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Purchasing Power Parity Of East Java Society

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ABSTRACT
The development of the purchasing power index in East Java over the past few years, with a special focus on changes and their impact on workers' wages. Does the development of the Regional Minimum Wage, inflation and GRDP Per Capita Growth affect the purchasing power parity of the people of East Java? This study took data from the Central Bureau of Statistics which was processed using the Eviews 10 data processing application. The results showed that the three variables of UMR, GRDP per capita and inflation had a significant effect on the Purchasing Power Index in 29 districts and 9 cities in East Java Province.

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INTRODUCTION

East Java is a province located in the eastern part of Java Island, Indonesia. It has an area of approximately 47,922.92 km² and is the second largest province in Java after West Java. With a population of more than 40 million, East Java is the second most populous province in Indonesia after West Java. In terms of economy, East Java has a significant contribution to the national economy. Many cities in East Java such as Surabaya, Sidoarjo, Mojokerto, Gresik, Malang and others are important economic and trade centers in East Java with various potentials, East Java has a very important role in economic and social development in Indonesia.

East Java Province is one of the important benchmarks in evaluating the level of welfare and economic growth in the region by looking at the purchasing power index, it can be understood to what extent the purchasing power of the people of East Java is able to meet their daily needs. The purchasing power index not only reflects people's ability to buy goods and services, but can also illustrate the economic problems faced by a region. Various factors such as the Regional Minimum Wage (UMR), inflation, per capita income, prices of local goods and services can affect the purchasing power of a community in a region.

The problem that arises relates to how an increase in the minimum wage in East Java can affect the purchasing power index and the overall welfare of the community. If the increase in the UMR is not matched by sufficient economic growth, this can have a negative impact on purchasing power, namely the ability of the community to buy goods and services that are increasingly limited. Gross Regional Domestic Product (GRDP) per capita is an indicator of community welfare because GRDP per capita is closely related to purchasing power, which reflects the ability of people in an area to buy goods and services with the

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money they have. Purchasing power that is not in line with the growth of GRDP per capita can cause problems related to income distribution, the price level of goods and services, and the general economic condition of the community. Inflation can be one of the factors that affect purchasing power. If inflation in East Java tends to be high, then the purchasing power of people in the region may decline. This can have an impact on people's ability to fulfill basic needs, such as food, clothing and shelter. In addition, inflation can also have a negative impact on the economic growth of a region.

The Purchasing Power Index is a method or indicator used to measure the extent to which people's income can buy a number of goods and services in a region or country, taking into account price differences between various places Economists have various opinions and contributions related to the concept of measuring the purchasing power index. Gustav Cassel, a Swedish economist, stated in 1918 that the exchange rate between two currencies should reflect the same price comparison of goods and services in both countries. The theory became the basis of research (John Kasem & Anwar Al-Gasaymeh, 2022) where the purchasing power index can be measured by various methods and approaches, and the differences in the above theories reflect the complexity in analyzing people's purchasing power and the differences in measuring it. in 1920 other economists such as John Maynard Keynes and Gunnar Myrdal also discussed and developed this theory. Keynes gave a more contextualized view to the theory in his analysis of international trade and exchange rates. In economics, the Purchasing Power Index is very important as it helps in understanding regional economic differences and comparing purchasing power between countries.

Regional Minimum Wage (UMR) is the minimum wage level set by the government of a country for workers in various sectors and regions. Kiha et al, (2021) said that the main purpose of setting the UMR is to protect workers by providing them with a minimum income sufficient to meet their basic needs, such as food, housing, education, and health. Minimum wages can vary from region to region within a country due to differences in the cost of living and economic conditions. John Kenneth Galbraith An American economist and diplomat supported the concept of regional minimum wages to address economic disparities between regions and ensure that workers in each region can meet their basic needs. Inflation is the general and continuous increase in the prices of goods and services in a country over a period of time. New Zealand economist A.W. Phillips found a negative relationship between the unemployment rate and the inflation rate. According to him, when the unemployment rate is low, pressure for wage increases, which then leads to inflation, a moderate inflation rate is usually considered a sign of healthy economic growth, but if inflation is too high it can reduce people's purchasing power because prices become unaffordable. (Sarbaini & Nazaruddin, 2023).

