%, a decrease compared to 2019 which was 28.98% and this value is also the third lowest in Indonesia. The population of NTB from 2018 to 2023 as reported by the Central Statistics Agency (BPS) is as follows: in 2018 it was 4,717,948 people, in 2019 it increased to 4,801,452 people, in 2020 it reached 4,888,472 people, in 2021 it reached 4,979,015 people, in 2022 it reached 5,073,101 people, and in 2023 it increased to 5,170,750 people. Data on the workforce in NTB was also provided by BPS for the same period. The NTB workforce from 2018 to 2023 is as follows: in 2018 there were 2,180,835 people, in 2019 it increased to 2,235,428 people, in 2020 it reached 2,293,568 people, in 2021 it reached 2,355,275 people, in 2022 it reached 2,420,670 people, and in 2023 it increased to 2,490,000 people. The workforce working in the formal sector in NTB has also been reported by BPS. From 2018 to 2023, the number of formal sector workers is as follows: in 2018 as many as 898,587 people, in 2019 it increased to 925,452 people, in 2020 it reached 955,085 people, in 2021 it reached 987,488 people, in 2022 it reached 1,023,000 people, and in 2023 it increased to 1,062,000 people. Likewise, the number of workers working in the informal sector in NTB has been provided by BPS for the same period. From 2018 to 2023, the number of informal sector workers is as follows: in 2018 there were 1,282,248 people, in 2019 it increased to 1,309,976 people, in 2020 it

reached 1,338,483 people, in 2021 it reached 1,367,787 people, in 2022 it reached 1,407,101 people, and in 2023 it increased to 1,446,750 people [1]–[3]

One way to expand employment is through industrial development, especially small industries. Development can be realized through private and government investment. The development of the industry will increase production capacity so that it can create employment opportunities. The workforce that can be absorbed from this labor absorption depends on the wage level, education level, and working hours [4], [5].

Wages are one of the crucial factors in influencing labor absorption. This is because wages affect the demand and supply of labor. Increasing wages can be an indicator for economic sectors in making demands for labor.

Another factor that affects labor absorption is the level of education. Labor absorption is generally based on the quality of the workforce, which can be seen from the level of education they have. The education they have will affect work productivity, because education is capital to create high productivity in a job.

In addition to wage level and education level factors, another factor that influences labor absorption is working hours. The number of working hours is the total working hours used by the workforce to work for one week. The number of working hours used by the workforce in working affects the income earned by the workforce. The higher the time devoted by the workforce to do the work, the higher the opportunity for the workforce to get additional income. Therefore, the author will raise this problem with the research title: "(Determinants of Formal Sector Labor Absorption in West Nusa Tenggara in 2023)".

Formulation of The Problem

Do Wage Level, Education Level, and Working Hours have a positive and significant effect on the absorption of formal sector labor in NTB?"

2. LITERATURE REVIEW

According to [6], informal and formal business sectors can be distinguished according to the way they work, the form of business, and the source of capital. The formal sector is a business activity that works in an orderly, organized manner, is financed from official sources, and uses labor with certain wages.

According to economic theory, wages can be seen as payments made to workers by employers for the provision of physical and mental services, as well as the total amount that is calculated as a replacement for services that have been delivered by the workforce during a specific time period or under specific conditions [7], [8].

According to Ricardo's Theory, if the wages of workers at a certain time are high enough, then the workers will tend to hold wedding parties because their wages are sufficient to provide a dowry and wedding party.

According to Andrew E. Sikula in [9] education is a process that takes a long time and involves the use of organized and systematic procedures. It is through this process that managerial personnel acquire knowledge that is conceptual and theoretical in nature for general purposes. As a result, Hariandja asserted that the level of education possessed by an employee has the potential to enhance the competitiveness of the firm as well as the performance of the company

According to [10] education is "all efforts aimed at developing attitudes and personality, knowledge and skills" education as the backbone of a country's progress, determines the high and low degree and position of the nation.

According to (Lukas, 2018) extension of working hours is an important step in the effort for decent work, the issue of working hours must be addressed at several levels to eliminate various types of gaps between the actual working hours desired by employees and promote the competitiveness of the company, this situation applies to employees who regularly work too long hours those who work part-time and prefer to work overtime.

