Innovative social business model development for organic rice commodity entrepreneur using business model canvas (BMC) (Case study: Gapoktan Simpatik, local farmers group entrepreneur in Cisayong, Tasikmalaya)

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Abstract. The demand for organic rice products tends to increase 20 percent annually. This has become a very promising market opportunity for business actors or farmer groups. One of the farmer groups in Tasikmalaya District that produces organic rice is Gapoktan Simpatik. The market of Gapoktan Simpatik product includes local and international markets, but the demand quantity of local market is lower than the international market. Breakthrough efforts to increase local market demand need to be done by increasing the number of sales, expanding markets, maintaining business sustainability and providing social impact to the wider community. The development of organic rice products is carried out using the Design Thinking approach which is followed by a validation process, repeated evaluations and modifications for each development. Business model design research using seven stages: 1) Planning Stage, 2) Vision Design, 3) Profound Understanding, 4) Idea, 5) Prototype, 6) Validation and 7) Scale Up. The final business model was then developed into a Social Business Model. To ensure the process is successful, the evaluation is done twice so that a social business model that has been improved appears. The results of this research show that the design carried out with the stages of Design Thinking shows that the business being run is getting better. This is indicated by the criteria for increasing sales of organic rice products, the ability of innovation in derivative products produced, and increasing the capacity of the community in terms of both economic and intellectual aspects.

Keywords: social enterprise, organic rice, Design Thinking, business development, product diversification.

1. Introduction

The agricultural sector has an important role for the economic growth of a country, including Indonesia. This is based on the contribution of the agricultural sector to the national Gross Domestic Product (GDP), increase in people's income, the acquisition of foreign exchange, and the creation of food security that is closely related to social security [3]. Efforts to increase strategic commodities need to be carried out both in improving quality, production capacity and expanding marketing. Rice is one of the strategic commodities that has become the main base in Indonesian agricultural vitality [1]. Improving
the quality of rice which implements a sustainable farming system is a very promising strategy because this strategy can increase rice production and farmers' income. The development of organic rice is one way to get better quality rice.

Organic rice is rice produced from cultivation with the principle of organic farming or without the use of chemicals based on certain standards and has passed certification from an independent institution. The prospect of developing organic rice is quite bright, considering that currently consumers tend to prefer a healthy lifestyle (back to nature). This is because the public is increasingly aware that the use of chemicals, synthetic pesticides and growth hormones in agricultural production, turns out to have negative effects on human health and the environment [6]. The development of organic rice is also supported by the government with the Go Organic program in realizing environmentally oriented agribusiness development oriented to meeting market demand involving consumers, farmers, market participants and the wider community. This causes the demand for world organic agricultural products, especially rice, to increase rapidly [1]

Based on data from the Tasikmalaya Agriculture Office, the market demand for organic rice has increased by around 20 percent annually [2]. Tasikmalaya Regency has an organic rice farmer group, one of which is the Combined Farmers Group of Organic Agriculture Systems (Simpatik Gapoktan). Simpatik Gapoktan is one of the gapoktan which brings together organic rice farmers in Tasikmalaya Regency which was founded in 2008 with a membership of 500 people and has passed organic certification. The main market of Simpatik Gapoktan for organic rice commodities is the export market and the local market where the ratio of the total volume of organic rice marketed to the export market with the local market is 10:1. Data on sale of Simpok Gapoktan organic rice to export markets and local markets in 2017 are presented in table 1.

| Varieties       | Export Market | Local Market |
|-----------------|---------------|--------------|
| Pandan White    | 8.250         | 7.162,58     |
| Pandan Brown    | 7.278         | 5.928,409    |
| Chii White      | 39.100        | 20           |
| Chii Brown      | 4.800         | -            |
| Red Rice        | 6.000         | 2.093,953    |
| Pink Rice       | -             | 2.477,04     |
| Black Rice      | 3.580         | 628,758      |
| Total           | 172.442       | 18.310,74    |

Sources: [5]

Based on table 1, the total sales volume of organic rice marketed to the export market is higher than the local market, where the ratio of the total sales volume is 9:1. The level of sales of organic rice to the local market is still very low so that farmers' crop yields have not been maximally absorbed. Therefore, there is a need for a business model that does not only focus on increasing sales but also focuses on empowering Simpatik Gapoktan farmers.

