The Contribution of Housewives to the Income and Welfare of Farmer Households in Jonggat District, Central Lombok Regency, Indonesia

[1]Candra Ayu, [2]Wuryantoro

[1,2]Agribusiness Study Programme, Faculty of Agriculture, University of Mataram, Indonesia

Abstract: **This study investigates the challenges faced by farmers in meeting their family's needs as the cost of living increases. Women are playing an active role in improving their family's economic situation due to the income-need imbalance. The research aims to determine the contribution of housewives to family income and the level of welfare of farmer households in the Jonggat District, Central Lombok Regency. Thirty farmers were interviewed using a descriptive and analytical method. The results reveal that the total income of farming families in the Jonggat District was IDR 13,259,772 per year, with women farmers contributing significantly to income at 32.6%. However, based on household purchasing power standards and farmer household income exchange rate criteria, the farmers and their families are still not prosperous.**

Keywords: **Housewife, Contribution, Welfare.**

I. INTRODUCTION

Indonesia, known as an agrarian country, should rely on the agricultural sector as a source of economy and as a pillar of development. The role of the agricultural sector in economic development is very important because most Indonesians depend on the sector for their livelihood. If planners are seriously concerned about the welfare of their people, then the only way is to improve the welfare of most members of the community who live in the agricultural sector (Arsyad L., 2010). In addition, the agricultural sector is still part of the potential development resources to be used as a strategic sector for current and future development planning, both at the national and regional levels (Fortunika, S. O, et.al., 2017).

Agricultural development in a region not only aims to increase production, but also leads to an increase in community income, expansion of employment, improvement of farmers' living standards, and welfare improvement. The ability of the agricultural sector to contribute directly to economic growth and the welfare of farm households depends on the level of farm income and the surplus generated by the sector itself. Thus, the level of farm income, besides being a major determinant of farm household welfare, has also emerged as one of the important factors conditioning economic growth (Soekartawi, 2003).

Along with the times and increasing family needs, on the other hand, the price of needs is too high, causing an imbalance between income and needs. According to Salaa, J. (2015) the increasing needs of households are one of the reasons women also participate in improving their family's economy. Women are currently not only acting as housewives but also working in other sectors outside the home.

Women have a role that is no less important than men in all aspects of life, especially in family economic activities, although sometimes it is still felt that there is discrimination in attention to women (Pudji, et al, 2011). Related to the role of women, regardless of the economic level achieved by a country, women have a significant role in agricultural and rural development. In the agricultural sector, women not only produce and process agricultural products but are also responsible for marketing agricultural products and other commodities (Sukiyono, et al, 2008).

Central Lombok is a regency dominated by the agricultural sector. The economy of the people of Central Lombok still depends on agricultural products ranging from food crops to plantations. Based on the 2018 "Sakernas", around 36.56 percent of the population of Central Lombok Regency work in the agricultural sector, while the rest are spread out in trade, industry, services, and other sectors. As much as 20.71 percent work in the trade sector, 17.09 percent in the industrial sector, 12.54 percent in the service sector, 8 percent in the construction sector, and the remainder in other sectors (BPS, 2020).

Jonggat District is one of the Districts in Central Lombok Regency with agricultural potential, especially irrigated rice fields which are quite extensive, namely 4900 Ha, and occupies the second irrigated land area after East Praya (BPS Lombok Tengah 2020). With this extensive irrigated land, the employment opportunities for both men and women farmers in food crop farming are also quite large. However, the average land area owned by farmers is relatively small at 0.28 ha. With a small land area and dependence on the agricultural sector as the main source of income, can farmers and their families meet their daily needs. Based on the household income that can be generated, women have employment opportunities that can generate income for their households, as an effort to reduce poverty in rural areas. (Alfrida, A., Noor, I.T., 2017). The research aims to: (1) Know the contribution of housewife's income to family income. (2) Know the level of welfare of farmer households

II. RESEARCH METHODOLOGY

The methods used in this research are descriptive and analytical (Timothy 2017). The descriptive method aims to determine a factual, and accurate description of the facts, characteristics, and relationships between the phenomena being investigated. The time perspective reached in descriptive research is the present time, or at least the period that is still affordable in memory. The analytical method is aimed at analyzing and making a deeper interpretation of the relationships between the variables studied (Nazir 2014).

