THE INFLUENCE OF THE MICRO AND SMALL INDUSTRIAL SECTOR ON CENTRAL JAVA'S ECONOMIC GROWTH

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Abstract. In Indonesia, one of the main drivers of economic growth is micro and small industry (IMK). This sector plays an important role in influencing economic development. Economic development itself refers to the transformation process from a low-level national economy to a modern industrial economy. The main goal of economic development is to increase the per capita income of a country's population in the long term, while bringing about significant changes in the economic structure and a more equal distribution of income among the country's population. This research aims to determine the influence of the micro and small industrial sector on economic growth in Central Java in 2018-2020, using economic growth as the dependent variable while business units, production value, workforce, minimum wage and open unemployment rate as independent variables. The analytical method applied in this research is panel data regression with fixed effects model estimation using time series data from 2018 to 2020. The research results indicate that all variables have a significant negative influence, except for the labor variable which shows a significant positive influence.

Keywords: economic growth; business units, production value; employment; open unemployment rate

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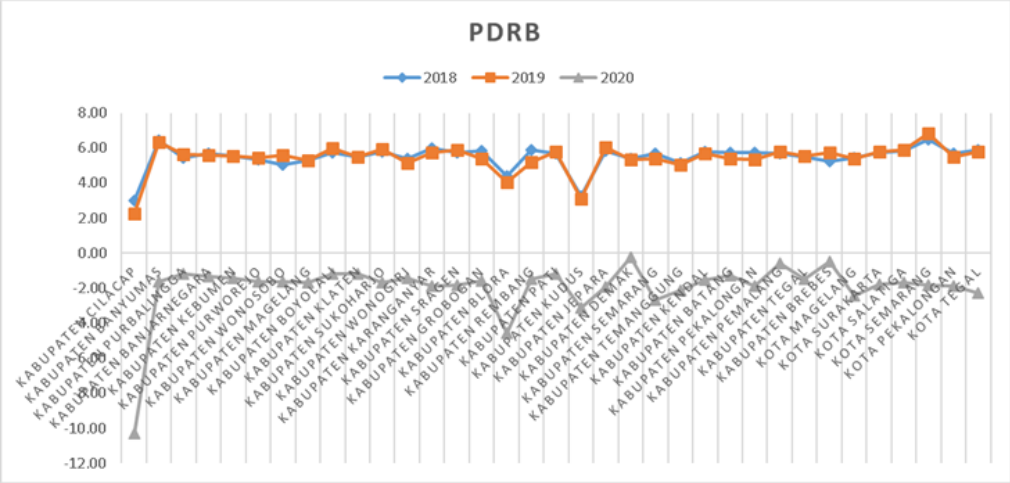
1 INTRODUCTION

Economic development is the process of transformation from a low-income national economy to a modern industrial economy. The main goal of economic development is to increase the per capita income of a country's population in the long term, which is accompanied by changes in the economic structure and equal distribution of income among the country's population. According to Kuznets (1971), economic growth is a country's ability to provide many economic goods to its population in the long term. This capability grows along with technological developments, requiring institutional and ideological adjustments.

In Indonesia, one of the main drivers of economic growth is IMK. Micro and small industry is one of the factors that might influence economic development. An increase in GRDP is a sign that a region's economy is growing or comes from the proper distribution of monies obtained from PAD, which influences the economy and results in an increase in GRDP. The province's income increases in direct proportion to its GRDP level, and this rise is typically utilized to fund local economic development (A'yun, Indanazulfa Qurrota. Vianti, 2004).

Figure 1. 1 Central Java GRDP Growth in 2018-2020



Source :BPS, Processed

Based on the graph above, the growth rate of Central Java's Gross Regional Domestic Product (GRDP) from 2018 to 2020 fluctuates. The highest growth will occur in 2028, namely 191.75%. However, in 2020 Central Java's GDP experienced a very drastic decline, reaching -67.95% (BPS, 2023). This decline occurred due to the impact of Covid-19 which hit Indonesia so that economic growth experienced a slowdown plus a lack of investment rates and a lot of unemployment (Mahera & Nurwati, n.d.).

