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Analysis of the Factors Influencing the Purchasing Power of the Community in Java Island

Yeni, Mohammad Wahed*

Universitas Pembangunan Nasional "Veteran" Jawa Timur, Indonesia

*Correspondence: Mohammad Wahed
Email: muhammadwahed124@gmail.com

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Abstract: This study aims to analyze the influence of several factors on the purchasing power of communities in each province on the island of Java. The type of data used in this research is secondary data, specifically panel data from 2017 to 2023. The research method is descriptive with a quantitative approach, and the estimation model employed is panel data regression. The results of the study indicate that the independent variables, namely the provincial minimum wage and consumer credit, have a significant effect on the purchasing power of communities in Java. Meanwhile, other independent variables such as inflation, per capita income, investment, and government expenditure do not have a significant effect on purchasing power in Java.

Keywords: Inflation, Per Capita Income, Minimum Wage, Investment, Government Spending, Consumer Credit, Community Purchasing Power

Introduction

Household consumption is the main component in the formation of Indonesia's Gross Domestic Product (GDP), contributing the largest share to total GDP. Purchasing power, which reflects the ability of individuals to meet their needs, serves as an important indicator of welfare. An increase in purchasing power has a positive impact on household consumption and economic growth, while a decline may indicate economic pressure resulting from inflation or insufficient income. Household consumption expenditure contributes 54.04% to GDP, followed by gross fixed capital formation (29.15%) and exports of goods and services (22.18%). On the island of Java, although it is the economic center and contributes 57.02% of total GDP, its economic growth is recorded at only 4.92%, indicating the presence of disparities and relatively low growth. Clear disparities in purchasing power can be seen among provinces, such as the significant increase in East Java compared to the more moderate growth observed in West Java and Central Java, suggesting potential economic instability.

Purchasing power is influenced by several factors, including inflation, income per capita, minimum wages, investment, government spending, and access to credit. The theory of consumption was introduced by John Maynard Keynes through his work The General Theory of Employment, Interest, and Money. In this book, Keynes argues that the role of

government in regulating the economy and aggregate demand is fundamental to understanding purchasing power. According to Keynes, purchasing power is significantly influenced by aggregate demand, which refers to the total expenditure on goods and services by households, businesses, and the government within an economy. High inflation rates and rising living costs for individuals and households due to increasing prices of goods and services substantially affect purchasing power (Sari and Nurjannah, 2023). Research conducted by Iskar et al. (2024) shows that household consumption levels are influenced by minimum wage levels.

Investment affects purchasing power by increasing labor productivity and promoting economic growth, as reflected in rising GDP per capita (Sarwana and Nuraini, 2024). It is expected that accelerating the realization of government spending will increase the money supply in society, thereby enhancing purchasing power. Research by Halim et al. (2022) states that consumer credit has a significant and positive effect on purchasing power. Therefore, research on "Analysis of Factors Affecting Purchasing Power in Java Island" is crucial for understanding social and economic dynamics and identifying strategies to improve purchasing power and economic growth in the region.

Research Method

This study employs a quantitative approach with secondary data as the primary source. The quantitative method was selected because it aligns with the positivist paradigm, which emphasizes testing relationships between variables through numerical analysis. The secondary data used in this research were obtained from official publications of Statistics Indonesia (BPS) and Bank Indonesia, covering six provinces on the island of Java—DKI Jakarta, West Java, Central Java, East Java, Banten, and the Special Region of Yogyakarta—over the period 2017–2023. To ensure that each variable could be analyzed systematically and objectively, this study established clear operational definitions.

The dependent variable, purchasing power, is measured using per capita expenditure, while the independent variables include inflation measured through the Consumer Price Index, per capita income calculated from GRDP divided by the population, provincial minimum wage, investment represented by domestic investment (PMDN), government spending obtained from the Budget Realization Report, and consumer credit reflecting loans for consumption purposes.

This study utilizes panel data, which combines time-series and cross-sectional data for the 2017–2023 period. The analysis was conducted using panel data regression with the assistance of EViews software. Three estimation techniques were applied to obtain the best model: Common Effect, Fixed Effect Model, and Random Effect Model.

