Business Model for Promoting Organic Vegetables

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Abstract. Consumers' interest in organic vegetables increases every year, because they aware on healthy life and environment. However, these organic vegetables have not been marketed everywhere. Only high-income people often eat organic vegetables. Producers of organic vegetables intend to enlarge their earnings by expanding the market. One of the organic vegetable producers began to apply business model by training, and the other producers established organic community and used "instagram" as a media to communicate amongst the member. The objective of this paper is to explain type of factor that motivates consumers to join in organic community, constraint faced by consumers and producers, and expectation of consumers and producers. This research was conducted in Bandung. The respondents of this study were entirely members who joined together in this community. This research expects to provide inputs to policymakers, stakeholders, producers and related institutions. Also, this research is aimed to provide a prototype of the business model in developing organic products and educating other societies for a healthy life.

The research found that trust is the main factor of respondents in the business model using "instagram", while word of mouth is the main factor of respondents in business model by training. The main constraint of producers is waste from environment that hampers organic vegetables cultivation. For the customers, the high price of organic vegetables is the main constraint. The main expectation for producers is the low cost of certification, while for costumers is the presence of a trusted Indonesian organic emblem.

1. Introduction
Organic vegetables farmers earn better yield (40-60%) than the conventional agricultural vegetables farmers [1]. This is due to more guaranteed quality of organic vegetable products than those of non-organic vegetables. This quality standard can be seen from the existence of certificates and organic label to differentiate with those of non-organic vegetables. The use of packaging and brands will result in premium vegetable product prices [1]. Moreover, organic vegetables have a better nutrient content than that of non-organic vegetables. Therefore, people who have at least once consumed organic vegetables and know the information that organic vegetables are good for health. Having potential and opportunities from existing markets, several producers are currently working on organic vegetable products in Bandung. They are Kurnia Hijau Farm, Ina Green Farm, Organic Garden, Semai Organic, Farm Organic, and Warung Langit. These six producers are regular suppliers for supermarket in Bandung. Kurnia Hijau Farm, Ina Green Farm, Organic Garden, and Semai Organic run the business without community. Farm organic provides training and build organic communities, while Warung Langit use "instagram" and build organic community. They use Instagram because it is considered a new way in in social media to promote a product and not have to pay. The purpose of this study is to analyze a business model in promoting organic vegetables.
2. Methodology

2.1 Data Collection

This research applied survey method in collecting data. The object of this research was a business model conducted by two companies. Farm Organic conducts training to promote organic products, while Warung Langit uses social media, notably "instagram" in promoting organic products.

The data used were primary data and secondary data. Primary data were collected from interviews with a producer who applied a business training model, and a producer who used "Instagram" for promoting business. In addition, 30 respondents were selected from each community. Community in this right is a group. There are two groups of people who often consume organic vegetables. The two groups are (1) groups of respondents who have participated in the organic training. This training explains how organic vegetable cultivation and organic vegetable benefits for health; (2) group of respondents incorporated in the service of organic vegetable delivery through Instagram. The population of respondents from group one about 150 people, while group two about 100 people. From each group taken 30 people by random sampling. Respondents were selected because they knew about the benefits of organic vegetables, the reasons for buying organic vegetables and bias to provide information about all organic to neighbors, family, friends and other words of mouth or to provide information related to organic vegetables in Instagram.

The observed variables were the products, effectiveness, words of mouth (WOM), lifestyle, purpose, and belief. Each variable has five indicators, and each indicator was measured using a Likert scale from 1 to 5. Secondary data were collected from related agencies. Place of the study was in Bandung from March to May 2016. Organic vegetables have long been known, especially since there is a government program 2010 about "Go Green", although there are still a few people who regularly buy organic vegetables because the price is expensive and currently only available in supermarkets. From the field revealed there are two ways to educate the public about the importance of organic vegetables for health, with the training and through Instagram. Both ways are called business models because the business initiator of this model wants his business to run smoothly and sustainably generate profit, but also educate other people will live healthy.

