

MARKETING | RESEARCH ARTICLE

“Go Healthy”: Diet Catering for Obese Consumers with a Consumer Discovery Approach

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article

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**Abstract:** The main health problem in the adult age group in Indonesia is obesity, which is closely related to diet. The purpose of this research is to design a verified business model for "Go Healthy" catering. This research uses a consumer discovery approach and a descriptive research design. Data collection was carried out by purposive sampling in the Jabodetabek area. The research respondents were 50 people aged 19-24 years who were interested in diet programs. Data were collected by filling out online questionnaires and in-depth interviews. Based on the results of the research, the problems found in this study are irregular diets, poor food quality, and nutritional deficits. These problems became the basis for the formation of the "Go Healthy" catering prototype. The "Go Healthy" catering prototype is a menu arrangement for 15 days with the value offered including menu customization, menu composition info with nutritional content, and affordable prices. The business is offered through online and offline outlet channels and through resellers. The business revenue comes from a subscription system.

**Keywords:** business model canvas, catering, customer discovery, diet, personal health

JEL Classification: D1, D10, I12, I18

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PUBLIC INTEREST STATEMENT

The problem of obesity in Indonesia needs to be addressed through the right diet program. This research tries to organize a diet catering business called "Go Healthy". The catering business scheme was chosen because it has several advantages over restaurants, namely it is easier to predict monthly revenue and cooking portions that are scheduled every day. This will have an impact on the ease of planning raw material shopping and production schedules. In addition, the catering business has a definite demand in the form of advance orders and usually uses a subscription system. On the other hand, catering is also more personalized and consumer data can be managed properly, for example, food serving data regarding what foods cannot be given to consumers, consumer favorite foods, and others. This research uses a customer development framework that focuses on the customer development stage, and uses the BMC framework to describe the details of the business to be created.



## 1. Introduction

Health is one of the most important things in human life. One of the health problems of the young adult age group according to the Ministry of Health is regarding nutritional status. Based on Riskesdas (2018) there are three main problems related to nutritional status, namely very short and short nutrition in children under five with a proportion of 30.8 percent; malnutrition and undernutrition in children under five with a proportion of 17.7 percent; and obesity and overweight in adults with a proportion of 21.8 percent (Ministry of Health, 2018a). One concern is the fact that the proportion of obesity and overweight in adults has always increased in every period of Riskesdas conducted from 2007, 2013, to the latest in 2018. In simple terms, nutritional status based on Body Mass Index (BMI) is categorized into two (2): overweight with a BMI of 25-27 and obesity with a BMI of more than 27. In the latest research in 2018, the proportion of obesity in adults reached 21.8 percent, and the proportion of overweight reached 13.6 percent of the population (Ministry of Health, 2018a). Based on data from BPS (2020) the adult population in the age group 20-24 amounted to 22,951,517 and was the second largest group after the population aged 15-19 years. One group that represents this age group is students.

Triandaru (2019) conducted research on UIN Syarif Hidayatullah students with an average age of 20-23 years as many as 2,436 people and showed that 19.24 percent of 2017 class students experienced more nutritional status or obesity. In addition, research conducted by Iqbal (2017) also showed that of 58 IPB nutrition students also showed that 17.2 percent of students had overweight nutritional status, and 10.3 percent had obese nutritional status both obese I and obese II. Obesity I occurs in individuals with a BMI of 25-29.9 and obesity II with a BMI of  $\geq 30$  (Ministry of Health, 2018b). Obesity is caused by several factors, namely genetics, environment, drugs, and hormones. Based on data from the 2014 individual food consumption survey, 40.7 percent of Indonesians consumed fatty foods, 53.1 percent consumed sweet foods, 93.5 percent lacked vegetable consumption, and 26.1 percent lacked activity. Consumption of vegetables and their preparations only amounted to 57.1 grams per person per day from the recommendation of 200-300 grams per person per day. While the consumption of fruits and their preparations only amounted to 33.5 grams per person per day from the nutritional recommendation equivalent to 150-250 gram of bananas per person per day. This figure is still low so it does not meet the body's needs for vitamins, minerals, and fiber (Ministry of Health, 2017).

