

No Guts, No Glory: Promoting Economic Independence of Brown Sugar Farmers Through Co-Operative

Novita, PUSPASARI,

Universitas Jenderal Soedirman , Accounting Department, Faculty of Economics and Business, Indonesia
novita.puspasari@yahoo.com

Yudha, ARYO SUDIBYO,

Universitas Jenderal Soedirman , Accounting Department, Faculty of Economics and Business, Indonesia
yudha_aryos@yahoo.com

Abstract

Banyumas regency is the largest producer of brown sugar in Indonesia. One location which produce brown sugar is in Ketanda Village. Unfortunately, most of brown sugar farmers have been trapped to bad middlemen for decades since they are lack of capital and market access. The farmers pay debt to middlemen with their sugar then the price is determined by the middleman. Moreover, middlemen buy brown sugar in much lower price than the market price. Both the buying price and the debt scheme determined by the middlemen are unfair to brown sugar farmers. This research used action research method. In the first step of action research, diagnosis, it was found that brown sugar farmers need an institution which can facilitate them to be free from middlemen, strengthen the farmers community, and also develop their business model. Therefore, the intervention made by gathering local actors and they committed to build a cooperative. There are two implications from this study. First, this study will enrich literature in cooperative as a social enterprise which has a main goal to manage social problem. Second, if successfully implemented, the cooperative model can be replicated in other regions to manage the same social problem, thus farmer's economic independence will be achieved.

Keywords: Cooperative, Farmer, Middlemen, Social Enterprise, Action Research.

JEL Classification: J5, Q1.

1. Introduction

BanyumasRegency is the largest producer of brown sugar or coconut sugar in Indonesia. Total production capacity of brown sugar in Banyumas reaches 170-200 tons per day and it is sufficient to support domestic and international market. Banyumas Regency has potential to be the biggest producer of brown sugar, not only in Indonesia, but also in the world (Kompas,

2016). The industry absorbs approximately 27,000 workers spreading across the sub-districts. Abdullah, et.al. (2015) found that brown sugar is financially feasible. The efforts of brown sugar processing can also be scaled up so that it can supply more sweetener needs of the world community.

One of the sugar producers in Banyumas is Ketanda Village, Kecamatan Sumpiuh. The majority of households produce sugar traditionally. There are approximately a thousand of households in the village and ninety percent (90%) are brown sugar farmers. In a family, husband work as *penderes* (tapping sap/nira) and the wife work as *pengindel* (cooking sap/nira). Usually, one family can produce five to eight kilograms of brown sugar per day. The quantity and quality of brown sugar depends on the weather.

Most brown sugar producers have been trapped by the middlemen due to capital constraints and limited market access for decades since they are lack of capital and market access. They pay debt to middlemen with their sugar. The price is determined by the bad middleman. Middlemen buy the brown sugar in much lower price than the market price. Both the buying price and the debt scheme determined by the middlemen are unfair to brown sugar farmers. There are two level of middlemen in Ketanda Village, level 1 (warung/kiosk/shop) and level 2 (individual/*tengkulak*).

According to Purwati, et al., (2014), ninety-two percent (92%) Small Medium and Enterprises (SMEs) are not bankable, therefore they find other source of financing to run their business. Unfortunately, MSMEs used insecure funding (bad middlemen) to finance their daily operations. In many cases, the use of insecure funding was not a solution, instead it was created new problem such as never ending debt problem. To take advantage from national or international trade, SMEs have to strengthen their institutional capacities (OECD, 2004). Strong institutional capacity will enable SMEs to compete in the market. In brown sugar farmers, institutional capacity can be built by first establishing network of cooperation among farmers.

This study has two main research objectives. The objectives are to build a model of a co-operation network among brown sugar farmers and to establish an alternative financing institution in order to free the farmers from middlemen. As a result, it will promote economic independence of brown sugar farmers. Konsti-Laakso et al. (2012) found that the process of establishing a network of cooperation can be facilitated by external support (also called intermediation or bridgers), which runs the network management role as coordinator, giver of advice, information intermediaries, intermediary relationships and sponsor innovation. The bridge also can be a researcher, thus action research was a chosen research methodology for this study. There are two implications from

this study. First, this study will enrich literature in co-operative as a social enterprise which has a main goal to manage social problem. Second, in practice, if successfully implemented, the co-operative model can be replicated in other regions to manage the same social problem, thus farmer's economic independence will be achieved.

