PAPER – OPEN ACCESS

Analysis The Role of Industrial Area to Labor Absorption in Medan City

Author : Fahirah Ananda and Rujiman
DOI : 10.32734/lwsa.v8i1.2374
Electronic ISSN : 2654-7066
Print ISSN : 2654-7058

Volume 8 Issue 2 – 2025 TALENTA Conference Series: Local Wisdom, Social, and Arts (LWSA)

LWSA Conference Series 08 (2025)
TALENTA Conference Series
Available online at https://talentaconfseries.usu.ac.id

Analysis The Role of Industrial Area to Labor Absorption in Medan City

Fahirah Ananda, Rujiman

Universitas Sumatera Utara, Medan 20155, Indonesia

fahirahnnda@gmail.com, rujiman.ira66@gmail.com

Abstract

The purpose of this study was to determine whether wages, production and length of business affect labour absorption in Medan City. This research uses a quantitative descriptive approach sourced from primary data. Descriptive research is a study that describes variables as they are supported by data in the form of numbers. The population used in this study were 330 companies in the industrial area. The sample taken using the non-probability sample method was 37 industrial companies that are still actively standing. The results of the research conducted show that wages, production and length of business can explain labour absorption in Medan City by 20% and the rest is explained by other variables outside the study. Wages have an insignificant negative effect on labour absorption, production has an insignificant positive effect on labour absorption and length of business has a significant positive effect on labour absorption.

Keywords: wage; production; length of business; labour absorption

1. Introduction

In Medan, unemployment is a labour problem that is still difficult to overcome. The cause of unemployment is the lack of jobs and labour absorption. Factors that influence it include wages, production and length of business. Policies in determining wages also often cause problems because there are still many workers whose wages are below the minimum wage level. Wage determination can also be seen as an increase in production costs where entrepreneurs decide to increase the selling price of production to ensure the continuity of their business. Changes in these factors will affect the amount of labor absorbed by a business field and are used as material in this study. The purpose of the study is to determine whether wages, production and length of business affect the absorption of labour in Medan City.

2. Literature Review

2.1. Labor

Labor is someone who does work to earn income and works for at least one hour individually in a week. The definition of labour includes the physical condition of the body, expertise, ability, thinking owned by the workforce, the state of labour is influenced by several things, namely tenacity, strength, health, skills, creativity, education, intelligence and so on [1].

2.2. Labor Absorption

A Labor absorption is a certain amount of labor used in a certain business unit or in other words, labor absorption is the amount of labor working in a business unit. Absorbing labor means recruiting people or labor in a business field in accordance with the needs of the business itself.

2.3. Wages

Wages are payments for physical services provided by labor to employers.

Selection and peer-review under responsibility of Event of Young Researcher and Economics Students (EVEREST) VIII
p-ISSN: 2654-7058, e-ISSN: 2654-7066, DOI: 10.32734/lwsa.v8i1.2374

2.4. Production

According to [2], Production is an activity that transforms inputs into outputs, including all activities or activities that produce goods and services as well as other activities that support or support efforts to produce these products. In this study, the production in question is the amount or amount of production produced by the company.

2.5. Length of Business

Length of business is the length of time a company has been running the business [3]. As longer the business, the interest of workers to work in a company are greater, the experience of workers in the company also increases rapidly.

3. Research Method

This research uses a quantitative descriptive approach using primary data, namely data obtained directly. Descriptive research is a writing that describes variables as they are supported by data in the form of numbers. In this study, the sample was selected using a non-probability sample method which was taken as many as 37 companies from a population of 330 companiesin the Medan industrial area.

The analysis technique used is multiple regression analysis with the least squares equation (Ordinary Least Square/OLS).

If all the classical assumption tests are met then the analysis model is suitable for use. with the following formula:

$$Y = a + b1\,X1 + b2\,X2 + b3\,X3 + e$$

Then, the Classical Assumption Test, Partial test, and simultaneous F test are preceded. Finally, testing the accuracy of the estimate which tests the level of closeness or attachment between the dependent variable and the independent variable which can be seen from the magnitude of the coefficient of determination. The coefficient of determination used is R-Square. If the R-Square value is closer to 100, then the level of closeness is also higher.

4. Results and Discussion

To test the hypothesis, a classic assumption test must first be carried out using statistical test tools such as multicollinearity, normality and heteroscedasticity tests. The following are the regression results of the three tests:

Table 1. Result of Regression Output

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-364.7651	1451.162	-0.251361	0.8031
X1	6.70E-05	0.000308	0.217572	0.8291
X2	0.000159	0.000121	1.314568	0.1977
X3	54.31984	22.01014	2.467945	0.0189

Source: Researcher Processed Data

After carrying out the three tests, it was found that there were no symptoms of multicollinearity and heteroscedasticity, and the data was normally distributed. After it is proven that there is no problem in the classical assumption test, hypothesis testing is then carried out using the T test and F test. Based on the output above, the T test results seen from the probability value show that the X1 and X2 variables have a probability value of 0.8291 and 1.1977, greater than 0.05. While X3 has a probability value of 0.0189, smaller than 0.05. After the T test is carried out, then the F test is carried out to see if there is a relationship between the three variables.

Table 2. Result of F Test

R-squared	0.208350	Mean dependent var	1629.757
Adjusted R-squared	0.136382	S.D. dependent var	2238.318
S.E. of regression	2080.093	Akaike info criterion	18.22002
Sum squared resid	1.43E+08	Schwarz criterion	18.39417
Log likelihood	-333.0703	Hannan-Quinn criter.	18.28142
F-statistic	2.895029	Durbin-Watson stat	1.669662
Prob(F-statistic)	0.049813		

Source: Researcher Processed Data

Based on the output result above, it can be seen that the F statistical value is greater than the T table (T table = 2.866266) and

the probability value is smaller than 0.05. So, it can be concluded that each variable X has a significant effect on variable Y.

5. Conclusion

Based on the results obtained from research, it can be concluded as follows: Wages have a negative and insignificant effect on labor absorption in Medan City, production has a positive and insignificant effect on labor absorption in Medan City, and business duration has a positive and significant effect on labor absorption in Medan City.

References

[1] Deliarnov, (2016). "Perkembangan Pemikiran Ekonomi", Edisi 3, RajaGrafindo Persada, Jakarta.
[2] Febriana, K. (2011). "Analisis Sistem Pengembangan Industri Terpadu Berwawasan Lingkungan", Jurnal Ekonomi dan Bisnis, Volume 18, Nomor 7, hal 146-158, Medan.
[3] Saraswati, KS, (2012). "Peranan Sektor Industri dalam Perekonomian Daerah Studi Kasus pada Kawasan Industri Gresik, Kabupaten Gresik", Diploma Thesis, Universitas Malang.
[4] Purnasari, N., and Damawaty, (2019). "Faktor-Faktor yang Mempengaruhi Pertumbuhan Kawasan Industri", Jurnal Ekonomi Keuangan dan Bisnis, Volume 4 Nomor 1, hal 77-85, Medan.