This study aims to increase the income of organic rice farmers through increasing rice sales in the local market which contributes socially to the empowerment of Simpatik Gapoktan farmers in Mekarwangi Village, Cisayong District, Tasikmalaya, where the development of organic rice business will be carried out using Business Model Canvas, where the chain of empowerment sociopreneurship based so that the products produced are of high value and have a positive impact on the surrounding environment.

2. Research methods
The research method used is descriptive method with a qualitative approach using tools based on the book Design a Better Business in designing the organic rice business model. The object of this research is organic rice products produced by Gapoktan Simpatik located in Mekarwangi Village, Cisayong
District, Tasikmalaya District. Data collection techniques were obtained through interviews and case studies, where interviews were conducted semi-structurally following the framework of the canvas business model. Broadly speaking, the stages of research carried out in the design of the Business Model Canvas (BMC) organic rice business model modified into Social Business Model Canvas (SBMC), where after the SBMC was made a process of validation and justification was made. Figure 1 shows the stages of research in this study:

![Figure 1. Stages of research.](image)

The analysis technique in designing this business model will refer to the book Business Model Generation and Modified Business Model Canvas for Social Enterprise designed by Qastharin [7] as the foundation. In addition to facilitating the process of designing business models and validating business models. The validation process is carried out through interviews with parties who understand the canvas business model, social entrepreneur, and academics to see and evaluate whether the business model is good or not.

3. Results and discussion

The design of the organic rice business model produced by Gapoktan Sympathetic is carried out in several stages based on the book Design a Better Business. The first step in designing a business model is to determine the role (team) or organizational structure needed in the business. According to [4], the organizational structure is needed to standardize operations, duties and obligations related to the fiber authority of each position's tie role. The tool used to determine the job requirements needed in an organic taste business is Team Charter Canvas. Based on the analysis using Team Charter Canvas the role needed in developing the organic rice business is CEO (Chief Executive Officer), CFO (Chief Financial Officer), CTO (Chief Technical Officer), CMO (Chief Marketing Officer), ICS (Internal Control System), and Manager. Individuals who play a role in several positions above work in a team to develop a sociopreneurship based organic rice business.
In designing Business Model Canvas (BMC), information and data obtained from Focus Group Discussions (FGD) with teams (individuals who play a role in business) use tools 5 Bold Step Canvas, Design Criteria Canvas, Persona Canvas, Customer Journey, Value Proposition Canvas and Context Canvas in MVP I (Minimum Viable Product) I. The results of the tools in MVP I are used in designing Business Model Canvas (BMC) I. Based on the results of the discussion with the team assisted by several tools, the following Business Model Canvas produced is presented in figure 2.

![Figure 2. Design of business model canvas 1st iteration.](image)

The design of the Business Model Canvas (BMC) in figure 2 is based on the business journey of organic rice in the first period (July-August). BMC produced MVP I (Minimum Viable Product) in the form of organic rice products (white, brown and black rice), local consumers who began buying Simpatik Gapoktan organic rice products, and farmers felt happy because the demand for organic rice was increasing. Next, the appearance of Simpatik Gapoktan organic rice products is shown in figure 3.

![Figure 3. Organic rice products (black, white, red rice).](image)

BMC I focuses more on strategies to increase sales of organic rice. The result of MVP 1 validation is that it can find out the Customer Segment that is addressed from BMC I by looking at the sales results. Data on organic rice sales in the first period from July to August are presented in table 2.
Table 2. Data on sales of organic rice in July-August.

| Varietas          | @5 kg  | @1 kg  | Total (kg) |
|-------------------|--------|--------|------------|
| Sintanur White    | 75 pcs | 170 pcs| 545 kg     |
| Black Rice        | 135 pcs|        | 135 kg     |
| Red Rice          | 77 pcs |        | 77 kg      |
| Pink Rice         | 95 pcs |        | 95 kg      |
| Rainforest        | 50 pcs | 105 pcs| 355 kg     |
| Vulcano           | 75 pcs | 50 pcs | 425 kg     |
| **Total**         |        |        | **1,632 kg** |

Table 2 shows that the sales of organic rice from each variety in one month reached 1,632 kg where 1,250 kg went to retailers and distributors, 382 kg to direct consumers. Demand in the first period was dominated by retailers and distributors, while purchases by consumers were directly under the sales of distributors and retailers. Therefore, improvements need to be made from BMC I which has been designed by designing a business model at Minimum Viable Product (MVP) II to achieve direct sales targets to consumers.