2. Literature Review

Porter's Diamond

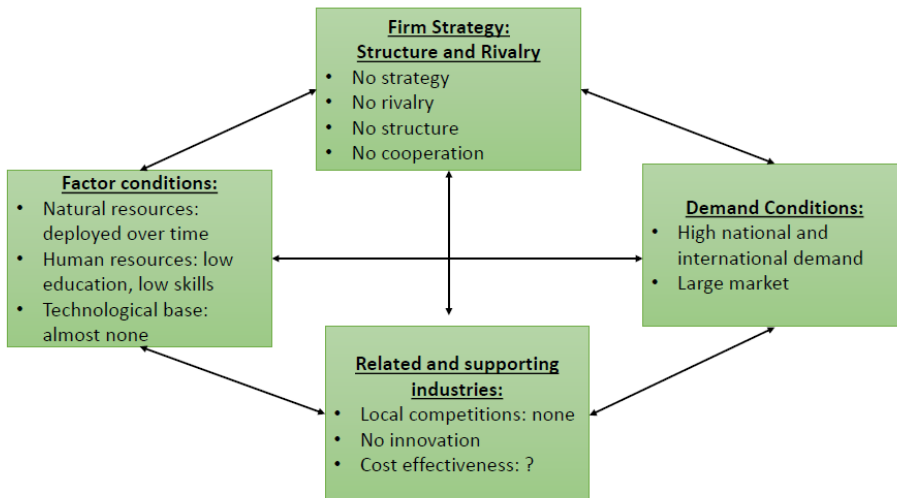
The Porter Diamond has been used to analyze national competitiveness or geographical competitiveness. According to the Porter Diamond model, there are six elements in assessing a region competitiveness: Factor Conditions, Demand Conditions, Related and Supporting Industries, Firm Strategy, Structure and Rivalry, Chance, and Government (Porter, 1990). Factor conditions are factors that can be exploited such as highly skilled workforce, linguistic ability of workforce, rich amount of raw materials and workforce shortage. Demanding conditions refer to demand of such products at home and foreign markets. Porter also stated high demand from home market is higher than global markets, local firms will put more efforts in improving their product than foreign firms. This will also lead to global competitiveness in exporting local products by local firms. High demand of local market thus will be the driver of growth, innovation and improvement of quality.

Related and supporting industries refer to the competition between local supporting industries and suppliers. When those parties are competitive, home country companies will be more efficient in cost and as an addition, will receive more innovative parts and products. Structure and rivalry refers to the structure and management systems which can potentially affect competitiveness. Home markets with less rivalry like in brown sugars farmers case in Indonesia may therefore be counterproductive, and act as a barrier in the generating of global competitive advantages such as innovation and development.

The Porter Diamond model offers an effective way for analyzing competitiveness since competitiveness is vital for sustainability. According to the model, home country's characteristics will be a key actor in defining local firm's of international competitiveness. The ecosystem of home country thus will define how successful a local firm can become in international markets. Assessing the competitiveness using this model will depict clearly advantages and disadvantages thus the Porter Diamond will be best model in shaping future strategy. Here is brown sugar's farmer identification using Porter Diamond.

Figure 1.

Identification of Brown Sugar's Competitiveness Using The Porter Diamond



Source: Data processed by reseacher,2018

Asset-Based Community Development

Asset Based Community Development (ABCD) is a strategy to mobilize individuals, associations, and institutions to work together in building collective assets. ABCD concerns to link micro-assets to the macro-environment. ABCD emphasizes the bond that already exists in the community to be the strength to drive the development process, including developing local economy. In using ABCD as an analyzing tool, there are two approach; Capacity Inventory Approach and Asset Mapping Approach. Capacity inventory lies in *Personal information, Skills information, Community information*. Asset Mapping lies in *Individuals, Physical assets, Associations, Institutions, Connections*.