Micro and Small Industries are one of the main drivers of economic growth in Indonesia. When the monetary crisis hit Indonesia in 1997/1998, small and medium businesses were able to survive better than large companies. This is because most small businesses do not depend on large capital or foreign loans in foreign currency, so they are not too affected by exchange rate fluctuations. On the other hand, large companies that frequently interact with foreign currencies are the ones most vulnerable to the impact of the crisis.(Safar et al., 2022). The era of globalization and information can encourage changes in the socio-economic structure of society. Initially economic policy focused on priority sectors, namely large-scale industry, but currently Micro and Small Industry is also a priority sector. The existence of micro and small industrial companies can have a positive impact, because the growth of this sector can create jobs for the community. The active role of society in supporting the development of micro and small industries is a mutually beneficial relationship. The higher the production level of micro and small industries, the more human resources are needed, which in turn can reduce the unemployment rate in Central Java.

Growth in the number of workers can affect production growth. Production value will increase if a good goods production process is supported by an increase in the quality and quantity of

labor through growth in the workforce and growth in knowledge and skills as well as technological developments. The number of things produced and the amount of labor the company absorbs are both determined by the usage of labor productivity. As a result, it gives policymakers a summary of the measures taken to raise labor productivity (Salim et al., 2024). According to Borjas (2016), the total product curve conveys the notion that salaries have an impact on labor productivity and effort. Although high wages will result in higher labor costs for businesses, labor is still capable of producing higher output levels (Maharani & Woyanti, 2019). To protect the wages of those who work for shorter periods (less than one year), a minimum wage is established. In addition, with fair and competitive wages, minimum wages can help reduce poverty (Ramadhona et al., 2023). According to I, if a person is working, that person will definitely have enough or have high welfare, but in society there are also people who are unemployed. The impact of increasing unemployment levels is to reduce people's income which will ultimately reduce the prosperity a person achieves (Hendri et al., 2019).

2 LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

According to Tambunan (2000), referring to Anderson's theory, states that MSMEs are likely to experience a decline along with sustainable economic development. This is caused by technological advances which continue to develop along with economic development. As a result, MSMEs will be replaced by large companies that have large capital and advanced technology to produce products on a large scale and with higher quality(Fauziah, 2021). In research conducted by (Parasan et al., 2018) with the title "Analysis of the Influence of Small and Medium Industries on Economic Growth in North Sulawesi". It was found that the contribution of business units to economic growth was not very significant. The limited number of small and medium industrial businesses, around 2,460 units, is still an obstacle in attracting investor interest to North Sulawesi. Encouraging the development of new small industries can also be an impetus for large-scale investment in North Sulawesi, which in turn can increase the value of production in the region.

(Winarto & Retnowati, 2022) According to his research, the processing industry sector in Central Java has had positive economic growth due to the influence of human capital and regional wages. However, the province's processing industry sector's economic growth is not significantly impacted by the labor force. These results highlight the need of raising the quantity of scholarships in order to enhance the caliber of human resources. In addition, it is imperative to raise local minimum salaries.

Next, research was conducted by (Hendri et al., 2019) with the title "The Influence of Human Index and Open Unemployment Rate on Economic Growth in Lhokseumawe City". Research findings show that there is a significant and positive relationship between economic growth and the human development index variable. However, there is no significant positive effect of the open unemployment rate on economic growth. Okun's law theory describes the relationship between the Open Unemployment Rate (TPT) and economic growth. This theory suggests that there is a negative relationship between the unemployment rate and Gross Regional Domestic Product (GRDP). This means that whenever there is an increase in the unemployment rate, it tends to lead to a decrease in economic growth (Nuzulailia, 2022). Thus, an increase in GRDP shows an increase in product and service output.

This research aims to identify how much influence several variables related to micro and small industries, such as the number of companies, workforce, production value, minimum wage and open unemployment rate, have on economic growth in the province of Central Java.

