

The Urgency of Institutional Development of Cassava Industry in the Special Region of Yogyakarta dan Central Java

Urgensi Pembangunan Kelembagaan Industri Ubi Kayu di Daerah Istimewa Yogyakarta dan Jawa Tengah

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Received: November 17, 2020 | Revised: March 1, 2021 | Accepted: April 13, 2021 | Online publication: July 1, 2021

ABSTRACT

Studies on the development of agricultural commodities are mostly carried out related to the production techniques, productivity and economic studies. Very few studies related to socio-economic institutional development are also related to partnerships and business governance. The study aims to explore the socio-economic institution and partnership factors of farming and processing of cassava at selected locations in Yogyakarta and Central Java Province. This study used qualitative descriptive method to explore the socio-economic institutional development of cassava industry. The results show that there were three types of business partnerships namely (1) growers and small-scale manufacturers; (2) partnership among growers, raw material processors, food manufacturers, and distributors or sellers; and (3) partnership among growers, small or large manufacturers and distributors or sellers. Among the three patterns, some enterprises had already performed a business-oriented processing method and quality assurance which requires best quality of raw cassava. Some business units that diversify and intensify their products perform more effective business. It resulted in a better selling price. However, most of the business units have not kept accounting record, resulting in the lack of data about financial position. Business partnerships, diversification and intensification of business and record keeping can guarantee the sustainability of business.

Keywords: cassava, food industry, institution, partnerships, social capital

ABSTRAK

Kajian pada pengembangan komoditas pertanian yang banyak dilakukan terkait teknik produksi, produktivitas dan kajian ekonomi. Sangat sedikit kajian terkait pengembangan sosial-ekonomi kelembagaan yang sering terkait dengan kemitraan dan pengelolaan usaha. Penelitian ini bertujuan untuk mengeksplorasi aspek kelembagaan sosial-ekonomi serta kemitraan pada usahatani dan pengolahan ubikayu. Metode penelitian yang dilakukan adalah dengan analisis kualitatif dengan teknik deskriptif. Hasil penelitian menunjukkan bahwa ada tiga jenis kemitraan usaha yaitu (1) petani dan produsen skala kecil; (2) kemitraan antara petani, pengolah, produsen makanan, dan distributor atau penjual; dan (3) kemitraan antara petani, produsen kecil atau besar, dan distributor atau penjual. Di antara ketiga pola tersebut, beberapa perusahaan telah melakukan metode pengolahan yang berorientasi bisnis dan memiliki penjaminan mutu yang mensyaratkan bahan baku singkong memiliki kualitas terbaik. Beberapa unit usaha yang memiliki diversifikasi produk olahan serta mengintensifkan penanaman juga terbukti lebih efektif mengelola usaha. Hal ini berdampak pada harga jual yang lebih baik. Beberapa unit usaha juga belum melakukan pencatatan keuangan, sehingga tidak ada data kondisi finansial usaha. Kemitraan bisnis, intensifikasi dan diversifikasi usaha serta pencatatan keuangan dapat menjamin keberlangsungan usaha.

Kata kunci: ubi kayu, industri pangan, kelembagaan, kemitraan, modal sosial



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Published under Department of Communication and Community Development Science, IPB University and in association with Ikatan Sosiologi Indonesia

E-ISSN: 2302-7525 | P-ISSN: 2302-7157

INTRODUCTION

On the studies of the development of farming commodities in Indonesia, much attention has been given to technical production and productivity aspects. Even though the number is limited, studies on economic aspect of farming commodities have been done. However, there are very few studies related to socio-economic institutional aspects on farming commodity. This phenomenon also occurs in the cassava which has historically been one of the important food commodities in Indonesia. The study related to institutional aspect of farming commodity development will be very urgent, as it has been argued by (Putsenteilo et al., 2020) which concludes that institutional system, aspect and environment play an important role on agricultural development.

Various literatures describe that discussion on institutional development in many cases often links with partnership, social capital, and organizational development. However, socio-economic institutional aspect will be arranged for studying cassava development in Yogyakarta and Central Java which traditionally has been important to support rural and community livelihood in the study areas.

