

ANALYSIS OF THE CANVAS MODEL BUSINESS FOR FISH FARMING IN SANGRIANG FARM, TUATUNU SUB-DISTRICT, GERUNGGANG SUB-DISTRICT, PANGKALPINANG CITY

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ABSTRACT

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The fish farming business in Pangkalpinang City is growing along with the increasing demand for aquaculture products. Sangriang Farm is a fish farming business engaged in the hatchery and rearing of Gurame (*Osphronemus goramy*), Catfish (*pangasius sp .*), Goldfish (*Cyprinus carpio*), Tilapia (*Oreochromis niloticus*), and Catfish (*Clarias sp .*). This study aims to analyze existing business models and recommend new business models through the Business Model Canvas (BMC). The research method used in this study is a survey method with a case study technique. Analysis of existing conditions reinforced by SWOT analysis resulted in BMC improvements in Channels elements (use of social media, product labels, and packaging), Key Resources (additional human resources, capital, and intensification of cultivation technology), Customer Segments (target consumers of semi-finished processed products and restaurant suppliers), and Revenue Streams (bookkeeping management and product diversification). Implementing the recommendations is expected to increase the business capacity of Sangriang Farm.

INTRODUCTION

The potential for freshwater fisheries is improving, encouraging people's interest in developing aquaculture. Several freshwater fishery commodities are now intensively cultivated, such as Catfish (*Pangasius sp .*), Catfish (*Clarias sp .*), Gurami (*Osphronemus goramy*), Tilapia (*Oreochromis niloticus*), Mujair (*Oreochromis mossambicus*), Bawal (*Bramidae*), Mas (*Cyprinus carpio*), and several other freshwater fish commodities. It was recorded that 2,428 freshwater fish cultivators spread across the Bangka Belitung Islands with a total cultivated area of 124,625 ha (KKP STATISTICS, 2020). Sangriang Farm Fishery Cultivation Business is a still-water pond aquaculture using a semi-intensive cultivation system. The water used in this cultivation is running water, and the water source comes from specially dug wells intended as cultivation water. Apart from using natural feed, this system also starts giving additional feed in the form of pellets (Ganjar & Sri, 2018).

Sangriang Farm is an aquaculture pond engaged in the business of hatching and growing fish, the commodities contained in the fishery business are Gurame Fish (*Osphronemus*

goramy), Catfish (pangasius sp .), Goldfish (Cyprinus carpio), Tilapia (Oreochromis niloticus), and Catfish (Clarias sp .). Sangriang Farm was established in 2013 and had been running the aquaculture business for almost eight years. In running its business, Sangriang Farm continues to strive to improve business competitiveness. However, over time, there will be many competitors in the cultivation business, so Sangriang Farm needs to improve the business model applied from the start. Analysis using the Business Model Canvas (BMC) is considered adequate because the analysis used explains thoroughly, both in terms of marketing, human resources, and finance, the value or product offered, so entrepreneurs can determine the direction of a business and find out the competitive advantages that exist on the business they are running (Suharti, 2015). This model is also used to assess whether the use of the model contributes to a business, thereby creating business value. Business development strategies using the canvas business model can quickly create and evaluate new models (Wallin et al ., 2013).

METHODOLOGY

This research was conducted in Tuatunu Village, Gerunggang District, Pangkalpinang City, in the Sangriang Farm aquaculture business. The commodities in this cultivation business vary greatly, such as carp, catfish, goldfish, catfish, and tilapia. The research method used in this study is a survey method with a case study technique. The methods used in collecting data in this study include observation, questionnaires, interviews, and documentation. The data analysis method used in this study is descriptive. The processing of this descriptive method is carried out using an analysis of the existing conditions of the canvas business model using 9 BMC elements displayed in 9 boxes according to (Osterwalder & Pigneur, 2010), namely Customer Segments, Value Proposition, Channel, Customer Relations, Revenue Streams, Key Activities, Key Partnerships, Key Resources, and Cost Structure and SWOT Analysis.