The design of the business model (BMC II) is based on case studies through FGD assisted by tools such as creative matrix, innovation matrix, wall of ideas, and prototype canvas so that MVP II and BMC II can be designed. The following is an explanation of each of the tools in MVP II, namely:

1. **Creative Matrix** is used to classify creative ideas that can facilitate the segmentation of product sales to consumers. Based on the results of the creative matrix there are four market segments, namely family, reseller, retailer and community.

2. **Wall of Ideas** is used to provide an overview of each stage of the cooled plan so that the target is reached. The wall of ideas are divided into three periods, namely:
   i. **Period one (2018)** is targeted to create processed products from organic rice, where the processed products can be a product that can replace organic rice or organic rice. In this first period, organic rice is processed into organic flour. The organic flour has been sold as much as 2,000 kg by the end of 2018. In addition, organic flour is also processed into food that can be consumed directly by consumers, namely Organic Rice Roll, where the product is sold as many as 150 pcs.
   ii. **Period two (2019)** focuses more on empowering the community by conducting training on organic farming and skills for processing products from organic rice. The output is produced in the second period in 2019, namely with the increasing marketplace for the sale of organic rice and organic rice processed products.
   iii. **The third period (2020)** focuses more on the sale of organic rice and organic rice processed products, where sales can spread to all marketplaces in Indonesia or major cities in Indonesia, and can collaborate with large restaurants in Indonesia.

3. **Innovation Matrix** is used for ideation in terms of financing, where this tool can facilitate the viewing of activities that incur large costs and see activities that can generate large income and can do separation or prioritize activities to be carried out in conducting business. The output of this tool is the production of rice roll (snacks) aimed at utilizing low grade rice to be processed so that it has a selling value when marketed to consumers.

4. **Canvas prototype** is used to convey all the plans that want to be realized, so that the development in BMC II modification can work well. The output generated from this tool is improving the quality of organic rice, developing organic rice, knowing the impact that consumers feel after consuming organic rice, strategies to maintain consumer confidence in the products produced, and real strategies to achieve that mission.
5. Based on the results of the discussion with the team assisted by several tools, the following is BMC II produced based on MVP II found in figure 4.

![Business Model Canvas](image)

**Figure 4.** Design of business model canvas 2nd iteration.

The design of Business Model Canvas (BMC) II in figure 4 is obtained based on the organic rice business trip in period one (until the end of 2018). BMC produces MVP II (Minimum Viable Product) in the form of organic rice products, processed products of organic rice (rice roll), approaches to farmers to consistently grow organic rice, and expansion of branding and relations. The following features of processed products made from the remnants of rice processing and grinding are presented in figure 5.

![Organic product rice roll](image)

**Figure 5.** Organic product rice roll.
The results of the validation of the second stage of the Minimum Viable Product process, which can change the business pattern used by looking at sales of the business model that has been built. Data on organic rice sales in the second period are presented in Table 3.

**Table 3. Data on sales of organic rice products in September-December.**

| Varietas       | @ 5 kg | @ 1 kg | Total (kg) |
|----------------|--------|--------|------------|
| Sintanur White | 125 pcs| 237 pcs| 862 kg     |
| Red Rice       | -      | 224 pcs| 224 kg     |
| Brown Rice     | -      | 168 pcs| 168 kg     |
| Pink Rice      | -      | 160 pcs| 160 kg     |
| Rainforest     | 50 pcs | 110 pcs| 360 kg     |
| Vulcano        | 125 pcs| 100 pcs| 725 kg     |
| Rice Roll      | 320 pcs|        |            |
| **Total**      |        |        | **3,361 kg**|

Table 3 shows that sales of organic rice from each variety in one period reached 3,361 kg and 320 pcs ricerolls. The total sales of retailers reach 1,120 kg, distributors reach 1,500 kg, while direct consumers reach 741 kg. Meanwhile, rice roll products with total sales of resellers reached 246 pcs while for consumers it reached 74 pcs.