Community livelihood has become an important discussion among stakeholders, such as government as a policy maker, development practitioner, as well as researchers and academia. Successful implementation of a livelihood strategy will guarantee sustainable livelihood as Niehof & Price (2001) state that sustainable livelihoods can guarantee several things, namely: (1) stable livelihoods and stable incomes, (2) involvement in productive activities with a sustainable economic and ecological environment and (3) ownership or access to sustainable managed resources. Scoones (2015) argues that efforts to promote sustainable livelihoods are always directed towards alleviating poverty. In promoting sustainable livelihoods for community, a development program should be people-centered, responsive and participatory, multi-level, able to promote partnership to enhance social justice, sustainable, and able to maximize utility (Carney, 2002; Scoones, 2009).

Strengthening Rural Livelihood Through Promoting Social Capital

Ownership or access to assets has a strategic role in determining people's livelihoods. Ribot and Peluso, (2003) have defined that access is the ability to benefit from resources. In agriculture and natural resource management, the concept of access is utilized to uncover power dynamics of each actor in making use of resources and the social relationship among actors. Such range of powers called "bundle of powers" depict the way people make use of natural resources closely related to how much they own powers. (SOAS, 2019) categorizes resources into several forms, namely, natural capital, physical capital, human capital, financial capital and social capital.

In the context of rural life, the common assets owned by agrarian community that play a vital role in rural livelihood are natural capital, physical capital and social capital. Natural capital is closely related to the capacity and condition of natural resources for the production of raw materials. Technically, it is related to the status and condition of agricultural environment such as soil fertility, land production capacity and the suitability between soil and commodities. Physical capital is defined as labor owned by households and should be available in sufficient and decent condition. The form of social capital is mostly social relations and mutual cooperation which are very important in building business networks and business partnership.

One of the prominent aspects related to institutional development of agribusiness is the social capital. Westlund and Nilsson (2005) defined social capital as 'networks of actors and the norms and values being distributed in these networks' (897). Despite the focus of social capital in the non-economic aspects of business, social capital holds a vital role in the organizational development of agribusiness. More scholars have increasingly underlined the importance of social capital for the performance of business organization in rural areas (Flåten et al., 2015; Grillitsch & Nilsson, 2015; Habersetzer et al., 2019).

Thus, when farmers and entrepreneurs are able to make use of the social capital effectively and within an adaptive organization that is responsive with innovations, their business will potentially generate high productivity. Besides, independent or individual activities of economic entities that restrict the

connection to other stakeholders will result in a weakly-competitive organization. These three types of capital will be effective if managed in an appropriate and supportive business partnership. More specifically, Wiggins and Davis (2006) state that some aspects such as institutional structures, regulations and norms, governance and cooperation patterns are very important in the development of economic institutions.

Cassava Production and Development

One of the potential and strategic commodities to be intensified in Indonesia is Cassava (*Manihot esculenta* Crantz). Cassava is one of the most important staples after rice and maize. Historically, cassava has been cultivated for a long period in Indonesia's rural areas. In the context of agronomy, technically, a cassava plant can be easily cultivated and has a high level of adaptability, from the aspect of altitude to the aspect of soil condition as well as high resistance to pest and disease. The effort to maximize the productivity of cassava as raw material, the processed products and the marketing of the product have a potential to increase the added value of the commodity and create employment opportunities for rural communities. Various food products made from cassava might become new staple food alternative for the community and create new consumption pattern which becomes a new strategy directed towards achieving food security, in the household or regional level. Such programs and commitment of achieving food security which are based on maximized local food have become pivotal as advocated by FAO.

Cassava has long been used as a staple food for the community. In some places it is consumed as a staple food, even though in other places it is utilized as additional and complementary food. The cultivation of cassava commodity is focused on the growing of its roots which are subsequently consumed in various preparations and products (El-sharkawy, 2004). Even though it has existed in Indonesia for hundreds of years, cassava is still often underestimated by consumers and even by farmers. In Java, the consumers of cassava are often stigmatized as less modern and poor (Utami et al., 2018). In general, farmers have not yet cultivated cassava seriously as it is mostly grown as intercropping plants.

Although cassava is often labelled a second-class food, the actual nutrient of cassava is quite beneficial for the consumers. Cassava contains starch with little glucose that produces sweet taste. Cassava also contains several valuable B-complex groups of vitamins such as folate, thiamine, pyridoxine (vitamin B-6), riboflavin, and pantothenic acid as well as important minerals such as zinc, magnesium, copper, iron, manganese and potassium. Potassium is an important component of cells and body fluids that help regulate heart rate and blood pressure (El-sharkawy, 2004).

