



PROCEEDING

Academic Community Empowerment through International Journal Publication

(International Conference and Call for Paper, MoU Multi Campus,
OJS Training and Clinic Manuscript for International Journal's Article)

Jakarta, January 13-14, 2017

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PREFACE

Praise being said to Allah Almighty God for all the grace and guidance that has been given to us all, so the Proceeding of the ADRI 2017 International Multidisciplinary Conference and Call for Papers is completed. The proceeding contains a number of articles and research papers from lectures, teachers, students, researchers and/or observers of the development of science and technology.

This seminar is the series of the International Seminar organized by ADRI, the first was held in Lombok, Mataram; the second was held in Surabaya; the third was held in Pontianak. The fourth International Seminar in Jakarta invites four keynote speakers from Japan, Malaysia, Thailand and Singapore. Paper participated in this conference has reached to more than 200 papers.

On this occasion we would like to thanks to our Keynote Speakers:

1. Prof. Dr. Mamoru Yamada (Japan)
2. Prof. Dr. Tharek Abdul Rahman (Malaysia)
3. Prof. Dr. Ir. Gatot Priyowirjanto (SEAMEO Bangkok)
4. Prof. Dr. Andrivo Rusydi (Singapore)

In addition to the international conference, this event also conduct inauguration of ADRI DPD DKI Jakarta-Banten, OJS Training and Clinic Manuscript for International Journal's Publication.

Hopefully, this proceeding may benefited to all of us, for the development of science, technology, arts, culture and sports. In addition, it is also expected to be a reference for the nation and state-building efforts so that science and technology will become a strong pillar in facing challenges in the future.

Sincerely,
Chief Executive

Dr.Ir. Illah Sailah, M.S.
Chairman ADRI DPD DKI Jakarta Banten

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*WITHIN FARMERS' ORGANIZATION: Case of Subak Kedua, Denpasar City,
Bali Province, Indonesia*

Putu Dyatmikawati

*INTEGRITY OF HUMAN RESOURCES AND PERFORMANCE OF THE
ORGANIZING ELECTIONS 2017*

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Meithiana

REPRESENTATION OF WOMEN IN MEDIA SITES ONLINE

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Novi Andayani Praptiningsih

DEVELOPING COOPERATIVE OF SUBAK TO IMPROVE AGRIBUSINESS: Case of Subak of Guama, Bali Province

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Abstract. Farmers group in Bali called *subak* as a traditional irrigation system and has been acknowledge as a world cultural heritage rewarded by UNESCO. In order to maintain subak an support rural development, government has introduced agribusiness program into subak system by establishing *subak* cooperative. This study aims at portraying the establishment and development of *subak* cooperative and describing the strength, weaknesses of *subak* cooperative relating to agribusiness works. The study was conducted in a *Subak* of Guama selected purposively as it is the only one of *subaks* in Bali which has been developed by government. Data collected was fully analyzed by using descriptive method.

The results of study pointed out that cooperative of Guama *subak* has established since 2003 under the law of cooperative. The main agribusiness works run by cooperative consists of integrated crops management, crop livestock system and micro credit. Aside from these, the activities conducted are producing of rice seeds and organic fertilizer and providing of agro-inputs service. The strengths of *subak* cooperative are (i) good interrelation among the farmers; (ii) the bond between farmers and their management board, (iii) *awig awig* (internal law) of *subak*; and (iv) religious value in the *subak*. While the weakness are limited size of paddy field, (ii) low formal education of farmers, (iii) the limited good agricultural practices/technologies, and (iv) lack of post-harvest technology.

Keywords: *Subak, agribusiness, cooperative and social capital.*

I. INTRODUCTION

One of the agricultural development objectives is to develop economic activities on rural economic development through agribusiness and develop agribusiness companies which have high competitiveness, sustainability and decentralization (Fatah, 2006). Agriculture and rural developments held in Indonesia seem to get less serious attention. The main mistake in agricultural development still reflects a marginalization concept for the local institutions. This unsuccessful achievement of agriculture and rural development is caused by lacking of involvement of the existing organizations in the community or a rural farm itself (Fatah, 2006; Syahyuti, 2007; Chambers, 1983). All forms of traditional aspects (social, cultural customs) in the villages and communities must be empowered to achieve the goal of agricultural and rural development (Elizabeth, 2007).