One way to overcome the above problems both overweight and obesity is to implement a diet program. Some of the reasons individuals go on a diet are mentioned in Husna's (2013) research, most of which mention going on a diet to maintain health and get an ideal appearance. However, dieting also carries risks if not done properly. Errors in dietary patterns can cause the body to experience adverse effects such as feeling hungry easily, experiencing frequent mood swings, experiencing digestive problems, and other problems (Tanjung, 2019). Other problems that may arise during dieting include difficulty being consistent in controlling the diet, difficulty getting dietary information that is suitable for the body's condition, not knowing the nutritional content contained in the ingredients used, not having free time to cook diet food, and difficulty finding recipes and how to process good and easy diet food (Widhayanti, 2021).

The catering business scheme was chosen because it has several advantages over restaurants, namely that it is easier to predict monthly revenue and cooking portions scheduled every day. On the other hand, catering is also more personal, and consumer data can be managed properly, for example, food serving data regarding what foods cannot be given to consumers, consumers' favorite foods, and others. This research used a customer development framework that focuses on the customer development stage and uses the BMC framework to describe the business details to be created. So based on this background and problems, this research is needed to: (1) identify consumer problems in carrying out a diet program, (2) design a prototype that is suitable for consumers, and (3) design a Business Model Canvas Verification (BMCV) that matches the product-market-fit.

## 2. Literature Review

### 2.1 Customer Discovery

According to Blank and Dorf (2012), customer discovery is the first stage of market development (customer development). Blank and Dorf (2012) also define customer development as a concept adapted to solve problems in the nine elements of the business model canvas that focuses on focusing attention on the intended consumers to create appropriate market and product development. The purpose of the customer discovery stage is to find customers that match the results of the hypothesis created. During the customer discovery process, entrepreneurs must make themselves the intended consumers and know the problems faced and the solutions that must be provided to consumers.

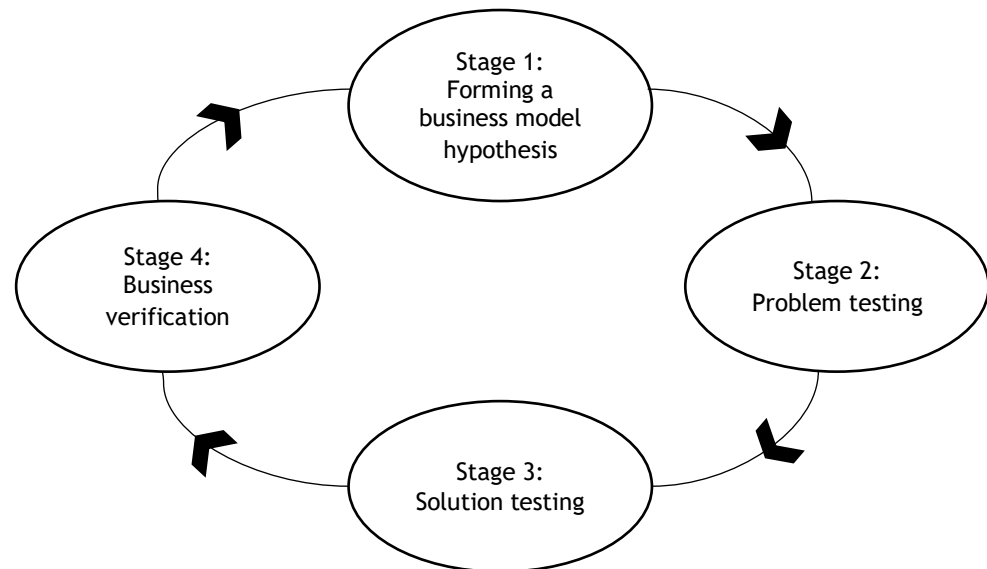


Figure 1. Four steps of the customer discovery process

There are four steps in conducting the customer discovery process, namely 1) making hypotheses, 2) testing problems, 3) testing solutions, and 4) verification. In the first stage, the author deconstructed the customer vision into nine parts of the Business Model Canvas, namely products, customers, sales channels, demand creation, revenue models, partners, resources, activities, and cost structures. In the second stage, the author conducted an experiment to test the problem hypothesis. This will show how important and big the problem is. Then most of the business model elements are tested. The purpose of the second stage is to turn hypotheses into facts. The third stage is testing solutions in the form of presenting value propositions and minimum viable products to customers and seeing customer reactions to products. The fourth stage of customer discovery is to verify what has been done in the previous stages (Blank & Dorf, 2012).