Successful development of cassava raw material production, processed products and the development of a product marketing system will provide high economic added value and thereby will create new jobs opportunity for the community. A variety of processed cassava products will create alternative food for the community and encourage food diversification. The movement towards consuming more diversified food is likely to reduce the over-dependency of consuming rice in Indonesia and thereby will promote food security (Utami et al. 2018). Various programs to support the achievement of food security based on local food sources are increasingly important as advocated by FAO (FAO, 2019).

Research on cassava in Indonesia have mainly focused on micro aspects, such as production and productivity and meso aspects including processing and farming analysis. On the other side, macro aspects that link social, economic and institutional issues are limited. Research on micro aspect was reported by Nugraha et al., (2015) in Pati, Central Java, the focus of which was on factors determining the productivity of cassava, including plant spacing, fertilizers dosage, and sowing period. Research on production aspect by Rianto et al., (2020) show that using silver blackish plastic mulch can significantly improve cassava growth. Research on meso aspects conducted by Thamrin et al., (2013) assess the farmers' income depends on the management of production costs (Land, seeds, labor, and fertilizers). Rosmiati et al., (2018) conclude that women farmers groups have performed well in processing cassava into modified cassava flour. This has been added by Wiraputra et al., (2019) who

said that development of cassava food processing has been growing in small, medium or large scale. The processing is conducted using various systems, ranging from traditional to semi-modern system.

Few macro-level research has been conducted but limited on relationship between economic institution (cooperation) and business units (Andriani et al., 2018). In addition to a limited number of studies on institutional socio-economic development of agricultural commodities, the focus is also limited to a single pattern of cooperation between farmers and the processing industry. In practice, with different socio-economic backgrounds, the pattern of partnerships and business management will also vary. This study provides an analysis of several aspects and institutional patterns of cassava development that are adapted to the socio-economic conditions of the farmers. In other words, this study offers novelty by shedding light on the development of cassava industry from the perspective of economic institution aspect and partnership between business units, such as farmers, SMEs or sellers. Common problems encountered in the development of cassava commodity (both farming and manufacturing of food products) in Yogyakarta and Central Java will be explored in this research. Thus, the research question for this research is to what extent the socio-economic problems hamper the development of firms or business organization and what gaps need to be addressed. Based on these considerations, the objective of this study is to explore the socio-economic institutional aspects and partnership aspects of farming and processing of cassava at selected locations in Yogyakarta and Central Java.

METHODS

This study was conducted between March and September 2019 and used qualitative methods in finding, collecting, processing, and analyzing data. The research was conducted in 9 districts in Gunung Kidul Regency (Playen, Rongkop, Bedoyo, Tanjungsari District), Sleman Regency (Bebah and Turi District), Wonosobo (Gerung District), Magelang (Mungkid District) and Salatiga Regency (Ledok District). The techniques of data collection in this study were Focus Group Discussions (FGDs), in-depth interviews and direct observation. The respondents consist of cassava growers who supply raw cassava, cassava processors (small-scale enterprises or manufacturers) and sellers. Focus Group Discussion was conducted to gain information from farmers groups that grow and process cassava in eight locations. The in-depth interviews were conducted to gain information from the head of farmers groups or owners of private cassava business. Both in-depth interviews and FGD were conducted one time per location to gather information about organizational aspects and production aspects. The FGDs were conducted in eight small and medium-sized enterprises (SMEs), consisting of 2-3 respondents per SMEs including the owners, employees and shop-keepers. Besides, seven cassava growers were interviewed to explore the relation between farmers and SMEs. Hence the total of respondents in Yogyakarta and Central Java were 26, varying from farmers, business owners or employees. Lastly, direct observation was performed to understand the production process of various cassava-based food in selected (SMEs) in Yogyakarta (Sleman and Gunung Kidul) and Central Java (Magelang, Wonosobo and Salatiga).

In collecting data, researchers determined the informants through a purposive sampling method namely an incidental sampling technique. The technique was utilized to provide more thorough information about production, organization, finance and marketing aspect of cassava. Technically, for the data analysis, this research opted qualitative method in a descriptive design. (Neuman, 2009) states that descriptive analysis combines the descriptive and analytical action, which relies not only the description and the chronology of an action but also the intertwinement of relationship between phenomena and exploration of the possibilities of the best recommendation to address the problems.