Prior to further analysis, this study conducted classical assumption tests, including a normality test using the Jarque-Bera statistic, a multicollinearity test through a correlation matrix, and a heteroscedasticity test to ensure that the residual variance remained stable. These procedures were conducted to ensure that the model met the requirements for multiple linear regression analysis. The regression equation was developed to determine the influence of inflation, per capita income, provincial minimum wage, investment, government spending, and consumer credit on purchasing power. Hypothesis testing was performed through the coefficient of determination (R^2) to assess the ability of the independent variables to explain changes in the dependent variable, the t-test to identify the partial effect of each variable, and the F-test to evaluate the simultaneous effect of all independent variables on purchasing power.

Results and Discussion

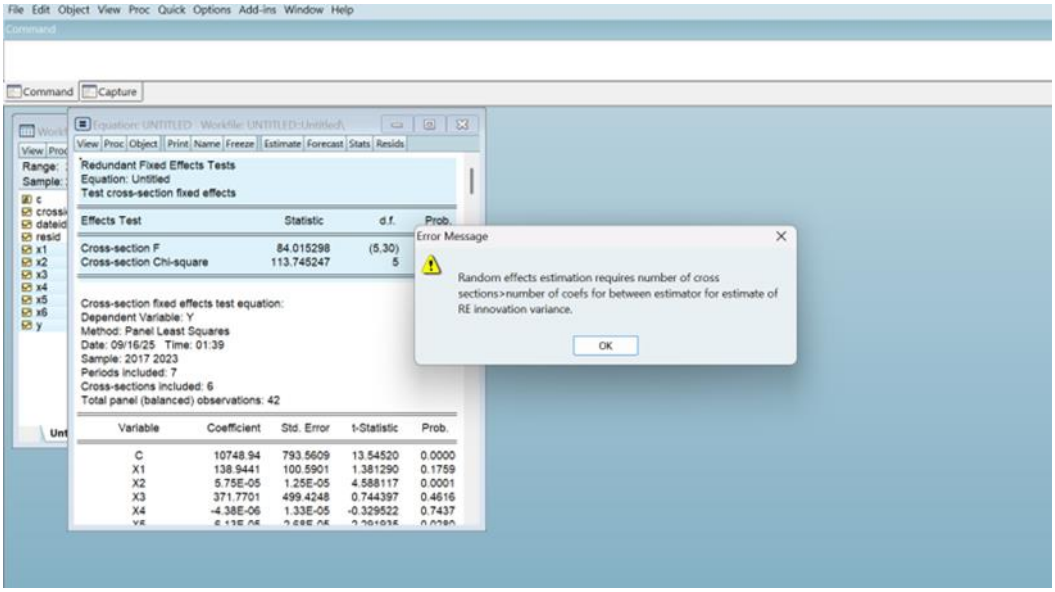
A. Model Selection Test

1. Chow Test

Effects Test	Statistic	d.f. (*Derajat Bebas*)	Prob. (Nilai-p)
Cross-section F	84.0153	(5, 30)	0
Cross-section Chi-square	113.7452	5	0

The model selection process indicates that the Fixed Effect Model (FEM) is the most appropriate model to use. This conclusion is supported by the Chow Test, which produced a p-value of 0.0000, demonstrating that the FEM is more suitable than the Common Effect Model.

