

Research Article

The Reaction of Poverty to Consumption and Inflation in Indonesia

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ABSTRACT

This study investigates the reaction of poverty to consumption and inflation in Indonesia, utilizing the Autoregressive Distributed Lag (ARDL) method to explore the dynamic relationships between these key economic variables. The analysis is based on time-series data spanning from 2012 to 2023, comprising a total of 340 samples from 34 provinces across Indonesia. The findings reveal that both consumption and inflation exert a significant influence on poverty levels, with effects observable in both the short and long term. Specifically, consumption and inflation demonstrate a statistically significant relationship at a 5 percent significance level in the short term. However, in the long term, inflation's effect is identified at a slightly higher significance level of 10 percent, indicating its persistent but somewhat weaker influence compared to consumption. These results highlight critical insights into the economic mechanisms that drive poverty in Indonesia, underlining the pivotal roles of consumption patterns and inflationary pressures. The research emphasizes the importance of targeted economic policies to manage these variables effectively to reduce poverty. For instance, promoting sustainable consumption and mitigating inflation's adverse impacts can foster greater economic stability and resilience among vulnerable populations. By addressing these factors, policymakers can implement more effective strategies to achieve equitable economic growth and social welfare.

Keywords: Poverty; Consumption; Inflation; Panel ARDL;

1. INTRODUCTION

Poverty is still one of the problems in Indonesia. Where poverty is the inability to obtain basic needs, such as shelter, clothing, food and medicine. The high poverty rate is still one of the problems in development for developing countries including Indonesia (Habriyanto, et al, 2023). One important dimension that is of concern to many parties is the expenditure or consumption dimension. This approach is often referred to as absolute poverty, where a person or household is said to be poor if they are unable to meet a minimum level of consumption consisting of food and non-food consumption that is considered essential and necessary over a certain period of time. The Central Bureau of Statistics defines poverty as the inability of individuals to meet the minimum basic needs for a decent life, further stating that poverty is a condition that is below the standard value line of minimum needs, both for food and non-food, which is called the poverty line (Abdillah & Samudro, 2019). Poverty can also be interpreted as a situation in which a person does not have the ability to change their economic and social circumstances, which is reflected in low productivity, weak will to progress, and limited capital, education, and opportunities to participate in development. Education is the path to progress and the achievement of social and economic welfare (Hardana, A. 2023). Poverty arises because of inequality in income distribution, differences in the quality of human resources that cause differences in wage levels, and differences in the fulfillment of capital, so that poverty can be described in the poverty circle theory. (Imelia, 2012). Basically, there are two sides of poverty, namely poverty seen from the level of income and basic needs (minimum basic) for a person to live properly (absolute poverty) and poverty that occurs because of social inequality where a person can meet his basic needs but is still below the conditions of the surrounding community (relative poverty). (Windra et al., 2016).

Poverty, which is indicated by a reduction in the fulfillment of basic human needs, has increased sharply. The poverty gap indicated by the Gini ratio is widening. The emergence of new poor households also affects people's consumption patterns. There has been a change in people's consumption patterns, either because of the increase in the prices of goods or because of other factors. Consumption activities play an important role in human life, whether it is to fulfill the need for

food, clothing, entertainment, or other needs. So that a person's ability in consumption activities will always be associated with a person's ability to fulfill the needs of life or the level of welfare. The greater the expenditure on consumption of goods and services, the higher the welfare level of the family. Along with the development of the times, there has been a shift in consumption behavior in society. The shift in the pattern of household consumption expenditure from food to non-food items can be used as an indicator of an increase in community welfare. With the assumption that after food needs are met, excess income will be used for non-food consumption.

Humans naturally cannot be separated from consumption activities, both in meeting basic needs such as food, clothing and shelter, as well as consumption activities to meet other needs. Consumption expenditure is inherent in every human being from birth to the end of his life, meaning that everyone throughout his life performs consumption activities. The importance of household consumption can objectively be explained in several reasons. First, consumption is the largest contributor to national income. In fact, in most countries, consumption expenditure can account for around 60-75 percent of national income. The second reason is that household consumption has a very fundamental influence in determining changes in economic activity from one period to another (Sukirno, 2016).

Consumption is an expenditure that arises because of the need to be consumed by a person or group of people. Rice consumption or food consumption is usually related to poverty, because in general, the consumption of poor households focuses more on meeting basic needs than on other needs. The higher a person's consumption level, the higher their economic consumption and welfare level. Poverty is synonymous with low average expenditure, which results in the lack of ability of households to meet the amount of food that can be consumed (Cita Anjar Sari, 2019). The rapid development of society causes consumption behavior to also change rapidly so that discussions about household consumption will remain relevant. Economic factors that affect the level of household consumption are household income, household wealth, the number of durable consumer goods in society, interest rates, expectations about the future, and government policies in reducing inequality in income distribution. Economic growth that changes from year to year also affects the consumption that will be carried out by the community and the rapid development of technology also affects people's attitudes and behavior in consumption (Firmansyah, 2018: 30).