### 2.2 Business Model Canvas

According to Osterwalder and Pigneur (2010) in their book entitled *Business Model Generation*, the Business Model Canvas consists of nine interrelated building blocks. The nine building blocks will produce a Business Model Canvas model that shows how an organization or business can generate profits, through the depiction of four main areas in a business consisting of customers, offerings, infrastructure, and financial sustainability so that it can be used as a reference for making better company strategies. The Business Model Canvas is a business model illustration presented in a visual form in the form of a painting canvas, consisting of nine boxes that are related and contain important elements that describe how the organization creates benefits for and benefits from its customers (PPM Management Team, 2012).

The advantages of the Business Model Canvas include its uniqueness in using visual aids through painting canvas images, which helps make it easier for readers to understand the contents of an organization/company's business model compared to using writings that are sometimes difficult to understand. The nine blocks of the Business Model Canvas include (1) customer segments, (2) value proposition, (3) channels, (4) customer relationships, (5) revenue streams, (6) key resources, (7) key activities, (8) key partnerships, and (9) cost structure (PPM Management Team, 2012).

### 2.3 Healthy Catering

The Ministry of Health (2017a) defines catering as a company or individual that carries out food management activities that are served outside the place of business on the basis of orders. The catering business includes the business of selling finished food (ready for consumption) which is organized through orders for celebrations, parties, seminars, meetings, travel packages, public transportation, and the like. Catering businesses always provide menu options for each service system.

The catering business system can be divided into two, namely the package system and the partial system. The package system is usually served complete from staple food to dessert as a set dish at a certain price. While the partial system is a (specific) menu order for buffets or buffets or several types of dishes for stands and so on. According to the Ministry of Health (2017a), a caterer can be called a healthy caterer if it meets the following requirements: (1) meet the recommended nutritional needs, (2) use food ingredients with the principle of diversity according to the concept of balanced nutrition, and (3) serve food in the right container and at the right temperature.

### 2.4 Obesity

Obesity is an excessive accumulation of fat due to a prolonged imbalance between energy intake and energy expenditure. Several physiological mechanisms play an important role in an individual's body to maintain a balance between energy intake and overall energy used and to maintain a stable body weight (Ministry of Health, 2017b). One way to determine a person's obesity level is by knowing the BMI value. Body Mass Index (BMI) is a simple index of body weight to height used to classify overweight and obesity in adults. BMI is defined as a person's weight in kilograms divided by the square of height in meters (Ministry of Health, 2018a). The national classification for BMI is shown in Table 1.

Table 1. BMI classification according to WHO Western Pacific Region

Classification	IMT
Underweight	< 18.5
Normal weight	18.5 - 22.9
<i>Overweight</i>	
With risk	22.9 - 24.9
Obese I	25 - 29.9
Obese II	≥ 30

Source: Ministry of Health Obesity Epidemic (2018)

## 3. Conceptual Framework

The customer development model developed by Blank and Dorf (2012) consists of four stages, namely customer discovery, customer validation, customer creation, and company building. This research is focused on the customer discovery stage which includes the preparation of the Business Model Canvas hypothesis obtained at the beginning in the form of problems from the results of the literature review, hypothesis testing (test the problem), solution testing (test the solution), and business model verification. In the business model hypothesis generation stage, the researcher deconstructed the customer vision into nine parts of the Business Model Canvas (product, customer, sales channel, demand creation, revenue model,

partner, my source, activity, and cost structure). At this stage, secondary data is needed to find information about industry analysis through literature studies and find other necessary information. Next, a Business Model Canvas (BMC) hypothesis will be developed which is used as a reference for testing the problem. Researchers test the problem hypothesis that has been obtained through literature studies to illustrate how important and big the problem raised is.

Based on the data from the BMC hypothesis, in the third stage a zero prototype / Minimum Valuable Product (MVP) will be created which will then be tested on consumers. Furthermore, interviews will be conducted with potential consumers regarding their responses to the MVP / prototype that has been made. The purpose of this is to validate how well researchers understand the problem in the previous stage. After there is feedback from consumers, then improvements will be made to the prototype / MVP that has been made based on the feedback that has been given by these potential consumers. The results of these improvements will later be used as the basis for the product that will be tested at the next stage.

