

Female Farmers' Knowledge as the Start-Up Capital for an Agribusiness Incubator: A Perspective of Banyubiru Village, Semarang Regency, Central Java, Indonesia

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ABSTRACT

Most of the members of the Female Farmer Group (FFG) in Banyubiru, Semarang regency have a low educational level and a weak socio-economic status. Related to that, the purpose of this research is to find out whether the women's entrepreneurship knowledge can be the main capital in their readiness for the establishment of an agribusiness incubator; and whether the results of the Strength-Weakness-Opportunity-Threats (SWOT) analysis support the feasibility and urgency for Banyubiru village to establish an agribusiness incubator. This research applied a *one-shot* case study in which the female farmers were subject to three interventions. Data on the women's entrepreneurship knowledge was collected through various measuring instruments, while data for the SWOT analysis was obtained through two Focus Group Discussion (FGD). The research subjects were women farmers, FFG administrators, farming trainers and village officials. A sample of 198 female farmers was determined by snowballing technique from 440 active FFG members. Research was carried out in Banyubiru village, Banyubiru sub-district, Semarang regency, Central Java, Indonesia. Through this research, it was found that ¹⁾ female farmers' entrepreneurship knowledge could be the main capital for their readiness to pioneer an agribusiness incubator; ²⁾ the results of the SWOT analysis on the modality factors determined that it was feasible and considered to be urgent to establish an agribusiness incubator in Banyubiru village. This research conclusively confirms that it is very feasible and considered to be urgent to establish an agribusiness incubator in Banyubiru village in Banyubiru sub-district.

Keywords: *Entrepreneurial knowledge, Woman farmer, Agribusiness incubator*

1. INTRODUCTION

The population of Indonesia in 2018 was estimated at 264.16 million, with an almost equal number of men and women, while the number of farmers in Central Java, as of December 31, 2019, was 2.8 million farming a land area of 1.5 million hectares (Governor of Central Java, 2019). The female population in Indonesia is almost the same as in Nigeria, where the female population is greater than 50 percent and they mostly live in rural areas, which therefore means that agriculture is their main occupation (Alemayehu, 2014). Mirakzadehand, (2011) found that, generally, more than half of rural women play a role in the economic activities that contribute to progress. The United Nations women's conference concluded that two thirds of the total workforce worldwide is comprised of rural women with poor social facilities (Osumi, 2015). According to World Bank predictions, 75 percent of the world's poor live in rural areas and their main livelihood comes from agriculture and other related sectors (Ogunlela & Mukhtar, 2009). The Female Farmer Group (FFG) is a female farmer's organization in Indonesia. Until now the empowerment of the FFG in the economic sector has not been maximized, as its functions and roles are more helpful to the women's husbands who work as farmers. According to Saidu, Samah, Redzuan, and Ahmad (2014), to improve the welfare of farming families, women should get small-scale business opportunities. Handaragama et al., (2013) stated that the economic contribution of rural women in developing countries has brighter prospects because they constitute the largest part of the workforce, especially in agriculture. The role of women farmers in facing the challenges of the production and development of the agricultural sector is prominent, relevant and significant; therefore they should not be marginalized (Nuggehalli & Prokopy, 2009). However, from the perspective of Eastern culture, rural women are still forced to occupy a limited position in society. Farm women have not yet produced added value; their role is still on the periphery, and they are left behind as deemed to have limited knowledge (Kuswardinah, 2009). Women are considered to belong in the kitchen and must serve the needs of the family's stomach, along with pregnancy and childbirth.

There are four aspects of entrepreneurship knowledge that are suitable to the context of women farmers, namely: 1) entrepreneurship tips; 2) processing agricultural products; 3) HR management; and 4) improving

family welfare (Kuswardinah, 2014). Reflecting on these aspects, it is therefore considered urgent to increase the entrepreneurship knowledge of the women.

FFG is the term for the women farmers' organization in Indonesia, which exists in rural areas and works based on the shared needs, and are led by a farmer hub. According to Rae Lasser Blumberg's theory (Blumberg & Mee-Udon, 2002), women's economic power is sequentially patterned relative to men's, ranging from the affairs of living in pairs to state affairs. The increasing economic power of women can be seen as an important factor that can reduce gender inequality. When they are empowered in the economic field, there is an escalation in their increasing self-confidence, strengthening their voice in the household decisions, better control over their life choices marrying responding to fertility patterns, and freedom of expression, as well as other roles in community affairs (Kuswardinah, 2019). Rural policies and projects that do not maximally involve women have had limited impacts. Rural organizations have proven to be very instrumental in increasing women's capacities to make strong and potentially profitable decisions (Kuswardinah, 2014; Woldu & Tadesse, 2015).