2.2 Data Analysis

The business model was analyzed descriptively, while dominant consumer factor in choosing business model was estimated using Partial Least Square (PLS). The method was developed as an alternative to structural equation modeling (SEM) with a weak theoretical basis. PLS can be used as an analytical testing and generates a relationship with no theoretical basis (exploratory). The steps in the PLS are design the structural model (inner model), the assessment model (outer model), the flowchart, the conversion of the flowchart to the system of equations, the estimation of the path coefficient, loading and weight, the estimation of goodness of fit, and hypothesis testing [2]

2.3 Literature Review

2.3.1 Organic Vegetables. Organic vegetables are vegetables that are naturally grown without any chemical substances. An essential concept of organic vegetables is the processing and cultivation techniques without the use of chemicals. The advantages of organic vegetables according to [3] are:

1. Organic vegetable products are healthy to be consumed because they do not contain pesticide residues and toxic chemicals that are harmful to health.
2. Organic vegetable products have crisper texture and sweeter taste.
3. Products of organic agricultural inputs (manure, bio-pesticides) do not cause environmental pollution, safe for the health of the user and readily biodegradable.
4. Improve and conserve soil fertility and biodiversity.
5. Suppressing production costs, which is economically profitable in the long term.

However, organic vegetables also have weaknesses, such as:

1. Organic vegetable products have poor physical appearance compared to those of conventionally grown crops.
2. Organic vegetable needs more labor than conventional, especially for fertilization and pest control activities.
3. In terms of the process of nutrient absorption from organic fertilizers and the effectiveness of plant botanical pesticides, the effect is slower than those of synthetic chemicals.
4. Plant maintenance activities are more intensive than that of conventional.

In addition, the color of organic vegetables is more concentrated, and it has a distinctive and strong vegetable aroma. Moreover, after cooked or processed, organic vegetables still have the smell of fresh vegetables. Organic vegetables are not heat resistant and easy to yellowing than those of non-organic vegetables. On the other hand, non-organic vegetables tend to be more durable although stored for months. If rotted, non-organic vegetables usually have an unusual smell of rotteness like a strong acidic smell due to the use of preservative.

2.3.2 Business Model Definition. The business model is defined as a model that describes how a company operates to gain profit. According to [4], there are three main characteristics of a business model. First, the business model must be following company goals. Second, the business model must be able to strengthen itself. Lastly, the business model must be tough and reliable. The business model that can be implemented to farmers is a business model that produces profit for farmers but there is a social business. Social business is done between the fabric of the introduction of all about organic activities that come to his garden for free. The hope after understanding the importance of health, then there is a tendency to consume organic vegetables increased and business become sustainable.

Stages to create a business model according to [5] are to determine customer segment; determine the products, service or value proposition; deliver products to customers and how relationships will be established between customers and the business; determine where the source of income or revenue streams; identify the source of resources needed or key resources; determine the main activities in the business or key activities; and determine who the main partner is needed in the business or key partners and from where the source of expenditure or cost structure.

3. Results and Discussion
3.1 Characteristics of Producers
Organic vegetable producers have 10-15 years’ experience, various vegetable products, with target of organic community market and supermarket of 32 and 68%, respectively. Techniques to produce organic vegetables are based on experience, self-learning, and training, as well as cooperation with research institutes (Indonesian Research Institute), international institutions (Hivos) and non-governmental organizations (NGOs). Therefore, the help of Hivos is complete, the farmer must finance his own business. With the sale of vegetables through Instagram, farmers seem to get the capital first to do business. Capital is obtained by farmers from members who participated in the Instagram group. Farmers reduce the risk in their business because the results are definitely purchased and distributed to members who are members of Instagram.

3.2 Characteristics of Consumers
Organic community respondents who used training and “Instagram” are mostly women, between 20 - 40 years of age, bachelor degree, entrepreneurs, having income between IDR 5 million and IDR 10 million per month. Commonly, the consumers buy organic vegetables because of a healthier diet, healthy life, maintaining the environment, motivating others to go green and to build a business. Fanatic consumers of organic vegetables can distinguish between organic and non-organic vegetables.

3.3 Business Models of Organic Vegetables
3.3.1. Using Social Media “Instagram” to Promote Organic Vegetables. The use of social media "Instagram" in promoting organic vegetables has been started since 2015 by producers. These producers created a small market program, where the community uses "Instagram" to communicate. The program was suspended in mid-2016 and can be used again in 2017. Small markets bring farmers
and consumers together. To grow the organic vegetables, farmers are assisted by funding from consumer membership fee of IDR 200,000 per person. For 1 kilogram of vegetables with eight deliveries, consumers pay IDR 160,000 per month or IDR 20,000 per delivery.