Based on the results of the design that has been made on MVP I and MVP II, where the output of the design becomes an increase in sales. The business model designed in MVP III focuses on empowering the surrounding community. The design was created using Business Model Canvas tools modified by Qastharin (2014) into Social Business Model Canvas. To make SBMC tools are needed that refer to the Design a Better Business book to validate from every business and social activity carried out. These tools are the riskiest assumption and experiment canvas. The following is an explanation of each of the tools in MVP III, namely:

1. **Riskiest Assumption Finder** is a medium to find the best assumptions for maintaining a business through social activities in MVP III. The output of this tool is knowing activities that have an impact on the wider community and classifying the level of risk in detail (high to low risk) of the activity. Empowerment activities can improve human resource capabilities by training. This HR Empowerment focuses on surrounding housewives who have the desire to learn in processing post-harvest products.

2. **Experiment Canvas** is used as a medium to validate the design of social activities carried out through real action. In this canvas there are several points that will be discussed as a form of design of social activities whose results are in the form of conclusions whether this activity is validated or not. Empowerment activities were carried out for mothers by providing training in the form of sorting rice and packing rice. The results of the experiment canvas concluded that the social activities were said to be valid and appropriate because these mothers gave positive responses to these activities.

Based on MVP III, the SBMC can be produced. Social Business Model Canvas (SBMC) is a media to determine the business model that will be run, of course, which has social values in it. The following are the results of the design of the Social Business Model Canvas (SBMC) in figure 6.
Figure 6. Design of a social business model canvas (SBMC).

The Social Business Model Canvas (SBMC) has 10 blocks, along with an explanation and the contents of each block, namely:

1. Customer segment
The customer segment points on the Social Business Model Canvas (SBMC) there are 3 parts where the market segment is not only focused on sales but there is also segmentation in the social activities carried out including Purchaser, Beneficiaries, and Stakeholders.

   a. Purchaser is a market segmentation that will buy our products, as well as in the previous business model market segmentation that will be focused on this business are family, resellers, retailers, and communities.
   
   b. Beneficiaries are parties who will benefit from the business done. In the social business of organic rice there are two parties who benefit from organic farmers and housewives. Organic farmers are one of the parties who will receive benefits from this business because they not only get material benefits but also gain more knowledge in processing agricultural land. In terms of material, they benefit because the grain produced will be absorbed directly by our party to be processed into products that have high added value. The price of grain purchased from organic farmers is higher than conventional grain. In addition, the knowledge capacity of farmers will increase because they are always given knowledge in processing rice fields through training carried out by the Internal Controling System (ICS). In addition to organic farmers, those who will benefit from social business activities are housewives. The canvas was previously tested where housewives were empowered to process agricultural produce. The results obtained from these activities are very good apart from their increasing economic level, the capacity of knowledge and experience of housewives obtained from these activities is increasing.
   
   c. Stakeholders are parties involved in business activities carried out. Parties involved in this business activity include the Agriculture Office of Tasikmalaya Regency as a communication mediator between the company and the agricultural service of West Java Province in terms of receiving assistance or overseas buyers. In addition, there is the Ministry of Agriculture as the party that facilitates licensing or parties who always provide information regarding policies related to organic rice quality standards. And the last is Simpatik Gapoktan itself which is the main axis in providing access to organic farmers in the Regency of Tasikmalaya.
2. Value proposition
   a) The value proposition in the Social Model Business Model Canvas does not only explain product superiority, but there are three important points in filling the value proposition. This is done to solve problems in the field relating to the organic rice business, these points are problem, Solution, and Vision.
   b) The problem or problem that is obtained when social business activities are carried out is that farmers' knowledge of agricultural products is still low which causes these agricultural commodities to become stiff so that the selling price of commodities is stagnant and farmers do not have access to sell their crops.
   c) The solution or solution that is produced after getting the problem is to provide knowledge in the context of processing and utilizing yields to give access to market processed commodities and buy their crops at reasonable prices.
   d) Vision or vision that is formed to mature the business is Down the field to feel the condition of farmers both in terms of knowledge and economic aspects, provide education in processing agricultural land and agricultural products with the aim of increasing added value from the agricultural products themselves, and making farmers as partners in the supply of crops and partners in processing crop yields.