Furthermore, the first step of the BMC verification stage is to compile a Business Model Canvas based on the prototype / MVP that has been evaluated by potential customers, which indirectly can already be called a product. Furthermore, the product and business model canvas will be verified with three important things. According to (Blank & Dorf, 2012), there are three important things in verifying the business model canvas, namely product-market fit, how to reach customers, and how the company makes money. If the three important things in the verification process are successful, they will be used as the basis for the preparation of the final product and also the final business model canvas. Meanwhile, if the verification is not successful, it will be pivoted by doing the same research stage from the beginning. The customer segment of this business is consumers who have an age range of 19-24 years. This research is conducted until the stage of making a verified business model in accordance with product-market fit.

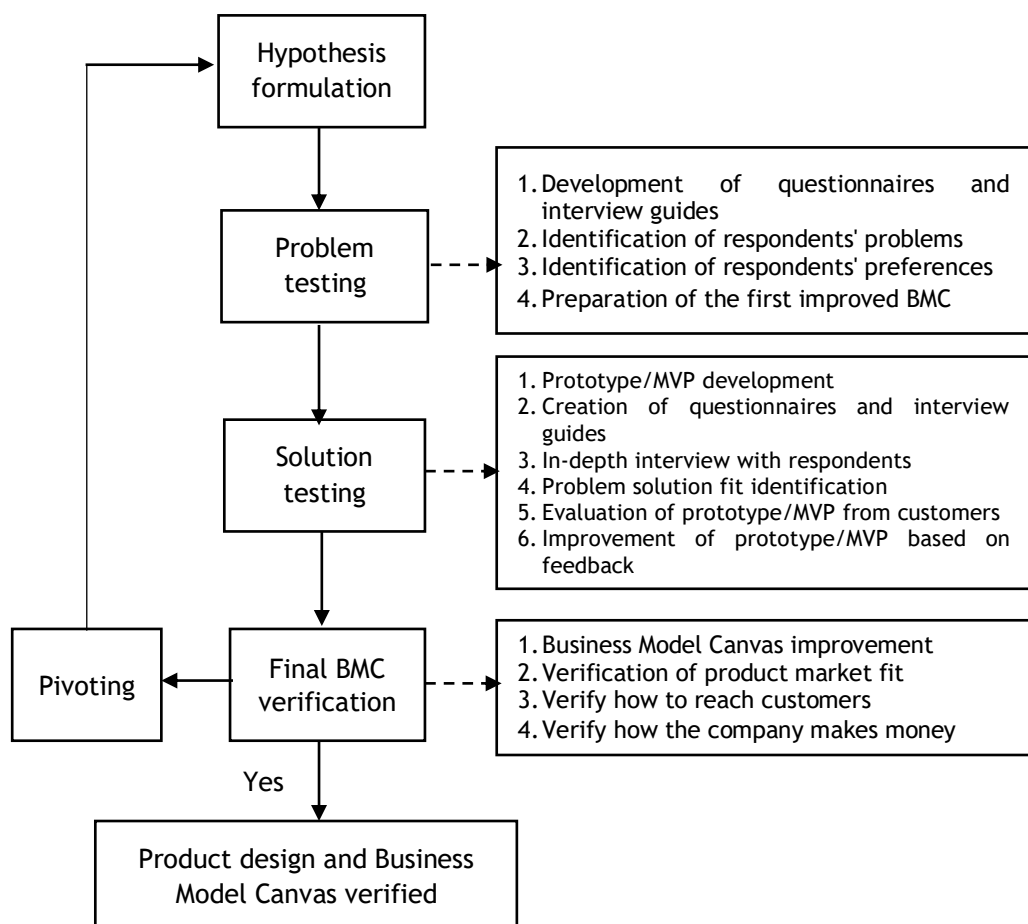


Figure 2. Conceptual framework

## **4. Methods**

### **4.1 Participants**

This research was conducted in the Jabodetabek area with a descriptive research design. Jabodetabek has a fairly good standard of living and awareness of a healthy lifestyle. Data collection was carried out by purposive sampling. The research respondents were 50 people aged 19-24 years who were interested in diet programs.

### **4.2 Measurement**

The types of data used in this study are primary. The data collection techniques were in-depth online interviews using questionnaires. The questionnaires included information regarding consumer identity, food preferences, and solution tests. This research uses a customer discovery approach which is part of customer development. The concept focuses on the intended consumers to develop appropriate markets and products (Blank & Dorf, 2012). So the questionnaire used in this study was prepared by researchers following this concept. The questionnaire includes consumer identity, food preferences, and solution tests.

