

## **Factors Affecting Household Foods Expenditures of Cassava Farmers In Buton District Southeast Sulawesi Province, Indonesia**

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**Abstract.** *Household food expenditure is important to be studied, especially in households of cassava farmers with limited incomes. The Purpose of this study was to analyze the factors that affect household food expenditure cassava farmers, either simultaneously or partially. The study was conducted in the District Pasarwajo Buton in 2017. The primary data were obtained from 32 respondents were determined by simple random sampling technique. Data were analyzed by using multiple linear regression analysis. The results showed that the variables simultaneously cassava farm income, non-farm income of cassava, education of household head, education housewife, the number of household members, and the price of rice has significant affect on household food expenditure of cassava farmers. Partially only four variables were significant, ie. farm income of cassava, income of non farming cassava, number of household members, and price of rice, while two other variables, that consist of education of household head and education of housewife did not significantly affect food expenditure farming households of potatoes wood.*

**Keywords** - *food expenditures, household, cassava farmers, Indonesia*

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### **I Introduction**

Indonesia as countries are at large population face a very complex challenge within meet the food needs of population. Therefore the policy of food security become a central issue in development as well is a major focus in development agriculture (Suryana, 2005). Increased food security is necessary because food is the most basic human need, so it is a human right to not experience hunger. Food security includes not only the national level, but also the level of household (Ariani and Handewi, PS Rachman, 2003).

According to the Law No. 18 of 2012, the food in the broad sense everything that comes from biological sources of agricultural products, agriculture, forestry, fisheries, livestock, and water, whether treated or untreated designated as food or beverage for human consumption, including material

additional, wishful raw materials, and other materials used in the preparation, processing, and / or manufacture of food or beverage. Although food availability has generally exceeded food sufficiency standards, national adequacy does not guarantee food sufficiency at the household level.

Food is a basic human need. Ability to meeting the basic necessities of life are closely related to income earned. Households with low incomes will prioritize expenditures for food needs. In

the Law No. 7 of 1996 affirmed that the right of everyone to obtain food with an "affordable" emphasis that contains deep meaning getting everyone's food is easy access it and easy purchase price obtained by everyone. Food prices it will affect purchasing power society, because the purchasing power is affected by the amount of public income (Sianipar, et al., 2012).

Broadly speaking, the allocation of the use of household consumption expenditure can use classified in two groups, ie expenditure for food and non-food expenditure. In a country developing, food expenditure is still the largest part of total household expenditure (Yuliana, et al, 2013). Along with the shift and increased revenue, the proportion of food expenditure patterns will decrease and spending on non-food racing will increase, with these conditions will be measurable level of social welfare and the ability of communities to meet their food needs, or both (Buhang, 201 5).

In Buton District, Southeast Sulawesi Province has 37,415 houses and 11,107 farming households (30 percent) of them are cassava farmers. According to Saediman, et al (2015) in

Buton, cassava farmers commercialize cassava plants in the farming subsystem are rotated with corn. Cassava farming is one source of household income for farmers in Buton. Furthermore Munirwan, et al (2017) suggested that source of income of cassava farmers, apart from cassava farming is sourced from other

farm and non farming. Household income derived from various sources amounting to 76.84 percent at a location right to food expenditures. This indicates that the proportion of household expenditures cassava farmers in Buton still dominated by spending on food needs. Therefore, this study aimed to analyze the factors that mempengaruhi household food expenditure cassava farmers.

## II Research Method

The study was Carried out in April-July 2017 in Pasarwajo Subdistrict of Buton District in Southeast Sulawesi Province, Indonesia. Buton District is located between the coordinates 4° 56' - 6° 25' of south latitudes and longitudes 122° 0' - 123° 34' East. Pasarwajo Sub district is located in the east part of Buton Island and has a size of 356.40 km<sup>2</sup>. The major economic activity of the inhabitants is agriculture. The main food crops grown are cassava, upland rice, corn, and sweet potato. The Subdistrict consists of two 2 villages. It has 5 8 6 10 inhabitants, consisting of 6, 391 Households. All These villages produce cassava as a source of income of the farmer households.