3. Customer relationship
   To create loyal customers is the core of every business, therefore it is necessary to form a form of relationship that exists with consumers so that business or sales activities always run well. To build good relationships with customers, we do things like product education, provide satisfying products and share experiences with customers.

4. Channels
   All relationships with consumers are conveyed through channel points directly and indirectly including:
   a) Word of mouth as direct media delivered from individual to individual. In this way consumers will communicate directly to get to know this product through knowledge sharing.
   b) Pandu Logistic and Wahana Logistic as a link or as a medium for shipping products to consumers.
   c) Facebook and Instagram as a medium to provide information to the public online. Besides Facebook social media and Instagram can also be a medium to promote and sell products so that people can get products easily.

5. Revenue stream
   a) In accordance with the design made on the previous canvas, the source of income from the sale of rice is done in three ways, namely:
      1. Direct sales, done by selling directly to consumers in the absence of media or practically offline.
      2. Online sales are done through online media such as Facebook as an online sales platform and as a source of information to customers.
      3. Sales through marketplaces related to agricultural products
   b) Apart from organic rice, the source of income is increased through the sale of rice rolls and other products such as rice bran, fertilizer, flour, and groats.

6. Key resources
   Resources needed so that this business activity can run well, of course, resources are needed. Supporting resources for the business are organic farmers, organic grain, milling, and housewives.

7. Key activities
   In the business the previous model has been discussed regarding what is the business activity of organic rice, starting from activities to looking for networks and branding activities to increase public awareness
about products from organic rice. Production and distribution activities began with the distribution of grain from farmers to production into rice products and organic rice derivative products.

8. Key partner
In maintaining the stability of this business, of course, requires partners who can mutually benefit both the company and the partners themselves. In this business trip, we partner with community, banking and personal institutions such as investors.

9. Cost structure
Costs incurred in this business are fixed costs which consist of the cost of purchasing grain, distribution costs, production costs (employees and fuel) and certification costs.

10. Key matrices
At the last point in the Social Business Model Canvas there are key matrices that are the parameters of the success of a social business. The parameter of success in social business activities is to spread kindness to the parties who are the segmentation of the business itself, namely farmers and housewives. In addition, with the conduct of social business activities, the quality of each individual who is part of this business is increasing both in terms of knowledge and in terms of welfare.

The results of Minimum Viable Product III process stage validation can change the business pattern used by looking at sales of the business model that has been built. Table 4 shows the data on sales of organic rice in the second period from January to March.

| Variety               | @5 kg | @1 kg | Total (kg) |
|-----------------------|-------|-------|-----------|
| Sintanur White        | 130 pcs | 490 pcs | 1,140 kg |
| Red Rice              | 99 pcs  | 99 pcs  | 99 kg     |
| Brown Rice            | 43 pcs  | 43 pcs  | 43 kg     |
| Pink Rice             | 51 pcs  | 51 pcs  | 51 kg     |
| Rainforest            | 125 pcs | 491 pcs | 1,116 kg |
| Vulcano               | 180 pcs | 500 pcs | 1,400 kg |
| Rice Roll             | 300 pcs |         |           |
| Total                 |        |       | 3,849 kg  |

Table 4 shows that sales of organic rice from each variety in one period reached 3,849 kg and 300 pcs of rice rolls. The total sales of retailers reach 2,500 kg, distributors reach 1,120 kg, while consumers directly reach 229 kg. Meanwhile, rice roll products with total sales of resellers reached 210 pcs while those of consumers directly reached 90 pcs.

4. Conclusions and recommendations

4.1. Conclusion
Based on the results obtained, the conclusion of this study is that the results of the design tools in the book Design a Better Business were able to increase sales of organic rice products. In addition, using these tools can create innovations from derivative products produced. From a social perspective, this business can have a positive impact on society by giving empowerment so that the capacity of the community both in terms of the economy and in terms of knowledge can increase.

4.2. Suggestion
Suggestions for subsequent research, namely the development of business models must continue to be carried out so as to increase sales capacity and increase a better impact on the community.
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