Analysis Of Factors Affecting Provincial Minimum Wages In Indonesia

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ABSTRACT

The aim of this study is to analyze the factors that affect the minimum wage across different provinces in Indonesia. The study examines secondary data from Indonesia's Central Statistics Agency for the period 2018-2022, encompassing 34 provinces. The dependent variable in this study is the minimum wage of each province, while the independent variables used in this study are the need for a decent living, inflation, gross domestic product, and consumer price index. The data analysis method applied is panel data regression analysis with a random effect model. The research findings indicate that a higher standard of living, an increase in gross domestic product, and a rise in the consumer price index have a positive and significant effect on the minimum wage of each province. However, inflation does not appear to have a significant impact on the minimum wage of each province.

INTRODUCTION

The provincial minimum wage is the lowest wage that the provincial government sets for all districts and cities within its jurisdiction. It serves as a benchmark for the minimum wage that formal workers in various sectors, including industry, trade, services, and agriculture, should receive. The provincial minimum wage aims to protect workers' rights, improve the welfare of workers and their families, and encourage regional economic growth. The provincial minimum wage is expected to reduce the wage gap between workers in different regions and between formal and informal workers. The provincial minimum wage is also an indicator for assessing regional competitiveness in attracting investment and creating jobs.

To determine the provincial minimum wage, the provincial government conducts a decent living needs (KHL) survey in its area. KHL is a list of goods and services needed by workers and their

families to meet physical, mental, social and spiritual needs. KHL includes 64 components, such as food, clothing, housing, education, health, transportation and recreation. provincial minimum wage is an important indicator in the world of work. provincial minimum wage can affect workers' purchasing power, entrepreneurs' production costs, foreign investment, and economic growth.

The minimum wage in Indonesia has been increasing every year from 2018 to 2021. However, in 2022, the provincial minimum wage will only increase by an average of 1.09 percent due to the ongoing impact of the Covid-19 pandemic on the economy and the business sector The minimum wage increase takes into account changes in inflation and the overall growth of the national economy.

Graph 1. Development of provincial minimum wage in 34 provinces in Indonesia 2018-2022
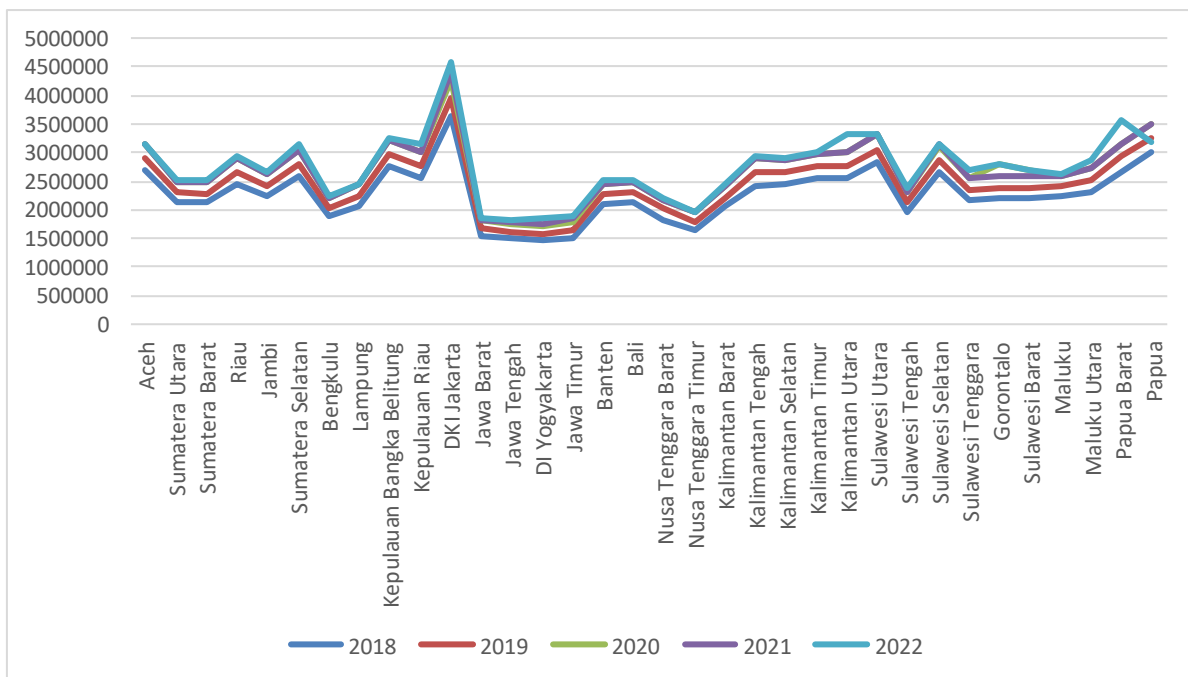
From the graph above, it can be seen that DKI Jakarta has the highest minimum wage throughout 2018 - 2022 and the lowest is in Central Java province. According to the Central Statistics Agency (BPS) report in 2022, the monthly minimum wage in DKI Jakarta was IDR 4.64 million, which was the highest, while in Central Java it was IDR 1.81 million, which was the lowest. The province with the highest minimum wage usually has high economic growth and cost of living, such as DKI Jakarta, Papua, and North Sulawesi. On the other hand, provinces with low levels of economic growth and cost of living, such as Central Java, DI Yogyakarta, and West Java, usually have the lowest minimum wage.