The method used in this research is survey method. Data and information collected by using interviews based on a questionnaire. Data collected in the interview include socio-economic characteristics of farmers and farmers' household food expenditure. Sampling is done randomly (*simple random sampling*) with a total sample of 3 2 households of farmers (15%) of 213 households cassava farmers.

Data were analyzed using linear regression analysis multiple by Algifari (2000) with the following equation:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 + b_4 X_5 X_5 + B_6 X_6 + e$$

Where :

Y = household food Expenditure (USD / year)

a = Constants

b<sub>1</sub> ... b<sub>6</sub> = coefficient of regression

X<sub>1</sub> = Revenue cassava farming (USD / year)

X<sub>2</sub> = non-farm income of cassava (USD / year)

X<sub>3</sub> = Education of household head (Y ear)

X<sub>4</sub> = Education housewife (Years)

X<sub>5</sub> = Number of household members (People)

X<sub>6</sub> = The price of staple food of rice (USD / kg)

## III Result and Discussion

### 1. Characteristics of Respondents

Entire households interviewed are cassava farmers who attempt to potato farming as a source of household income. Table 1 shows that the majority of respondents (75%) were aged between 15-5 4 years (with an average of 46 years), while respondent older than 54 years is only 25%. These facts indicate that most respondents or average are at a productive age. Based on the level of formal education shows that 1 5 .6% of respondents had never attended school, 12.5% t very elementary, 2 8. 1% have finished junior high school, and 4 8. 3% have finished high school. The condition indicates the majority of respondents have formal education, although with different levels.

**Table 1. Characteristics of cassava farmer respondents**

Characteristics	amount	Percentage
Age		
15 - 54	28	75.0
> 54	4	25.0
Education		
No school	5	15.6
Primary school	4	12.5
Junior high school	9	28.1
Senior High School	14	4 3.8
Household members		
<4	5	15.6
4 - 6	18	56.3
> 6	9	28.1
Experience trying		
<5	5	15.6
5 - 10	11	3 4.4
> 10	16	5 0.0

Source: Survey field, 2017

Table 1 shows also that the majority of respondents (56.3%) had a number of members of the household of 4-6 people, with an average of 5 people. Respondents with the number of households less than 4 as much as 15.6% and which has more than 6 people as much as 28.1%. The large number of household members can be a source of family labor in supporting the development of cassava farming. Furthermore, based on experience trying to show the largest proportion of all respondents (50%) have experience of trying more than 10 years, whereas those who have experience of 5-10 years and less than 5 years respectively 34.4% and 15.6% (with an average of 16.5 year). This shows that the average respondent has experienced in managing cassava farming.

**2. Food Expenditure house t tine Respondents**

One indicator to see the level of family welfare is through the structure of expenditure. Households with a share of higher food expenditure classified as household welfare levels relatif lower than the proportion of households with low food expenditure (Nopirin, 1997). In general the needs of household consumption or expenditure of food and non-food needs where the needs of both are different.

Foodstuffs consumed daily by household respondents were grouped into 6 (e nam) major groups, namely rice and tubers, animal and vegetable, oil and seasoning, sugar, coffee and drinks, vegetables and fruits, as well as smoking. Table 2 shows that household food expenditure biggest that for rice and tubers (rice and cassava) reached 42.8 percent and for expenditure of animal and vegetable products (fish and eggs) of 27.1 percent. The results of the same study proposed by Firdaus, et al (2013) that biggest household food expenditure that is for grains reached 22.24 percent. The large value of expenditure for grains, indicating that rice / rice is the main staple food in the household. According to research conducted by Purwantini and Mewa (2008), rice is the main source of carbohydrate and is a national food staple. Staple foods such as rice seems difficult to change although many households face a bad season, so the increase in rice prices are expected to have little impact on reduced consumption of rice.

**Table 2. P roporsi Food Expenditure Structure of Household Respondents**

Food Expenditure	Percentage
Rice + Tuber	42.8
Animal + Vegetable	27.1
Oil + Spices	2.5
Sugar + Coffee + Drinks	7.3
Vegetable + Fruit	4.1
Cigarettes	16.2
<b>Total</b>	<b>100</b>

Source: Munirwan Zani et al, 2017

Other food expenditure that has a value that is large enough that spending on cigarettes was ranked the third largest with a share of expenditures by 16.2 percent of the total expenditure of farm households. Spending on cigarettes needs is higher than for oil and seasoning, sugar, coffee and drinks as well as fruit and vegetable needs, each by 2.5 percent, 7.4.3 percent and 1 percent. Based on the survey results revealed that the average head of household smoking respondents consumed by the number of 1-2 packs / day.