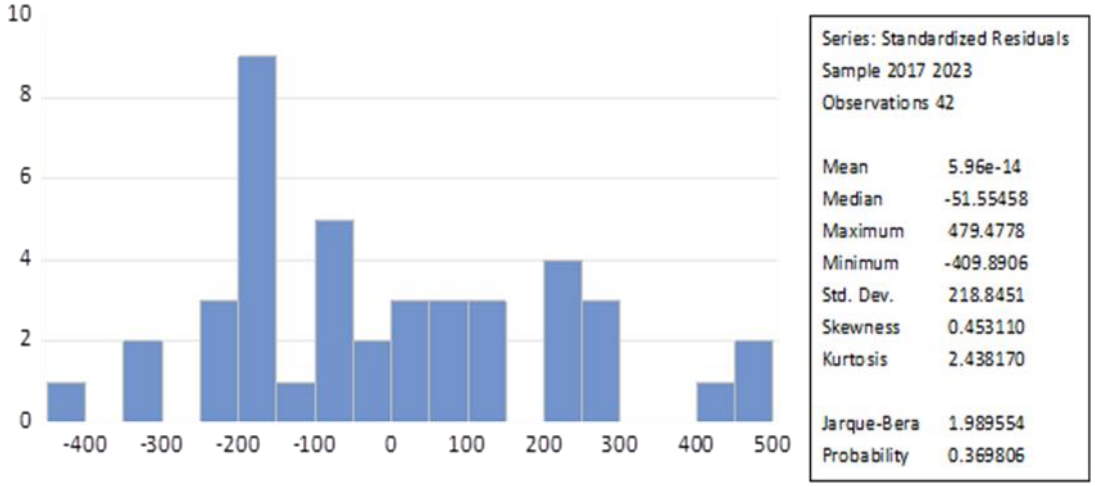
2. Hausman Test



The Hausman Test could not be fully performed due to limitations in the data structure; however, from a theoretical perspective, the Fixed Effect Model (FEM) is more appropriate when T > N, as explained by Gujarati (2009).

B. Classical Assumption Test

1. Normality Test



After the model was established, classical assumption tests were conducted. Based on the Jarque-Bera test, the Jarque-Bera statistic was 1.989554 with a probability (p-value) of 0.369806. Therefore, it can be concluded that the residuals are normally distributed. This indicates that the regression model satisfies the normality assumption, ensuring that the estimation results are reliable and unbiased.

2. Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	384473	246.705	NA
X1	878.251	5.87421	1.07543
X2	4.40E-11	93.9109	1.39233
X3	44048.9	140.017	2.47376
X4	3.87E-11	40.692	3.87808
X5	3.02E-10	150.854	1.22281
X6	7.50E-12	126.496	2.73113

Based on the results of the multicollinearity test presented in the table above, each independent variable in the model has a Tolerance value greater than 0.10 and a VIF value below 10. These findings indicate that there is no significant linear relationship among the independent variables. Therefore, it can be concluded that the regression model is free from multicollinearity issues. This implies that the independent variables are mutually independent and can be reliably used to explain the dependent variable in the multiple regression model

3. Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob. (Nilai-p)
C	327.8078	297.9938	1.10005	0.2801
X1	-9.594032	14.24242	-0.6736	0.5057
X2	-2.35E-06	3.19E-06	-0.7373	0.4667
X3	42.15274	100.8654	0.41791	0.679
X4	-1.06E-06	2.99E-06	-0.3553	0.7248
X5	9.65E-08	8.36E-06	0.01155	0.9909
X6	-2.41E-07	1.32E-06	-0.1831	0.856

Based on the results of the Glejser test, all variables in the regression model have significance values greater than 0.05. This indicates that the regression model does not exhibit heteroskedasticity according to the Glejser Test. Therefore, the regression model satisfies all fundamental assumptions and is appropriate for hypothesis testing.

4. Estimation of Panel Data Model Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9951.921	620.0584	16.04997	**0**
X1	9.314401	29.63529	0.314301	0.7555
X2	1.11E-06	6.64E-06	0.167197	0.8683
X3	735.8076	209.8783	3.505878	**0.0015**
X4	1.72E-06	6.22E-06	0.277045	0.7836
X5	1.52E-05	1.74E-05	0.874242	0.3889
X6	5.83E-06	2.74E-06	2.129488	**0.0415**

From the table above, the regression equation can be derived as follows:

D_e = 9951.921 + 9.314401I_it + 1.1e-06Y+ 735.8076〖UMP〗_it + 1.72e-06〖IV〗_it + 1.52e-05G_it + 5.83e-06C_it + E

D : Purchasing Power of Society
E : Error Term
T : Year of Study (2017-2023)
i : Observation (6 provinces on the island of Java: DKI Jakarta, West Java, Central Java, DI Yogyakarta, East Java, Banten)
I : Inflation
UMP : Provincial Minimum Wage
IV : Investment
G : Government Expenditure
C : Consumer Credit

The following are the findings for each independent variable based on the regression results obtained from the panel data analysis using the Fixed Effect Model (FEM):

B_0 : The constant value obtained is 9951.921, indicating that, on average, an increase of one unit in the independent variables will increase the purchasing power of society by 9951.921.

B_1 : The coefficient of the inflation variable is positive at 9.314401, indicating that every one-unit increase in inflation is followed by an increase in purchasing power by 9.314401 units, and vice versa.

B_2 : If the per capita income variable increases, the purchasing power variable also increases by 1.1e-06, and vice versa.