RESULTS AND DISCUSSION

Cassava as Food

The production of cassava raw materials in all field sites varies depending on the demand from the processors and manufacturers and the suitability of the cassava varieties and the specific land condition. Cassava farmers in Garung, Wonosobo Regency, Central Java, grew Lantheng varieties as the varieties were demanded for the production of tapioca starch. In Berbah District, Sleman Regency, Yogyakarta, farmers grew Ketan varieties as it is the most sellable varieties. In Playen, Tunjungsari, Rongkop and Bedoyo District, Gunung Kidul Regency, Yogyakarta, farmers grew numerous varieties of cassava such as Gatut Koco, Putih and Kirik (Table 1). Farmers in these sites were more flexible in deciding the cassava varieties. The Gambyong farmers were less concern on the market demand and preferred to determine the varieties which owned strong adaptability to the low precipitation level in Gunung Kidul Region.

Table 1. Distribution of Preferred Cassava Cultivars

Village name	Cassava Cultivars	Note
Garung, Wonosobo Regency, Central Java,	Lantheng	varieties was demanded for the production of tapioca starch
Berbah District, Sleman Regency, Yogyakarta	Ketan	most sellable varieties
Mungkid District, Magelang Regency, Central Java	Gatut Koco,	selected because of its white flesh that suitable for cassava chips
Playen, Tunjungsari, Rongkop and Bedoyo District, Gunung Kidul Regency, Yogyakarta,	Gatut Koco, Putih and Kirik	preferably cultivars that produced large cassava
Gambyong, Gunung Kidul Regency, Yogyakarta,	Any kinds of cultivars but preferably local cultivars such as Gatut Koco	preferably cultivars that have strong adaptability to the low precipitation level in dry area

There are also varieties in cassava-based food production in Yogyakarta and Central Java. Modified cassava (Mocaf) flour is one of the most famous cassava-based food produced in Gunung Kidul. Three field sites showed different yield as Mocaf processors in Gunung Kidul used different varieties of cassava. Gatut Koco varieties had the lowest yield compared to other varieties. However, both farmers and processors still produced these cassava varieties as they were perceived as one of the most adaptive varieties to dryness in Gunung Kidul.

In procuring the raw material, Mocaf producers depended on various supply chains. Some of the producers of Mocaf flour were also cassava growers which resulted in the cutting of supply chain cost, but producers often found difficulties in securing supply stock for Mocaf production. In securing the availability of raw material stock, mocaf producers also procured the ingredient from other farmers or farmers groups to reduce the uncertainty in raw material supply. This result was in line with some findings about the benefit of supply chain partnership on the performance of small and medium-sized enterprises (SMEs) (Rezaei et al., 2015). The last system used by mocaf producers is by purchasing it from the local sellers. Such system was utilized when the stock of cassava from the local farmers was low. However, there were still no permanent patterns of raw material supply as the mocaf producers still purchased it based on the lowest price in the market.

There are also various cassava food-based products that have been recorded in Yogyakarta and Central Java. This research classified food-based products into snacks and meals. The cassava snacks

produced in Yogyakarta and Central Java ranged from egg roll, lempeng (cassava crackers), pathilo (textured cassava chips), criping (flat cassava chips), and manggleng (vertical-cut cassava chips). The variants of cassava meals were frozen cassava fries, mocaf instant noodles, thiwul (dried cassava cereal), gatot (fermented dried cassava), and analog rice. The productions of cassava snacks were mostly produced in several farmers groups in Gunung Kidul region (Playen, Tanjung Sari, Rongkop, and Bedoyo district) and Magelang Region (food company). Most of these farmers' groups were women's farmers group. It is also recognized that in Gunung Kidul Regency, women played a vital role in creating diversified products of cassava, such as various kinds of snacks, mocaf noodle, thiwul, gatot and analog rice. The productions of cassava meal products were in PIAT Sleman (food company), Putri 21 Women Farmers Group in Playen district, and D9 Salatiga Region (food company). The variants of cassava food-based products depicted the contribution of cassava as an alternative food, potentially giving added value for the cassava commodity itself. The various cassava food-based products show that cassava has grown more in demand modern society. Cassava as food, is no longer associated with staple for rural people, but growing demanded by urban people. It is also beneficial for community well-being, as different kinds of cassava processes and products show that there have been attempts to reach sustainable rural livelihood, and therefore women and rural institutions play crucial roles in this agenda (Scoones, 2015).