A. Research Location and Respondents

This study took place in Jonggat District, focusing on three specific villages: Puyung Village, Jelantik Village, and Sukarara Village in Lombok Regency Indonesia. These locations were chosen through purposive sampling, considering their significant areas of planting and rice production, as well as the high number of individuals working in agriculture compared to other villages (according to BPS, 2020). The study included 30 randomly selected farmers as respondents and utilized descriptive analysis to compile, process, present, and draw conclusions from the collected data..

B. Data Analysis

To answer the research objectives, several analytical tools are used as follows:

B.1. Household income

According to Iriani Datau T, et.al. (2019) farmer household income is income derived from farming activities (on farm), non-farming (off farm) and from outside agricultural business which can be calculated using the following formula

HI = I on farm + I non own farm + I outside farm

Notes :

Hi   *= Household Income*

I on farm   *= Income generated from farm activities*

I non own farm = Income earned outside of own farming

I outside farm   *= Income earned from outside the farm*

B. 2. Contribution of housewife's income to family income

To determine the contribution of farming women's income to family income using the following analysis (Marisa in Pratiwi, D., et.al, 2022; Riyadh, M.I, 2015):

HWC = HWI/HI x 100

Notes :

WC = Women contribution

HWI = Women Income

HI = Household Income

The level of a woman's contribution to the total family income is determined as follows.To determine the level of women's contribution to total family income is measured by:

a. If her income makes up less than 50% of the total family income, her contribution is categorized as small

b. If her income makes up 50% or more of the total family income, her contribution is categorized as big.

B.3.. Analysis of Family Welfare Levels

Farmer Household Welfare according to Sudana, at.al., 2017 can be analyzed using the following

indicators:

a. The level of purchasing power of farmer households

The purchasing power of farmer households can show indicators of the economic welfare of farmers. Higher purchasing power means better access to food, thus improving family food security.

$PPFH = HI/(HE - CF)$

Notes:

PPFH = Purchasing power of farmer households

HI =Farmer's household income of (IDR/year)

HE =Household expenditure (IDR/year)

CF = Cost of farming

b. The farmer household income exchange rate

The level of welfare of the farmer household can also be approached by the concept of the Farmer's Exchange Rate, which is the ratio of the price index received and the price index paid by farmers. The Farmer Household Income Exchange Rate (FHIER) can be calculated using the following formula:

$FHIER = HI/HE$

Notes:

FHIER   = Farmer Household Income Exchange Rate

HI   =Farmer's household income

HE   = household expenditure

III.   RESULT AND DISCUSSION

A. Household Income Structure

Household income, as defined by Iriani Datau T, et.al. (2019), refers to income obtained from farming (on farm), non-farming (off farm), and other non-agricultural sources. The study conducted in Jonggat District revealed that farmer households obtained income from two main sources: the agricultural sector and the non-agricultural sector. Income from the agricultural sector was derived from both on-farm and off-farm activities. The analysis below focuses on the sources of income from farming, including both farming and non-farming activities.

A.1. Income from one's own farming.

According to the study, farmers in Jonggat District cultivate 0.21 hectares of land for three growing seasons each year with a cropping pattern of Paddy-Rice-Soybeans. The table below displays the findings for production analysis, production values, production costs, and income for one year (three planting seasons).

Table 1. Average Production, Production Value and Revenue of Respondent in Farming Activities in Jonggat District

No.	Planting Season I (Rice)	Value
1.	Production (Kg)	1,440
2.	Price (IDR/Kg)	4.700
3.	Production Value (IDR)	6,780,000
4.	Cost Production :	
	Fixed Cost (IDR)	233,818
	Variable Cost (IDR)	1,034,050
	Other expenses (IDR)	64,450
5.	Total Cost Production (IDR)	1,332,318
6.	Revenue (IDR)	5,435,682
No.	Planting Season II (Rice))	
1.	Production (Kg)	1,275
2.	Price (IDR/Kg)	4,700
3.	Production Value (IDR)	5,99,.500
4.	Cost Production :	
	Fixed Cost (IDR)	233,818
	Variable Cost (IDR)	1,034,050
	Other expenses (IDR)	64,450
5.	Total Cost Production (IDR)	1,332,318
6.	Revenue (IDR)	4,660,182
No.	Planting Season III (Soybean)	
1.	Production (Kg)	174
2.	Price (IDR/Kg)	7,500
3.	Production Value (IDR)	1,305,000
4.	Cost Production :	
	Fixed Cost (IDR)	233,818
	Variable Cost (IDR)	552,669
	Other expenses (IDR)	20,542
5.	Total Cost Production (IDR)	929,993
6.	Revenue (IDR)	375,007
Total Income/Revenue (Planting Season I + II + III)		10,470,871