Growth in Gross Regional Domestic Product per capita is an important measure of the economic well-being of a region. GRDP per capita measures the value of a region's production of goods and services in one year divided by its population. High growth in GRDP per capita is usually considered an indication of a healthy economy and rising public welfare. Solow-Swan Growth Model, Robert Solow and Trevor Swan are two economists who developed a highly influential model of economic growth. This model highlights the importance of capital accumulation and technological progress in determining the growth rate of GRDP per capita.

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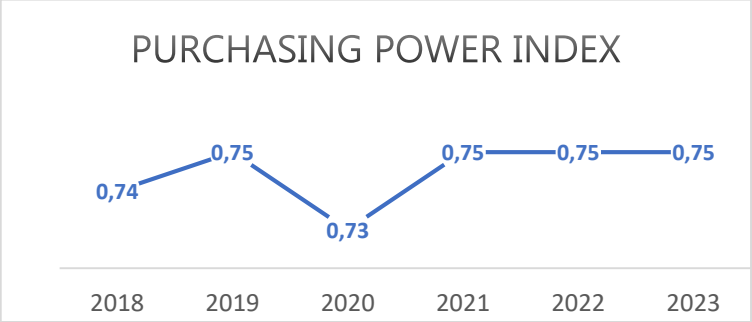
The Solow-Swan model suggests that GRDP per capita growth depends on capital accumulation (investment in equipment, machinery, and infrastructure) and technological progress. According to this model, capital accumulation increases production directly, while technological progress increases production efficiency. The Solow-Swan model also puts forward the concept of convergence, which states that countries with low GRDP per capita tend to grow faster than countries with high GRDP per capita. Convergence occurs because countries with low GDP per capita have more opportunities to use proven technology and management practices from developed countries. The growth of GRDP per capita can be influenced by various factors, including overall economic growth, income distribution, investment in human capital (education and health), technological innovation, economic policies, and the political conditions of a region. These factors interact with each other and influence the economic growth of a region (Yang, 2019).

The relationship between minimum wage, inflation, and GRDP per capita growth has a direct impact on people's purchasing power. If the minimum wage is raised wisely and in line with economic growth, then workers will have a better income, which in turn can increase their purchasing power according to research (Dewi & Zakia et al (2022)). However, if inflation increases faster than wage growth and GRDP per capita growth is stagnant, then people's purchasing power will decrease because the purchasing power of money is no longer the same as before.

Graph 1: Purchasing Power Index of East Java People in 2018-2023



Source: Central Bureau of Statistics of East Java Province (data processed)

From the graph above, it can be explained that people's purchasing power in 2020 has decreased due to the Covid 19 pandemic and has increased again to 0.75 in 2021 and until 2023 it can be seen that people's purchasing power tends to stagnate. Changes in the minimum wage can affect the cost of living and purchasing power. If the minimum wage rises significantly, this can increase workers' income, which in turn can increase people's purchasing power. However, changes in the minimum wage can also have an impact on the prices of goods and services, which can affect relative prices and disrupt the purchasing power balance. An example is the difference in the purchasing power index of the people of Madiun City and Madiun Regency, where in 2023 the minimum wage of Madiun City is IDR 2,154,251 and Madiun Regency is IDR 2,154,251, but the purchasing power index is different between the two regions. Madiun City in 2023 has a purchasing power index of 0.86 while Madiun Regency in the same year has a purchasing power index of 0.75.