Organizational Aspects of Cassava Farming and Processing

In general, from the aspects of institution and business organization, both cassava farming and food processing were generally in an unsteady condition. Indeed, some business units already had simple organizational structures, but many of them often worked individually or depended on household labor without any clear organizational structure. For commercial food company such as the D9 Salatiga, the business management had already applied well-managed business management. Conversely, farming and food processing practices by farmers group, such as the Women Farmers Group (KWT) in Playen and Tanjung Sari Gunung Kidul tended to have simple organizational structures, although they were not well-organized. Other business units such as Rongkop, Bedoyo and Garung even did not have any organizational structures as they were very small family firms. Table 2 presents the organizational structures of cassava farming and cassava food production.

Table 2. Organizational Structures of Cassava Farming and Food Processing

Location	Organizational structure	
	Farming	Food Processing
Berbah-Sleman	None (individual) but there is partnership between farmers and food processing manufacturers (PIAT- UGM) where farmers become suppliers	Exist but simple through PIAT - UGM
Playen-Gunung Kidul	Exist but simple: Women farmers group	Exist but simple: Women farmers group
Tanjung Sari - Gunung Kidul	Exist but simple: Women farmers group	None (individual) conducted by the head of the women farmers group)
Rongkop- Gunung Kidul	None (individual)	None (individual)
Bedoyo- Gunung Kidul	None (individual)	None (individual)
Garung-Wonosobo	None (individual)	None (individual): manufacturers become suppliers to noodle restaurant owned by relatives
Salatiga		Exist: private company
Garung-Wonosobo		None (individual)
Magelang		Exist: private company

Source: Primary Data Analysis, 2019

Record keeping of cassava farming and processing in all SMEs was generally weak. Especially in business units whose labors were members of farmers groups and family unit, the business orientation was still subsistence and thereby the standard operational procedures were not found. Such business units did not take into account a record keeping and financial management, such as recording the cost of production or income, and calculate breakeven point or R/C ratio. Mostly, the calculations of the obtained profit had been based on estimation (*awangan* = Javanese language). Viewed from the organizational aspects, since the majority of business units were still characterized as home industries whose business owners were responsible as the managers and the family members played roles as unpaid labors. As a result, there was no rigid division of tasks regarding who did financial management or who did the record keeping. Besides, the ability of the business unit to start partnership with similar businesses or with cassava growers was very limited so that the value chain did not develop effectively.

Some of the processing business units such as KWT Putri 21, KWT Ngudi Sari, PIAT-UGM, Salatiga D9 and a chips factory in Magelang had recorded their spending and income, although not all of them had the ability to manage and make financial statements. Eventually, those business units were included as the SMEs who were subject to industry tax and the owner was obliged to report the financial statements. Record keeping is beneficial for farmers, SMEs or sellers because they can assess the financial status of their business as well as analyze whether their business is feasible or not. Well-managed business units, will be more effective in utilizing production cost and will increase profit (Zvinavashe et al., 2011).

Processing business that has developed or is in the form of a group requires high entrepreneurial and leadership skills to be able to deal with changes that occur quickly, both internal and external conditions. The internal competencies, such as entrepreneurship and leadership aspects in commercial businesses such as the Salatiga D9 Processed Business, the KWT Putri 21 Business Group and PIAT-UGM were better than that of the smaller businesses such as in Rongkop, Tangungsari and Bedoyo. As mentioned by Zvinavashe et. al., (2011) larger-scale-businesses are likely to have more effective financial performance, as the cost for the inputs per unit of output will be lower than that of smaller businesses.

The business management competencies of those subsistence and family-oriented business units must be accelerated. External competencies are generally gained from long experience and interactions with partners. Social capital used by family-oriented business that relies on kinship is beneficial in the sustainability of the subsistence and family-oriented business. However, in long term, the family-oriented business who have lack of access in entrepreneurship training and internships should be involved in trainings and internship. The competencies of SMEs actors (knowledge and skills) in managerial skills should be supported by central and regional government, private institutions, and academia.

