

The dynamics of rural household expenditure in Indonesia

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Abstract

Many indicators can be used to measure welfare, one of which is the proportion of food expenditure. This study aims to analyze and calculate the proportion of food expenditure in rural Indonesia and analyze the relationship between the proportion of food expenditure as an indicator of welfare. The method used is descriptive statistical analysis. The data used are national socio-economic survey data in 1996:2017. This paper shows that the pattern of household spending varies in income groups during the period analyzed. Likewise, the proportion of food expenditure varies depending on the income level; the higher the income level, the smaller the proportion of food expenditure.

Keywords: *Expenditure; household; welfare*

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Introduction

As one of the countries with the largest population globally, Indonesia's economic changes will certainly attract a lot of attention from various parties. Changes in the economy, at least in the last decade, have resulted in striking changes in the consumer spending patterns of the people. Data from the National Socio-Economic Survey (Susenas) from the Central Bureau of Statistics (BPS) shows that with economic growth and an increase in the community's average income, Indonesian people's consumption expenditure for food from 2002 to 2013 tends to decline. In 2002, an average of 58.7 percent of the proportion of income for food expenditure was recorded. The trend decreased to 47.9 percent in 2013 (BPS, 2014). In the study of economic theory, things like this are in line with Engel's Laws (Engle Laws) which says that as income increases, the proportion of food expenditure will decrease.

The proportion of food expenditure is one indicator that can determine the level of community welfare. The lower the share of food expenditure, the economic welfare of the community will increase. Vice versa, the higher the share of food expenditure, it indicates the welfare of the community. The economic crisis in 1998 resulted in a decline in people's welfare (Warr, 1999). However, the development of public welfare continued to improve during the 1999-2011 period, despite the financial and monetary crisis in America and Europe and the increase in fuel oil (BBM). The proportion of food expenditure in 2011 was 48.5% lower than the previous years (BPS, 2014).

The aspect related to the level of income is the level of community expenditure; in general, it is known that the level of income affects the pattern and level of expenditure (Nurmanaf, et al., 2000). Research by Sudaryanto, et al. (1999) proves that income has a negative relationship with the portion of food expenditure.

Broadly speaking, household needs can be grouped into two broad categories, namely food, and non-food needs. Thus, at a certain income level, households will allocate their income to meet these needs. Naturally, food needs will reach saturation point while non-food needs, including food quality, will not. According to BPS (2014), consumption and expenditure data can be used to research the application of economic law.

Therefore, the composition of household expenditure can be used as a measure to assess the level of the economic welfare of the population; the lower the percentage of expenditure on food to total expenditure, the better the economic level of the population. On the other hand, the larger the share of food expenditure, the less prosperous the household is. In conditions of limited income, the fulfillment of food needs will take precedence, so that in low-income groups, it will be seen that most of their income is used to buy food. The proportion between food and non-food expenditures is also used as an

indicator to determine the level of welfare or food security of households or communities. The higher the share of a household's food expenditure, the more food insecure the household is (Melgar-Quinonez et al., 2006). In more detail, according to Soekirman (2000), households with a proportion of food expenditure of 60% can be categorized as food insecure, and households with a proportion of food expenditure <60% are categorized as food insecure.

Meanwhile, according to Trisnowati and Budiwinarto (2013), the shift in household expenditure structure occurs because the elasticity of demand for food is generally low. Hence, the smaller proportion of food consumption expenditure indicates an improving level of welfare. This is what makes the discussion of food consumption interesting to study.

Based on this background, this article attempts to analyze how the proportion of rural household expenditure has been so far. By knowing the pattern of the proportion of household expenditure, it will be able to know the extent of the level of household welfare and prove Engel's theory. The advantage of this analysis is that it is simple and easier to carry out until the lowest administrative level or certain community groups can quickly and accurately classify household welfare. In addition, knowing the pattern of household consumption can contribute to designing better public policies. It is important to know how households allocate and change their spending on a food commodity in response to changes in income and developments over time.