The provincial minimum wage is determined by considering several factors, including economic growth, which measures regional economic performance over a certain period. High economic growth shows an increase in production, income and social welfare. Regional economic growth can influence the provincial minimum wage because it reflects the ability to pay employers and the living needs of workers/laborers. Inflation is another indicator that evaluates the overall increase in the price of goods and services over a given time period. Regional inflation can have an impact on the minimum wage of a province. This is due to the fact that it decreases the purchasing power of workers and laborers, while simultaneously increasing the production costs of entrepreneurs. Additionally, the minimum wage can also be influenced by Decent Living Needs (KHL), which is a measurement of the minimum costs required by workers and their families to meet

basic physical and non-physical needs. KHL is considered a reference point for ensuring the welfare of workers and their families. Finally, the rate of unemployment, which measures the proportion of people of working age who are unemployed but actively seeking work, can have an impact on a province's minimum wage.

Based on the previous explanation, the main objective of this research is to analyze the impact of several independent variables such as the need for a decent living, inflation, gross domestic product, and consumer price index on the provincial minimum wages in Indonesia during the 2018-2022 period.

LITERATURE REVIEW

Inflation

Inflation refers to a state where the prices of goods and services experience a consistent and overall increase. Inflation can be caused by various factors, such as the amount of money in circulation, aggregate demand, economic structure, and others. The following are several theories that explain inflation along with the theories and years.

The Quantity Theory is a monetary theory that was first proposed by David Hume in the 18th century, and later developed by Irving Fisher in 1911. According to this theory, the nominal interest rate (i) is the sum of the real interest rate (r) and the expected inflation rate (πe). In other words, $i = r + \pi e$. This theory assumes that changes in nominal interest rates are only influenced by changes in expected inflation while keeping the real interest rate constant.

From this equation, it can be seen that if inflation rises, the nominal interest rate will also rise. This will increase the cost of capital for companies, thereby reducing profits and their ability to pay wages to workers. Therefore, inflation can reduce the provincial minimum wage in real terms, even though in nominal terms the provincial minimum wage remains or even increases.

Several researchers have found a positive correlation between inflation and minimum wages (Eni Larasati, 2018; Elviani, Militina, & Suharto, 2018; Muhammad Shun Hajji & Nugroho Sbm, 2013; Fandi Chandra Irawan, 2022; Dewi Septini Bako, 2021).

Necessities for a Decent Life

The concept of a decent life refers to the minimal standard of welfare that individuals and families must achieve to live with dignity. It differs from absolute poverty in that it simply considers a person's capacity to satisfy basic requirements like food, clothes, and shelter. The need for a decent life also encompasses aspects such as health, education, security, social participation, and a clean and healthy living environment.

According to Amnesty International Indonesia, a decent standard of living includes meeting our basic needs, including food and clean water, and adequate housing. A decent standard of living also includes opportunities for school, fair and supportive employment conditions, health services, and social security when unemployed, sick, retired, or in other vulnerable situations.