### **4.3 Analysis**

This research was conducted with a qualitative approach. According to Sugiyono (2014), activities in data analysis, namely data reduction, data display, and conclusion drawing/verification. Data reduction means summarizing, choosing the main things, focusing on the important things, and looking for themes and patterns. Data display can be done in the form of brief descriptions, charts, and relationships between categories. Conclusion drawing/verification is the drawing of conclusions in accordance with the findings obtained during the research. The quantitative data obtained was analyzed using descriptive statistics where the data was analyzed by describing or describing the collected data as it is. Things that are included in descriptive statistics, namely presenting data through tables, graphs, and pie charts. Other quantitative data is a Likert scale which is processed using the Microsoft Office Excel application. According to Sugiyono (2014), the Likert scale is used to measure the attitudes, opinions, and perceptions of a person or group of people regarding social phenomena.

## **5. Findings**

### **5.1 Identify Problems in the Diet Program**

The search for problems in conducting a diet program begins with conducting a literature review to then develop a hypothetical business model canvas. Then the hypothesis is tested in problem testing to update the hypothesis business model canvas into the first business model canvas update. The first step in developing a business model hypothesis is the literature review. The author uses several types of references in finding sources of consumer problems. The first is the publication of official institutions, especially the Ministry of Health of the Republic of Indonesia where some examples of references include: Riskesdas Kemenkes tahun 2018, Epidemic Obesity 2018, Gerakan Nasional Atasi Obesitas (Gentas) tahun 2017, and Menu Katering Sehat 2017.

In addition to using references published by institutions, the author also uses several scientific references from previous research. Based on the literature review that has been conducted, the author has written the results of the literature review in the background section. Through the literature review, the author can conclude that there are several possible problems related to diet and nutrition experienced, including the following: (1) Based on research that has been done, there are still many students who have an irregular diet, either eating less than 3 times a day, or eating irregularly, and eating that is not balanced with exercise; (2) The quality of

the diet here means a poor balance of nutrients, e.g., low protein, low carbohydrates, excess fat, and so on; (3) The number of students who still consume excessive fat and carbohydrates and other nutrients that are not balanced or less than the established standards makes them vulnerable to obesity or overweight. The hypothesis was then translated into BMC<sub>0</sub> as the basis for testing the problem to be carried out. The BMC<sub>0</sub> hypothesis can be seen in Figure 3.

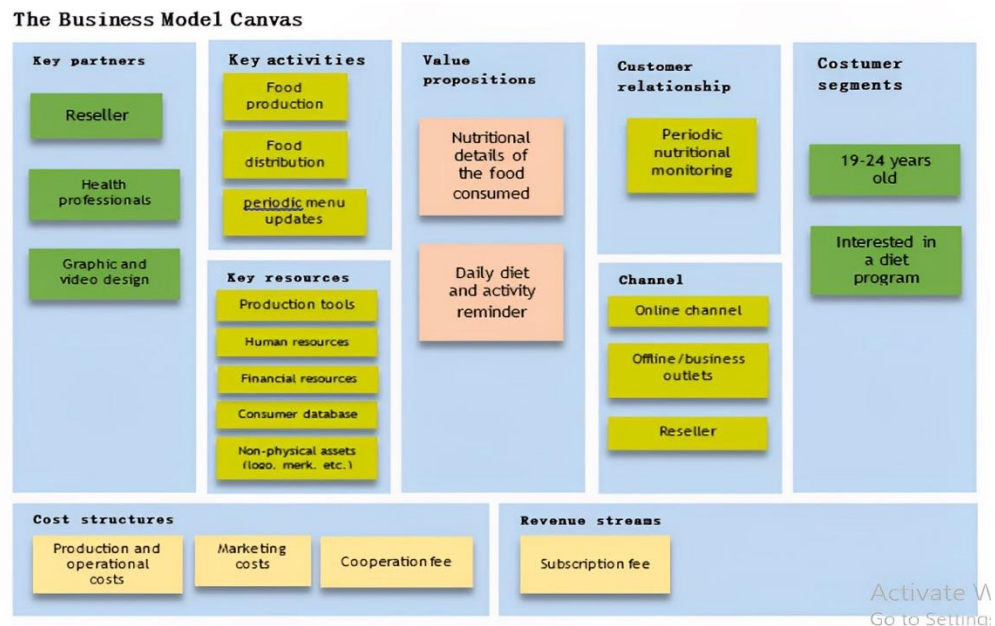


Figure 3. Hypothetical business model canvas (BMC<sub>0</sub>)

### 5.1.1 Characteristics of Problem Testing Respondents

Based on the problem testing criteria described in the research method, a questionnaire was filled out to 50 respondents who had been determined. From this process, the respondent profile data is obtained as in Table 2.

