# Paper 65

## Business Model Innovation : A Case Study Nitya

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*Abstract* - **A scarcity of grass in Jabodetabek area makes cattle fattening process become costly and more time-consuming. This makes farmers need to find alternative source of food to make fattening process still affordable. This is where Nitya Feed, a cattle feed from seaweed produced by Nitya company, comes as a solution for farmers. However, Nitya still does not have a solid business model yet. The purpose of this study is to find the most suitable business model for Nitya. Initially, Nitya has designed a business model in the form of membership and packaged-food sales. This study uses a qualitative method by conducting semi-structured interview on ten cattle farmers. The interview was conducted by comparing Nitya's designed business model with farmer's behaviors and their willingness to pay. The interview's results show that Nitya's business model is in accordance with the farmer's behavior. Therefore, membership and packaged-food sales are the most suitable way to transfer Nitya's value to cattle farmers.**

*Keywords* – **Cattle feed, Business model, Customer behavior, Willingness to pay, Nitya**

## I. INTRODUCTION

Beef is one of the main sources of public consumption, especially in Indonesia. Not only high in protein, vitamins, and minerals, there are many benefits that can be obtained from consuming beef for health. Some of the benefits that can be obtained from consuming beef are it helps the body produce haemoglobin, supports the immune system, and improves muscle health [1].

Although it has many benefits, unfortunately Indonesian people have not been able to fully enjoy the benefits of meat. This is because the meat consumption of the Indonesian people as of 2021 is still at 38 grams/month [2] while we are recommended to consume beef at least 1.4 kg/month [3]. Unfortunately, the level of beef consumption has not been met from year to year.

Beef production cannot be separated from the cattle fattening process. Nowadays, the fattening process takes a long time and costs a lot of money. This is based on our interviews with several cattle farmers in Jabodetabek. This happens because farmers no longer use grass as the main feed during the process. Farmers no longer use grass because grass is getting harder and harder to get. Therefore, some farmers decide to mow the grass in some areas or use other feeds as a substitute for grass such as straw. In addition, during the fattening process, cows also need to be given additional food such as concentrates and vitamins to maintain their quality. This is the reason why fattening is long and expensive. Therefore, it is necessary to make products that can help cattle farmers to improve their cattle fattening process and give them an affordable price.

Nitya is a cattle feed producing company. Nitya's product is cattle feed whose raw material is seaweed. Their products consist of forage, in the form of seaweed, as well as concentrates consisting of bran, cassava pile, and coffee grounds. The value that Nitya offers is animal feed which has a high nutritional content and has an affordable price. High nutritional content in feed can accelerate the duration of fattening cattle. Affordable prices can reduce the cost of farmers so that farmers can sell cattles with a larger margin.

The basic core logic and strategic decisions of a company are represented by its business models, which allow it to develop enticing value propositions for delivery to consumers and to benefit from cost and risk structures that can effectively capture the resulting value [4]. During Nitya's one-and-a-half-year run, we have made a high-fidelity prototype and tested it to two potential customers, and they were affirmative. We need to proceed to the next step which is selling in the mainstream market. Unfortunately, we still do not have a solid business model. We have an initial business model, which is membership, but we have not done any feasibility test with the business model. Therefore, it is important for the writer to research "Business Model Innovation: A Case Study of Nitya." to find out whether membership is the best business model for Nitya or not.

There are three theories that supports this research. First theory is willingness to pay. Willingness to pay, sometimes abbreviated as WTP, is the maximum price a customer is willing to pay for a product or service [5]. Consumers evaluated the utility of each quality attribute before deciding to purchase [6]. Willingness to pay is influenced by several factors including price, age of the consumer, level of education, number of dependents in the respondent's household and historical consumption preference [7]. Reference [7] also said, the consumer values the environmental services maintained or created by the product or its production, they may be willing to pay a price premium. The implementation of willingness to pay in this study is to find out the maximum price potential customers are willing to pay for our product and test whether they will buy our product with our current price.

Second is customer behavior. Consumer behavior refers to the process of organizing and obtaining information following a purchasing decision and of using and evaluating products and services [8]. Reference [8] also mentioned that This process also covers the selection, purchase, use, evaluation and disposal of products and services. In marketing and consumer behavior studies, product attributes act as qualifiers of products and determinants of product purchase during the consumer decision-making process, since these are the assessment criteria used by consumers to judge purchase alternatives [9]

Culture, social, personal, and psychological factors all influence customer buying behavior [10]. Reference [10] also said the values and norms of social life are not something that consumers are born with; rather, they must learn about what they are taught by their family and their surroundings. Social class has an impact on many purchasing behaviors. Personal characteristics include things like age and life cycle, occupation and economic situation, personality, way of life, and self-concept. Examples of psychology include perception, learning, faith, and motivation. Customers' perceptions are influenced by a variety of things. The variables are internal, external, self-concept, and lifestyle. External influences include things like preferences, memory, learning, motivation, personality, emotion, and behavior. Self-concept is a person's opinion of themselves.