There are five key assets in ABCD Communities; *Individuals, Associations, Institutions, Physical Assets, and Connections*. ABCD recognizes that each individuals has gifts and skills. Each of individuals in the community need to be identified and recognized. This is the initial step in doing ABCD. Regarding associations, small informal group of people in the community will be critical to community mobilization, particularly if they gather because of their common interest by their individual choice. Regarding institution, government, university and private business are included. They are as catalisator for the community. The

institution usually has their own material assets. Their assets will be valuable resources for the community.

Regarding to physical assets such as land, building, and other physical assets can be used for the community. In connections, there must be an exchange between people in sharing their assets. The connection can be made through some mediators/conectors. They are the people who will be responsible in managing communications in the community or with external parties.

Research Method

This research used action research. Social knowledge, according to Torbert (2002) has two main goals; as a reflective science and as an action science. Action research is problem centered and action oriented research. In action research, researchers describe, interpret and explain a social situation at the same time to make changes or interventions with the goal of improving community or participation (Sulaksana, 2004). Davison, Martinsons and Kock (2004) mentioned that action research as a method of research, action research founded on the assumption that the theory and practice can be integrated with the learning of the outcome of the interventions planned after a detailed diagnosis of the context of the problem.

The stages of this study are based on the stages of action research stated by Davison, Martinsons and Kock (2004). According to Davison, Martinsons and Kock (2004), there are five stages in action research: diagnosis, action planning, action-taking, evaluating and learning. This action research will take approximately three years to be completed. In diagnosis phase, we try to identify the financial problems of brown sugar farmers and explore the possibility to establish alternative financing institution over the bad middlemen. In the action planning phase, we try to develop the financing alternative model and at the same time promote local competitiveness of brown sugars. In action taking phase, the financing alternative model is started to operate. In the evaluation phase, we try to analyze impacts and benefits of an alternative financing institution and cooperation network. Data collection used in this study will be dominated by in depth interview and Focus Group Discussion (FGD). Based on the reference stage of the action research, the stages in this study and the methods and outcomes described in the following table:

Table 1. Phases of Action Research

Action Research Phase	Diagnosis (1)	Action Planning (2)	Action Taking (3)	Evaluation (4)	Learning (5)
Research Phase	<ul style="list-style-type: none"> -Identify brown sugar farmers' financial problems (middlemen). -Explore the possibility of establishing an alternative financing institution 	<ul style="list-style-type: none"> -Making plan for the establishment of an alternative financing institution. -Develop a model to increase local competitiveness. (Forming a cooperation network/cluster, etc). 	<ul style="list-style-type: none"> -Establishing an alternative financing institution. -Implement a model to increase local competitiveness (clustering). 	Analyze impacts and benefits of an alternative financing institution and cooperation network/cluster.	Improve and develop an alternative financing institution and cluster.
Methods Used	<ul style="list-style-type: none"> -Data mining (farmers and their debt data) through <i>in-depth interview</i>. -Focus Group Discussion. 	-Focus Group Discussion	-Focus Group Discussion	In-Depth Interview Focus Group Discussion Questionnaire	In Depth Interview Focus Group Discussion
Output	<ul style="list-style-type: none"> • Database of brown sugar farmers • An alternative financing institution is built 				<ul style="list-style-type: none"> • Assessment (benefit analysis) and development (business diversification plan). • Increased institutional capacity. • Decreasing number of brown sugar farmers who are in debt to middlemen. • Increased productivity and innovation (including the use of information technology)
Time Framing	Year 1 and Year 2				Year 3