Governance Aspects of Cassava Farming and Processing

A detailed description of the governance aspects of cassava business units (growers and food products producers) in Yogyakarta and Central Java is presented in Table 3. Table 3 illustrates the governance aspects of cassava growers that were still relatively weak. The majority of cassava growers, who were family farming and subsistence oriented tended to have low performance in their organizational management as the component of organizational structure, role and functions of the organization members, the standard operational procedure and the quality control procedure did not exist. Most of the actors of the cassava industry in Yogyakarta and Central Java showed non-availability of organizational structures as most of the business units failed to answer who were the leader of the business, who were the treasuries, who run the technical issues or other roles within the business. Business activities were dynamics, as anyone could do any activities. This pattern was mainly showed in a small family business where the members of the business were family members.

Table 3. Governance Aspects Cassava Growers and Food Processing Units

Farming or Processing	Organizational Structure	Standard Operational Procedure	Quality Control	Note
A. Farming				
Berbah-Sleman	Not exist	Not exist	Not exist	Groups of cassava farmers
Playen-Gunung Kidul	Exist (but very simple)	Not exist	Not exist	Women Farmers group
Tanjung Sari-Gunung Kidul	Exist (but very simple)	Not exist	Not exist	Farmers group
Rongkop- Gunung Kidul	Not exist	Not exist	Not exist	Groups of cassava farmers
Bedoyo- Gunung Kidul	Not exist	Not exist	Not exist	Groups of cassava farmers
Garung-Wonosobo	Not exist	Not exist	Not exist	Groups of cassava farmers
B. Food Processing Units				
Berbah-Sleman	Exist (but very simple)	Exist (but very simple)	Exist (but very simple)	Industry under management of Centre for Agrotechnology UGM
Playen-Gunung Kidul	Exist (but very simple)	Exist and comprehensive	Exist and comprehensive	Women Farmers Group
Tanjung Sari-Gunung Kidul	Exist (but very simple)	Not exist	Not exist	Women Farmers Group
Rongkop- Gunung Kidul	Not exist	Not exist	Not exist	Family SMEs
Bedoyo- Gunung Kidul	Not exist	Not exist	Not exist	Family SMEs
Salatiga	Exist and comprehensive	Exist and comprehensive	Exist and comprehensive	Established industry
Garung-Wonosobo	Not exist	Not exist	Not exist	Family SMEs
Mungkid-Magelang	Exist and comprehensive	Exist and comprehensive	Exist and comprehensive	Established industry

Source: Primary Data Analysis, 2019

Some other business units have already had simple organizational structures at least for the group leader, treasury, and secretary, such as farmers and processors in Playen, Tanjung Sari and Berbah. Women Farmers Group in Playen utilized farmers groups as vehicles to support their access to financial loans and assistance as well as education and trainings which resulted in the better organizational managerial namely creating Standard Operational Procedure for procurements, productions, packaging, marketing and quality control. However, business unit in Berbah had simple organizational structure but as the unit was new, the organizational managerial aspects were not yet established. Farmers' organizations such as farmers groups are essential entities for farmers to help them improve their bargaining position in value chain, enhancing access to financial assistance and loans .

More established business such as D9 factory and chips factory in Mungkid had firmer organizational structures. The owners have successfully divided roles between the members or employers. Clear

division of labor made Standard Operational Procedure established. As larger-scale-businesses, D9 and chips factory in Mungkid have better access to market information. As mentioned by (Zvinavashe et al., 2011) larger-scale-business have better resources in accessing market information and have more power to produce demand-driven products, hence able to establish quality control mechanisms to boost the sale.

Only the growers that supplied KWT Putri 21 in Playen District and KWT Ngudi Sari in Tanjungsari District owned organizational structure and rule regarding the roles and function of the members as the farming systems were managed by group members and thereby the productions were integrated directly with cassava processing units. The institutional aspects in cassava farming can be enhanced with performing more optimized and intensified farming, such as placing plastic mulch, pruning and fertilizing (Rianto et al., 2020).

However, the research showed that the cassava processing businesses were better in governing their businesses as organizations. Most of the business units have already had every organizational component such as organizational structure, clear division of roles and function of the members, standard operational procedure and quality control mechanisms, except for the cassava snack business in Rogkop and Bedoyo, Gunungkidul and wet tapioca business in Garung District, Wonosobo because its production capacities were still relatively small and performed by family members. From the aspect of business management, most of these business units already had their own standard operational procedure of production, although not all them were well-recorded. The same food products could have different standard operational procedure, for example the mocaf flour production in KWT Putri 21. Playen had different standard operational procedure especially in its production process, criteria of the raw material and procurement procedure with that managed by small business unit in Rongkop. As a result, the differences in management had implications for the effectiveness and business development of each business.