The necessity for an acceptable standard of living serves as the foundation for determining the minimum wage, hence there is a link between these two concepts. In order for employees to meet their basic necessities in a dignified manner, the minimum wage must be commensurate with the acceptable standard of life in the area. The minimum wage must be increased if the requirement for an acceptable standard of life rises. In other words, the minimum wage must be high enough to allow workers and their families to live decently. Workers would struggle to satisfy their fundamental necessities if the minimum wage is below what it would take to live decently. Workers will have extra money if the minimum wage is more than what is necessary to live comfortably, and they can use it to save or invest.

According to a number of studies (Yuliana and M. Fauz, 2016, Widiyanti and Suroso, 2015, Putri and Oktaviani, 2015, Sulistiyo and Insukindro, 2009, Larasati 2018, Sari and Effendi, 2020), the requirement for a reasonable standard of life positively affects the minimum wage.

Gross Domestic Product

The entire gross value added produced by all economic sectors in an area, as defined by the Central Statistics Agency (BPS), is known as GRDP. GRDP describes a region's economic performance over a specific time period using both constant prices and current prices. Prices that apply in the current year are known as current prices, whereas those that apply in the base year are known as constant prices. Real economic growth, or growth that is not impacted by pricing variables, is measured using constant prices.

GRDP can also be interpreted as the total amount of production value, both goods and services produced in a certain area or region during a certain year. In calculating GRDP, products produced by foreign companies carrying out production activities in the area are included in the calculation.

Regional economic growth is an essential factor in determining the minimum wage for workers in a province, which is measured by GRDP. A higher GRDP indicates that the region can afford to pay better wages. Therefore, the provincial government should take into account the growth of GRDP while setting the minimum wage each year. A higher minimum wage can boost people's purchasing power, leading to increased demand and production of goods and services in the area. This can further increase the GRDP and the overall welfare of the community.

Several researchers found that gross regional domestic product has a positive effect on provincial minimum wage (Elviani et.al, 2018; Wibowo, 2022; Irawan, 2022; Walid, 2019; Purba, 2020; Bako, 2021; Krisbiantono, 2022; Pramesti, 2022; Aisyah, 2023; Eco, 2021)

Consumer Price Index

The Central Statistics Agency (BPS) defines the consumer price index as an index that determines the normal change in the cost of a bundle of products and services used by households during a specified time period.

In order to compute the CPI, a comparison between the average price of a particular set of products and services throughout a given time and the average price over the base period must be made. The annual adjustment of the minimum wage is based on the Consumer Price Index (CPI), which measures the inflation rate. This way, the workers can maintain their purchasing power and afford the basic goods and services. The CPI and the minimum wage influence each other and create a dynamic interaction. The minimum wage increase should reflect the CPI variation to ensure a decent standard of living for the workers..

Several researchers have found that a decent living wage positively influences the minimum wage (Armidi et al., 2018; Dwijayanti and Sedana, 2015; Aini and Amrullah, 2015; Pratama and Razman, 2014; Arifin and Purbadhika, 2015).

METHODS

The Central Statistics Agency (BPS), which provided secondary data for the study, was used. Panel data regression, a type of analytical method that mixes cross-sectional and time series data, was employed in the study. The analysis's chosen model was the Random Effect Model (REM).

This study examines the effects of independent factors, including reasonable living standards, inflation, gross domestic product, and consumer price index, on provincial minimum salaries in Indonesia between 2018 and 2022.

Multiple regression is the research methodology, and the research model is as follows:

$Yt = ß0 + ß1 X1 + ß2 X2 + ß3 X3+ ß4 X4 + e$

Description:

Y: Provincial Minimum Wage
ß0: Constant
X1: Inflation
X2: Necessities for a Decent Life
X3: Gross Regional Domestic Product
X4: Consumer Price Index
e: error term

RESULTS

Model Determination Test
Chow Test

When analyzing panel data regression models, the Chow test is used to evaluate whether a common or fixed effect model is being used. The hypothesis is as follows:
H0: Common effect model
H1: fixed effect model

Table 1. Estimation Results of Chow Test

Test chow		
Effect Test	Statistics	Prob
Chi-square cross-section	578.645408	0.0000

Source: Data Processed, 2023

The resulting p-value from Table 1 is 0.0000, which is less than the significance level of (0.05). This means that the null hypothesis (H0) can be rejected. Furthermore, based on the findings of the Chow test, the fixed effect model is the best model to adopt.