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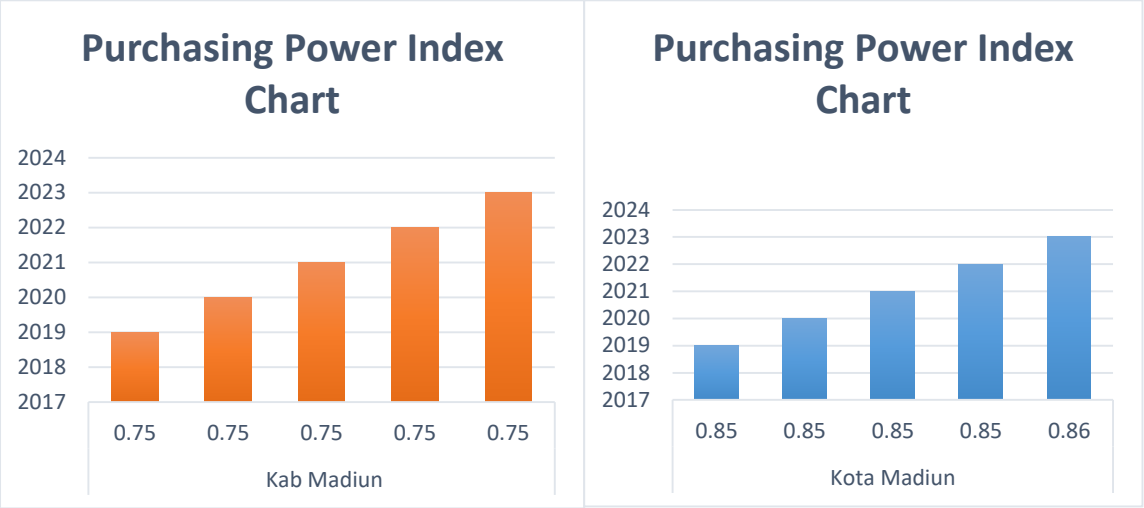
Table 1: Difference in Purchasing Power Index in two cities



Source: Central Bureau of Statistics of East Java Province (processed)

Differences in the purchasing power index on the one hand may not be caused by the minimum wage, but other factors such as inflation, GRDP per capita or other factors. The relationship between purchasing power, GRDP per capita growth, inflation, and minimum wage is dynamic and complex. These variables influence each other and are influenced by various other factors, including government policies, global market conditions and changes in consumer preferences (Martanto et al., 2021).

Local governments have an important role in maintaining a balance between minimum wages, inflation, GRDP per capita growth and purchasing power. The government seeks to set a fair minimum wage that is in line with economic conditions and closely monitors inflation. For this reason, this study aims to analyze the development of the purchasing power index of district and city communities in East Java, with a focus on policies and spatial conditions with a focus on the UMR variable, inflation and GRDP per capita growth. The objectives of this research can be described as follows:

1. To determine the effect of the increase in the Regional Minimum Wage on the purchasing power of district and city communities in East Java.
2. To assess the impact of the inflation rate on the purchasing power of district and city communities in East Java.
3. To understand how GRDP per capita growth contributes to the purchasing power of district and city communities in East Java.

In this study, researchers proposed a research hypothesis:

H1: It is suspected that the Regional Minimum Wage has a significant positive effect on the purchasing power of district and city communities in East Java.

H2: It is suspected that the inflation rate has a significant negative effect on the purchasing power of district and city communities in East Java.

H3: It is suspected that GRDP per capita growth has a significant positive effect on the purchasing power of district and city communities in East Java.

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METHODS

The unit of analysis in this study is 29 districts and 9 cities in East Java. The type of data in this study is secondary data, including data that has been published previously by the Central Bureau of Statistics of districts and cities in East Java and taken with the documentation technique. Secondary data includes minimum wage, inflation, GRDP per capita growth and purchasing power index. The data analysis technique used is panel data regression analysis. Panel data regression is a statistical method that analyzes data by combining time series and cross-sectional elements. One of the advantages of panel data regression analysis is that it considers the diversity that occurs in cross section units (Srihardianti & Prahutama, 2016). (Srihardianti & Prahutama, 2016).. In other words, panel data is a combination of time series data and cross section data. The panel data regression equation model is as follows:

$$\boldsymbol{Y=\beta 0+\beta 11X1+\beta 2X2+\beta 3X3+\varepsilon t}$$

Y: Purchasing Power Index (Index number)
$\beta 0$: Constant
$\beta 1$,$\beta 2$,$\beta 3$: Coefficient
$X1$: UMR (Rupiah)
$X2$: Growth of GRDP per capita (%)
$X3$: Inflation (%)
εt: std Error

Some possible models that can be used are *fixed effect model, random effect model* and *common effect model.* To determine the best model, the chow test, Hausman test and Lagrange Multiplier test are used. The chow test aims to determine the best model to use between the common effect model or the fixed effect model. The hypothesis proposed is

-H0 : Probability > 0.05 = accept Common Effect Model
-H1 : Probability <0.05 = accept Fixed Effect Model

Hausman test is to choose the best model between random effect model or common effect model. The hypothesis proposed is :

-H0 : Probability > 0.05 = accept Random Effect Model
-H1 : Probability <0.05 = accept Fixed Effect Model

Statistical tests will include the T test and F test. The test used in this study is to conduct a significance test consisting of a t-statistic test to see how much influence an independent variable has on the dependent variable by keeping the other independent variables constant. (Rostin et al., 2019). F test to show whether all independent variables included in the model have a simultaneous influence on the dependent variable and the coefficient of determination ($R2$) which will explain the extent of the model's ability to explain variations in the dependent variable.