Based on the table provided, it is evident that farmers with a land area of 0.21 Ha earned IDR 10,470,871 from their farming activities across three growing seasons. During the first and second seasons, rice was planted, while soybeans were planted in the third season, resulting in the production of 100 kg of soybeans. Further details regarding production, production costs, and income from farming activities in Jonggat District for one year are discussed below.

a. Production

The table above displays the crop production data for the three planting seasons. During the first season, farmers planted rice and harvested 1,440 kg of rice. In the second season, they also planted rice but only produced 1,275 kg. The third season saw the planting of soybeans with a yield of 173.20 kg. The difference in rice production between the first and second seasons was 11.61%, with the first season having higher yields. This difference was mainly due to pest and disease issues in the second season. The total value of production received by farmers from their farming activities for one year was IDR 5000.

b. Production cost

Production costs in this study include of variable costs and fixed costs. Variable costs are used to purchase production inputs such as seeds, fertilizers, pesticides and are used to pay labor wages. Meanwhile, fixed costs are the cost of depreciation of tools used by farmers in farming. The study revealed that the total production costs for Planting Season I and II amounted to IDR 1,332,318, while the cost for Planting Season III was IDR 929,993. Therefore, the total farming costs that farmers need to incur for one year is IDR 3,594,629.

c. Farmer Income

Farm income, as defined by Suratiyah (2010), is the profit earned by subtracting the total costs of farming activities from the value of production. Based on the table above, it is known that the total income received by farmers during the three growing seasons in their farming activities is IDR 10,470,871.

In the first planting season the production value obtained from rice farming is IDR 6,780,000, while the farming costs incurred by farmers is IDR 1,332,318, then the income earned by farmers is IDR 5,435,682. Meanwhile, in planting season II also from rice farming activities, the income earned by farmers is IDR 4,660,182. In the second rice farming season, farmers earned an income of IDR 4,660,182. In the third season, farmers cultivated soybean commodities and earned a production value of IDR 1,305,000. The cost of production was IDR 929,993, resulting in an income of IDR 375,000 for the farmers.

A.2. Income earned by wives from farming on their own land.

The approach to calculating the income of women from farming is by using the approach of the amount of labor contribution devoted to farming activities for one year in units of man days. The following is the average work outlay of farming women and income in farming activities in one year on a land area of 0.21 Ha

Table 2. Labor and Income Contribution and Women in Farming Activities

No.	Description	Amount
1.	The total need for labor in farming activities for one year (man days)	45.5
2.	Number of female farm workers absorbed in farming activities for one year (man days)	12.5 (27.5%)
3.	Farming income for one year (IDR)	10,470,871
4.	Farmer women's income for one year (IDR)	2,876,615

Table 2 data reveals that women farming workers contribute significantly to farming activities, covering an area of 0.21 hectares. They account for 12.5 man-days or approximately 27.5% of the total labor force required for farming activities throughout the year. If we calculate this in terms of monetary value, the income generated by women farmers from their contribution to farming is IDR 2,876,615. According to Pudjiwati (1983), farming families with limited land ownership tend to encourage their wives to earn more money because the only reliable economic source for such families is human resources. Therefore, women farmers have to work longer to increase their income and meet their livelihood needs.

A.3. Income from farming Outside of Farming

In this research, what is meant by farming income outside of one's own farming business is the income earned by farming families from working on agricultural land owned by other farmers or working as farm laborers. The results showed that the family members who were involved in the activities were farmers and women farmers. The amount of total income per year obtained from these activities is Rp. 1,453,830.00 with details obtained by farmers amounting to Rp. 487,500.00 while women farmers earn Rp. 966,330.00.

A.4. Farmer Family Income from Outside the Agricultural Sector

Sources of non-farm household income obtained by respondents in Jonggat District come from various activities, including construction laborers, motorcycle taxis, barbers, and head of the sub village, while for farm women most of the activities of kiosks. Details of the source and amount of income from outside agriculture (non-farm) can be seen in the following table.