Flexible working hours are the answer to various employee challenges to recover from various work tensions, fatigue and conflicts between work and family, people who have the power to choose when they can start and stop working tend to be more satisfied with their jobs [11].

Hypothesis Formulation

Based on the theoretical basis and previous research, the formulation of the hypothesis is as follows: "It is suspected that the Wage Level, Education Level, and Working Hours have a Positive and Significant Influence on the Absorption of Formal Sector Labor in West Nusa Tenggara."

3. METHODS

Quantitative research is the type of research that is being conducted. Quantitative methods involve the collection of data in the form of numerical values that are capable of being computed and are associated with the issue that is being investigated. study that solely depicts and explains various conditions, situations, phenomena, or various study variables according to events as they are obtained, photographed, interviewed, observed, and through the papers that are researched is included in the category of descriptive quantitative research, as stated in [12]. This approach of study is referred to as quantitative research since the data that is utilized is in the form of numbers and its analysis is carried out utilizing statistics.

This research was conducted in West Nusa Tenggara Province. The reason the author chose the location of West Nusa Tenggara Province is because of the inequality between urban and rural areas in terms of the availability of formal jobs. In rural areas, the informal sector is more dominant, while the formal sector is more abundant in urban areas that have more facilities and industries. Migration of workers from rural areas to big cities can also exacerbate this inequality problem.

The type of data used in this study is secondary data. Secondary data, namely combined data consisting of two parts, namely time series. The time series data used is annual data for ten years, namely 2013-2023. Data sources are obtained from media related to the data needed in this study. The media in question is the Central Statistics Agency (BPS).

Identification and Classification of Variables

The variables used in this study are wage level and education level as independent variables (free variables). While the dependent variable (bound variable) in this study is the absorption of formal sector labor in 2023.

4. RESULTS AND DISCUSSION

Table 1. Results of Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Conclusion
C	403.4226	398.6142	1.012063	0.3452	-
X1	147.6190	61.20086	2.412042	0.0466	Significant
X2	-46.42857	61.45877	-0.755443	0.4746	No Sig

X3	1.562500	1.459927	1.070259	0.3200	No Sig
R-Square :0.995782 Adj. R-Square :0.993974 F-Stat :550.8245					

Source: Appendix (2)

Based on table 4.6, the results of the regression coefficient (β) above can be seen, so the following regression equation is obtained:

$$Y= 403.4226 + 147.6190 \times_1 - 46.42857 \times_2 + 1.562500 \times 3$$

After analogy it becomes, $Y= 0.0403 + 0.0147 \times_1 - 0.0046 \times_2 + 0.0156 \times 3$

The following is a simple explanation of the results of the regression analysis:

1. **Constant Value = 0.0403**
   This means that if all variables X1, X2, and X3 are zero, then the value of Y is estimated to be 0.0403. This value indicates the starting point or base value of Y before considering the influence of other variables.
2. **Coefficient X1 = 0.0147**
   Every 1 percent increase in X1 will increase Y by 0.0147 percent, assuming other variables remain constant. Since the p-value (0.0466) is less than 0.05, this effect is considered statistically significant.
3. **Coefficient X2 = -0.0046**
   Every 1 percent increase in X2 will decrease Y by -0.0046 percent, assuming other variables remain constant. However, since the p-value (0.4746) is greater than 0.05, this effect is not statistically significant.
4. **Coefficient X3 = 0.0156**
   Every 1 percent increase in X3 will increase Y by 0.0156 percent, assuming other variables remain constant. However, since the p-value (0.3200) is greater than 0.05, this effect is also not statistically significant.

4.1 Classical Assumption Test Results

1. Normality Test

The purpose of the normality test is to determine whether or not the dependent variable and the independent variable in the regression model both have a normal distribution. An effective regression model is one that has a data distribution that is either normal or very close to normal. Utilizing the graphical analysis method through the use of a histogram is one way to establish whether or not the data is normal. Because the Jarque-Bera Probability value is 0.980, which is greater than 0.05, it indicates that the data follows a normal distribution.