The context of customer behavior in this study is to examine what is our potential customer's nature in using our product, in this case cattle farmers. Reference [11] defined customer behavior into several variables which are summarized into a full life cycle use case. This framework explains how their current product no longer fulfils their needs and must find other alternatives. Outlining the customer's present workflow is beneficial because doing so makes it simpler to integrate your solution into their business. Utilization of Full life cycle use cases is to make customers do word-of-mouth to other customers.

Third is business model innovation. There are several definitions of business model innovation. According to Aspara et al, business model innovation is efforts that aim to challenge current industry-specific business structures, responsibilities, and relationships in specific geographic market sectors in order to create new value [12]. Reference [13] stated that business model innovation refers to an organization's pursuit for innovative business models and methods for creating and capturing value for its stakeholders. Business Model Innovation can range from minor adjustments to certain parts of business models, expansion of the current business model, the introduction of competing business models, all the way up to disruption of the business model, which may involve completely replacing the current model with a new one [14].

Value proposition, value creation, and value capture innovation are the three main components of the multi-dimensional construct known as business model innovation [15]. Innovation in a company's value proposition relates to its line-up of fresh goods and services for customers as well as to how it creates new customers, market segments, and customer relationships [16]. By utilizing its resources as well as intra- and inter-organizational process skills, a company can generate new values and raise the total value in the value network. This process is known as value creation innovation [17]. Innovation in a company's revenue model and/or cost structure to more effectively distribute and capture value in the value network is known as value capture innovation [18].

## II. METHODOLOGY

Researcher uses a qualitative method in this study. An interpretive philosophy is frequently related with qualitative research. It is interpretative in nature because researchers must make sense of the subjective and socially created meanings expressed about the issue under investigation [19]. In this study, researcher use a qualitative method because with this method we can understand my customers better. Business model is fundamental for a business, for that researcher needs to make sure that Nitya potential customers want to buy our products with our business model plan.

The data collection method that the author uses is a semi-structured interview. Reference [19] stated in a semi-structured interview, the researcher has a list of themes and possibly some key questions to be covered, although their use may vary from interview to interview. The interview will be conducted directly by going to the location of the source. The interview will be conducted with an interview design that has been created by the author. Interview design authors make sure that the interview conducted has direction and data obtained in accordance with research needs. Interview design is made according to [11] Full Lifecycle Use Case which is the need to act, find out about our products, acquire, and pay for our products, use and get value, and tell others. In addition, researcher will ask about farmer's willingness to pay for Nitya Feed and farmer's opinions about Nitya's initial business model.

The population targeted by this study is cattle farmers in the Jabodetabek area. The reason is because cattle farmers are the target customers of Nitya. Precisely a cattle farmer with maximum farm capacity of 50 - 200 cattles located in Jabodetabek.

Purposive sampling is the method utilized by the author. Purposive sampling is preferred by researchers who want to follow a procedure by interviewing a pre-selected and visible group of elites who meet certain requirements. The sampling approach is used to ensure that the interviewee meets the criteria. The criteria in question are relevant with Nitya's target market.

# III. RESULTS

## A. Cattle Farmers Willingness to Pay for Nitya Product Analysis

One of the things that researchers are looking for through the study is whether farmers want to buy and use Nitya's feed and services. This study found that cattle farmers have different budgets in buying feed during the fattening process. Cattle farmers in the Jabodetabek area have the same provisions in purchasing their feed.

Based on interview results, the budget spent by cattle farmers in buying feed ranges from IDR 1,300 - 20,000/kg per cattle. The breakdown of this budget is to buy concentrates, additional ingredients such as cassava pulp/cassava pulp; beer dregs/soybean dregs; and solid/palm pulp, and tofu pulp. For forage, cattle farmers choose to mow the grass around them. To mow the grass, what is calculated is the cost of gasoline which is included in the operational costs of the farmer.