Source: Data processed by researcher, 2018

3. Result and Discussion

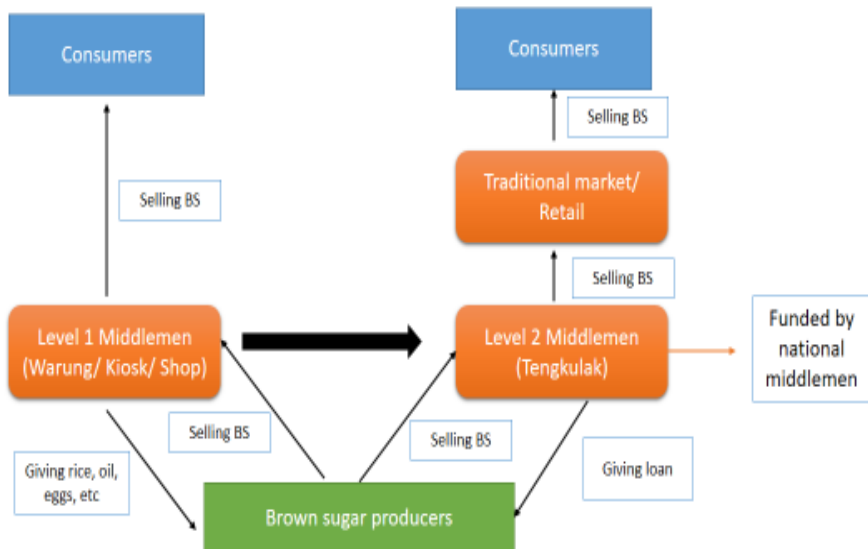
First year

The first phase of action research is Diagnosis Phase. In the first year, diagnosis phase used in depth interview and Focus Group Discussion (FGD) as data collection tools. Using one local person as a facilitator between brown sugar farmers and the Institute (Kopkun Institute as a research incubator), the process run relatively smooth. The local person is also part of Kopkun Institute thus the communication and meetings between two parties were intensive. Some information revealed from the interview, such as there are two type'level of middlemen: Level 1 and Level 2. each farmers debts to Level 1 and Level 2 middlemen were around Rp 3,000,000- Rp 5,000,000 per person. Although it was not a huge amount of debt, they cannot paid it off since the middlemen were not transparent in recording their payment. The brown sugar farmers did not know how much their debt left or how much money they have paid.

FGD came together with local/traditional activities like *yasinan* and *rembug desa*. In addition, the local person also visited the farmers' house, one by one, to assure them to form a cooperation network which can enable them to be free from bad middlemen trap. After series of visiting and local FGD, the brown sugar farmers agreed to form a co-operative as a media for their aspiration besides co-operative also as an economic tool. Co-operative can become an alternative financing institution while in the other side, become a social institution which can glue the farmers together.

Brown sugar farmers have debts in level 1 middlemen (warung/kiosk) because they have to buy groceries for their daily needs. The brown sugar farmers exchange their brown sugars with groceries. The Level 1 middlemen then set the brown sugar prices lower than the market. Brown sugar farmers have debts in level 2 middlemen if they need fresh money as soon as possible. Level 2 middlemen have been well known for their 24/7 service, no requirements as the banks, but in the other side, very high interest. Here is the value chain of actors involved in brown sugar industry:

Figure 2. Value Chain of Brown Sugar in Banyumas



Source: Data processed by researcher, 2018

The government and other external parties had tried to manage the debt problems of brown sugar farmers beforehand. They gave cash money directly to the farmers to pay their debt. However, giving direct cash money to brown sugar farmers to pay their debt had never solved the problem. Thus, there is an urgent need of institute and cooperation among brown sugar farmers. Based on the information obtained, there were steps to be taken:

- Build a cooperative as a socio-economic institution to sell together (joint selling) member's sugar production. The cooperative is chosen as an institutional strategy because it fits perfectly with the strong rural life with the value of the spirit of *gotong royong* (social capital).
- Build Micro Savings and Loan Services cooperatives for alternative financing (production and consumption) so the farmers do not depend on the middleman.
- Increasing institutional capacity and cooperative effort to maintain its sustainability.

- Increasing economic added value for brown sugar farmers through village-based potential efforts.

After identifying several important notes and steps to be taken, the researcher and representatives of local people started to make a plan of a co-operative (pre co-operative). The issues that should be addressed were the source of initial capital of the co-operative, people who will be in co-operative management, and how to gain more members. The farmers members were poor, therefore each of them cannot collected a lot of money to run the co-operative. Therefore, the initial capital was collected among members using "*celengan bambu*" method. Each member's house were given a *celengan* (piggy bank from bamboo). They have to put Rp. 1.000 to the *celengan*, and every day, the co-operative administrators stopped by farmer's house to take and collect it. After ten months, a significant amount of money were collected from its members. The money, therefore, became the initial capital of the co-operative.