Building Bridges Between Farmers and Agribusiness Firms

One of the strategies to increase the production of cassava raw materials and processed food products is through building partnerships between main stakeholders, including farmers (individuals or farmers' groups), processing units (individuals or farmers groups), and supporting stakeholders such as marketing service providers, government, universities, and etc. Based on the results of the research on selected study locations in Yogyakarta and Central Java, three patterns of business partnerships were identified. The partnership involved producers of raw materials (cassava growers), processing units or manufacturers and retail marketing of cassava food products. Some agribusiness units required specific varieties, but others opened to any varieties of cassava. The various arrangements have created different patterns of partnership.

There were three patterns of established business partnerships namely (1) growers and small-scale manufacturers (such as women farmers group in Tanjungsari and tapioca flour producer in Wonosobo); (2) partnership among food manufacturers and distributors or sellers (KWT Putri 21 in Playen, D9 Salatiga); and (3) partnership among growers, small or large manufacturers and distributors or sellers (KWT Putri 21, D9 company, PIAT company, and cassava chip factory in Magelang). Among those three patterns, the more the partnership was created, the better the chance to earn more profit. The third pattern was featured with the enterprises that had already performed a business-oriented processing method and quality assurance which required the best quality of raw cassava. This resulted in a better selling price. However, there were also partnership patterns that performed flexible quality control which resulted in a low-priced product. Table 4 presents an overview of the characteristics of the three partnership patterns related to cassava development.

Table 4. Partnership Aspects of Cassava Business Units

Partnership Aspects	Pattern 1 (Growers and small-scale manufacturers)	Pattern 2 (Cassava food manufacturers, and distributors or sellers)	Pattern 3 (Growers, small or large cassava food manufacturers and distributors or sellers)
Location	Wonosobo-Garung Gunung Kidul-Saptosari	Gunung Kidul-Playen D9 Salatiga Retail	Gunung Kidul-Playen Salatiga Magelang-Mungkid Sleman - Berbah -PIAT
Form and mechanism of partnership	Non written contract, periodic order	Non written contract, periodic order	Non written contract, periodic ordering, return mechanism was exist
Stakeholders involvement	Farmers with tapioca producers; Farmers with mocaf producers	Farmers or Women Farmers groups (KWT) who specializing in processing and owned kiosk; SMEs who processed cassava food products with distributors or sellers	Farmers or Women Farmers groups (KWT) who grew cassava as well as processed various food products; Cassava growers with PIAT or D9 company who produced food products and owned kiosk; Cassava growers with manufacturers and with resellers.
Input	Cassava raw material	Cassava raw material, Mocaf flour, Tapioca starch	Cassava raw material, Mocaf flour, Tapioca starch
Output (products)	Mocaf flour, tapioca starch, eggroll, <i>thiwul</i> , <i>gathot</i> , <i>pathilo</i> , <i>manggleng</i> , <i>lempeng</i> ,	Mocaf flour, eggroll, <i>thiwul</i> , <i>gathot</i> , <i>pathilo</i> , <i>manggleng</i> , <i>lempeng</i> , rice analog, Mocaf noodle	Mocaf Noodle, Mocaf flour, eggroll, <i>thiwul</i> , <i>gathot</i> , <i>pathilo</i> , <i>manggleng</i> , <i>lempeng</i> , rice analog, Mocaf noodle, frozen cassava

Source: Primary data analysis, 2019

Many scholars have mentioned the importance of building partnership between business units - SMEs, farmers or even sellers – such as reduced effort in distribution, cost savings, shared information, enhanced innovations and increased profit (Cao & Zhang, 2013; Herbig & O’Hara, 1994; Koçoğlu et al., 2011). In building successful business to business partnership and collaborative supply chain, it is recommended that farmers or SMEs also promote communication and share information in order to build supply chain integration. In the context of partnership model showed by business units, bigger business units have more experience in utilizing the social capital into stronger partnership and institutional characteristics. With more partnership developed, the business units showed that they were reliable, trusted, qualified and honest. Therefore, in developing supply chain integration, it is important that SMEs, farmers or even sellers should maintain trust, reliability, honesty, and fairness.