Hausman Test

The Hausman test is used to assess whether a random effect model or a fixed effect model should be utilized. The results of this test assist in determining which approach to use. The hypothesis is put to the test in the following way:
H_0: Random effect model
H_1: Fixed effect model

Table 2. Hausman test results

Hausman test		
Test Summary	Chi-Sq. Statistics	Prob
Cross-section random effects	4.522011	0.3399

Source: Data Processed, 2023

The p value obtained from table 2 is 0.3399. When compared to (0.05), H_0 is approved since the p-value>. The random effect model was chosen based on the findings of the Hausman test.

Lagrange Multiplier Test

The Lagrange Multiplier Test is used to assess whether a random effect or a common effect model should be utilized. This statistical testing procedure aids in the selection of the proper model. The hypothesis of which approach should be used is tested during the test.

H_0: Common effect model
H_1: Random effect model

Table 3. Lagrange Multiplier Test

Test Summary	Statistics	Prob
Breusch-Pagan Cross-section	309.6988	0.0000

Source: Data Processed, 2023

The p-value calculated from table 3 is 0.0000. H0 is rejected because the p-value is less than 0.05. The random effect model is the most appropriate model based on the Lagrange Multiplier Test findings.

Regression Analysis
Table 4. Regression Analysis

Variables	Coefficient	t-Statistics	Prob.
C	0.097894	0.223648	0.5233
Inflation	0.002779	1.666115	0.9765
Ln KHL	0.566517	11.08196	0.0000
ln GRDP	0.45848	2.018400	0.0452
CPI	0.001921	7.336088	0.0000
R-Square	0.812326		
F-statistic	178.5463		
Prob(F-statistic)	0.000000		

Source: Data Processed, 2023

Coefficient of Determination (R2)
As Table 4 indicates, the explanatory power of the model is 0.812326, which is the value of R2. This implies that the variation in the provincial minimum wage can be explained by 81% by the four independent variables: Inflation, Decent Living Needs, Gross Regional Domestic Product, and the Consumer Price Index. The remaining 19% of the variation is due to other factors that are not included in the model.

Hypothesis test
After choosing which model is the best, proceed with hypothesis testing to answer questions related to the problems in this research. Hypothesis testing is carried out using partial statistical significance tests or two-tailed t-tests.

Simultaneous Statistical Test (F-Test)
The F-test, or simultaneous statistical testing, is used to assess if all independent variables in a model impact the dependent variable in the same way. From the results of research data selecting the random effect model, it was found that the F.Stat Probability value was 0.0000 < α = 0.05, so the conclusion was drawn that H0 was accepted, then Inflation, Decent Living Needs, Gross Regional Domestic Product and Consumer Price Index together affected wages provincial minimum in Indonesia.

Partial Statistical Test (t-test)

1. Inflation

   The significance test carried out on the inflation variable can be seen from the probability value. From the results of regression with random effects, the probability value = 0.0976 > α 0.05 is obtained, so H 0 is accepted and H 1 is rejected, so the partial conclusion is drawn that inflation does not significantly affect provincial minimum wages in Indonesia.

2. Necessities for a Decent Life

   The result of the regression showed that the coefficient of the Decent Living Needs variable was positive and significant at the 0.05 level of significance. This means that we can reject the null hypothesis that there is no relationship between the Decent Living Needs and the provincial minimum wage, and accept the alternative hypothesis that there is a positive relationship.

   The probability value (p-value) of the coefficient was 0.0000, which indicates a very strong evidence against the null hypothesis. The p-value tells us how likely it is to observe a coefficient as large as or larger than the one we obtained, if the null hypothesis were true. A small p-value means that it is very unlikely to observe such a coefficient by chance, and therefore we can conclude that it is statistically significant.

   The interpretation of the coefficient is that, holding all other variables constant, a one million increase in the Decent Living Needs will lead to a one unit increase in the provincial minimum wage. This implies that as the cost of living for a decent standard of living increases, so does the minimum wage that workers should receive.