Table 2. Distribution of respondents based on characteristics

Categorization	Categories	n	%
Gender	Female	36	72
	Male	14	18
Monthly Expenditure (IDR)	< 1,000,000	16	32
	1,000,000- 1,500,000	21	42
	1,500,001- 2,000,000	11	22
	2,000,001- 2,500,000	1	2
	≥ 2,500,000	1	2
Daily Meal Budget (IDR)	< 30,000	19	38
	31,000 - 60,000	23	46
	61,000 - 100,000	8	16
IMT	18.5 - 22.9 (information)	19	38
	22.9 - 24.9	9	18
	25 - 29.9	17	34
	>30	5	10

### 5.1.2 Consumption Behavior of Respondents

Based on the problem test, it was found that the consumption behavior of respondents as shown in Table 3. The majority of respondents have a meal frequency that is still outside the recommendation, namely only eating 1-2 times a day with a percentage reaching 52 percent followed by those who have eaten 3 times a day as much as 46 percent (Table 3). Meanwhile, regarding snack consumption, 80 percent of respondents have consumed 1-2 times a day which is in accordance with the recommendations. The majority of respondents often consume

vegetables in their large meals with a percentage reaching 50 percent and there are still 30 percent of respondents who still rarely consume vegetables. Meanwhile, regarding the main side dishes in their meals, the majority or 68 percent of respondents have consumed varied side dishes with the majority of respondents at 64 percent having a favorite side dish in the form of chicken. Regarding their concern about the nutrition they consume, 62 percent of respondents answered that they were quite concerned, followed by 20 percent of respondents who answered that they were very concerned.

Table 3. Consumption behavior

Categorization	Categories	n	%
Meal frequency (times/day)	1-2	26	52
	3	23	46
	4	1	2
Snack frequency per day (times/day)	1-2	40	80
	3	6	12
	4	4	8
Frequency of vegetable consumption	Rarely	15	30
	Often	25	50
	Always	10	20
Variety of side dishes	Monotone	4	8
	Varied	34	68
	Very variable	12	24
Favorite type of side dish	Chicken meat	32	64
	Egg	10	20
	Fish	5	10
	Vegetarian	2	4
How much you care about the nutrition you consume	Very indifferent	2	4
	Don't care	7	14
	Care enough	31	62
	Very caring	10	20
Understanding the amount of nutrients consumed	Not sure	26	52
	No	17	34
	Yes	7	14
Knowledge of personal RDA adequacy	Don't know	29	58
	Not sure	14	28
	Knowing	7	14
Interest in the diet program	Interested enough	23	46
	Very interested	27	54

However, this was not matched by an understanding of the amount of nutrition consumed, as evidenced by the fact that only 14 percent of respondents understood the nutrition they consumed, while 34 percent answered that they did not understand and the remaining 52 percent were not sure whether they understood or not. Furthermore, related to understanding the adequacy of personal AKG (Nutrient Requirement), 58 percent of respondents answered that they did not know, while 28 percent answered that they were not sure, and only 14 percent of people answered that they knew. And the last question related to diet programs, the majority of respondents as much as 54 percent said they were very interested in dieting, and the remaining 46 percent said they were quite interested in dieting.

### 5.1.3 Problem Test Interpretation

From the results of the respondent interviews above, several important interpretations were obtained. Based on the respondents' expenditure data, the author assumes that the price of a suitable catering package is in the price range of IDR 650,000-750,000 with a 2-week or 14-day subscription. Another alternative is to provide a special package with a premium price of IDR 1,050,000 - 1,200,000 for those with high expenses. The food offered has a main side dish of chicken (to facilitate business shopping planning) and reflects the favorite side dish of the majority of respondents.



Research needs to be done on the various ways of processing chicken meat so that it remains nutritious but still attractive to respondents and variations in the types of vegetables given in each large meal given. The drink given in each portion of food is water. Indirectly, if this catering service can provide food that meets the AKG and nutritious food according to the IMT of consumers. Then this catering business can help the diet program that can be done by consumers. Another value proposition that can be provided to consumers is education. Both in the form of basic education such as how to live a healthy life, how to find out personal AKG, and how to calculate the nutrients of the food consumed. In addition, more specific knowledge can be in the form of education on the food menu provided by catering services so that it can be a differentiator between this catering service and other catering services.