There are three places for organic vegetable delivery, namely Arcamanik, Martadinata, and Dago. Delivery is usually done using bamboo baskets. Each basket contains four to five vegetables. Every consumer should take the vegetables at predetermined point, usually on Monday and Thursday. Consumers directly receive the organic vegetable products, but consumers cannot choose the type of vegetables. However, producers have prepared the latest recipes to process a food using the vegetables. These producers develop their business by making a café which specially provides organic foods with the principle of 4 P [without “pengawet” (preservative), “pewarna” (coloring), “penyedap” (flavoring) and “pemanis buatan” (artificial sweeteners)]. Business model training and Instagram also include elements of the element. Its customer segment is clear that the respondents who follow the training and who follow Instagram. Value proportions are the benefits customers get. Channels in this case directly to customers. Revenue streams are a stream of profits, both business models promote organic vegetables, in order for the business to be sustainable. Customer relationship is a company relationship with the customer. The hope after the customer understands all about organic vegetables it will spread it to family, neighbors, and friends. Key activities created to create value proportion. Key resources are to manage the business resources as much as possible, this has been done both business model. The key partnership is maintaining a good relationship with all parties. The cost structure is managing the business efficiently and minimizing risk. This has been done business training model by offering its products by subscribing to trainees. Similarly, the Instagram business model minimizes business by obtaining capital from members of Instagram. Monthly contributions paid in advance by members can be used as capital for farmers to manage their business. The business model is as follows:

![Figure 1. Business model with “instagram”](image)

3.3.2. Conducting Training to Promote Organic Vegetables. Producers who do training in promoting organic vegetables already have a website in promoting organic vegetables. From this website, people know what programs are offered. From this training, it also forms an organic community. Training is conducted every month on Saturday, but the date is adjustable. This depends on the number of trainees. If there are at least 20 participants, then this training is carried out. The cost of group training is IDR 300,000 per person, and an additional cost of IDR 50,000 per person is needed to see the garden. The cost of private training is IDR 400,000 per person. The business model is as follows:
3.4 Dominant Factor of Consumers to Join in Organic Community

3.4.1. Business Model with Social Media “Instagram”. Table 1 shows the values of sixth latent composite reliabilities. The values are above 0.7. Hence, it can be said that the variable has good reliability as a measuring tool.

| Aim                   | 0.739128          |
|-----------------------|-------------------|
| Effectiveness         | 0.789574          |
| Life Style            | 0.754109          |
| Product               | 0.800164          |
| Producer Factor       | 0.926160          |
| Trust                 | 0.778476          |
| WOM                   | 0.755370          |

Source: Data Processing Results, 2017

From the Confirmatory Factor Analysis (CFA) model with the second order, information of the dominant factors and indicator are available. From the value of loading factor, the trust factor has the highest loading factor among others, which is equal to 0.959. This shows that the reason of respondents follows the community with the “instagram” model business is trust, followed by effectiveness (with a loading factor of 0.904), lifestyle (with a loading factor of 0.903), and the other three are considered lower, namely the product, destination, and WOM.
Figure 3. Standardized Loading Factor Inner dan Outer Model Business with Instagram

Trust is the dominant factor of respondents follow in organic vegetables community by using “instagram”. It is because “instagram” spreads information quickly and can be trusted. This trust also correlates with the reputation of organic producers.

3.4.2 Business Model with Training. Table 2 shows the values of sixth latent composite reliabilities of training. All values are above 0.7. Thus, it can be said that the variable has good reliability as a measuring tool.

Table 2. Results of Composite Reliability of Training

| Composite Reliability   |       |
|-------------------------|-------|
| Aim                     | 0.815825 |
| Effectiveness           | 0.6717417 |
| Life Style              | 0.774438 |
| Producer Factor         | 0.845010 |
| Product                 | 0.798011 |
| Trust                   | 0.728889 |
| WOM                     | 0.771241 |

From the value of loading factor the WOM factor has the highest loading factor among others, which is equal to 0.919. This shows the reason of respondents follow the business model of training is the existence WOM, followed by lifestyle (with loading factor of 0.881); trust (with loading factor of 0.878), and three other factors are considered lower, namely the product, objectives, and effectiveness.
3.5. Constraints Faced by Producers and Consumers for Organic Vegetables