3 RESEARCH METHOD

This research aims to test the hypothesis, namely to test whether there is a fundamental relationship and answer the research questions asked (Yuniarti et al., 2021). This research uses quantitative data, using panel data that combines time series and cross section data. The cross section data in this research includes data on business units, workforce, production value, minimum wage and TPT (open unemployment rate) in 35 districts/cities in Central Java province. Meanwhile, the time series data in this research covers the years 2018 to 2020. The source of data collection in this research was obtained from the official BPS Central Java website.

Table 1. Data Source

No	Variable	Symbol	Operational definition	Source
1.	Economic growth	GRDP	Total income received by the company	BPS
2.	Business unit	UU	A business unit is a unit of activity carried out by an individual or household or an entity that has authority determined by the location of the physical building and its operational area.	BPS
3.	Production Value	NP	The number of goods or services produced in one period multiplied by the selling price, these products use available production factors.	BPS
4.	Labor	TK	People who are able to carry out work in order to create goods or services to fulfill individual needs and public needs.	BPS
5.	Minimum wage	UM	Rewards in the form of money earned by workers for one month of work.	BPS
6.	Open Unemployment Rate	TPT	Percentage of the ratio of labor force to unemployment.	BPS

In this research, the panel data regression analysis method is used to process the data. According to Baltagi (2005), one of the advantages of using panel data estimation is its ability to describe the dynamics of change. Panel data is able to detect and measure impacts and reduce bias that may arise in regression analysis (A & Khasanah, 2022). The panel data regression analysis method is used to analyze research data using the following equation:

$$PE_{it} = \beta_0 + \beta_1 InUU_{it} + \beta_2 InTK_{it} + \beta_3 InNP_{it} + \beta_4 UM_{it} + \beta_5 InTPT_{it} + e_{it}$$

Information :

i : observation
t : period of time
In : natural logarithm

In analyzing the panel data regression model, parameter estimation uses three approaches, namely the Common Effect, Fixed Effect and Random Effect approaches. In the process of selecting the best model, there are three testing stages, namely the Chow test, Hausman test and LM test (Widarjono, 2018) . (Basuki, 2015) stated that in linear regression, there are four classical assumption tests that are often used, namely the Autocorrelation, Heteroscedasticity, Multicollinearity and Normality tests. The simultaneous influence of many independent variables on the dependent variable is ascertained using the F test. Every independent variable's validity with respect to the dependent variable is examined using the T test.

4 RESULT DISCUSSION

Descriptive Statistics

The Central Java Province Statistics Agency provided panel data, which was used as secondary data in this study. The data was a combination of cross-sectional and time-series data, with 35 districts and cities in the province of Central Java serving as the cross-section and data from 2018 to 2020 as the time series.

Table 2. Descriptive Statistics

Variabel	N	Minimum	maksimum	Rata-rata	Standar deviasi
UU	105	1829.000	73715.00	26092.30	16967.45
TK		1203.000	138969.0	40517.03	33717.68
NP		24691414	3.6000000000	2.640000000	3.700000000
UM		1490000	2715000	1830469	219702.5
TPT		2.180000	9.830000	5.080190	1.900883

Source: Data Processing Results, 2023

Panel Data Regression Model Selection Test

Table 3. Chow Test Results

Effect Test	Statistic	d.f	Prob.
Cross-section F	4.656361	(34.65)	0.0000
Cross-section Chi-square	129.591186	34	0.0000

Source: Data Processing Results, 2023

The table above shows that the prob value < 0.05 or 0.0000 < 0.05 means that H0 is rejected, so the most appropriate model to use is FEM.

Table 4. Hausman Test Results

Test Summary	Chi-Sq.Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	70.842075	5	0.0000

Source: Data Processing Results, 2023

The table above shows that the prob value < 0.05 or 0.0000 < 0.05 means that H0 is rejected, so the most appropriate model to use is FEM. Because the estimation test chosen was FEM, there was no need to use the Lagrage Multiplier (LM) test and this research was continued using FEM.

Model Regresi Terbaik

After checking the panel data regression equation, the most appropriate method to use is FEM.