B_3 : The coefficient of the provincial minimum wage (UMP) variable is positive at 735.8076, indicating that a one-unit increase in UMP will increase purchasing power by 735.8076 units, assuming other variables remain constant, and vice versa.

B_4 : The investment variable has a positive coefficient of 1.72e-06, meaning that a one-unit

increase in investment will be followed by an increase in purchasing power by 1.72e-06 units, and vice versa.

B_5 : The government expenditure variable has a positive coefficient of 1.52e-05, indicating that every one-unit increase in government spending has the potential to increase purchasing power by 1.52e-05 units, and vice versa.

B_6 : The consumer credit variable has a positive coefficient of 5.83e-06, indicating that every one-unit increase in consumer credit will be followed by an increase in purchasing power by 5.83e-06 units, and vice versa.

5. Statistical Test

a. Coefficient of Determination Test (R^2)

Statistik	***Nilai***	***Statistik***	***Nilai***
Spesifikasi Efek	Cross-section fixed (dummy variables)		
Root MSE	216.2241	R-squared	0.993449
Mean dependent var	13089.5	Adjusted R-squared	0.991046
S.D. dependent var	2703.773	S.E. of regression	255.8399
Akaike info criterion	14.16194	Sum squared resid	1963621
Schwarz criterion	14.65841	Log likelihood	-285.401
Hannan-Quinn criter.	14.34392	F-statistic	413.5619
Durbin-Watson stat	1.408995	Prob(F-statistic)	0

Based on the results of the coefficient of determination test (R^2), the model yields an R-squared value of 0.9934 and an Adjusted R-squared value of 0.9910, indicating that the model has a very high explanatory power, with 99.34% of the variation in purchasing power explained by the variables included in the model.

b. F-Test (Simultaneous Test)

Statistik	*Nilai*
F-statistic	413.5619
Prob(F-statistic)	0

The F-test reinforces these results with a p-value of 0.0000, indicating that all independent variables jointly have a significant effect on purchasing power.

c. T-Test (Partial Test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9951.921	620.0584	16.04997	**0**
X1	9.314401	29.63529	0.314301	0.7555
X2	1.11E-06	6.64E-06	0.167197	0.8683
X3	735.8076	209.8783	3.505878	**0.0015**
X4	1.72E-06	6.22E-06	0.277045	0.7836
X5	1.52E-05	1.74E-05	0.874242	0.3889
X6	5.83E-06	2.74E-06	2.129488	**0.0415**

Based on the results of the t-test presented in the table above, only two independent variables are proven to influence purchasing power, namely the provincial minimum wage (UMP) and consumer credit, as indicated by their probability values being less than 0.05. Nevertheless, the partial t-test confirms that only these two variables have a statistically significant effect.

Discussion

Inflation on Community Purchasing Power in Java Island

Based on the results of the hypothesis test, the inflation variable shows a t-statistic of 0.167197 with a probability value of 0.8683, which is greater than 0.05. These results indicate that the inflation variable (X1) does not have a significant effect on purchasing power, meaning that H0 is accepted.

This finding is consistent with observations reported by Sarwana and Nuraini who also concluded that although inflation exhibits a positive correlation, its effect is not statistically significant. Their study suggests that although inflation is generally considered a factor that reduces purchasing power, its impact may be offset by other contributing factors in certain contexts.

Furthermore, Zahara (2022) reported similar results, with a probability value of $p > 0.05$ (0.4221), indicating that inflation has no significant effect on purchasing power. Such conditions may occur when households possess sufficient savings to absorb rising prices, accompanied by increases in income such as higher district or municipal minimum wages

(UMK), which can compensate for the impact of inflation. As a result, households continue to purchase essential goods despite price increases and maintain their consumption levels to meet basic needs.

Per Capita Income on Community Purchasing Power in Java Island

Based on the results of the hypothesis test, the per capita income variable shows a t-statistic of 0.167197 with a probability value of 0.8683, which is greater than 0.05. These results indicate that the per capita income variable (X2) does not have a significant effect on purchasing power, meaning that H0 is accepted. The high probability value reflects a weak relationship between X2 and Y, suggesting that per capita income does not provide a meaningful contribution within the model.