In case of Bali, the agricultural development has been carried out with less emphasis on the local institution endowment which has been existed. (Elizabeth and Iwan, 2009). Institution of farmers tends to be positioned as a mere tool to implement the project, not as an attempt to the empowerment and without any strengthening of their social capital (Syahyuti, 2007). Hartono (2009) also argues that the powerlessness of the functioning of local institutions such as farmer groups and Water Users Association (WUA), including *subak* will result in the failure of agribusiness development in rural areas. Sahyuti (2007) adds that the introduction of outside institutions that have less attention to existing structure and networks of local

institutions with a top-down approach led to low participation of community. In this context, the study of economic development at the local institution (*subak*) which has cultural basis such as social capital needs to be done. The strategy of community empowerment and local institutional are seen as urgent in rural development programs to strengthen the networks of rural economy (Elizabeth, 2007).

Subak that has successfully conducted agribusiness activity is *Subak* Guama located in the District of Marga, Tabanan regency since 2002 through the Direct Financial Assistance for Community (BLM). This *subak* was purposively selected as a research study. Objectives of the study are to portray the existence of *subak* cooperative and describe the strength, weaknesses, opportunities and threats of *subak* cooperative relating to agribusiness works. Data collected by employing interview, focus discussion group, and direct observation. Data is fully analyzed by using descriptive method.

II. RESULT AND DISCUSSION

1. DEVELOPING SUBAK COOPERATIVE WITHIN SUBAK OF GUAMA

Subak of Guama is located in the sub-district of Marga spread across three villages, namely Selanbawak, Peken Batannyuh and Belayu. Water source of *subak* is from Cangi weir built by the government on the river Yeh Sungai. Some other *subaks* which also obtain water from the weir of Cangi are: (i) Pacung Babakan; (ii); Cangi Selatan; (iii) Apit Jurang; (iv) Uma Dalem; (v) Bulan, (vi) Selanbawakand (vii) Lepud. The entire *subaks* getting

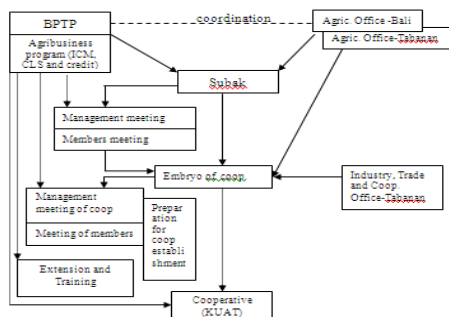
water from weir of Cangi have merged into a coordination body, called Subak-gede Asta Buana Cangi.

The area of Guama *subak* is 179 ha where its rice fields have relatively flat topography. Availability of water in the *subak* for planting along the year is sufficient with the cropping pattern of rice-rice-secondary crops. Physical infrastructure such as roads either for four-wheel and two wheels in the *subak* and the surrounding area is relatively good, so be a contributing factor in the development of agribusiness. In addition, network communication, electricity and drinking water to rural communities including farmers as *subak*' members are very good.

2. Establishment of *subak* cooperative

BPTP (The Agency of Research for Agricultural Technology) Bali made as a pilot project in Subak of Guama for an integrated agribusiness development through *subak*, which was initiated the formation of the integrated agribusiness activities. In an effort to ensure the sustainability of agribusiness development on the *subak* basis, empowerment activities had carried out since the beginning process by employing intensive and participatory approaches (see Figure 1). Community empowerment is a concept of economic development covering social values (Chambers, 1983; Chambers, 1995; Korten, 1987).