Figure 1. Number and Percentage of Poor People, September 2012 - March 2023

The number of poor people in Indonesia in March 2023 reached 25.90 million people. Compared to September 2022, the number of poor people decreased by 0.46 million people. Meanwhile, when compared to March 2022, the number of poor people decreased by 0.26 million people. The percentage of poor people in March 2023 was recorded at 9.36 percent, a decrease of 0.21 percentage points against September 2022 and a decrease of 0.18 percentage points against March 2022. Based on the area of residence, in the September 2022-March 2023 period, the number of poor people in urban areas decreased by 0.24 million people, while in rural areas it decreased by 0.22 million people. The percentage of poverty in urban areas fell from 7.53 percent to 7.29 percent. Meanwhile, in rural areas it fell from 12.36 percent to 12.22 percent.

Currently, the eradication of poverty is a major development goal in many countries, including Indonesia. One of the main targets of the Millennium Development Goals (MDGs) planned by the United Nations (UN) is to reduce the proportion of poor people. The measurement of poverty is important, especially when it is related to poverty reduction policies and programs that will be established (Widyaningrum, 2009). Poverty is synonymous with low average expenditure, resulting

in a lack of ability for households to meet the amount of food that can be consumed. Consumption is an expenditure that arises because of the need to be consumed by a person or group of people. Consumption is usually closely related to poverty (Dominique, et al, 2021). because in general, the consumption of poor households focuses more on meeting basic needs than other needs (Ayunita, 2018). The higher a person's consumption level, the higher the economic consumption and welfare level. The theory of J. M. Keynes in Wurangian states that individual consumption depends on the income received by individuals or society (called real income or absolute income). When real income increases, consumption increases (Rizkina, et al., 2022).



Figure 2. Change in Average Monthly Per Capita Expenditure Between March 2023 and March 2022 by Province (percent)

This is also inseparable from inflation. One of the impacts if inflation is not controlled by the government, it will cause social vulnerability and create new poor people (Adawiyah, 2020). Even worse is experienced by people who were already poor plus a suffocating price increase (Abdillah, et al, 20119). The government is trying to reduce the rate of price increases so that the inflation rate can be suppressed because it will have an impact on people's purchasing power (Amir & Purnamasari, 2021). Basically, even though inflation is high but people's income is also high, it doesn't matter because it will not have an impact on decreasing purchasing power. In general, those who feel the most if there is an increase in the inflation rate are people with fixed income and people with low income (Okuputra & Nasikh, 2022). Inflation is a major problem that affects the economy of every country, and it is a particular monetary phenomenon that constantly threatens countries because the available solutions often result in two problems that will either improve or worsen the overall economic growth rate (Hastin, 2022).

Controlling the rate and level of inflation plays a vital role in macroeconomics. The success of inflation control is very important because the impact of inflation will affect people's welfare, especially when inflation is at a high and unstable level resulting in a decline in people's welfare. Inflation needs to be controlled by both the central bank and the government. The central bank and the government must work together in order to reduce the inflation rate to be low and stable, in order to create equitable public welfare. (Martanto et al., 2021). As is known, inflation has a close relationship with public consumption, where if the prices of goods and services rise and inflation increases, it will cause a decrease in the real value of income so as to weaken the purchasing power of the community, especially towards domestic production so that it can cause a decrease in public consumption (Persaulian, 2013: 7). So in the short term, an increase in inflation can reduce the value of public consumption because people with relatively lower income levels will choose to withhold consumption for secondary goods or seek substitution of goods that have experienced price increases with goods that are cheaper but have the same benefits (Ragandhi, 2012: 65).