The development of rural socio-economic communities cannot be achieved without involving the women. Women in Ghana, for example, could contribute to their socio-economic growth and family well-being when they actively participated in the socio-economic field (Avornyo, 2013).

Rural women are estimated to spend 85 to 90 percent of their time preparing for household consumption (Fontana & Natali, 2008). Other data also explain that rural women in fact devote about 60 to 80 percent of their time to agricultural activities (Food Agriculture Organization of the United Nations, 2011). However, their contributions to agriculture and other rural projects have not been taken seriously. Research by Ogunlela and Mukhtar (2009) found that there is a significant effect of women's participation in national and regional policies, namely on the sustainability of the agricultural sector. According to Elizabeth, initiating improvements in the agricultural sector can have bad results if it does not involve the women's participation (Elizabeth, 2006). The agricultural sector is the largest in the world, employing more than one billion people and accounting for three percent of global GDP (Food Agriculture Organization of the United Nations, 2012).

A business incubator is an organization that offers a variety of business development services and provides access to business spaces and locations with flexible rules. It can be technology-oriented or non-technological, both of which are aimed at increasing the talent or entrepreneurial spirit. With the concrete involvement of farmers in entrepreneurial activities, this certainly will increase their incomes. At the same time, it indicates that they can contribute to the community (McGehee, Kim, & Jennings, 2007), manage the countryside and increase the intensity of meeting new business partners. The requirements for establishing a business incubator from the perspective of Banyubiru village, are namely: 1) availability of office space; 2) availability of office facilities; 3) readiness for guidance and consulting on marketing, finance, production, and technology management; 4) support for research and business development and access to technology's use; 5) training to prepare business plans and management; 6) availability of start-up funds and access to capital from financial institutions; 7) and readiness to build business networks both locally and regionally.

As is well known, small business problems always include internal and external problems. A "tenant" (the owner, user or tenant of the incubator, in this case the women farmers) who has been incubated is expected to be able to maintain a stable business continuity and detect market fluctuations. The existence of an incubator mentoring and strengthening model, an incubator tenant financing patterns and incubator training models are expected to become the basic guidelines to be developed or elaborated on according to the capacity of the manager.

The problems of this research are as follows:

1. Can the modality of the knowledge of women's entrepreneurship in Banyubiru village be the main capital for the readiness to pioneer the establishment of an agribusiness incubator?
2. Can the results of the SWOT analysis on the modalities, in the form of agricultural yield potential, human resources' potential, and land availability in Banyubiru village, describe the "feasibility" and "urgency" for pioneering the establishment of an agribusiness incubator?

2. METHOD

This research applied a *one-shot* case study where an intervention with the women farmers was carried out three times, followed by a post-test without having had a pre-test. The research subjects are women farmers, FFG administrators, PPL officers (field agricultural extension workers) and village officials. There were 198 women farmers involved in the intervention; they were determined by snowballing technique from 440 active FFG members. The research location was in Banyubiru village, Banyubiru sub-district, Semarang regency, Central Java province, Indonesia.

Knowledge measuring instruments were developed from the indicators of each component, namely: ¹⁾ 5 items

of entrepreneurship; ²⁾ 5 items of HR management; ³⁾ 5 items of family welfare; ⁴⁾ and 6 items of processing food. While the answer choices for all the questions were 1 (incorrect), 2 (inappropriate), 3 (quite precise), 4 (exact), and 5 (very precise). The achievement score of each subject (x) in the knowledge component 1 to 3 was $x = (5 \times 25)$, and in the knowledge component 4 it was $x = (6 \times 30)$.

The test results of the measuring instruments for each component with Cronbach's alpha were: ¹⁾ entrepreneur = 0.853; ²⁾ HR management = 0.82; ³⁾ family welfare = 0.850; ⁴⁾ processing food = 0.838. All the instruments are valid because of the significance value of $p > 0.5$.

The respondents' achievement scores were grouped into five categories, namely ¹⁾ very high ($x > M + 1.5 SD$); ²⁾ high ($M + 0.5 SD < x \leq M + 1.5 SD$); ³⁾ moderate ($M - 0.5 SD < x \leq M + 0.5 SD$); ⁴⁾ low ($M - 1.5 SD < x \leq M - 0.5 SD$); ⁵⁾ very low ($x < M - 1.5 SD$). (Azwar, 2012).