Figure 1
Empowerment process in subak cooperative establishment

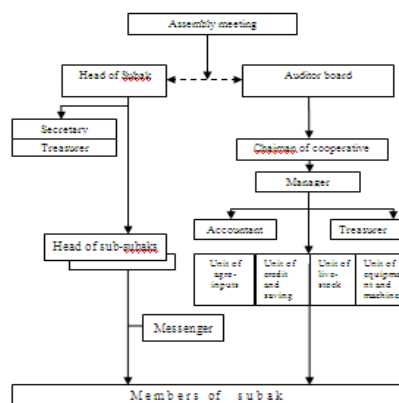


Source: Sedana (2013)

Mentoring by BPTP especially in Subak of Guama significantly contribute to encourage and motivate farmers and subak to establish *subak* cooperatives (called KUAT, Koperasi Usaha Agribisnis Terpadu or Cooperative of Integrated Agribusiness Activities). The staffs of BPTP with the management boards of subak and cooperative further enhance its role in the development of agribusiness. Agribusiness development made *subak* to have adjustment on its organizational structure. As known, socio-cultural aspects of agriculture become very dominant in the *subak* system, in other hand the farmers' demand of needs increasingly complex, especially with regard to economic aspects. At Guama subak, its institutional adjustment has been experiencing along with the development of agribusiness being operated since 2003. In the development of agribusiness at the *subak* level, Subak of Guama has expanded the institutional structure in accordance with the needs of the agribusiness activities. In addition, institutional adjustment is also made to comply with

legislation on cooperatives. Agribusiness activities in Subak of Guama run through a cooperative unit that was formed under the auspices of the subak. Schematically, the Subak Guama institutional adjustment can be seen in the Figure 2. In this institutional adjustment, position of *kelihan subak* or *pekaseh* still has a central role to oversee the cooperative established. This condition indicates that the formation of cooperatives still remain under the umbrella of subak.

Figure 2
Institutional adjustment of subak orienting agribusiness



Source: Sedana (2013)

3. Development of *subak* cooperative

An institutional adjustment made in *subak* is an effort to develop agribusiness activities and still be under the auspices of the *subak* institutions. There are several advantages gained by establishing new institutions within the subak, which are as follows.

- Members can easily get the agro-inputs for both groups and individuals.
- Members easily obtain credit.
- Subak easily adjusts members' obligations due to awig awig subak included in economic management.
- Profits of economic activities within *subak* can be part of individual profit as well
- Make it easier to get access to external capital.
- Facilitate access to information

At *Subak* of Guama, agribusiness development organized through the established cooperative, called Cooperative of Integrated Agribusiness (KUAT) *Subak* of Guama which has already legal status: Number 22/BH/Diskop/VIII/2003 dated August 14, 2003. KUAT has a function to hold the management of the business units for the members of Guama *subak* relating to farm management and increased revenue *subak* members. Through capital gained from the government (BPTP), some of the main activities that have been carried out were as follows: (i) integrated crops management; (ii) crops-livestock system; and (iii) micro credit.

On the integrated crops management operations, it was realized in the form of distribution of agro-inputs such as distributing of seeds, fertilizers, and pesticides with the

certain payment system that is after harvesting (4 months) and the interest rate of 1% / month. On crops-livestock system, it had been realized in the form of cattle loans to members of the *subak* as much as Rp. 3,000,000.00 /unit with a 1% interest, in which it should be returned within 2 years. Micro credit was carried out by providing capital assistance for the strengthening of women farmers on the activities such as: (i) coconut oil business, (ii) breeding pigs; (iii) local snack business, (iv) a loom; (v) carving business, and (vi) trading businesses.

Development of agribusiness activities in *Subak's cooperative* of Guama had significantly increased, especially on the financial aspect. The amount of capital owned by KUAT Guama increased on the three activities as shown in Table 1.