Sumber: Badan Pusat Statistik

Figure 3. Development of Headline, Core, Administered Price, and Volatile Goods Inflation in Indonesia (m-to-m, 2018=100), 2022-2023

The development of general inflation between months throughout 2022 was relatively stable, the deepest deflation occurred in August at 0.21 percent (m-to-m) and the highest inflation in September at 1.17 percent (m-to-m). Core inflation was relatively stable ranging between 0.15 percent and 0.42 percent. Meanwhile, the administered price inflation component experienced relatively stable volatility, except in September which reached 6.18 percent due to fuel tariff adjustments. Volatile goods inflation throughout 2022 experienced the lowest deflation in August 2022 of up to 2.9 percent due to falling prices of several commodities. Meanwhile, the highest volatile goods inflation occurred in the middle and end of 2022, which amounted to 2.30 in April and 2.51 percent in June. The increase in several commodities due to weather conditions that disrupted production drove inflation. Meanwhile, high volatile goods inflation in April was influenced by the Eid holiday. The occasion also affected administered price inflation, which reached 0.73 percent. Until the first semester of 2023, general inflation is likely to be more stable

2. RESEARCH METHOD

The research method used is Autoregressive Distributed Lag (ARDL), and uses time series data, from 2012 - 2023. With a total sample of 340 covering 34 provinces in Indonesia. However, this study uses the Autoregressive Distributed Lag (ARDL) Panel model. The use of the ARDL panel model assumes that the variables used, and this study are dynamic. The ARDL model is suitable in this study. The software used in this research is Eviews.10.

$$\Delta \ln K_{j,t} = \alpha_{0i} + \sum_{i=1}^n \alpha_{1i} \Delta \ln K_{i,t-1} + \sum_{i=1}^n \alpha_{2i} \Delta \ln C_{i,t-1} + \sum_{i=1}^n \alpha_{3i} \Delta \ln INF_{i,t-1} + \beta_{11} \ln K_{j,t-1} + \beta_{21} \ln C_{j,t-1} + \beta_{31} \ln INF_{j,t-1} + u_{j,t} \dots \dots \dots (1)$$

Where K is poverty, C is Consumption and INF is inflation, α_1 through α_2 are short run coefficients, β_1 through β_2 are long run coefficients, t is the year i.e. 2012-2023, j is the region of 34 provinces in Indonesia, i is the lag order, and u is the error term.

3. RESULTS AND DISCUSSION

3.1 Panel Stationarity Test

Table 1. Panel Unit Root

Variable	<i>Individual Intercept</i>			
	LLC	IPS	ADF-Fisher	PP-Fisher
Poverty	-5.66152 (0.0000)	-0.54069 (0.2944)	73.8117 (0.2940)	817948 (0.1215)
Cunsumption	-0.93049 (0.1761)	4.72792 (1.0000)	14.8814 (1.0000)	115199 (0.0003)
Inflation	-7.29248 (0.0000)	-4.14627 (0.0000)	129.853 (0.0000)	427.060 (0.0000)
Δ Poverty	-6.59201 (0.0000)	-3.51854 (0.0002)	121.544 (0.0001)	296.362 (0.0000)
Δ Cunsumption	-867363 (0.0000)	-1.97587 (0.0241)	90.6968 (0.0344)	97.6536 (0.0107)
Δ inflation	-10.9447 (0.0000)	-5.06010 (0.0000)	149.019 (0.0000)	382.457 (0.0000)

Stationarity test is a mandatory requirement before ARDL panel model estimation is conducted. Stationarity testing in this study uses four approaches namely Levin, Lin & Chu (LLC), Im, Pesaran and Shin (IPS), ADF Fisher Chi-Square (ADF Fisher) and PP-Fisher unit root with individual intercept and individual intercept and trend. The results in Table 1 explain that each variable has different stationarity at the level (I(0)) or at the first difference level (I(1)). Because there are differences in stationarity, the ARDL panel model is eligible for use in this study.

3.2 Panel Cointegration Test

Table 2. Cointegration Test

Pedroni Kointegration Test	Statistic	Weighted Statistic
Panel v-Statistic	-0.2423 (0.5958)	-1.2575 (0.8957)
Panel rho-Statistic	1.5054 (0.9339)	1.4342 (0.9243)
Panel PP-Statistic	-2.0598 (0.0197)	-3.9376 (0.000)
Panel ADF-Statistic	-3.2854 (0.0005)	-4.6430 (0.000)
Group rho-Statistic	4.1720 (1.0000)	
Group PP-Statistic	-3.8607 (0.0001)	
Group ADF-Statistic	-3.6980 (0.0001)	
KAO Cointegration Test	t-statistic	
ADF	-2.2714	0.0116

The Cointegration test in this study uses Panel cointegration with Predoni and KAO Based which aims to see several variables integrated at different orders I(0) or I(1) Badalayan et al (2014). Based on table 2 shows that the results of the Panel cointegration test between poverty, consumption and inflation, with a significance level of 5%, so it can be concluded that there is a short-term to long-term relationship between the three variables.

3.3 Optimal Lag Test

The lag test in this study uses the Akaike Information Criterion (AIC). Basically, this study looks at the smallest value, and explains the optimal lag using the AIC criterion and the lag result is 1 lag. Therefore, the best lag selection by looking at the smallest AIC value so that the lag used in the study is 2.