2. Multicollinearity Test

In the regression model, the multicollinearity test is designed to determine whether or not there is a correlation between the variables that are considered independent. A decent model should not have the coefficient of correlation that is the highest between the variables that are independent. The cotuff value that is most usually used is 0.10, which is the same as the value of 10 for the VIF.

It is stated that there are signs of multicollinearity if the variance inflation factor (VIF) is greater than 10 or less than 0.10, according to the rules of tolerance and variance inflation (VIF). If the value of the VIF is lower than the tolerance of more than 0.10, then it is stated that there are no indications of multicollinearity. This is the best case scenario. According to the obtained value of the

variance inflation factor (VIF), which is 601.0612, it is evident that the VIF value of the independent variable is less than 10.00. Therefore, the assumption of the multicollinearity test is not satisfied or the multicollinearity test is not passed.

3. Autocorrelation Test

One analytical way for detecting autocorrelation is to do a test. The Probability Obs*R-Squared value in this test is 0.3928 (>0.05), indicating that the assumption of the autocorrelation test has been satisfied.

4. Heteroscedasticity Test

This test seeks to determine if there is variance inequality in the regression model based on the residuals of individual observations. An effective regression model exhibits homoscedasticity and lacks heteroscedasticity. The Probability Obs*R-Squared value from the test results is 0.4074, which exceeds 0.05. This indicates the presence of heteroscedasticity in the regression model.

4.2 Basic Statistical Test Results

1. Partial Test (T-Test)

Wage Level Variable (X1)

Based on the regression analysis that has been done, the Prob value is 0.0466 <0.05, which means that H_0 is rejected and Ha is accepted. So it can be concluded that the wage level variable has a significant effect on the formal sector workforce absorption variable in NTB.

Education Level Variable (X2)

Based on the regression analysis that has been done, the Prob value is 0.4746>0.05, which means that H_0 is accepted and Ha is rejected. So it can be concluded that the education level variable does not have a positive and significant effect on the formal sector workforce absorption variable in NTB.

Working Hours Variable (X3)

Based on the regression analysis that has been done, the Prob value is 0.3200>0.05, which means that H_0 is accepted and Ha is rejected. So it can be concluded that the working hours variable does not have a positive and significant effect on the formal sector workforce absorption variable in NTB.

4.3 Simultaneous Test (F Test)

The F test is used to assess the collective impact of all independent factors on the dependent variable. This study finds that income level variables, education level, and working hours positively and significantly influence the absorption of formal sector labor.

The F-Statistic is 550.8245, with a Prob. (F-statistic) value of 0.00 (<0.05). It can be concluded that the independent variable (X1) exerts a positive and significant simultaneous effect on the dependent variable (Y).

4.4 Coefficient of Determination Test (R^2 Test)

The Adj R-Squared value of 0.995782 indicates that the independent variable accounts for 99.5% of the variance in the dependent variable concurrently. The remainder is affected by variables external to this study.

CONCLUSION

Based on the research I conducted at the Central Statistics Agency (BPS) of West Nusa Tenggara with secondary data from 2013-2023 and based on the analysis I conducted in chapter IV. With the variables of Wage Level (X1), Education Level (X2) and Working Hours (X3) it can be concluded that its influence on the Absorption of Formal Sector Labor (Y) in West Nusa Tenggara can be concluded as follows:

1. Partially, the wage level variable from 2013-2023 can be concluded to have a positive and significant effect on the variable of formal sector labor absorption in NTB.
2. Partially, the Education Level Variable from 2013-2023 does not have a positive and significant effect on the absorption of formal sector labor in NTB. Partially, the Working Hours Variable from 2013-2023 does not have a positive and significant effect on the absorption of formal sector labor in NTB.
3. Simultaneously, Wage Level (X1) has a positive and significant effect simultaneously (at the same time) on the dependent variable of Formal Sector Labor Absorption (Y). While the variables of Education Level (X2) and Working Hours (X3) do not have a positive and insignificant effect on Formal Sector Labor Absorption in NTB.

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