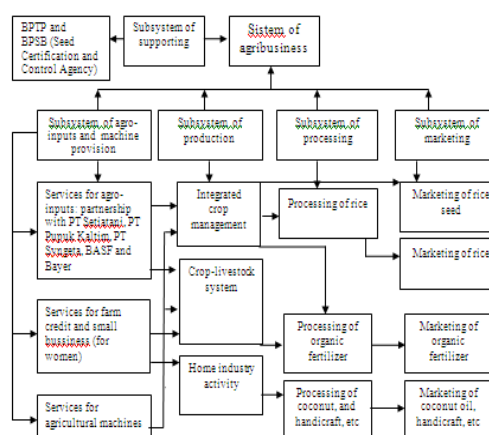
Table 1
Development of capital of KUAT, Subak of Guama sourced from BLM

No	Activities	First capital in 2003 (Rp)	Capital in 2011 (Rp)	Increase (%)	Average/ year (%)
1	Integrated crops Management	663,500,000	923,534,113	39.2	4.9
2	Crops-livestock system	98,000,000	2,068,790,460	2,011.0	251.38
3	Micro credit	81,700,000	1,044,042,023	1,177.9	147.24
	Total	843,200,000	4,036,366,596	378.70	47.34

Sources: KUAT, Subak of Guama, 2012

This condition indicates that the formation of cooperatives within subak system could increase economic value and provide benefits to the farmers. In other words, the economic value of capital in KUAT Guama is in the forms of integrated crops management, crop-livestock system and micro credit increased by an average of 47.34% per year. The highest percentage of increase was in the business activities of the integrated crops management which reached an average of 251.38% per year. Economic benefits perceived by the farmer as members of *subak* and cooperative are reflected in the condition of SHU. In this study, it was found that SHU of KUAT from 2004 to 2012 had significant changed. Aside from the main activities, KUAT of Guama also had other business development such as rice seed business, processing compost and UPJA (the service for agricultural machine). Sustainability of cooperative might be ensured as long as it could give good service to members and encourage their participation (Aref, 2011; Ortmann and King, 2007). Development of agribusiness within *subak* is shown in Figure 3 (Sedana, 2013).

Figure 3
Agribusiness development within cooperative in *Subak* of Guama



Source: Sedana (2013)

Strengths found in *subak* system relating to agribusiness development are as follows: (i) the interrelation among the farmer as members of *subak*, (ii) the bond between farmers and their management board, (iii) *awig awig* (internal regulation) *subak*; and (iv) religious value in the *subak*. These are strongly related to social capital components, such as mutual trust, social norms and social networking (Putnam, 1992; Fukuyama, 1995; Mudarta, 2009; Flassy, et al., 2009; Subejo, 2004; Hasbullah, 2006). These three elements might have influences on the achievement of common goals (agribusiness activities) through the coordination and collective actions (Woolcock, 1998; Montgomery, 1998; Cox, 1995; Haris dan Renzio, 1997). Weakness in this study might bring about barriers to the development of agribusiness in the *subak* level. These include: (i) limited size of paddy field, (ii) low formal education of farmers, (iii) the limited good agricultural practices/technologies, and (iv) lack of post-harvest technology.

III. CONCLUSIONS

Intensive empowerment and participatory approach ensure the sustainability on agribusiness activities within *subak*. This empowerment needs an adjustment of *subak* institution by establishing an economic unit, namely cooperative. The strengths of *subak* in agribusiness development relating to social capital are: (i) ties among members of *subak*; (ii) ties among members and management board; (iii) internal regulations (*awig-awig*) of *subak*; (iv) religious values within *subak*. These are likely component of social capital (mutual trust, social norms and social networking). Meanwhile, the weaknesses are: (i) small size of rice field; (ii) low level of formal education; (iii) lack of agricultural technologies; and (iv) lack of post-harvest technologies.

Regarding the conclusion mentioned and in the effort to achieve sustainability of agribusiness

development within *subak* system, it might be suggested as follows. Strengthening social capital of *subak* should be done by using participatory approach. For this, it could be equipped with improving skills of administration, management, leadership and finance for the management boards of *subak* and cooperative. Aside from this, it should be done an extension and training for increasing entrepreneurship of them. Empowerment process should be intensively facilitated to have good achievement aside from giving charity. Farmers' participation is needed as a social capital within *subak*.

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