The percentage of the number of subjects in each category was calculated by the formula: $NP = (R \times 100 \%) \times (SR)^{-1}$; NP = percentage of subjects in each category, R = number of subjects in the category, SR = total number of subjects, and 100 = fixed number.

Focus Group Discussion (FGD) before intervention (1) and after (2)

¹⁾ Prior to the intervention, the participants in the research team, the PPL and FFG administrators compiled the module syllabus and determined which of the women farmers would participate in the intervention; ²⁾ after the intervention and data collection, the research team, the PPL, the FFG administrators, representatives of the women farmers, and the village officials analyzed the SWOT results.

3. RESULTS

- 1) Results of the FGD before the intervention include ¹⁾ the production of a training module which contains tips on entrepreneurship; managing human resources; ways to process food from agriculture; and ways to improve family welfare; ²⁾ 198 women farmers were selected to be subject to the intervention.
- 2) Intervention Results

Table 1. Entrepreneurial knowledge

Category	Score	Freq.	Percentage. (%)	Limit	Information
Very High	21 - 25	81	40.9	25	Mean =19.7
High	17 - 21	85	42.9	21	(19.7 >17)
Moderate	13 - 16	31	15.7	17	High
Low	9 - 12	1	0.5	13	category
Very Low	5 - 8	0	-	9	
Total	-	198	100	-	

Table 2. Knowledge of HR management

Category	Score	Freq.	Percentage. (%)	Limit	Information
Very High	21 - 25	110	55.6	25	Mean =20.8
High	17 - 21	68	34.3	21	(20.8 >17)
Moderate	13 - 16	20	10.1	17	High
Low	9 - 12	0	-	13	Category
Very Low	5 - 8	0	-	9	
Total	-	198	100	-	

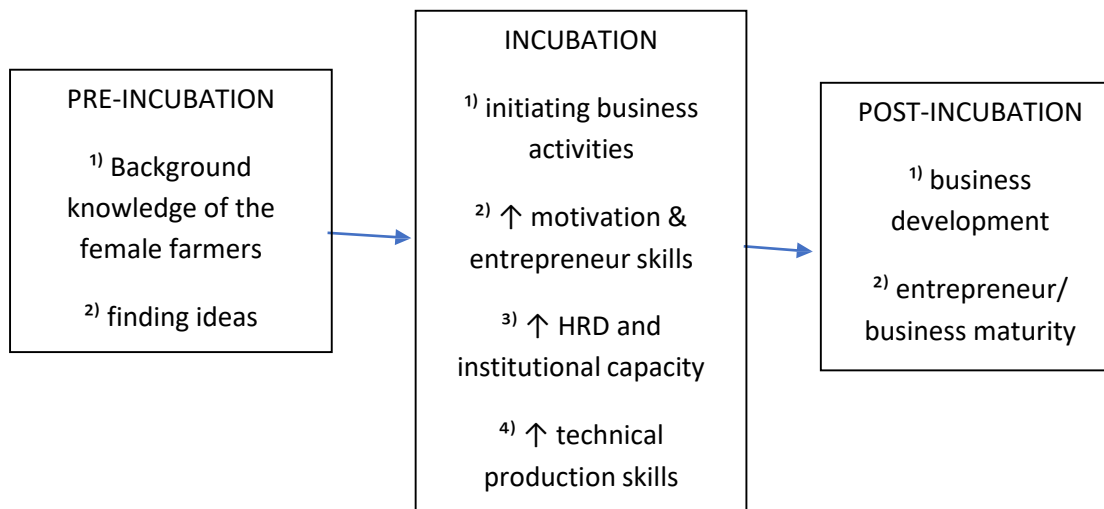
Table 3. Knowledge of family welfare

Category	Score	Freq.	Percentage. (%)	Limit	Information
Very High	21 - 25	12	6.1	25	Mean = 15.9
High	17 - 21	67	33.8	21	(15.9 > 13)
Moderate	13 - 16	100	50.5	17	Moderate
Low	9 - 12	19	9.6	13	Category
Very Low	5 - 8	0	-	9	
Total		198	100	-	

Table 4. Knowledge of processing agricultural products

Category	Score	Freq.	Percentage. (%)	Limit	Information
Very High	26 - 30	55	27.8	30	Mean = 23.8
High	21 - 25	122	61.6	25.2	(23.8 > 20.4)
Moderate	16 - 20	20	10.1	20.4	High
Low	11 - 15	1	0.5	15.6	Category
Very Low	6 - 10	0	-	10.8	
Total	-	198	100	-	

Results of the FGD after the intervention include the concept of the pre-incubation stage, incubation and post-incubation stage, which support the implementation of an agribusiness incubator, as shown in Figure 1.