3.4 Analysis of ARDL Panet

Table 3. ARDL Panel

Estimate	Variable	Coefficient	t-Statistic	*
(Long Run)	Cunsumption	0.1085	7.3960	0.0000
	Inflation	0.0140	14.4161	0.0000
(Short Run)	C	0.4163	-5.1639	0.0000
	Δ Cunsumption	-0.5742	-4.6046	0.0000
	Δ Inflation	-0.0030	-1.6589	0.0487
	ECT (-1)	-0.2614	5.7950	0.0000

Note: *) Sign of 1% and 5%

The ARDL panel regression results are qualified because the error correction term coefficient has a negative slope and is significant. Since this model is qualified, it can be used as a model for analyzing the reaction of the crisis to consumption and inflation. The ECTt-1 coefficient illustrates that if a shock occurs, it takes 1.5 months to return to the equilibrium position before the shock. This condition shows that there is a very fast effort to reach equilibrium again. Table 3 shows that consumption and inflation variables have an effect, either in the long run or in the short run with a significant level of 5 percent. However, the inflation variable in the long run has an effect with a significance level of 10 percent.

3.5 Cross-Section Results

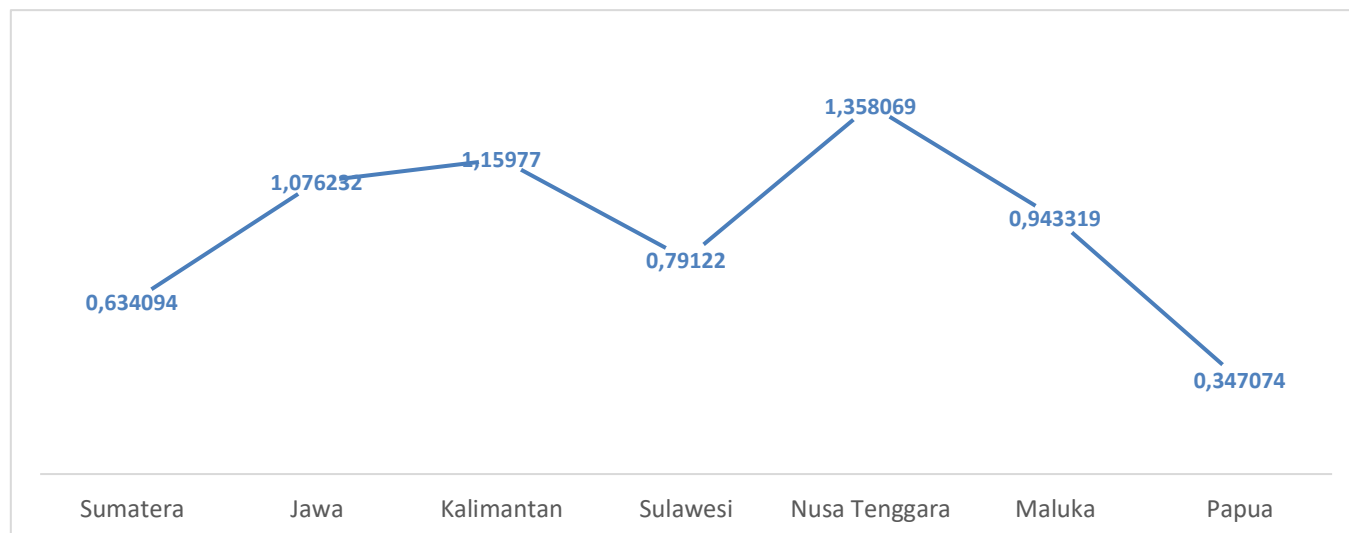


Figure 4. Average Coefficient of Short-term Cross-section

4. CONCLUSION

Based on the research that has been conducted, the results show that consumption and inflation variables have a significant influence on the economy, both in the short and long run. The significance level found is 5 percent, which indicates a strong and reliable relationship between the two variables over a shorter period of time. However, for the inflation variable in the long-run context, the identified effect has a slightly higher significance level of 10 percent. This indicates that while inflation remains influential, it is not as strong as consumption in the long run. This finding is important for understanding economic dynamics, especially in formulating economic policies. By identifying the role of consumption and inflation, policymakers can be more precise in taking the necessary steps to maintain economic stability. Therefore, more attention needs to be paid to these two variables, both in short-term and long-term analysis, in order to minimize the risks that may arise due to fluctuations in inflation and changes in people's consumption behavior. This research provides a solid basis for more effective policy measures in the future.

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