

The Effectiveness of Integrated Agribusiness Cooperatives on The Income of Local Farmers

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ABSTRACT

The objective of agricultural development is to increase the income of farmers and agriculture business actors. The primary problem is the limited capital owned by the farmers. This study determine agribusiness activities and analyze the effectiveness of the Integrated Agribusiness Cooperative on the income level of farmers in Subak Guama, Tabanan Regency, Bali Province. The research subject is the Subak Guama farmers who receive capital assistance, and the object is the income of farmers. This study used quantitative data with descriptive statistical analysis, namely paired sample t-test. The results showed that: (1) The Subak Guama carries out: integrated rice management activities, rice-livestock integration activities; and task to strengthen household business capital, namely independent business loans; (2) There is a difference in the level of farming income of Subak Guama farmers before and after receiving capital assistance for agribusiness cooperatives of 7.24% with an effective level of 86.69% with effective criteria.

Keywords: Capital, Income, Integrated Agribusiness Cooperative

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1. INTRODUCTION

The agricultural sector is one of the sectors that our country still relies on because the agricultural sector contributes a lot to economic development (Ginting, 2004). On the one hand, this sector has a significant role in the national economy, including in the form of contribution in the formation of GDP, provision of food and feed, provision of foreign exchange sources, provision of industrial raw materials, provision of employment, poverty alleviation, improvement of community income, and bioenergy sources. (Prayitno & Budi Santosa, 2006). The agricultural development objective is to increase the profit and welfare of farmers

and agriculture business actors. In achieving these goals, agricultural development activities require the utilization of all the potential in society, natural resources, human potential, technology, and institutional resources optimally, profitable while maintaining environmental sustainability (Anggriani & Widya, 2012).

(Pasaribu, 2012) states that if the government sides with agricultural development, there are five (5) government approaches to economic growth, namely: 1). Increase employment in rural areas, inhibit urbanization in urban areas; 2). Support Indonesia's food security from dependence on imports from developed countries; 3). Optimize existing natural

resources as a gift from God Almighty to Indonesia as an agricultural country; 4). Control the inflation factor, from the demand for foodstuffs; and 5) Provide opportunities for the Indonesian youth generation to open new jobs for youth and a new generation of Indonesians.

In general, family problems are closely related to agriculture in Indonesia. Firstly, farmers find it difficult to change simple technology to increase the productivity of agricultural products. Second, farmers experience limited access to agricultural information. Third, farmers have the right to their human resources. Fourth, the limited capital owned by farmers (Kanisius, 2000).

Agribusiness consists of five subsystems: (1) farming subsystem (on-farm); (2) the upstream industrial subsystem as an input provider (upstream); (3) downstream industrial sub-system, which processes products during one farm (downstream); (4) marketing subsystem, and (5) supporting subsystem (support services). Currently, the portrait of farmers and farmer institutions in Indonesia is still not revealing what is expected (Saragih, 2001). According to (Suparta, 2005), problems that are still inherent in the figure of farmers and farmer institutions in Indonesia are: (1) Farmers' insights and knowledge of production management and marketing network problems are still minimal; (2) Farmers are not fully involved in agribusiness and are still focused on production activities (on farm); and (3) as long as the function of the farmer institution as a forum for the organization has not run optimally.

Subak in Bali has existed since tenth centuries ago, still exists, and provides services to farmers. Subak has

been able to function sustainably as an irrigation system with a socio-cultural character (Ambarawati, 2005). Subak Guama located in Marga District, Tabanan Regency. The total area for one sawahan Subak Guama is 184 ha, which is divided into seven tempek (part of the subak), including the Manik Gunung tempek which is located at the upstream, Pekilen tempek, Kekeran Desa tempek, Kekeran Carik tempek, Guama tempek, Blusung tempek, and tempek Celuk, which is located downstream. The number of krama (members) Subak Guama is 544 farmers.

The success of agribusiness development should be benefited by all farmers by accessing the facilities and activities in Subak Guama. (Sjarkowi, 2004) states that the income of a business depends on the capital. If the capital is large, the production results are high so that the revenue obtained is also high, and vice-versa, if the capital is small, the production results are low. Therefore, the research entitled "The Effectiveness of Integrated Agribusiness Cooperatives on Local Farmers' Income (Case Study in Subak Guama, Tabanan Regency, Bali Province)" is very relevant and very appropriate to do. This study aimed to view agribusiness activities and analyze the Integrated Agribusiness Cooperative on the income level of farmers in Subak Guama.