#### 5.1.4 First BMC update

There are additions to several BMC elements when compared to BMC<sub>0</sub>, including: (1) the addition of health education features as a value proposition. This health education is provided in the form of photos and videos containing health content that is useful for consumers themselves. (2) The addition of a nutrition consultation feature with a nutritionist/doctor. This is planned to be specifically for those who buy value packages in this business. (3) As a customer relationship, a health tips reminder feature is added on a daily basis. Health tips is a scheme that is almost similar to health education, only it is personalized, reminders, and health tips are sent personally if there are consumers who need special health advice. (4) Adding customer segment criteria by adding criteria for those who care about the nutrition they consume. These criteria lead to those who do not suffer from diabetes but pay attention to the nutrients consumed. Based on the interpretation of the problem test and also the addition of the elements described earlier, BMC<sub>1</sub> was created which is an update of the hypothetical business model as shown in Figure 4 below.

The Business Model Canvas

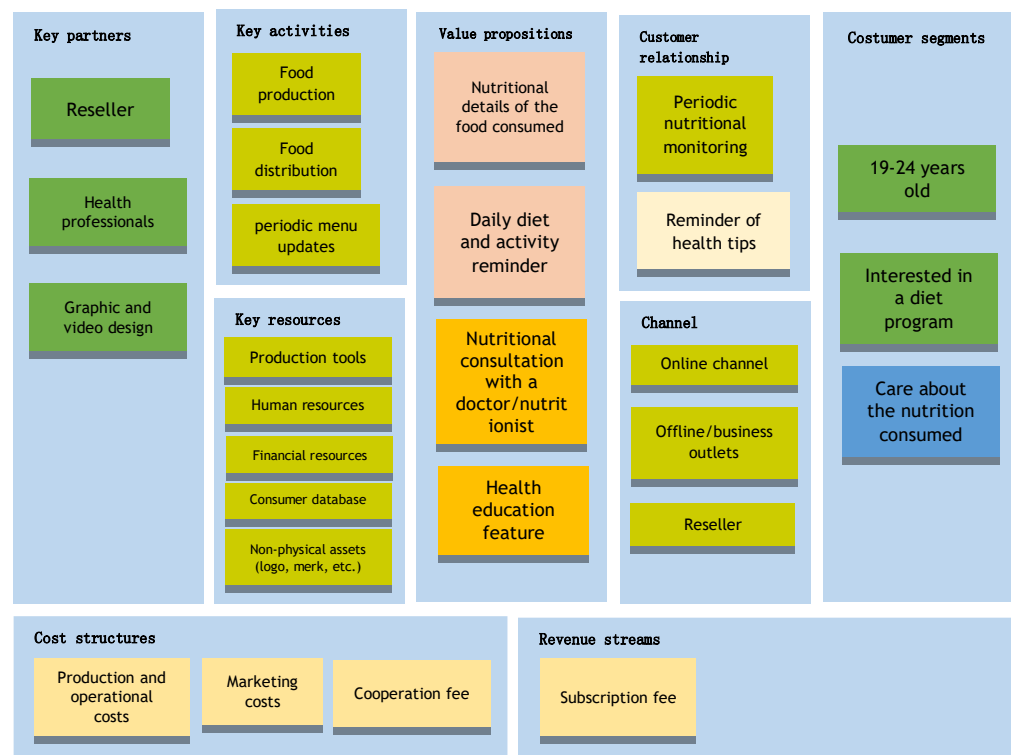


Figure 4. First business model canvas improvement (BMC<sub>1</sub>)

## 5.2 Prototyping

### 5.2.1 Minimum Viable Product (MVP) Creation

In preparation for the solution test, we created a Minimum Viable Product (MVP) in the form of menu options ranging from breakfast, lunch, to dinner that can be selected by respondents if they subscribe to healthy catering (Figure 5). Then they are invited to choose the menu arrangement that they will choose if they subscribe to this catering service for a period of 15 days (each day there are 3 menus to choose from, so there are a total of 45 menus that will be chosen by respondents). The 10 most selected menus will be used in the prototype update.



Figure 5. Breakfast, lunch, and dinner menu options

### 5.2.2 Solution Testing Method

After creating the MVP, a solution test was conducted on 25 respondents with criteria that have been written in the research method to test the values offered by this catering and to evaluate the MVP that has been made to be further developed into a prototype.