Since the purpose of this research is to find out whether Nitya's initial business model is in accordance with the preferences of farmers, it is necessary to find out whether farmers are interested in buying Nitya's products or not. Nitya Feed consists of seaweed, bran, corn, cassava, and tofu dregs and costs IDR 5,000/kg. Based on the results of interviews, the following are the answers of farmers:

1. 8 cattle farmers are interested in buying Nitya's Feed because they are interested in its protein content. However, they wanted to conduct an experiment first to see whether the cattle liked Nitya's Feed and whether the cattle experienced significant weight gain,

2. 2 cattle farmers are not interested in buying Nitya's Feed. The first breeders were not interested because the feed they use now is much more affordable and the quality of the feed has been proven. The second breeder refused because they already had a formula that had been developed by themselves and already had their own feed production site.

3. Based on the above results, cattle farmers in Jabodetabek Area are interested in buying Nitya's feed because of its protein content. However, they all want testing first to make sure cattles like Nitya's Feed and gain weight fast.

## B. Cattle Farmers Behavior Analysis

a. The Need to Take Action

Based on the interview, there are some reasons why farmer wants to change their current feed. The first reason is because current feeds are expensive. This results in the total cost incurred by the farmer during one fattening cycle, and it is difficult to take a margin from the sale. The second reason is because of the limited feed stock. This influences the sustainability of the feed. If the stock of the ingredients used is limited, then the farmer will have to look for new feed to replace it. In fact, in one fattening, it is better if the feed used does not change. The third reason is because of slow weight gain. This influences the duration of cattle fattening farmers. If the cow's feed is experiencing slow weight gain, it is feared that when it is sold, the cow will not reach its target weight.

b. Find Out About our Product

Based on the interview results, there are several channels for farmers to get information about new cattle feeds. The first channel comes from a fellow farmer. Farmers in one area tend to visit each other to share information or create a community to share knowledge. This is where farmers share info about new cattle feeds. Further information comes from the Department of Animal Husbandry and Fisheries. Local government, through the Department of Animal Husbandry and Fisheries, often visits and provides counseling to cattle farmers. This visit was carried out to monitor the quality of fattening process cattle farmers do and provide information if there are new cattle feeds that can be used by farmers. Usually, the information provided by the Department of Animal Husbandry and Fisheries is in the form of newfound feed and has just been tested in the lab. The last channel comes from the subscribed store where farmers usually buy their feed. These stores usually offer products that they have just developed or products that are consigned in their stores. After receiving the information, the breeder tends to test the new cattle feed first to find out whether the cattle like the feed or not, then check the weight gaining of the cattle after eating the cattle feed.

c. Acquire and Pay

Cattle farmers have many ways to get cattle feed. The methods used by cattle farmers are different to acquire each type of feed.

To acquire grass, cattle farmers need to mow grass around the area. This process is carried out every day to once a week according to the needs of the breeder and how to fatten it. If through mowing cannot meet the needs of feed, the farmer needs to buy grass from the supplier. The intensity of buying this grass is in accordance with the intensity of the grass mowing process.

To acquire concentrate, cattle farmers buy it from the production plant. Purchase of this concentrate is done once a month. There is also a cattle farmer who has able to make their own concentrate formula and able to produce it themselves.

To acquire additional materials, cattle farmers buy from suppliers of these materials. Additional used by farmers in Jabodetabek are cassava pulp, solid/palm pulp, beer dregs/soybean dregs. The supplier here can be a factory that processes the material or a farmer who grows the material in question. This purchase is usually made once a month.

To acquire tofu dreg, cattle farmers subscribe to a nearby tofu factory. The subscription is valid for one month to one year. Tofu factory will send tofu dregs every day to

farmers according to the tofu dregs available at the factory.

the payment system used by cattle farmers is down payment then repayment and cash on delivery. For the first system, after placing an order, the farmer is asked to pay a down payment, then when the order arrives, the farmer only fulfils the repayment. For the second system, the farmer pays after the ordered goods arrive. This system can be used by farmers if they have subscribed to a shop and the shop already has trust with the farmer.

d. Use and Get Value

Cattle farmers have different ways and formulas for feeding cattles. The feeding session was divided into several sessions: morning, afternoon, and evening. There are two ways to feed cattles. These methods differ by the food provided in each session.

The first way is to give mixed food. First, the farmer will mix all the feed ingredients which in general consist of grass, concentrate, additional material, and tofu dreg. Some breeders give water to the mixture to make it easier for cows to eat it. Then the mixture will be given to the cows in each session and refilled continuously until the feeding session is over.