2. METHOD

The subjects of this research are members of Subak Guama who are members of the Integrated Agribusiness Cooperative, while the object is the net income of members of Subak Guama farmers. The type of data used is quantitative data. The data is focused on the number of quantitative funds from the

Integrated Agribusiness Cooperative given to Subak Guama farmers, as well as their income. Based on data sources, the data used are secondary. Data were collected using documentation techniques and interviews and then analyzed quantitatively and quantitatively, with income analysis and then paired sample t-test with IBM SPSS 20 for Windows.

3. RESULTS AND DISCUSSION

3.1. *Agribusiness Activities of the Subak Guama Integrated Agribusiness Cooperative*

The Subak Guama Integrated Agribusiness Cooperative was established on 1st April 2002 based on togetherness manifested as a traditional local organization and the economic base has been incorporated as a legal entity Number 22 / BH / DISKOP / VIII / 2003 dated 14th August 2003. the function is to organize the management of economic business units for members of the Guama Subak. This Integrated Agribusiness Cooperative is an institutional unit that is inseparable from the existing Subak institutions, because it is a Subak asset management agency sourced from external capital as an effort to empower Subak and its members, especially in the aspect of farming services to improve the welfare of farmers (Ministry of Agriculture, 2011). The source of capital for the Subak Guama Integrated Agribusiness Cooperative for the Bali Integrated Rice Development Project, in the 2002 Fiscal Year amounting to IDR 843,2,000,000.00 for various activities with the value of each activity as follows:

1. Integrated Rice Management Activity (Integrated Crops Management) amounting to Rp. 98,000,000.00;

2. Activities for Integrating Animal Rice (Crops-Livestock System) amounting to Rp. 663,500,000.00; and
3. Activities to strengthen household business capital, namely Mandiri Business Credit, amounting to Rp. 81,700,000.00.

In more detail, some of these activities include various efforts carried out in the Subak Guama Integrated Agribusiness Cooperative, including the following:

1. Integrated Plant Development (Integrated Corps Management)

Integrated Corps Management, namely integrated crop processing is realized in the form of distribution of rice production facilities from the distribution of seeds, fertilizers, and pesticides received by members of the Guama Subak in the form of seeds, fertilizers, and pesticides with a harvest payment system for months and one interest for one percent for one month.

2. Integration of the Corps Livestock System

Corps Livestock System, namely the development of rice-livestock integration realized in the form of cattle credit to members of the Guama Subak with a credit ceiling of Rp. 3,000,000.00 for one head with an interest of one for one percent settled for one month with a repayment period of two years.

3. Independent Business Credit (credit savings and loans)

Independent Business Credit is used to provide assistance to strengthen business capital for women farmers for one year: (i) coconut oil business; (ii) pig farming; (iii) Balinese snack

business; (iv) weaving business; (v) carving business; and trading business.

As for the business development carried out by the Subak Guama Integrated Agribusiness Business-Cooperative in addition to the main activities of the Community Training Center, among others:

1. Rice seed breeding business

In this breeding process, the Subak Guama Integrated Agribusiness Cooperative can only breed 10-20 hectares during one season with a production capacity of approximately 100 tons during one growing season.

2. Compost processing business

The business of processing organic fertilizers uses raw materials for cattle, which are mostly taken from farmer groups in Subak Guama using the active ingredient *Romino bacillus*, which is under the guidance of the Agricultural Technology Research Center. The production of organic fertilizer in Subak Guama reaches an average of 25 tons for one month, and most of it is for ornamental and horticultural crops.

3. Tool and machine service unit for one farm

The tool and machine service unit for one farm is to support activities to increase production during one crop which is carried out from post-planting to post-harvest handling. The tools and machines available are hand tractors, seeders, power threshers, rice milling units.

From 2007 until now, the Subak Guama Integrated Agribusiness Cooperative has implemented a national program, namely Prima Tani (Pilot Program and Acceleration of Technology

Innovation Prisoners for one year). The activities carried out in Prima Tani are as follows:

1. Field of application of cropping pattern technology (food crops and secondary crops) Application of rice cultivation techniques in the form of:
 - a. Use of quality seeds with a recommendation of 20-25 kg in one-hectare
 - b. Planting young seedlings (age 15-21 days).
 - c. Plant 1-2 seeds in one planting hole.
 - d. Planting with the Tapin Legowo system
 - e. Planting with the Tabela Legowo system
2. Processing of livestock waste for solid and liquid organic fertilizers
3. Rice plant seed breeding
4. The introduction of several new high yielding varieties
5. Drying and processing business (Rice Milling Unit)
6. Procurement of colony pens (cattle fattening business)
7. Strengthening of farmer groups/women institutions
8. Establishing cross-agency cooperation networks
9. Improving livestock health
10. Training on Integrated Crop Management Field School, post-harvest, and consultation clinic during one farm