Method

In this study, the data used are expenditure or consumption data from the National Socio-Economic Survey (Susenas) of BPS in 1996, 1999, 2002, 2005, 2008, 2011, 2014, and 2017. Each year's data is used to capture the spending behavior patterns of rural households during the year. Eight periods were taken to see the dynamics of expenditure that occurred from time to time, along with changes in the factors that influence it. The grouping based on income class follows the World Bank and BPS classification criteria, namely 40 percent of the low-income class, 40 percent of the middle-income class, and 20 percent of the high-income class. The analytical method used is a descriptive statistical analysis used to see the spending patterns of rural households in various income groups and over time.

Empirical Result

Data on household expenditures, especially the proportion of their expenditures, can apply the economic theory. Based on Engel's Law, if the tastes do not differ, the percentage of household expenditure on food decreases as household income increases. Therefore, the proportion of household expenditure can be used as a measure to assess the level of the community's

economic welfare, where the lower the percentage of expenditure on food to total expenditure, the better the level of the community's economy.

Based on Chart 1 or Appendix 1, there are several interesting points: *First*, regarding total expenditure, in general, the nominal value of the average food consumption expenditure of rural households shows a consistent increase over time for all income groups. However, this increase does not necessarily indicate the level of household welfare because the food price influences the nominal value of food consumption. Food prices may have increased over time while nominal income has remained constant or even fallen. If this happens, then the level of household welfare will decrease.

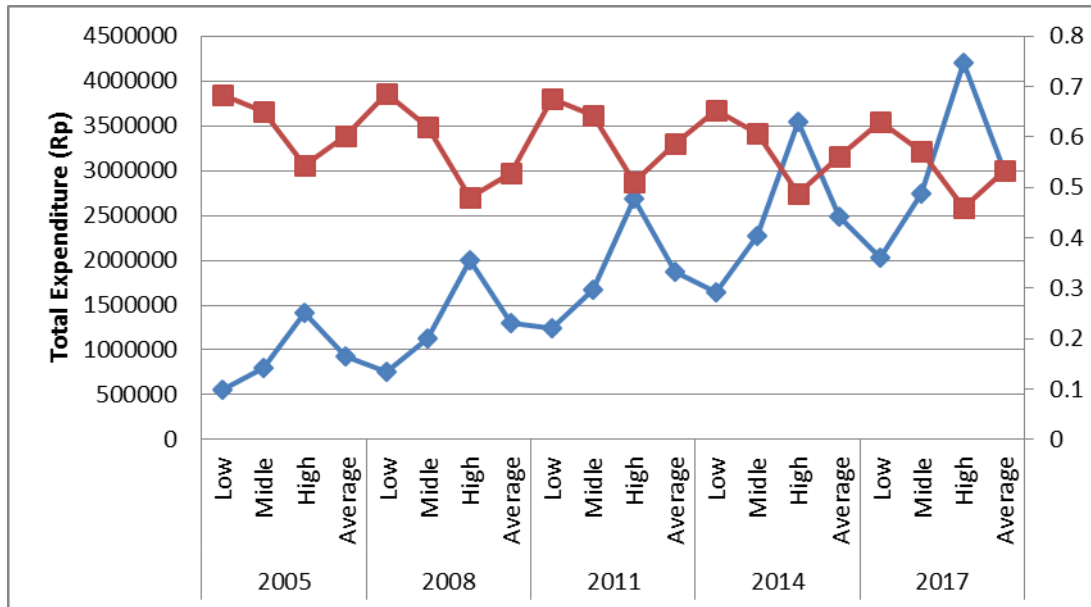
Likewise, changes in household real expenditures must be seen as an indicator of changes in the level of household welfare, whether the household is more prosperous or not during an economic crisis. In conditions of an economic crisis, the total household expenditure may be greater than the income received by the household, especially for low-income households, because according to Warr (1999), the wage increase that occurred during the crisis was still lower than the price increase, or in other words, the inflation rate was higher. So that real wages fall, likewise, according to Irawan (1998) research and Iriawan and Romdiati (2000).