RESULT

Based on the research results, it was found that the existing conditions of the fish farming business at Sangriang Farm used the Business Model Canvas (BMC) approach as follows.

Customer Segments

Consumers or customers who buy fish at Sangriang Farm come from the surrounding community and consumers at Pasar Pagi, Pangkalpinang. The business owner sells the harvested fish directly to the Morning Market, while wholesalers dominate the demand for fish seeds.

Value Proposition

Production. Feeding fish in this aquaculture business uses commercial pellets so that the quality of fish and aquaculture water can be maintained with appropriate pellet nutrient levels and using artificial feed does not take a long time to obtain feed because it is widely available in fish feed shops, so that it can save energy in the process. In addition, the source of water that comes directly from springs is one of the product's advantages because the primary needs for fish farming can be obtained easily.

Channels

There are several types of marketing channels used by Sangriang Farm. First, namely the zero-level marketing channel, namely, marketing is carried out by selling cultivation products

directly to the morning market in the Pangkalpinang area. Second, the level one channel, namely producers to retailers to consumers, this marketing channel is carried out by collectors who take consumption fish for resale or seeds for re-cultivation. In addition, there are also often those who promote word of mouth among consumers. Farmers also use social media in the form of WA (WhatsApp) as a production channel, but promotions have yet to use other social media platforms such as.

Customer Relationship

The Sangriang Farm fish farming business already has consumers and customers from various backgrounds, such as customers or consumers at the Pangkalpinang Morning Market. In addition, there are several customers who purchase seeds, such as fish collectors in the Toboali, Belinyu, and Pinang Sebatang areas. In building customer relationships, this aquaculture business provides bonuses to regular customers such as for every purchase of more than 50 kg, will be given a bonus of 2-5 kg, and for every purchase of seeds over 50 thousand heads, will be given a bonus for catfish and tilapia species. In addition, cultivators always strive for the availability of the commodities they wish to order or ready stock for regular customers to keep customers from buying elsewhere.

Key Activity

The main activity currently being carried out by cultivators is fish rearing cultivation, starting from seed stocking, feeding, and harvesting. Fish-rearing activities are carried out in earthen ponds, and rearing ponds are divided into two. Rearing ponds for Tilapia, Gurame, and Catfish, as well as Catfish Hatchery activities in fish ponds, are carried out in tarpaulin ponds. However, this cultivation business can only produce seeds for catfish and tilapia commodities. In contrast, for catfish, carp, and carp seeds, this cultivation business obtains fish distributed from outside the area, which will then be grown again or sold in seed sizes.

Revenue Streams

The income stream at Sangriang Farm only comes from the production of fish farming, and the most significant source comes from the sale of consumption fish in the form of catfish, tilapia, and catfish in the market. For the sale of fish consumption, the average sales can spend 50 kg/per day. As for Goldfish and Gurame, because the cultivation cycle is long enough, sales can only be made occasionally or occasionally to fulfill customer orders. For selling seeds, this cultivation business provides catfish and tilapia seeds at any time, but carp, goldfish, and catfish seeds can be obtained after placing an order. Fish seeds whose stock is empty will be obtained from business partners. The most purchase of seeds, namely catfish seeds, every month sales of catfish seeds average 30 thousand / month. For tilapia, the average sale is 20 thousand / per month, and for catfish, 20 thousand / per month. At the same time, the demand for Goldfish and Gurame seeds averages 7 thousand / month, obtained from business partners.

Key Resources

Human resources that support production activities only come from owners and workers. The fish hatchery was carried out by Mr. Hendra, whom a pond worker assisted. The technological resource these aquaculture ponds use is flowing irrigation; water flows from springs to cultivated fish ponds. The physical resources that support cultivation are vehicles for marketing access.

Key Partnership

In meeting consumers' needs for fish seeds, Sangriang Farm obtains goldfish, carp, and catfish from shipments outside the region, such as Jakarta, Sukabumi, and Yogyakarta, as well as business partners within the region, such as in the Central Bangka region, namely Pokdakan

Pinang Sebatang, Lampur, and Sarang Mandi. To meet the need for fish feed for enlargement activities, farmers obtain commercial feed from commercial feed stores close to the cultivation area. This cultivation business needs a feed storage warehouse. To avoid damage to feed quality, feed purchases will be made if the fish feed is already finished.