Second year

In the first and second month, the pre co-operative, with the assistance of regional co-operative (Kopkun) open its kiosk. This kiosk opened to overcome the Level 1 Middlemen (warung/kiosk), thus if the farmers need buy groceries, they do not have to exchange it with their sugar as they did with Level 1 Middlemen. To overcome Level 2 Middlemen (the individual middlemen/tengkulak), micro savings and loan services of co-operative has started to operate. Three young local people were chosen to manage the co-operative. In this year, the co-op management and members were also regularly came to Purwokerto (capital city near Ketanda Village) to learn about co-operative and co-operative enterprise from the incubator institution (Kopkun). They learned accounting, business modelling, co-operative education, and leadership.

Every month, the pre co-operative conducted a meeting to discuss their performance. The meetings were divided into four sections: membership, *celengan bambu*, kiosk/warung, and brown sugar business. In the second year, the number of members were increased because more and more brown sugar farmers have benefited from the co-operative. In fact, there were farmers from another village who wanted to join the co-operative. The *celengan bambu* has been unseparable part of member's life, the members often asked the administrators if the were late in taking the money. The members were very happy knowing the amount of their balance. They were surprised knowing that they actually can save the money regularly, a thing they never know before.

There were about 10,000 coconut trees in Ketanda Village. Every day, the farmers can climb coconut trees twice, in the morning and afternoon. With about 20-40 trees to be climbed everyday and the duration to cook brown sugar will be around 6-7 hours, the co-operative build a Communal Kitchen for the farmers to cook their sugar. Communal kitchen is a concept of coconut sugar production collectively managed by cooperatives with the aim of making production costs more efficient.

Third year

The co-operative is currently entering the third year. The farmers finally have started to reach their economic independence although several works are still in progress. The co-operative now also become one of the brown sugar producers in Banyumas whose products are marketable. Some importers from overseas have tried to contact the co-operative to arrange an import agreement with them. However, due to production capacity, they cannot sign a deal this year, but this will be their project for future years.

The members have significantly increased in the third year, from only 9 farmers in the first year, the members now has reached 135 farmers. Currently at least they have collected Rp.19 million from member and community savings (*celengan bambu*). The average monthly total collected reaches 2.5 million rupiah. Since they save only Rp. 1.000 per day, most of their savings are coins. One of the member said:

"I am so happy. I just 'throw' my coins every day, but it turns out that I have saved a big amount until now. Later, if I need the money, I do not have to go to the middlemen since I have my own saving"

When being asked how the management of co-operative feel after three years running the co-operative, one of them said:

*"Last month's meeting, we have got applause from the farmers. To be honest, I have a regular headache during the past three years (laughing). But, **no guts, no glory**. There are price to pay for promoting farmer's economic independence. We put our trust and belief in our co-operative"*

The other co-operative administrator added:

"It feels dizzy but happy. Dizzy because there is still a lot of homeworks. Happy because we see directly in the field how members began to believe and loyal to the co-operative. That's what makes me and my friends happy!"

To inspire other farmers in similar situation, the co-operative has worked together with external parties to make a movie about their journey in reaching their economic independence over middlemen. Together with the researcher, we will evaluate the works we have done in the past three years. *No guts, no glory.*

4. Conclusion

Banyumas Regency has potential to be the biggest producer of brown sugar, not only in Indonesia, but also in the world. The industry absorbs approximately 27,000 workers spreading across the sub-districts. One of the sugar producers in Banyumas is Ketanda Village, Kecamatan Sumpiuh. The majority of households produce sugar traditionally. There are approximately a thousand of households in the village and ninety percent (90%) are brown sugar farmers. For decades, brown sugar farmers have been bounded by the middlemen due to capital constraints and limited market access since they lack of capital and market access. They pay debt to middlemen with their sugar. The price is determined by the bad middleman. Middlemen buy the brown sugar in much lower price than the market price. Both the buying price and the debt scheme determined by the middlemen are unfair to brown sugar farmers. There are two level of middlemen in Ketanda Village, level 1 (warung/kiosk/shop) and level 2 (individual/*tengkulak*).