When compared to the study conducted by Halim et al. (2022) which found that per capita income significantly influences purchasing power—where higher income increases individuals' ability to acquire goods and services—the findings of this study present a contrasting result and can therefore be considered relatively new. Nevertheless, the findings of this research are consistent with those of Sukirno (2019) who argues that growth in per capita income does not always correspond with an increase in household purchasing power, particularly in situations where inflation is high or income distribution is uneven.

Provincial Minimum Wage (UMP) on Community Purchasing Power in Java Island

Based on the hypothesis testing results for the Provincial Minimum Wage (UMP) variable, the t-statistic value obtained is 3.505878 with a probability level of 0.0015 < 0.05. This finding indicates that the UMP variable (X3) has a positive and significant influence on society's purchasing power (Y), meaning that H0 is rejected and Ha is accepted. Thus, any increase in the UMP will contribute significantly to improving the community's purchasing power.

This result is consistent with the findings of Sarwana and Nuraini (2024) which show that the purchasing power index is positively and significantly influenced by the minimum wage. A similar conclusion was reported in Zahara's study (2022), stating that the district minimum wage (UMK) has a substantial impact on society's purchasing power. These consistent findings reinforce the notion that minimum wage policies play a crucial role in enhancing people's consumption capacity.

Investment on Community Purchasing Power in Java Island

Based on the results of the hypothesis testing for the investment variable, the analysis shows a t-statistic value of 0.277045 with a probability of 0.7836 > 0.05. This indicates that the investment variable (X4) does not have a significant influence on society's purchasing

power (Y), and therefore H0 is accepted.

This finding differs from the study conducted by Ayus Ahmad Yusuf and Sinta Nurmalah in Region III Cirebon (2016) which demonstrated a positive and significant effect of investment on purchasing power. The insignificance of investment in the present study can be explained by several structural and contextual factors. First, the investments made during the study period do not appear to have been directly felt by households in the form of increased income. Second, the dominant nature of capital-intensive rather than labor-intensive investment contributes to this weak relationship. Capital-intensive investments tend to absorb only a limited amount of labor, resulting in minimal impact on household income.

Government Expenditure on Community Purchasing Power in Java Island

Based on the results of the hypothesis testing for the government expenditure variable, the analysis shows a t-statistic value of 0.874242 with a probability of 0.3889 > 0.05. This finding also indicates that H0 is accepted, meaning that government expenditure (X5) does not have a significant effect on society's purchasing power (Y).

This result contradicts the findings of Ayus Ahmad Yusuf and Sinta Nurmalah (2016) who reported that government spending significantly increased the purchasing power of the community in Region III Cirebon. This discrepancy can be understood by reconsidering how government expenditure is managed and allocated, as well as how it translates into societal welfare.

Theoretically, government spending should stimulate the economy by increasing aggregate demand and creating a multiplier effect that ultimately boosts household consumption. However, in practice, not all government spending directly stimulates purchasing power. During the study period, most government expenditure was likely allocated to long-term infrastructure development or administrative and bureaucratic costs, the benefits of which take considerable time to materialize. Consequently, such spending does not directly increase household income or strengthen consumption capacity in the short term.

Consumer Credit on Community Purchasing Power in Java Island

Based on the results of the hypothesis testing for the consumer credit variable, the analysis shows a t-statistic value of 2.129488 with a probability of 0.0415 < 0.05. This indicates that the Consumer Credit (X6) variable has a significant positive effect on society's purchasing power (Y), and thus H0 is rejected. In other words, every increase in Consumer Credit (X6) provides a significant contribution to raising the dependent variable.

This finding is consistent with the study conducted by Halim et al. (2022) which states that the distribution of consumer credit by banks has a tangible impact on enhancing the community's ability to make consumption expenditures. This can be understood because easier access to consumer credit allows households to fulfill their needs even when their real purchasing power is constrained by other factors such as income fluctuations or inflationary pressures.

Conclusion

The conclusion of this study shows that the variables of inflation and per capita income do not have a significant effect on the purchasing power of communities in Java Island. In contrast, the Provincial Minimum Wage (UMP) is proven to have a significant impact on increasing purchasing power. Meanwhile, the variables of investment and government spending do not exert a meaningful influence on purchasing power. On the other hand, consumer credit demonstrates a significant positive effect, indicating that an increase in consumer credit distribution can enhance the purchasing power of communities in the region.

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