Table 3. Average of Farmer Household Income from Outside the Agricultural Sector

No	Source of Income		Income (IDR/Year)
1.	Husband		
	-	Head of sub village	300,000
	-	Motorbike taxis	93,000
	-	Coachman	72,000
	-	Entrepreneur	100,000
	-	Construction workers	90,000
	-	Barbers	60,000
	Total		715,000
2.	Women (housewife)		
	Seller at the kiosk		966,330
	Total income from off-farm		1,681,330

From the table above, it is known that the total household income obtained from the non-agricultural sector is IDR. 1,681.33 per year. The table above also provides information that from activities outside of agriculture, women farmers are able to generate greater income than those earned by farmers (husbands). Where women farmers earn IDR 966,330 while farmers earn IDR 715,000.

B. Household Income

In this study, what is meant by household income is the total income of all family members, including farmers, farmers' wives, and children, both income derived from the agricultural sector and the non-agricultural sector. The following table describes the details of the source and amount of family income and the contribution of female farmers to family income.

Table 4. Average Household Income of Farmers and Contributions of Women Farmers from Various Income Sources in One Year

No.	Source of Income		Income (IDR/Year)	Contribution (%)
1.	Housewife		2,876,615	
	●	From own farming	966,330	21.7%
	●	From outside own farming (farming workers)		7.3%
	●	From outside the agricultural sector	620,071	4.6%
	Total income earned by the farmer's wife		4,463,016	32.6%
2.	Husband (farmer)			
	●	From own farming	7,594,256	57.3%
	●	From outside own farming (farming workers)	487,500	3.7%
	●	From outside the agricultural sector	715,000	5.4%
	Total income earned by the Husband		8,796,756	65.4%
	Total Household Income		13,259,772	100.00

According to Table 4, the average yearly income of a farmer household in Jonggat District is IDR 13,259,772. The table indicates that the agricultural sector, which includes farming and farm labor activities, is the primary source of income for these households, providing IDR 11,924,701 or about 90% of their total income.

Out of the total household income, the husband earns IDR 8,796,756 annually. His income is comprised of IDR 7,594,256 from farming activities, IDR 487,500 from non-farming activities, and IDR 715,000 from activities outside the agricultural sector. On the other hand, the wife (a farmer) earns IDR 4,463,016 per year. Her income is derived from farming activities (IDR 2,876,615), farming labor activities (IDR 966,330), and non-agricultural activities (IDR 620,071).. Meanwhile for children, research results show that no one has been able to generate income for their family.

C. Contribution of Housewife to Family Income

 The contribution of housewife income is the amount of contribution of income earned by housewife to the total family income calculated in percent (%). Based on the results of the study, it is known that the contribution of women's income to family income in Jonggat District, Central Lombok Regency is IDR 4,463,016 or 32.6%.

According to Zulkifri et al., in Hernanto D., 2014 that to find out the category of the contribution of farm women to family income can be seen in the following table:

Table 5. Criteria for Contribution of Women's to Family Income in Percent

No.	Contribution (%)	Criteria
1.	0.00 -10.00%	Very little
2.	10.01 – 20.00%	Little
3.	20.01%-30.00	Sufficient
4.	30.01 – 40.00	Simply
5.	40.01 – 50.00%	Great
6.	> 50 %	Very Great

The table above shows that farm women in the Jonggat Sub-District contribute between 30.01% and 40.00% to their family income, which is considered fairly good. This highlights the significant role played by women in contributing to family income. According to the respondents, the main reason for encouraging housewives to work is the insufficient income of the husband to meet the family's needs. This is consistent with the findings of a study conducted by Bunsaman, S.M. (2018), which concluded that women tend to be active in increasing family income when the husband's income is not enough to cover the daily expenses.

D. Expenditure and Economic Balance of Farmer Households

Farmer household expenditure includes all costs incurred to meet the needs of daily life, while the economic balance of farmer households can be known by comparing total household income with total expenditure. In this study, the type of household expenditure is grouped into two parts, namely: expenditure on food and expenditure on non-food (non-food). In more detail, the structure of household expenditure of farmers in Jonggat District is as follows:

Table 6. Structure of Respondents' Household Expenditure in Jonggat District

No.	Expenditure Type		
1.	Expenditures for food	(IDR/Year)	Percentage (%)
	a. Rice	4,923,600	5.41
	b. Meat	513,000	5.56
	c. Fish	73,000	0.80
	d. Tempeh and Tofu	561,600	6.09
	e. Eggs	541,200	5,87
	f. Cooking oil	336,000	3.64
	g. Sugar	218,400	2.37
	h. Vegetables	449,600	4.88
	i. Fruits	0.00	0.00
	j. Tea	35,200	0.38
	k. Coffee	496,800	5.39
	l. Seasoning for cooking	1,070,040	11.61
	Total	**9,219,040**	**100.00**
2.	Non Food Expenditures	(IDR/Year)	Percentage (%)
	a. Liquified Petroleum Gas (LPG)	374,400	11.44
	b. Kerosene	292,00	5.87
	c. Soap	143,996	4.40
	d. Detergent	177,240	5.42
	e. Home Furniture	150,000	4.58
	f. Clothes	456,000	13.93
	g. Helath	164,000	5.01
	h. Fuel	614,000	18.76
	i. Telephone	185,600	5.67
	j. Electricity	815,400	24.92
	k. Water	0.00	0.00
	Total	**3,372,676**	**100.00**
	Total Household Expenditure (1+2)	**12,591,716**	

Based on the table provided, it is evident that the total annual household spending amounts to IDR 12,491,716. This total is further divided into food expenses of IDR 9,219,040 and non-food expenses of IDR 3,272,676. This information also

highlights the fact that farming families spend most of their income to meet their basic needs. In the previous discussion, it is known that the total income of the farmer's family is IDR 13,259,772 while the total household expenditure is IDR 12,591,716, - per year, thus it can be concluded that the economic balance of farmer households in Jonggat District is in a surplus of IDR 668,056. This condition indicates that the farming community can fulfil its daily needs from the income earned by household members.

E. The welfare level of the farmer's household.

In this study, farmer household welfare was measured by two criteria: purchasing power and income exchange rate.

E.1. Measuring the welfare of farmer households based on their purchasing power level.

The purchasing power of farmer households is determined by the ratio of their total income to their total household expenditure, excluding farming costs. According to Iriany D T (2019), if the ratio between income and household expenses is greater, then it can be said that the family is quite prosperous, and the higher the ratio value, the higher the level of purchasing power of the community and the higher the level of welfare. The results showed that the total income of farmer households in Jonggat District was IDR 13,259,772, while the total household expenditure was IDR 12,591,716 per year, thus it can be seen that the level of purchasing power of the community is 1.05, The ratio value shows that the purchasing power of farmer households is greater than 1, which means that the income of farmer families is greater than their expenses and can be categorized as a fairly prosperous family because it can meet its consumption needs.

E.2. Measuring the wellbeing of farmer households based on Farmer Household Income Exchange Rate

The Farmer Household Income Exchange Rate (FHIER) is an indicator to see the level of ability/purchasing power of farmers in rural areas. It also shows the exchange power of agricultural products in terms of trade with goods and services consumed, as well as production costs. According to BPS (2020), the exchange rate for farmer household income is the ratio between total household income and total household expenditure. The total household expenditure referred to in this study includes expenses for production costs and expenditures for consumption, both food consumption and non-food consumption. In more detail, the FHIER of farmer households in Jonggat District is seen in the following table:

Table 7. Farmer Household Income Exchange Rate Against Consumption, Production Costs and Total Household Expenditures

No.	Description		Value
1.	Total Household Income (IDR) :		13,259,772
	a.	Income from own farming (IDR)	10,470,871
	b.	Income from farming labor (IDR)	1,453,830
	c.	Income from non-agricultural businesses (IDR)	1,681,330
2.	Total Spend:		16,186,345
	a.	Farm production costs (Pp)	3,594,629
	b.	Expenditures for Food (IDR)	9,219,040
	c.	Expenditures for non food (IDR)	3,372,676
3.	Exchange Rate of Farmer:		
	a.	Farm production costs	3.7
	b.	Total consumption	1.05
	c.	Total expenditure	0.9

Based on the table above, it is known that the NTRP on production costs is 3.7, which is greater than the NTRP on consumption, which is 1.05. This indicates that expenditure on consumption (especially food consumption) is greater than expenditure on production activities. This situation also means that to fulfill their welfare, the farming community in Jonggat District allocates more of their income to meet their consumption needs than to fulfill their business. household spending is in deficit. Meanwhile, FHIER to total expenditure is high at 0.9 or less than 1, this means that the exchange rate of farm households to total household expenditure is deficit or negative. This also means that farming families in Jonggat District are not yet prosperous. According to BPS (2020), one of the uses of FHIER is to measure the level of farmer welfare. The greater the surplus, the greater the welfare of farmers. The main cause of the lack of prosperity of farmers and their families is the very narrow ownership of agricultural land, which is only 0.21 Ha, where the agricultural sector is the main source of income for farmers. Another reason is that farmers and their families have not been able to obtain sufficient income to supplement their daily needs, both sources of income from the agricultural sector outside farming and the non-agricultural sector.