Cost Structure

The most extensive series of cost burdens in running the fish farming business in the fish farming business at Sangriang Farm is the cost of feed; this is because feed prices continue to increase while farmers only rely on commercial feed. Some other costs incurred to carry out this activity are electricity costs, costs for procuring seeds for enlargement activities, workers' salaries, and gasoline for vehicle access.

DISCUSSION

Based on the results of research on the existing conditions of the fish farming business at Sangriang Farm, a strategy was produced to determine recommendations for the Canvas Business Model for Improvement in the Sangriang Farm Fish Cultivation Business concerning the SWOT Analysis as follows.

Strength	Weakness
Value Propositions <ul style="list-style-type: none"> • Aquaculture water that is maintained from household waste • The use of commercial pellets from the factory 	Channels <ul style="list-style-type: none"> • The biggest marketing channel only with sales in the morning market • Minimal social media
Customer Relationship <ul style="list-style-type: none"> • Bonuses for customers • Ready stock 	Key Resources <ul style="list-style-type: none"> • Minimal cultivation equipment • Few human resources
Key Partners <ul style="list-style-type: none"> • Cultivation partners in various regions 	Customer Segments <ul style="list-style-type: none"> • The biggest consumers only come from sales at the morning market and fish seed collectors
Opportunity	Threat
Revenue Streams <ul style="list-style-type: none"> • Increase income from products other than fish commodities and processed products 	Structure <ul style="list-style-type: none"> • Feed costs • Electricity cost • Cost of procuring seeds • Gasoline costs • Worker salary
Key Activity <ul style="list-style-type: none"> • Carry out activities other than seeding and enlargement 	

Based on this, the recommendations for the improvement canvas business model for Sangriang Farm in determining the target market or consumers are divided into two components. Customer segmentation is grouping customers based on needs, wants, and behavior. After segmenting the market into several groups, producers can choose which segments to develop or target. Targeting is allocating or utilizing existing resources effectively to determine the next target market.

Direct consumers

Semi-finished or ready-to-cook fish products are an alternative to reach consumers because this is in line with the opinion of Kotler and Armstrong (2014) that direct marketing uses salespersons (humans) to attract customers; direct marketing can facilitate ordering according to consumer needs. One of the ready-to-eat fish products that can be developed is ready-to-fry catfish with yellow seasoning. Catfish was chosen as a semi-finished processed product because if the catfish has passed the harvest period or the size is too large, consumers' willingness to buy the fish will decrease.

Indirect consumers

Indirect consumers are consumers who buy products for resale. The following are recommendations for target customers (Customer Segments) that Sangriang Farm can achieve.

Pecel catfish restaurant

Fish farming Because traders can order fish according to the ideal size for sale. One of the commodities in Sangriang Farm is catfish, which is currently the highest production. Research by Farin *et al.* (2015) states that pecel catfish is a product made from the primary raw material, namely catfish, but there are also other fresh fish such as gourami and tilapia; some entrepreneurs or pecel catfish traders prefer to obtain fish raw materials from enlargement ponds. With so many catfish pecel food stalls currently in Pangkal Pinang and the surrounding area, this is an opportunity for Sangriang Farm to become a supplier of fresh fish for catfish pecel stall entrepreneurs.

Catering

Elvinarossa (2016) states that there are many ways in which a person fulfills his life's needs, namely by taking it directly from nature, processing it himself, then consuming it. During the Covid-19 pandemic, especially now, many people prefer to order food instead of having to buy it directly because this can reduce the risk of contracting the disease. However, some obtain food by buying ready-to-eat food.