Table 5. Panel Data Regression Test Results (FEM)

Variabel	Coefficient	Std. Error	t-Statistic	Prob.
UU (X1)	-2.447960	0.954103	-2.565720	0.0126
TK (X2)	2.432055	0.336449	7.228606	0.0000
NP (X3)	-0.690153	0.341337	-2.021909	0.0473
UM (X4)	-13.83562	3.403711	-4.064862	0.0001
TPT (X5)	-1.019998	0.181702	-5.613565	0.0000
C	221.7511	49.59316	4.471405	0.0000
R-square	0.923416	F-statistic		20.09597
Adjusted R-squared	0.877466	Prob(F-statistik)		0.000000

Source: Data Processing Results, 2023

The general model equation for panel data regression is as follows:

$$PE_{it} = 221.7511 + -2.447960UU_{it} + 2.432055TK_{it} + -0.690153NP_{it} + -13.83562UM_{it} + -1.019998TPT_{it} + e_{it}$$

Information :

UU = Business Unit
TK = Labor
NP = Production Value
UM = Minimum Wage
TPT = Open Unemployment Rate

Classic assumption test

Table 6. Multicollinearity Test

	Business unit	Labor	Production value	Minimum wage	TPT
Business unit	1,000000	0.670024	0.654898	-0.045623	-0.136009
Labor	0.670024	1,000000	0.584970	-0.293678	-0.368912
Production value	0.654898	0.584970	1,000000	0.050236	0.011147
Minimum wage	-0.045623	-0.293678	0.050236	1,000000	0.402746
TPT	-0.136009	-0.368912	0.011147	0.402746	1,000000

Source: 2023 Data Processing Results

The regression results show that the correlation value between business units, workforce, production value, minimum wage and TPT is < 10. Therefore, it can be concluded that there is no multicollinearity problem.

Table 7. Heteroscedasticity Test

Variable	Prob.	Decision
Business unit	0.9934	Heteroscedasticity Free
Labor	0.6534	Heteroscedasticity Free
Production value	0.2914	Heteroscedasticity Free
Minimum wage	0.4405	Heteroscedasticity Free
TPT	0.8769	Heteroscedasticity Free

Source: 2023 Data Processing Results

From the findings of the heteroscedasticity test, the Glejser test shows that the probability value is > 0.05. This indicates that there is no heteroscedasticity problem.

Hypothesis testing

The F test is used to determine the effect of the independent variables together on the dependent variable simultaneously. To find the degrees of freedom in statistical tests as follows:
Df = (α ; (k-1, n-k))
Df = (5% ; (6-1,105-6))
Df = (5%; (5,99))
Df = 2.31

Table 8. F Test

Variabel	F-hitung	F-tabel	Prob.
UU, TK, NP, UM, TPT	20.09597	2.31	0.000000

Source: Data Processing Results, 2023

From the results of the F test, it shows that F-count > F-table, namely 20.09597 > 2.31. This means that there is a significant influence between the business unit variables, labor, production value, minimum wage and TPT together on economic growth in Central Java.

The T test is used to analyze the validity of each independent variable on the dependent variable. To carry out a t test you need a t-table, here is the formula for calculating the t-table:
= (α ; df)
=(α ; n-k)
=(5%;105-6)
=(5%; 99)
=1.660

Table 9. Statistical T Test

Variable	Coefficient	t-count	t-table	Prob	Information
UU	-2.447960	-2.565720	1,660	0.0126	Significant
TK	2.432055	7.228606	1,660	0.0000	Significant
NP	-0.690153	-2.021909	1,660	0.0473	Significant
UM	-13.83562	-4.064862	1,660	0.0001	Significant
TPT	-1.019998	-5.613565	1,660	0.0000	Significant

Source: Data Processing Results, 2023

Discussion

The tests that were run to determine the association between the dependent and independent variables using EViews 10. Business units, labor force, production value, minimum wage, TPT, and the dependent variable—economic growth in the province of Central Java—are the independent variables that were employed.