**3. Factors that Influence the Home Food Expenditure t tine Respondents**

Farmers' expenditure illustrates how many farmers are organizing and take advantage of his opinions for meet their household needs. One farmer household expenditure which is spending to buy a food needs. Analysis of the factors affecting food expenditure in the study conducted at the household level cassava farmers. The result of regression analysis factors that affect household food expenditure cassava farmers with variables p wishful expenditures dependent on independent variables are presented on Table 3.

**Table 3. Regression Analysis Results factors that affect household food expenditure of cassava farmers**

Variables	b	t-count	Significance
Cassava farm income	1.839	2.257	0033 *
Non-farm income of cassava	0.230	2.985	0006 *
Education head of household	-290292.54	-2.003	0.056 <sup>ns</sup>
Education housewives	122174.44	0.694	0494 <sup>ns</sup>
Number of household members	952142.36	2.506	0019 *
The price of rice	1498.10	2.452	0022 *
(Constant)	-1.282E7	-2.397	0024 *
<b>R<sup>2</sup> = 0.775 0</b>			
<b>F-count = 14.38</b>			

Description: \* significant (5%)

<sup>ns</sup> non-significant (5%)

Results of regression analyzes the factors that affect household food expenditure cassava farmers derived indigo  $R^2$  by 0,7750 means the 77,5,0% variation of variabel dependent can be explained by factors which is in the model (variable independent), while the remaining 22.50% explained by other variables outside the model. From the F test can be known the value of F - count 14 3 8 greater than the F-table 5%, this shows the independent variables consisting of: farming income of cassava, the income of non farming cassava, education of head of household, education housewife, the number of household members, and the price of rice together influential significantly affect household food expenditure cassava farmers at a rate of 5% error. Therefore the model used for the estimation is sufficient adequate.

Individually from t test can also known that variable cassava farm income, non-farm income of cassava, the number of household members, and the price of rice influential n of paragraph against the respondent household food expenditure the error rate of 5%, while education and education of household head housewife no have a real impact. This gives value meaning coefficients of the variables household head education and education of housewife no meaningful, meaning increase or decrease education level of head of household and education of housewife no effect on household food expenditure cassava farmers.

Variable cassava farm income and non-farm income of cassava significantly and positively related to household food expenditure cassava farmers; it means that if the household income from these two sources increases, the household food expenditure will increase as well. This indicates that the food needs remains a priority in household consumption of cassava farmers. It can be concluded conditions

household income still limited. This is in accordance with the law Engel who argued that the group of low income people will use most of their income to meet their food needs in advance (Nicholson, 1995).

Similarly variable total household members has significant and positive related to household food expenditure cassava farmers. This means that increasing the number of household members will be followed by an increase in household food expenditure. Because each member of the household would require the consumption of food, so it will boost household food expenditure. Prasetyoningrum, et al (2016) explain that total of household members will affect the percentage of consumption household food, as it increases number of household members, then needs households will increase.

Rice prices also showed a real influence and positive impact on household food expenditure cassava farmers. This indicates that rice is a staple food household, so p Increased rice prices force any low-income households to take action to prioritize spending on food rice. Thus, the increase in the price of rice will result in the expenditure of household food of cassava farmers to increase. Darwanto (2005)states that the higher the staple it will further affect the expenditure household food. So that it can concluded that the higher price of materials then the principal will affect higher food expenditure as well.

#### **IV Conclusion**

The results showed that household food expenditure cassava farmers dominated by spending on food groups rice and tubers, animal and vegetable, as well as smoking. The household food expenditure is significantly influenced by variables cassava farm income, non-farm income of cassava, the number of household members, and the price of rice. The increase of these four variables resulted in greater household food expenditure. Household cassava farmers are advised to stop smoking and take advantage of the resulting cassava as a staple food farming households to reduce household food expenditure.

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