3.2. *Effectiveness of Integrated Agribusiness Cooperatives on Income Levels of Local Farmers in Subak Guama*

Descriptive statistics aim to describe the research object sampled and the characteristics of the data (Sugiyono, 2013). Through descriptive statistics, it is

hoped can explain the data regarding the initial picture of the problem under study and also the state of the data from each variable. The use of descriptive statistics can reflect the income characteristics of Subak Guama farmers in the 2015-2020 period before and after obtaining capital for the Integrated Agribusiness

Cooperative. Indicators in descriptive statistics are focused on the maximum and minimum values. The average income before and after obtaining capital for the Integrated Agribusiness Cooperative for the 2015-2020 period can be seen in the following table.

Table 1. Average Income of Subak Guama Farmers Before and After Obtaining Capital for Integrated Agribusiness Cooperatives for the 2015-2020 Period

	Mean	N	Std. Deviation	Std. Error Mean
Average income before receiving assistance	746.840,00	50	94.007,51	13.294,67
Average income after receiving assistance	800.930,00	50	120.672,01	17.065,60

Source: Primary Data, 2021

Table 2. Paired Samples Test t-test results

	Paired Differences			<i>t</i>	dk	p-value
	Mean	Std. Deviation	Std. Error Mean			
Average income before and after receiving capital assistance	54.090,000	161.296,618	22.810,786	2,371	49,000	0,022

Source: Primary Data, 2021

Table 1 shows that the average income of farmers before obtaining capital for the Integrated Agribusiness Cooperative is Rp. 746,840.00 for one month, whereas the income after obtaining capital for the Integrated Agribusiness Cooperative of Rp. 800,930.00 for one month; then the average income earned by Subak Guama increased by Rp. 54,090.00 for one month for the difference in income of Subak Guama farmers is Rp. 2,704,500, - / month. Table 2 shows the p-value $< \alpha$ (0.05) and the amount of the t-value (2.371) $>$ t-table (2.014) with a significant

level of α (0.05). So, it can be concluded that H_0 is rejected. This means that there are differences in the income of Subak Guama farmers before and after obtaining capital for the Integrated Agribusiness Cooperative for the 2015-2020 period. Thus, there is the influence of the Integrated Agribusiness Cooperative Fund on the income of Subak Guama farmers for the period 20015-2020 with the effective value of the Integrated Agribusiness Cooperative on income is 86.69% which is considered effective. Thus, the average income obtained by Subak Guama farmers

after being given the capital of the Integrated Agribusiness Cooperative is greater than the income before being given the Integrated Agribusiness Cooperative Fund. The correlation between income before and the score after obtaining funds for rural agribusiness development (PUAP) is very low, namely 0.915 with a P value $(0.01) < \alpha (0.05)$. It means the changes in income before obtaining capital are related to changes in income after obtaining capital for an Integrated Agribusiness Cooperative.

This is consistent with previous research, (Tan et al., 2011), stated that the group business capital in the Rural Agribusiness Development Program in Kuala Nenas Village, Tambang District, Kampar Regency can be returned by farmers, meaning that farmers can manage these funds properly so that it can be used for their agricultural process. The Integrated Agribusiness Cooperative is a form of business capital assistance in growing and developing agribusiness businesses for owner farmers, cultivators, farm laborers, and farm households with the aim of : (1) reducing poverty and unemployment through the growth and development of agribusiness activities in rural areas under the potential of the area; (2) increasing the capacity of agribusiness entrepreneurs, Gapoktan administrators, extension workers, and Mitra Tani supervisors; (3) empowering farmer institutions and rural economies for the development of agribusiness activities; and (4) increasing the institutional function of the farmer economy to become a network or partner of financial institutions in the framework of access to capital. The objectives of the Integrated Agribusiness Cooperative to be achieved are (1)

developing agribusiness businesses in poor/underdeveloped villages under the village agricultural potential; (2) developing Gapoktan / Poktan owned and managed by farmers; (3) improve the welfare of poor farmer households, small scale farmers/breeders (owners and or cultivators), and farm laborers; and (4) developing agribusiness actors that have daily, weekly, and seasonal businesses (Fatah, 2006).