IV. CONCLUSIONS

The study concludes that farmer families in Jonggat District earn a total income of IDR. 13,259,772 annually. Interestingly, farmer wives contribute significantly to the total income by 32.6%. While the farmer families' purchasing power is relatively good with a ratio value of 1.05, they are not prosperous as per the farmer household income exchange rate of 0.9.

Since land ownership is limited, farming families in Jonggat District can improve their welfare by exploring opportunities beyond the agricultural sector. One of the ways to increase their income is by focusing on entrepreneurship. Therefore, relevant agencies should provide entrepreneurship training to farming communities to enhance their skills and increase their income and welfare.

REFERENCES

[1] Arsyad, Lincoln, 2010. Development Economics. Fifth Edition, BP STIE YKPN Publisher, Yogyakarta.

[2] Alfrida, A., and Noor, T. I, 2017. Analysis of Income and Welfare Level of Rice Paddy Farmer Households Based on Land Area. AGROINFO GALUH Journal, 4 (3), 426-433

[3] BPS, 2023. Farmers' Exchange Rate--December-2022. https://www.bps.go.id/ pressrelease/ 2023/01/02/1985

[4] BPS NTB Province. 2020. NTB in Figures 2020 (Harvested Area and Paddy Production by District or City in West Nusa Tenggara Province). Publisher of BPS NTB Province.

[5] Bunsaman, S.M., 2018. The Role of Women in Improving Family Economic Welfare (Study of the Role of Women's HSE Officers. Proceedings of Seminar and Community Service, 5 (2), 146-157

[6] Fortunika, S. O., Istiyanti, E. &, Sriyadi. Contribution of the Agricultural Sector to the Economy of Banjarnegara Regency. AGRARIS: Journal of Agribusiness and Rural Development Research, 3 (2), 119-127.

[7] Hernanto, D. 2014. Analysis of the Income Contribution of Guava Picker Housewives at Pt. Nusantara Tropical Farm (Ntf) to Family Income in Lampung Timu Regency. Journal of Management and Business MEDIA ECONOMY, XVIII (2), 82-94

[8] Iriani D T., Canon, Sy., Halid A., 2019. Welfare Level of Farmer Households According to Community Typology. Jambura Agribusiness Journal. Vol. 1, 26-35

[9] Nazir Moh. 2014. Research Methods. Ghalia Indonesia. Bogor.

[10] Pratiwi, D., et. al, 2022. Contribution of Dalima Women Farmers to Household Income. Journal Of Pessian Social Economics, 3 (1), 1-9.

[11] Pudjiwati, S.. 1983. The Role of Women in the Development of Village Society. Jakarta: CV Rajawali

[12] Pudji Umi A., et al. 2011. Analysis of the Role of Women in Farmer Households Supporting the Success of the SLPTT-PUAP Programme in Bengkulu. Bengkulu Agricultural Technology Assessment Centre. Bengkulu City.

[13] Riyadh, M.I, 2015. Analysis of Farmer Exchange Rates for Food Crop Commodities in North Sumatra. Journal of Economics & Public Policy, 6 (1), 17 – 32.

[14] Salaa, J. 2015. The Dual Role of Housewives in Improving the Family Economy in Tarohan Village, Beo District, Talaud Islands Regency. Holistic Journal, VIII (15), 1-16

[15] Soekartawi, 2003. Economic Theory of Production. Raja Grafindo Persada. Jakarta.

[16] Sudana, W. (2007). Final Report of Rural Area Development Study. BBP2TP. Agricultural Research and Development Agency. Bogor

[17] Sukiyono K., Cahyadinata I., Sriyoto. 2008. Women's Status and Food Security of Fisher Households and Rice Farmers in Muko Muko District. Agro-Economiv Journal, 26 (2). 191=207

[18] Timothy, K. H. 2017. Introduction to Research Methodology: A Knowledge Management Approach to Knowledge Development. Andi Publisher. Yogyakarta.