Restaurant

Pangkalpinang City is the capital of Bangka Belitung. Of course, there are lots of food restaurants with freshwater fish menus. Catfish, carp, and carp are the leading freshwater commodities in great demand by people visiting restaurants. There are several reasons why fish are in great demand by many people fish is a food ingredient that contains various substances, and apart from being cheap, the absorption of fish protein is higher than other animal products such as beef and chicken because fish meat has high protein fibers. Shorter than meat and beef protein fibers (Pandit, 2008).

Value Proposition

The following are recommendations for product excellence that Sangriang Farm can create.

Independent feed

The price of commercial feed, which continues to rise every year, makes the selling price of fish also higher. The increase in feed prices should be of particular concern to cultivators so that there are no discrepancies in cultivation; according to the statement of Arief *et al.* (2014), that fish feed spends as much as 60-70% of production costs. Prasetyono and Syahputra (2016) stated that trash fish is one of the widely available local raw materials. There are many sources of raw materials for trash fish in Bangka Belitung, an area surrounded by the sea.

CBIB Certification

Good fish farming practices (CBIB) are a concept of how to raise fish to be of good quality and increase product competitiveness. A good product is undoubtedly free of chemical and

biological contamination and is safe for consumption. With the CBIB certification, other advantages that fish cultivators can obtain are increasing customer trust and being environmentally friendly.

Channels (Marketing channels)

The following are some recommendations for marketing channels that farmers can implement.

a). Promotion through social media with exciting content.

With current technological developments, entrepreneurs promote their businesses through social media. According to Kotler and Keller (2016), social media is used as a marketing communication tool to increase consumer awareness of products, improve product image, and increase sales. Social media platforms that are widely used to promote products, such as Facebook (FB) and Instagram (IG), this media can be used to introduce cultivation businesses so that people can easily find information about these cultivation businesses. One of the applications that can be used to promote this semi-finished product or ready-to-cook processed fish is to use an online application in the form of Grab food. Consumers can order easily through an application to increase sales.

b). Packaging of semi-finished products (ready to cook)

Food freezing technology (Frozen Food Technology) can be a solution to extend the shelf life and durability of a product, according to the statement of Evans (2008), which states that Frozen Food Technology can lower the temperature of food to below the freezing point of water. The advantage of this freezing technique is that the nutritional value is maintained. Lowering the temperature will inhibit the growth of microorganisms and enzyme activity in food products, making food more durable and less perishable.

c). Label

Eco-labelling is an initiative to apply labels in the fisheries sector, which aims to promote sustainable fisheries management and fishery products to consumers. Therefore, eco-labeling is expected to create market incentives based on environmental issues such as environmentally friendly products and processing methods. Ultimately, the primary purpose of using this label is to make a profit. This is in line with Wijayanti's statement (2018), which states that the use of this label by entrepreneurs is basically to increase product competitiveness.

Customer Relationship

In building customer relationships, a company can take three approaches, namely financial benefits, social benefits, and structural ties, which are described as follows.

Financial Benefits

Financial benefits include costs incurred by someone to buy products or services from a company. These financial benefits are often implemented by giving bonuses to consumers or customers. Another way that can be achieved to benefit from this financial implementation is quality assurance; namely, cultivators guarantee that the product they sell is guaranteed freshness and quality.

Social Benefits

Move and Minor (2008) stated that loyalty is a condition where customers have a positive attitude towards a product or brand, commit to the brand, and intend to continue purchasing in the future. One way to increase customer loyalty is to provide good service, communicate that builds positive thinking and be friendly to each customer, which is expected to make customers return to transactions. The social benefits Sangriang Farm can apply to customers and consumers are good service and communication.

Structural bond

Building profitable long-term customer relationships through structural ties can make it easier for customers to transact with companies. This can be realized by providing more accessible product services using a delivery system. In addition to making it easier for consumers to get goods, this service also helps increase sales for the company. Delivery systems or delivery services for customers or consumers are to Farida's statement (2014) that most modern people prefer ordering food to be delivered to their homes rather than buying directly from the seller's place.

Key Activity

Based on the analysis of the existing condition of the previous canvas business model, the business model can be improved in the following ways.