To overcome middlemen problem, there is an urgent need to promote brown sugar farmers' economic independence. Economic independence from the middlemen can be reached only if the farmers build a cooperation among them. From a diagnosis phase, it is known that they need to build an alternative financing institution which is not only strengthen their economic capital but also their social capital. "Co-operative" form was as an institutional strategy because it fits perfectly with the strong rural life with the value of the spirit of *gotong royong* (social capital). In the first year, the co-operative started to operate and gain members from brown sugar farmers. Furthermore, the "*celengan bambu*" movement was conducted to gain an initial capital for the co-operative. In the

second year, education was the main issue. Co-operative management learned co-operative and co-operative enterprise from their co-op incubator, Kopkun Institute. Moreover, they also build a communal kitchen to make production costs more efficient. In the third year, there is a significant increased of members in the co-operative, while the kiosk runs well. Although this year is our third year, but we have not make an overall evaluation. The evaluation will be conducted by the end of this year, however we have seen the progress of brown sugar farmers, economically and socially.

5. Implications

There are two implications from this study. First, this study will enrich literature in cooperative as a social enterprise which has a main goal to manage social problem. Second, if successfully implemented, the cooperative model can be replicated in other regions to manage the same social problem, thus farmer's economic independence will be achieved. Since bad middleman is the same story but in different fields and different places in Indonesia, this co-operative model of brown sugar farmers can be replicated in such situation.

References

- [1] Abdullah, Weka Gusmiarty., Rianse, Usman, Raden Marsuki Iswandi, and Sittu Aida Adha Taridala. (2015). *Potency of Natural Sweetener: Brown Sugar*. WSEAS Transactions on Business and Economics Volume 12.
- [2] Davison, R. M., Martinsons, M. G., Kock N. (2004). *Principles of Canonical Action Research*. Information Systems Journal, 14, 65–86
- [3] Gilmore, A., Carson, D., Grant, K., O'Donnell, A., Laney, R., Pickett, B. (2006). *Networking in SMEs: Findings From Australia and Ireland*. Irish Marketing Review, 18 (1&2), 21-28.
- [4] Konsti-Laakso, S., Pihkala, T., Kraus, S. (2012). *Facilitating SME Innovation Capability through Business Networking*. Creativity & Innovation Management, 21 (1), 93–105.
- [5] Nadvi, Khalid. (1994). *Collective Efficiency and Collective Failure: The Response of the Sialkot Surgical Instrument Cluster to Global Quality Pressures*. World Development Vol. 27, No. 9.
- [6] Porter, E, Michael. (1990). The Competitive Advantage of Nations. *Harvard Business Review* 68, no. 2 (March–April 1990): 73–93.
- [7] Purwati, A.S., I, Suparlinah dan N. K. Putri. (2014). *The Use of Accounting Information in the Business Decision Making Process on SME in Banyumas Region, Indonesia*. Economy Transdisciplinary Cognition, Vol 17 No. 2: 63-75.
- [8] Torbert R. William and Steven S. Taylor. (2002). *Action Inquiry: Interweaving Multiple Qualities of Attention for Timely Action*. Reason & Bradbury (2e)-3562-Ch-16. 240-253.

- [9] www.abcdinstitute.org
- [10] <https://m.tempo.co/read/news/2013/05/28/089483874/banyumas-sentra-gula-kelapa-terbesar>
- [11] <http://berita.suaramerdeka.com/smcetak/manisnya-potensi-gula-kristal-banyumas/>
- [12] https://en.wikipedia.org/wiki/Action_research
- [13] <http://kopkuninstitute.org/portfolio/daya-dukung-multi-pihak-untuk-amj/>
- [14] <https://www.oecd.org/eu/40808769.pdf>
- [15] <https://nasional.kompas.com/amp/read/2010/10/28/14073356>