Indicators of success for the Integrated Agribusiness Cooperative in accordance with Kepmentan No. 01 / Kpst / OT.140 / 1/2014, namely: (1) The success indicator of output means that it can help capital problems to carry out productive business for farmers and can strengthen the human resource capacity of Gapoktan managers, extension assistants and PMT; (2) Indicators of success outcome means helping to improve Gapoktan capabilities in facilitating and managing business capital assistance for Gapoktan members, can increase farmers' income (owners and / or cultivators), can increase the number of farmers, farm laborers and farm households who receive business capital assistance, can increase agribusiness activities in rural areas; (3) Benefit and impact indicators mean that it can reduce the number of poor farmers and unemployed in rural areas, can improve the function of Gapoktan as a farmer economic institution in rural areas owned and managed by farmers, can develop agribusiness and farm household economic businesses in rural locations that received the Integrated Agribusiness Cooperative (Prayitno & Budi Santosa, 2006).

Based on the survey results on Subak Guama farmers, the decrease/increase in average income is

thought to be due to many factors, including (1) low capital management skills of some Subak Guama farmers; (2) the use of funds outside agricultural purposes, for example, to buy motorbikes; (3) different types of land that cause different quality and quantity of agricultural products; (4) different types of cultivated plants (Vegetables and Flower Pacah) being cultivated so that the sale of the harvest and harvesting period are differently related to the income of each member; (5) in selling agricultural products, most of the farmers still depend on middlemen who sometimes play with prices in the market. Most of the farmers have not been able to distribute their crops; (6) crop failure in certain seasons; (7) farmers' lack of ability to see market price opportunities; and (8) Some farmers do not follow the correct agricultural management pattern, for example, related to spacing more tightly / densely, fertilizing or using excessive insecticides, etc. which causes a decrease in crop yields. Therefore the performance aspects and performance quality of Subak Guama farmers need to improve performance, namely the existence of a Subak work plan, holding meetings/member meetings, Gapoktan not yet having a legal entity, time and loan realization, business feasibility analysis, reporting made by Subak management, business development members, the existence of supervision in terms of financing, use of funds, facilities and infrastructure, the role of extension assistants on a sustainable basis; There is a need for training on strategies for dealing with market prices, distribution methods, and post-harvest processing.

The income aspect should be the focus of the government's attention in

poverty alleviation. However, in its implementation, it is hoped that there will be continuous control and training. Increase household income can be done by diversifying household businesses. Of course, rural communities will never be separated from the agricultural sector, so household business diversification is also inseparable from the agricultural sector. The government's way of reducing poverty through an approach to fulfill the basic needs of the farming community, one of which is capital, is very important, especially for poor/poor farmers. The hope is that the funds for the development of the Integrated Agribusiness Cooperative must continue to be distributed if possible in a larger amount because it can increase the income of some farmers, especially farmers in Subak Guama, Tabanan Regency, Bali Province to alleviate poverty. Funding assistance as capital is very important for underprivileged farmers. With sufficient capital, farmers can buy seeds, fertilizer, and maintain agricultural land to earn income. (Amuelson et al., 2002) stated that the size of the capital used affects the income earned. (Soekartawi, 2008) is stated that the concept of capital is based on the function of funds to generate income. All the funds owned by the company are used to generate income under the company's main business.

4. CONCLUSIONS

Based on the results of research on farmers in Subak Guama, Tabanan District, Bali Province. It can conclude that:

1. The Integrated Agribusiness Cooperative in Subak Guama was established on April 1, 2002, and

incorporated as a Cooperative Number 22 / BH / DISKOP / VIII / 2003 dated August 14, 2003, with several main activities, namely: (i) integrated crops management activities. management); (ii) rice-livestock integration activities (crop-livestock system); and (iii) household business capital strengthening activities, namely independent business loans;

2. There are differences in the level of income of farmers before and after receiving capital assistance from the Integrated Agribusiness Cooperative ($p < 0.05$), with an average income before obtaining capital amounting to Rp. 746,840.00 and after Rp. 800,930.00; with the effectiveness value of PUAP on Income is 86.69% with Effective Criteria.

The recommendations are (a) supervising financing, use of funds, facilities, and infrastructure; (b) providing continuous counseling and assistance for each Subak farmer; (c) carrying out training related to market pricing strategies, harvest distribution methods, post-harvest processing; and (d) establishing a standard minimum price rule for the purchase of coffee and Gemitir crops so that farmers are not harmed by middlemen.

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