Second, related to the proportion of food expenditure. In general, the proportion of expenditure in the 1996-2017 periods was on average in 50-70 percent, especially for middle and low-income groups in the range of 60-70 percent. The portion of food expenditure in the range of 60 percent indicates low welfare and food insecurity. These results are in line with the research of Soekirman (2000) and Melgar-Quinonez et al. (2006) and Pakpahan, et al. (1993), which essentially states that there is a relationship between the proportion of food expenditure and household food security. The share of food expenditure is inversely related to food security; the larger the share of food expenditure, the lower the resilience of the household concerned. The results of other studies that are in line are the research of Ilham and Sinaga (2007), Purwaningsih et al. (2010), Miranti et al. (2016), Puspita and Agustina (2019); and Vaulina (2019).

The results of Wardhani's research (2017) are somewhat different. The proportion of rural household food expenditure is sometimes not in line with the results of previous studies because rural households still depend on their own production to meet their family's food needs. As a result, even though the proportion of food expenditure is large, they are not necessarily food insecure because their food needs often come from their own production.

However, using Susenas data indicators such as table 1 and previous studies shows that for the two groups of households in this village area, the average is not yet prosperous. In addition, this high percentage of expenditure also indicates a decline in food security at the household level, especially in low

and middle-income households. They will, of course, prioritize the fulfillment of food needs over non-food needs so that in groups of households with low incomes, most of their income is used to buy or spend on food.



Sources: Susenas 1996, 1999, 2002, 2005, 2008, 2011, 2014, 2017. BPS.

Fig. 1. Total food expenditure and proportion of Indonesian rural household by income group 1996:2017

In addition, the data also shows that from period to period, the low-income household group has a smaller percentage change in food expenditure than the middle and high-income household group. However, the percentage value of the expenditure is still the highest. This illustrates that whenever there is an increase in food prices, the low-income household group is the most affected compared to the high-income household group because a large portion of the income of low-income households is used to buy food.

Therefore, to improve the welfare of the people in the village area, especially those related to food and income, it is the availability of job opportunities to get a higher income. This includes considering and paying attention to factors that affect the level of income and purchasing power of rural communities, for example, the level and structure of control of production factors, the efficiency of commodity marketing, procurement of production facilities, and consumption needs of rural communities originating from cities (Junaedi, 2014).

Conclusions

Based on the previous description and discussion, it can be concluded that during the observed period of time, the total expenditure of rural households

experienced changing and different dynamics, both between time and between income groups. Then the proportion of food expenditure in the observed period has different dynamics, namely the proportion of food expenditure decreases with increasing income. As an implication, the proportion of food expenditure deserves to be used as a welfare indicator because it can be measured by numbers, simple to obtain and interpret, objective, and responsive to changes in economic conditions. Meanwhile, to obtain more specific results between the share of food expenditure and the level of welfare, research can be developed for a more specific scope, for example dividing certain household groups by area or income level.

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Appendix 1. Total expenditure and proportion of Indonesian rural household Food Expenditure by Income Group in 1996:2017

Periods	Income Group	Nominal Income Level (Rp)	Proportion of Food Ekspenditure (%)
1996	Low	26 741.29	68.33
	Midle	46 009.10	63.51
	High	109 786.80	41.56
	Average	51 058.60	57.80
1999	Low	79 089.50	74.41
	Midle	138 337.10	68.66
	High	272 009.50	53.67
	Average	141 374.30	65.58
2002	Low	109 825.10	70.54
	Midle	180 571.90	67.58
	High	344 407.80	42.80
	Average	185 042.70	60.31
2005	Low	563.896,70	68,26%
	Midle	800.539,90	65,00%
	High	1.407.414,00	54,33%
	Average	923.950,20	60,24%
2008	Low	757.401,90	68,56%
	Midle	1.133.185,00	62,02%
	High	1.997.794,00	47,91%
	Average	1.296.126,97	52,77%
2011	Low	1.246.211,00	67,66%
	Midle	1.669.908,00	64,27%
	High	2.684.208,00	51,15%
	Average	1.866.775,67	58,74%
2014	Low	1.648.684,00	65,39%
	Midle	2.268.425,00	60,62%
	High	3.549.633,00	48,87%
	Average	2.488.914,00	56,09%
2017	Low	2.028.684,00	63,00%
	Midle	2.738.425,00	57,15%
	High	4.199.633,00	46,07%
	Average	2.988.914,00	53,28%

Sources: Susenas, BPS Indonesia