3. Gross Regional Domestic Product

   The probability value explains the relevance of the gross regional domestic product variable. Based on the results of the regression with random effects, the probability value is 0.04, which is less than the 0.05 threshold value. As a result, H 0 is rejected and H 1 is accepted. As a result, it is possible to make a partial conclusion that the gross regional domestic product has a positive and considerable influence on the provincial minimum wage. This indicates that, if all other variables stay constant, a one million increase in the gross regional domestic product will result in a one million increase in the provincial minimum wage.

4. Consumer price index

   The significance of the consumer price index variable can be determined by analyzing its probability value. In the regression results with random effects, the probability value was calculated to be 0.00, which is less than α 0.05. H 0 is thus rejected, but H 1 is approved. As a result, the consumer price index has a positive and considerable influence on the provincial minimum wage. In other words, if the consumer price index rises by one points and all other factors stay constant, the provincial minimum wage will rise by one poin.

DISCUSSION

According to the findings of the study, the minimum wage in the province in Indonesia is positively and considerably influenced by the GDP, the Consumer Price Index (CPI), and the requirement for a decent living. the coefficient value, the requirement for a decent living has greater effect on the provincial minimum wage in Indonesia.

The coefficient of adequate living necessities has a favorable influence on the provincial minimum wage. This is reinforced by studies undertaken by Sulistiyo and Insukindro (2009), Larasati (2018), and Sari and Effendi (2020). In 2022, the government will again open up space to increase the provincial minimum wage by considering KHL as one of the determining factors. This is considered a positive step to improve worker welfare while encouraging productivity and industrial competitiveness. With the increase in the provincial minimum wage based on KHL, entrepreneurs are required to increase the productivity, quality, and competitiveness of their products or services

to compete in the market. This can be done by increasing investment, technology, management and human resources.

Furthermore, the gross regional domestic product coefficient has a positive value toward provincial minimum wage, this is in line with provincial minimum wage research (Elviani et.al, 2018; Wibowo, 2022; Irawan, 2022; Walid, 2019; Purba, 2020; Bako, 2021; Krisbiantono, 2022; Pramesti, 2022; Aisyah, 2023; Eko, 2021). When GRDP experiences an increase, this shows that the region is experiencing an increase in economic activity, both in the production, consumption, investment, and export-import sectors. The increase in GRDP also has a positive impact on per capita income, purchasing power, and poverty. In 2022, the government announced an increase in GRDP throughout Indonesia of 5.12 percent. This surge is the result of rather strong economic development in the middle of the Covid-19 epidemic. This rise in GRDP has a favorable influence on the provincial minimum wage in Indonesia, which is set at 8.35 percent. It is thought that raising the provincial minimum wage will boost workers' welfare and people's buying power. An raise in the provincial minimum wage can also enhance worker productivity and competitiveness, as well as attract investment and generate new employment.

The latest variable in the consumer price index has a positive coefficient value relating to the provincial minimum wage. This is in line with research. In 2022, the Indonesian government has set a 5 percent increase in the provincial minimum wage to be applied across the country. This decision was based on several factors, one of which was the increase in the CPI. According to the Central Statistics Agency (BPS), the national CPI reached 1.64 percent on an annual basis in October 2021, a rise of 0.08 percent from the previous month. This spike in CPI reflects a surge in demand and people's purchasing power in the midst of the Covid-19 outbreak. The increase in the CPI will have a positive impact on the provincial minimum wage increase in Indonesia in 2022 because it can improve workers' welfare and reduce social inequality. Workers can meet their fundamental necessities, which are rising in tandem with the cost of products and services, if the provincial minimum wage is raised. Furthermore, increasing the provincial minimum wage can also enhance worker productivity and motivation, as well as boost the competitiveness of domestic industries.

CONCLUSION

This research shows that the provincial minimum wage in Indonesia has been rising every year. In 2022, the average provincial minimum wage in Indonesia reached IDR 2,737,418. The factors that affect the provincial minimum wage in Indonesia are the decent living needs, the Gross Domestic Product, and the Consumer Price Index. These factors have a positive and significant impact on the provincial minimum wage in Indonesia.

SUGGESTION

From the results of this research, several limitations and suggestions can be given to future researchers, namely that local governments in Indonesia make legal regulations regarding minimum wages that are in the interests of employers and workers, to improve the quality of work relations and economic welfare. Apart from that, it is hoped that future research can examine other factors that influence regional minimum wages.

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