RESULTS AND DISCUSSION

The test results to determine the best model is to compare the chow test and hausman test. Chow and Hausman test results can be seen in table 2 below:

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Table 2: Best Model Selection

No.	Test Model	Effect Test	Prob	Description
1	Chow	Cross-section Chi-square	0.0000	FEM
2	Hausman	Random Cross-section	0.4310	FEM

Source: Eviews 10 data processing results

Based on the Chow test obtained Prob.F = 0.0000, the value is smaller than 0.05. so it was decided to reject H0. Thus based on the above hypothesis it can be concluded that the Fixed Effect Model is more appropriate to use. Based on the Hausman test obtained Prob.F = 0.4310. This value is greater than 0.05 so it was decided to fail to reject H0. Thus it can be said that the Fixed Effect model, From the results of the Chow and Hausman tests above, the model chosen is the Fixed Effect Model.

Based on the panel regression results using the fixed effect model, the following results are obtained:

Table 3: Fixed Effect Regression Estimation Results

Variables	Coefficient	Std. Error	t-Statistic	Probability
X1	2.27E-08	4.34E-09	4.767124	0,0000
X2	1.01E-08	3.37E-09	2.999742	0,0032
X3	0,000894	0,002087	0,428199	0,6691
C	0,682049	0,010908	62.52572	0,0000
R-Squared			0.901507	
Adjusted R-Squared			0.874887	
F-Statistic			33.86610	
Prob. F			0.000000	
S.E of Regression			0.019704	

Source: Eviews 10 data processing results

The regression equation is known as follows:

$$Y = 0.682049 + 2.270008X1 + 1.010008X2 + 0.682049X3 + 0.019704$$

The minimum wage variable (X1) with a probability value of 0.0000 and a coefficient parameter of 2.270008 shows that the minimum wage has a significant positive effect on the Purchasing Power Index (Y), an increase in the minimum wage of 1,000,000 rupiah causes an increase in the purchasing power index of East Java by 2.27 index units. In theory, an increase in the increase in wages of workers and employees can increase the purchasing power index The GRDP per capita variable (X2) has a probability value of 0.0032 and a coefficient of 1.010008, these results indicate that GRDP per capita has a significant positive effect on the purchasing power index, meaning that the growth of GRDP per capita by 1% will increase the purchasing power index by 1.01%. The results of this study are supported by research Nandita (2019) where economic growth has a major influence on increasing the purchasing power index of the community. Inflation (X3) with a probability value of 0.6691 with a coefficient of 0.000894 has a positive and insignificant effect on increasing the Purchasing Power Index, meaning that a high inflation rate tends to increase people's purchasing power but this effect is not statistically significant, rejecting the hypothesis which

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means inflation has no effect on the purchasing power index. The results of this study are supported by research Hidayat & Dharma, (2023) and Apriliawan & Yasin, (2013) where good inflation control can improve people's welfare.

The F statistic test shows the probability of F statistic = 0.00000, meaning that the three variables, namely the minimum wage, GRDP per capita growth and inflation together have a significant effect on the purchasing power index. The R-Square determination test shows a value of 0.901507, this shows that the purchasing power index of the people of East Java can be explained by 90.15% by the three variables, namely UMR, GRDP per capita growth and inflation, the remaining 9.85% is explained by variables outside this research model. From the above results, several things that become important notes are the importance of the policy of setting regional minimum wages to be reviewed regularly and adjustments to the growth of GRDP per capita in several districts and cities in East Java so that the purchasing power index of the community does not fall.

CONCLUSIONS

From the research results above, it is known that the minimum wage variable and GRDP per capita have a significant positive effect on the purchasing power index, while the inflation variable has a positive and insignificant effect on the purchasing power index. The minimum wage has the highest influence on the increase in purchasing power of the people of East Java.

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