The Influence of Business Units on Economic Growth

The analysis results show that business units have a significant negative impact on economic growth in Central Java Province. This variable has a coefficient of -2.447960, indicating that if the business unit variable decreases by 1%, economic growth will increase by 2.44%. and the probability value of 0.0126 is below 0.05, which means it has a significant negative influence. According to Anderson's theory (Fauziah, 2021) which predicts that MSMEs will decrease as economic growth increases. Since more complex technology advancements will correspond with more advanced economic development. so that big businesses who already have the resources and cutting-edge technology to make goods in larger quantities and with higher quality will force out MSMEs.

The Influence of Labor on Economic Growth

From the results of data processing, it was found that labor had a positive effect on economic growth. If labor increases by 1%, economic growth in Central Java province will increase by 2.43%. This finding is in line with previous research (Parasan et al., 2018) that as the number of Micro and Small Industry workers increases, economic growth will also improve. Adam Smith explained that when there is an increase in population growth, the amount of output produced can be increased through additional labor and the existence of domestic and international markets. Apart from that, population density will lead to more efficient use of natural resources, increase savings and can encourage economic growth.

The Influence of Production Value on Economic Growth

The results of the analysis show that production value has a significant negative effect on economic growth in Central Java province. With a coefficient value of -0.690153, it means that when economic growth falls by 1%, the production value increases by 0.69%. In consumer theory, production theory is a theory of available alternative choices. In this case, it is a decision taken by a producer to determine the choice of alternative(Parasan et al., 2018). When a producer tries to maximize the value of its production, it will require greater capital to obtain quality raw materials. However, when production value increases without market demand, economic growth will decrease.

The Effect of Minimum Wages on Economic Growth

The results of the analysis carried out show that the minimum wage has a significant negative influence on economic growth in the province of Central Java. Because the coefficient value is -13.83562, when the minimum wage increases by 1%, economic growth will decrease by 13.83%. For entrepreneurs, the minimum wage is a cost, this increase causes them to have to adjust the amount of wages that must be given to workers with the minimum wage that has been set by the government(Winarto & Retnowati, 2022). So, with this increase, entrepreneurs tend to reduce their workforce, which will result in increased unemployment and will affect economic growth, which will also decrease.

The Effect of TPT on Economic Growth

From the results of the research conducted, it can be concluded that TPT has a significant negative effect on economic growth in Central Java Province. When TPT falls by 1%, economic growth will increase by 1.20%. In civil law, it is explained that there is a negative relationship between unemployment and GRDP, when unemployment increases it tends to be associated with a decrease in economic growth (Nuzulailia, 2022). So if economic growth increases, it means that the production of goods and services will also increase, which will affect production factors, namely the increase in demand for labor so that the unemployment rate will decrease.

5 CONCLUSION AND RECOMMENDATION

The conclusions obtained from the analysis carried out in this research are: Micro and small industrial business units in Central Java province in 2018-2020 had a significant influence and had a negative relationship on economic growth. This means that when economic growth in Central Java increases, micro and small industrial business units will experience a decline. The micro and small industry workforce in Central Java in 2018-2020 had a significant negative influence on economic growth. This means that when economic growth in Central Java increases, the number of workers needed in micro and small industries also increases. Production value has a significant negative influence on economic growth in Central Java in 2018-2020. This means that when economic growth increases, the value of production will decrease. The minimum wage in Central Java province in 2018-2020 has a significant negative influence on economic growth. When economic growth increases the minimum wage will decrease. The Open Unemployment Rate (TPT) also has a significant negative influence on

economic growth. This means that when economic growth increases, the unemployment rate in Central Java province will decrease.

IMPLICATIONS/LIMITATIONS AND SUGGESTIONS

In the development of micro and small industries, the government should continue to facilitate by frequently facilitating exhibitions of micro and small industrial businesses and also encouraging micro and small industrial entrepreneurs to carry out product innovations that can attract many consumers. And if more and more micro and small business units are established and developed, the owners of these micro and small industries will continue to increase their production capacity, which of course requires new workers. So the number of Open Unemployment Rates (TPT) will decrease because there is a lot of labor needed in the development of micro and small industries. It is also evident from the calculations that one of the elements of economic growth is predicated on raising the minimum wage. To help workers meet their needs in the face of economic volatility, the government keeps adjusting the minimum wage. Over time, this will have a positive impact on economic growth in Central Java province.

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