Intensification of cultivation technology

Aquaculture recirculation system (Recirculation Aquaculture System), with filtration techniques, is one effort that can be applied to aquaculture activities. This system has many advantages and is very efficient; this is supported by the statement of Helfrich and Libey (2000); the use of this system, in general, has several advantages, such as the relatively low use of water per unit time, flexibility of cultivation locations, more controlled and hygienic cultivation, the need for relatively small space or land, ease in controlling, maintaining and maintaining temperature and water quality. The schematic diagram of the RAS system is attached in the following figure.

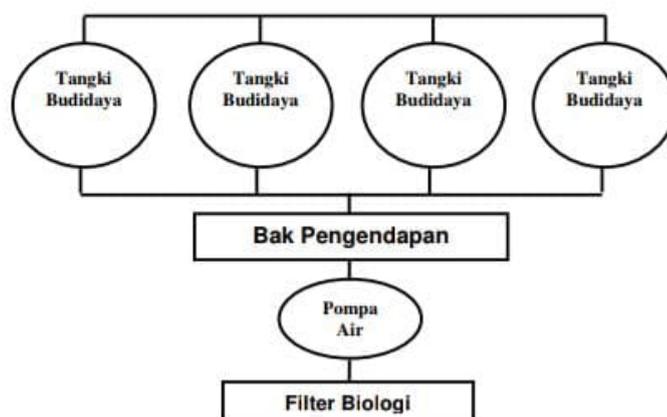


Figure 2 shows that this recirculation system is a pond water circulation by reusing water for cultivation to reduce the use of water from outside the system.

Biofloc System

The biofloc system is a cultivation system that has recently been widely implemented. This system is considered more efficient and effective for fish farming. Because it requires little space and can produce more production, this is supported by the statement of Suparno (2016), which states that the stocking capacity of fish seeds using biofloc technology is 20 times greater than conventional technology.

Aquaponics

The working system of aquaponics is quite simple; that is, the manure from fish farming is distributed to plants because it contains many nutrients. Then the plants will absorb the nutrients from the fish excrement, which in return, the plants will provide oxygen to the fish through the water that the growing media have filtered. This is supported by Connolly and Trebic (2010), who state that the fish culture water will be circulated to the planting medium, where hydroponically grown plants will absorb the nutrients. Fish that are kept in ponds will emit waste, especially in the form of nitrate and ammonia, through their urine and gills

throughout the pond water. Over time, these toxic waste compounds will accumulate in the water and affect the fish's health. On the other hand, these fish waste compounds can be used as organic fertilizers that fertilize plants (Nelson, 2008).

Revenue Streams

The following are recommendations for sources of income that the Sangriang Farm aquaculture business can develop.

Bookkeeping

As a business actor, it is essential to keep books of account; this is done to record all transactions such as buying seeds, selling cultivated products, paying salaries, buying feed, and other cultivation support needs. This is supported by Arsyad's statement (2008) that production conditions are often risky and unstable, which can result in credit failure. Formal or commercial financial institutions are more likely to extend credit to large-scale, low-risk companies. By default, transactions that need to be recorded are transactions related to cash, purchases (cash and credit), sales, accounts receivable, and payables.

Processed fresh fish products

In the current era, of course, human habits are changing, and increasingly sophisticated technological developments are a motivating factor for people to do everything practically because of certain activities; this is to the statement of Sulistijani (2002), which states that semi-finished food is easier and faster to process and storage so that it is suitable for consumers who have limited time. For this reason, Sangriang Farm can take advantage of this opportunity to become a provider of processed fish that has been cleaned and seasoned so that it is practical for consumption.

Hydroponic Vegetables

Better quality. By implementing the Aquaponics system in the current cultivation business, the benefits obtained by cultivators will be multiplied. In addition to obtaining consumption, fish can also produce hydroponic vegetables. Hydroponic vegetables produced in aquaponic cultivation will undoubtedly maintain their quality; this is supported by the statement of Haryoto (2009), which states that some of the advantages of plants grown hydroponically include guaranteed cleanliness because they do not use soil media, diseases rarely attack plants, and crop yields are low.