In the process of raw material production, there is a downtime of about 9-10 months (depending on the processor's preference). If demand from the food manufacturers rises, the price of cassava will escalate and thereby give profitable result for the farmers. In the downstream stage of cassava industry, the development and innovation of food product with various attributes (taste, shape, color, packaging, etc.) are likely to attract consumers in purchasing cassava products. In promoting stability and sustainability in both farming and processing stage, it is necessary to develop partnership and promote

more effective business management from upstream to downstream. Using partnerships are likely to boost innovative attitude of SMEs and create value among business units. Social capital as the umbrella of the cooperative performance of SMEs is very useful to enhance the collaboration between actors in value chain (Jamali et al., 2011).

From the aspect of marketing, every cassava product had mechanisms of marketing and marketing reach. In general, most products were able to reach up to consumers in provincial level (consumers from different regions could purchase the products). However, there were also some products that had bigger market as the products were sold to other provinces in Java island or even to other islands. The products namely frozen cassava, cassava chips and mocaf noodle. Those products were produced in more established and middle level manufacturers such as KWT Putri 21, PIAT, and D9 company. The marketing mechanisms were mostly done through conventional (direct order or via reseller) or electronic media (social media and e-commerce platform).

In promoting institutional development and promoting the sustainability of farming and cassava industries, homework has to be done by farmers, SMEs and sellers. The research show that there have been some gaps in enhancing performance of the actors in cassava industries, namely partnership, product intensification diversification and financial record keeping skills (Figure 1). Some business units that promote business to business partnership, diversify and intensify their products, and conduct financial records perform more effective business. This results in a better selling price and guarantees the sustainability of business.

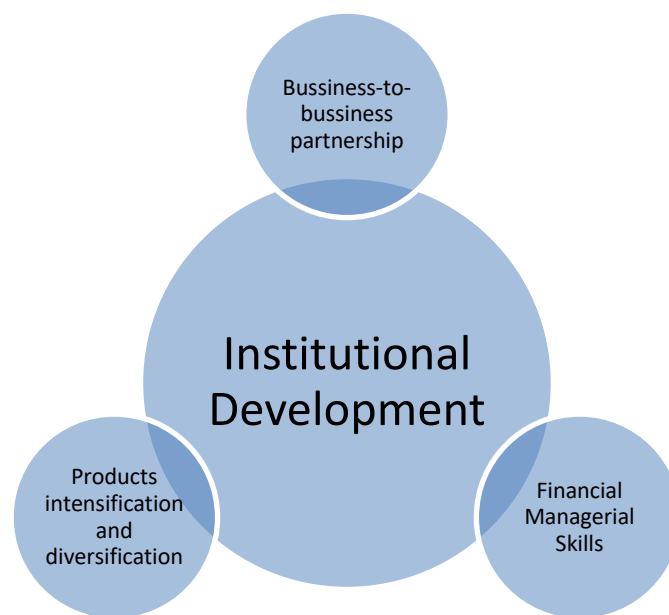


Figure 1. Strategies to Promote Institutional Development

CONCLUSION

Culturally and historically cassava has various forms of its food products in Java, particularly in Yogyakarta and Central Java Province. A wide range of cassava food products have produced a variety of food processing activities among business unit, from individual, groups and settled business organizations which are profit-oriented. The production of raw material can be separated from the location of food production while some business units can produce raw material as well as manufacture its food products. Organizational, governance and partnership aspects play a vital role in shaping how a business unit performs and develops. Food manufacturers with high profit do not necessarily have fixed and sustainable raw material supply which also result in the unstable price and shortage of raw material particularly during dry season. However, other farmers who have successfully

collaborated with a larger cassava industry that is profit-and-commercially-oriented are better off, giving evidence that social capital plays a vital role in the institutional development of cassava industry. Unfortunately, besides the scarcity of the cassava material, the quality of raw cassava during dry season can be low. Therefore, to overcome the scarcity of the raw material, partnerships between farmers and SMEs are vital. Training for SMEs is necessary, especially in increasing productivity, keeping record, and controlling quality and creativity of cassava food production. As cassava food production involves different actors in its value chain, another key factor is giving attention to ensure the continuity of productions, in particular the raw material supply.

ACKNOWLEDGEMENT

An appreciation and gratitude are directed to Agrotechnology Innovation System Universitas Gadjah Mada (PIAT UGM) for the supports and funding. This research has been funded by the research grant from PIAT UGM.

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