For producers, the main constraint in organic cultivation is the waste from the surrounding environment that hampers the cultivation of organic vegetables. While for consumers, the main constraint is the price of organic vegetables, which is expensive. The high price of organic vegetables can be understood because organic vegetable producers are still small. Moreover, it requires persistence and patience in the process of farming. Constraints of producers and consumers can be seen in Table 3.

| Table 3. Constraints Faced by Producers and Consumers of Organic Vegetable |
|---------------------------------------------------------------|
| Producers | % | Consumers | % |
| Long cultivation time | 34.00 | High price of organic vegetables | 50.00 |
| Poor physical appearance | 20.00 | Place of sale in supermarket | 26.67 |
| Existence of waste from the surrounding environment | 46.00 | Availability of desired vegetables | 23.33 |

3.6. Expectation of Producers and Consumers of Organic Vegetables

The main expectation of producers of organic vegetables is the low cost for certification, while the main expectation of consumers is the presence of a reliable Indonesian organic emblem. Expectations of producers and consumers can be seen in Table 4.
### Table 4. Expectation of Producers and Consumers of Organic Vegetables

| Producers                | %  | Consumers                  | %  |
|--------------------------|----|----------------------------|----|
| - Low cost of certification | 60.00 | - The existence of quality control institutions | 13.33 |
| - The existence of facilities from the government | 20.00 | - The presence of symbol of organic vegetables of Indonesia | 26.67 |
| - Easiness to get investors | 7.00 | - Easiness to get | 16.67 |
| - Easiness to get the loan | 13.00 | - An affordable price | 20.00 |
|                          |    | - Green packaging | 6.66 |
|                          |    | - Honesty of producers | 16.67 |

### 4. Conclusions

There are two business models in promoting organic vegetables, using "instagram" and training. Trust is the main factor of respondents in the business model using "instagram," while WOM is the main factor of respondents in business model by training. The main constraint of producers in organic vegetable is the waste from the environment that hampers organic vegetables cultivation. For the consumer, the high price of organic vegetables is the main constraint. The main expectation of producers in organic vegetables is the low cost of certification, while for consumers is the presence of a trusted Indonesian organic emblem. The main constraint of producers in organic vegetable is the waste from the environment that hampers organic vegetables cultivation. For the consumer, the high price of organic vegetables is the main constraint. The main expectation of producers in organic vegetables is the low cost of certification, while for consumers is the presence of a trusted Indonesian organic emblem.

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Attachment

**Goodness Of Fit Business Model with Instagram**

To validate the overall model, goodness of fit (GoF) is used. The GoF index is a single measure used to validate the combined performance of the measurement model and the structural model. This GoF value is obtained from the average communal index multiplied by the value of $R^2$ model. Here are the results of the calculation of goodness of fit model:

| Table 1. Results of Average Communalities Index |
|-----------------------------------------------|
| AVE   | R Square   |
| Aim   | 0.574824   | 0.683645   |
| Effective | 0.527189   | 0.816787   |
| Life Style | 0.507838   | 0.815939   |
| Product | 0.506993   | 0.796672   |
| Produser Factor 1 | 0.510426   |              |
| Trust   | 0.572767   | 0.920527   |
| WOM     | 0.507886   | 0.701474   |
| Rata-rata | 0.529703   | 0.789174   |
| GOF     | 0.646551   |              |

**Goodness Of Fit Model Business Training**

| Table 2. Hasil Average Communalities Index |
|-------------------------------------------|
| AVE   | R Square   |
| Aim   | 0.689820   | 0.706781   |
| Effective | 0.547494   | 0.628562   |
| Life Style | 0.513481   | 0.776211   |
| Product | 0.593329   |              |
| Produser Factor 2 | 0.531802   | 0.772289   |
| Trust   | 0.728889   | 0.550682   |
| WOM     | 0.508844   | 0.844409   |
| Rata-rata | 0.587666   | 0.713156   |
| GOF     | 0.647377   |              |

Based on Table 2, the average result of communalities is 0.529703. This value is then multiplied by $R^2$ and is rooted. The calculation results show that the GoF value of 0.646551 is more than 0.36. Therefore, it is categorized as a big GoF, meaning that the model is very good (has the high ability) in explaining empirical data.