Key Resources

Based on the business activities carried out, the following are the primary resources that this cultivation business needs to add to its production activities.

Add HR or workforce

Labor for aquaculture can come from within the family or outside the family. Not only seen from the availability of labor but also the quality of labor must be considered. This is in line with Soekartawi (2005), who states that if the quality of this workforce is not considered, there will be a bottleneck in the production process.

Cultivation System Equipment (Technology)

Along with the times, many new technologies and innovations exist in fisheries and other industries. Technological developments will lead to changes in the production process and productivity. Technological advances in aquaculture techniques and equipment can increase production yields by reducing production costs. This is in line with the statement of Utami *et al.* (2014), which states that technology significantly affects aquaculture production.

c) Capital

Sources of loans can be obtained to increase business capital by applying for credit from the government (KUR).

The problem currently faced by MSMEs, in general, is the difficulty accessing credit or financing. The presence of KUR is a government initiative to overcome this problem. KUR is credit or financing banks provide to micro businesses but have yet to be bankable. Anggoro (2014) states that KUR positively impacts income and employment opportunities, both in strengthening business capital and increasing productivity and in increasing the welfare and income of business actors.

Brands

The brand can be a product's differentiator from other competing products or where the product comes from. A strong brand identity will give rise to a significant competitive advantage. This follows the statement of Kotler and Keller (2006), which states that a brand is a name, sign term, symbol, design, or combination that can be used as a product or service identity that distinguishes one seller or group of sellers from their competitors.

Key Partnership

Based on the analysis of the existing condition of the previous canvas business model, the following are recommendations for an improved business model that Sangriang Farm can reach to expand cooperation partners.

Collaboration with more minor or novice fish collectors.

The partnership program is expected to create a healthy and profitable business climate. The most straightforward partnership pattern is to regulate each business partner's responsibilities, rights, and obligations to develop a small business into a large one. This statement is supported by Hafsah (2000), who states that partnership is a business strategy carried out by two or more parties within a certain period to gain mutual benefit with the principle of mutual need and growth. One of the simple partnership concepts forged by this aquaculture business is to cooperate with fish collectors; of course, it can simplify the marketing process because the collectors are like resellers (indirect distribution) who will then distribute the products to consumers.

Collaboration with stores that provide Frozen Food

To market frozen food products directly, of course, cannot be done by Sangriang Farm because semi-finished products require storage places such as freezers or freezers. Marketing that is carried out may only be carried out with a delivery-order system or ready-to-deliver because product storage only allows it to be stored at home. However, with so many Frozen Food shops currently being developed, cultivators can work together to market their products because Frozen Food supply shops have their consumers.

Cost Structure

Based on the statement of Osterwalder and Pigneur (2012), this cost structure element explains the highest costs that arise when operating specific business models.

- a) Production worker salary
- b) Independent feed production costs
- c) Labeling and packaging costs for semi-finished products
- d) The cost of making a biofloc cultivation system
- e) The cost of making hydroponics
- f) Cost component for intensification of cultivation

CONCLUSION

1). Based on the analysis of existing conditions using the Business Model Canvas approach and SWOT analysis, it is necessary to carry out an improvement strategy for the

Sangriang Farm fish farming business by strengthening weaknesses, namely in the Channels, Key Resources, and Customer Segments channels. As well as using opportunities to increase income by producing other fishery-based products.

2). Based on the analysis of existing conditions strengthened by the SWOT analysis, it produces a Business Model Canvas for improvements to the Channels element, namely by using social media with more exciting content, putting labels on products, and using packaging. The Key Resources element can be supported by additional human resources in the production sector, additional capital, and intensification of cultivation technology. The Customer Segments element can be expanded to target consumers of semi-finished processed products and suppliers of fish needs for catfish pecel stalls, catering, or restaurants. This fish farming business can increase revenue or revenue streams by managing bookkeeping, making processed fresh fish products, and producing hydroponic vegetables.

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