Another way is to provide different foods in each session. In the morning the cattle will be fed a mixture of concentrate, additional material, and tofu dregs. Then in the afternoon until the feeding session ends, grass will be given. If the food in the morning has not been finished, it will be cleaned and replaced with food for the next session.

e. Tell Others

There are several reasons a cattle farmer would recommends a cattle feed. The first reason is because related feed can make cattle fatten faster. The thing that is the main determining factor for the success of a fattening process is that the cow reaches a certain weight within a predetermined time. Therefore, the faster a feed can fatten a cattle, the cattle feed is considered high quality. Of course, at a reasonable price. Another reason is the additional effects after consuming certain feeds. For example, the use of solid/palm pulp in cattle feed will make the cow's skin shinier. Those are some farmers that use solid in their formulas. Another example is the use of too much tofu pulp will make the beef contain a lot of water. For this reason, there are farmers who reduce the use of tofu dregs in their feed.

f. Nitya Membership Feasibility Result Analysis

Based on the interview results, Farmers felt that they fit Nitya's initial business model. There are several improvements that must be made to adapt to farmers. First, the price set by Nitya is still expensive, so it is necessary to change the formula or change the supplier to get a more affordable price. Second, free trials must be given to breeders because breeders prioritize authentic evidence that is carried out on their cattles. Third, it is necessary to implement a payment system that does not bother farmers but also does not make Nitya short of capital.

# IV. DISCUSSION

Based on data obtained from cattle farmers, there are several adjustments needed to Nitya's initial business model. For each element, here are some adjustments in Nitya's business model:

## A. Value Preposition

The value that Nitya offers is "Livestock feed from seaweed with higher nutritional and affordable price for cattle farmers to fasten cattle fattening process". From this value, we hope to help cattle farmers by accelerating the cattle fattening process. Nitya contributes by producing cattle feed from seaweed.

## B. Customer Segments

Customer segment of Nitya is cattle farmers located in Depok, West Java which has cattle of 50-200 cows. We target these customers because they are the ones who experience problems in the cattle fattening process. Based on the interview result, Nitya can expand their market to Jabodetabek Area.

### C. Customer Relationship

Nitya maintains a relationship with customers by providing monthly consolidation to control cattle that consume Nitya Feed. Do not forget to provide vet visits to provide countermeasures to sick cattle. Nitya also needs to provide Nitya Feed free trial to prove the product's quality and values. Nitya will also provide down payment system to make it easier for farmers to pay.

### D. Channel

Nitya sells their products through three channels: Nitya official store in the form of offline stores, phone calls for approaching cattle farmers directly, and websites for those who want to use us through the internet.

### E. Key Activities

The main activity is the provision of raw materials by outsourcing. Then go through our production process: grounding, mixing, and packaging. Then do a food test to make sure our cattle feed is according to standard. We do promotion by giving free trials for cattle farmers and sales to gain revenue. Finally, delivering our product to customers.

### F. Key Partners

To realize Nitya's value, Nitya works with several partners. The main partner is raw material supplier consisting of seaweed, bran, cassava, and corn. Not to forget, Nitya also works with packaging suppliers to make their packaging. Machinery Suppliers assist by supplying the machines Nitya uses for production and providing service. Food lab to test Nitya cattle feed and veterinarians to make sure cattle are safe to eat their cattle feed product.

### G. Key Resources

Our main resources are raw materials in the form of seaweed, bran, cassava, and corn. Then there is also packaging to pack feed and machinery that supports our production activities.

### H. Cost Structure

Our cost structure consists of raw materials procurement, production, packaging, marketing cost in the form of COCA/Cost of Customer Acquisition, and employee salary.

### I. Revenue Streams

Nitya main revenue comes from product sales and membership program fees.

## V. CONCLUSION

The objective of this study is to determine what kind of business model innovation that can be applied to Nitya. The primary data of cattle farmer's willingness to pay and farmer's behavior collected from interviews with cattle farmers in Jabodetabek. After that, researcher use open coding and descriptive analysis to break down the interview results. Then, researcher continue to adjust Nitya's initial business model according to the analysis results.

The result are farmers have no comment towards Nitya's proposed service but first, the price set by Nitya is still expensive, so it is necessary to change the formula or change the supplier to get a more affordable price. Second, free trials must be given to breeders because breeders prioritize authentic evidence that is conducted on their cattles. Third, it is necessary to implement a payment system that does not make it easier for farmers but also does not make Nitya short of capital.

Therefore, the best business model to be applied to Nitya is Nitya's initial business model with several adjustments in customer segments by expanding their market to Jabodetabek, customer relationship by implementing free trial and down payment scheme, new formula by switching corn with tofu dregs. And last adjustment in key partners by adding a tofu factory to align with the formula.

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