**Figure 1.** Stages of an Agribusiness Incubator

4. DISCUSSION

The results of the intervention significantly show that the aspects of knowledge, human resources' management and agricultural products' processing are at a high level. Such conditions have a positive impact and form better views and perceptions, which gradually influence behavior. Entrepreneurship knowledge helps strengthen self-confidence which has implications for the growth of positive beliefs and attitudes that can result in proactive entrepreneurial actions. This is in line with the Indonesian government's efforts to improve the welfare of rural families through its poverty alleviation programs (Kuswardinah, 2014). A case of gender inequality in Kenya shows an impact on women's limited access to the labor market and access to agricultural activities. Kenyan women's incomes are less monitored in the total agricultural sector's income than the men's (Aguilar, Carranza, Goldstein, Kilic, & Oseni, 2015; Zereyesus, 2017), it turns out that only 0.5 percent of Kenyan women have access to financial services.

Another finding is the knowledge aspect of “family welfare” being in the moderate category. This fact is intertwined with the relatively low socio-economic level of most women farmers. Women farmers are made to always feel poor as they are massively excluded from economic adequacy. They tend to have a pessimistic mindset and only aspire to help obtain a livable life for their family. Among them, there is a strong level of hope, a family to feed, and always appreciates any efforts to improve the welfare of their family (Kuswardinah, 2019a). This condition is diametrical to the fact that most of them have only a low level of education. As is known, education contributes significantly to the low participation of women in farmers’ group activities. Most of the thinking energy of women farmers revolves around trying to meet the needs of daily life. Their substance, however, is often more focused on worshipping Allah SWT, as a large number of them are devout Muslims. Next comes preparing food for their family’s daily consumption and then helping their husbands in the fields. The results of the SWOT analysis into the feasibility of pioneering an agribusiness incubator for Banyubiru village are seen in Figure 2:

Internal Factor	<i>Strengths (S)</i>	<i>Weaknesses (W)</i>
	¹⁾ Abundant natural sources of agricultural products (fish and plants); ²⁾ large number of human resources, active FFG organization; ³⁾ knowledge and entrepreneurial willingness of FFG members is high; ⁴⁾ lots of land available for offices and activities	¹⁾ Lack of financial capital; ²⁾ lack of conceptual capital about incubators; ³⁾ low education human resources, ⁴⁾ product marketing insight is not yet available; ⁵⁾ weaknesses in IT; ⁶⁾ household matters are very time-consuming; ⁷⁾ weaknesses in managing finances
External Factor		
<i>Opportunities (O)</i>	S-O Strategy	W-O Strategy
¹⁾ Variety of processed rare products that are not yet on the market; ²⁾ very wide-open market; ³⁾ very easy transportation; ⁴⁾ encouragement from the village officials	Use strengths to take advantage of opportunities (identified in detail during operational preparation)	Take advantage of opportunities and overcome weaknesses (identified in detail during operational preparation)
<i>Threats (T)</i>	S-T Strategy	W-T Strategy
¹⁾ The use of ICT is becoming a trend in buying and selling; ²⁾ product competition is qualitatively very high; ³⁾ public trust is still low for traditional products; ⁴⁾ difficult & strict policies to build a business partnership	Use force to deal with threats (identified in detail during operational preparation)	Minimize weaknesses to deal with threats (identified in detail during operational preparation)

Figure 2. SWOT analysis

According to the matrix above, which covers the results of a comprehensive SWOT analysis carried out through the FGD, it can be concluded that Banyubiru village is ready and capable of organizing an agribusiness incubator.

5. CONCLUSION

1. Based on the entrepreneurship knowledge of the women farmers in Banyubiru village, this research can be used as the main capital and an adequate justification, as well as the driving force, for their readiness to start an agribusiness incubator.
2. The results of the SWOT analysis on the modalities of Banyubiru village in the form of its agricultural potential, human resources’ potential, and land availability show that it is very feasible and considered to be urgent to pioneer the establishment of an agribusiness incubator in Banyubiru village.

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CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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