### 5.2.3 MVP Assessment

Based on the results of filling out the questionnaire that has been carried out, some data from respondents is obtained regarding their assessment of the MVP that has been given to respondents. The majority of respondents have stated that what is displayed is interesting both from breakfast, lunch, and dinner. The following in Table 4 presents the 4 menus most chosen by respondents in each category which will later become the highlight or highlight in making prototypes.

Table 4. The menu most chosen by respondents

Categories	Menu options	Total options
Breakfast	Menu 7	21
	Menu 15	17
	Menu 9	16
	Menu 11	16
Lunch	Menu 8	22
	Menu 7	18
	Menu 1	17
	Menu 14	17
Dinner	Menu 10	20
	Menu 8	19
	Menu 7	17
	Menu 1	16

From the table above, it can be concluded that the seventh menu is the respondent's favorite breakfast menu selected by 21 out of 25 respondents, menu 8 is the respondent's favorite lunch menu selected by 22 out of 25 respondents, menu 10 is the respondent's favorite dinner menu selected by 20 out of 25 respondents. There are several menus that may have to be deleted because they were only chosen by less than 50 percent of respondents, for example Menu 3, 10, 12, 13, and 14 for the breakfast menu.

### 5.2.4 Final Solution Test Questionnaire

Table 5 below presents the results of respondents' answers related to the final questionnaire given. This questionnaire, among others, aims to validate the value proposition or value offered by the company, validate respondents' interest in healthy catering services, validate the marketing channel hypothesis that has been compiled, and analyze whether the price plan for this healthy catering service is in accordance with the target consumer or not.

Table 5. Respondents' answers to final questionnaire questions

Question/Statements	Answer Categories	Total Answers	Percentage (%)
Do you think daily broadcast messages with health tips, meal alarms, and exercise tips would be helpful?	Very helpful (4)	17	68
	Helpful enough (3)	4	16
	Less helpful (2)	4	16
	Not helpful (1)	0	0
What are your sources for interesting places to eat near campus?	Friens	18	72
	Online ordering media (Grabfood, Go-food)	2	8
	Advertising broadcast promotion in the group	5	20
Which media might you use to order this catering service?	Order through resellers	11	44
	Order directly to the place	3	12
	Order via Whatsapp	3	12
	Order via Line	7	28
Do you think there should be an add-on facility to consult with 3rd parties (e.g., Halodoc, klikdokter, etc.)?	Not necessary (1)	0	0
	Less necessary (2)	3	12
	Necessary (3)	6	24
	Very necessary (4)	16	64
How interested are you in using our "healthy diet" catering services?	Ordinary (3)	4	16
	Interested (4)	10	40
	Vey interested (5)	11	44
Do you think a subscription system is a good system for this business?	1 (Not appropriate)	1	4
	2 (Less precise)	3	12
	3 (Appropriate)	9	36
	4 (Very precise)	12	48
Do you think the price of IDR 1.050.000/2 weeks is right for this catering service?	1 (Very inappropriate)	7	28
	2 (Less precise)	8	32
	3 (Appropriate)	8	32
	4 (Very precise)	2	8
Do you think the price of IDR 750.000/ 2 weeks is right for this catering service?	1 (Very inappropriate)	0	0
	2 (Less precise)	7	28
	3 (Appropriate)	8	32
	4 (Very precise)	10	40
If there was a 10% discount for an initial subscription, would you want to try our catering service?	Yes	16	64
	Maybe	9	36
	No	0	0

### 5.2.5 Improvement of MVP to Prototype

Based on the suggestions given by respondents regarding the MVP that has been made, the MVP is improved and becomes a prototype as shown in Figure 6. In this prototype, images have been added to several menus which are the favorite choices of respondents.



Figure 6. Improvement of MVP to prototype

### 5.3 Verified Business Model Design

At this stage, the author compiles a verified BMC based on the results of the solution test that has been carried out. After compiling the BMC, verification of product suitability for the market, verification of customers and how to achieve them, and verification of the company's ability to generate revenue were carried out.

#### 5.3.1 BMC Update Phase Two (BMC<sub>2</sub>)

Based on the solution test that has been carried out, there are several implications of these results for elements in BMC. Based on respondents' answers to the price range, it was found that at a price of IDR 1,050,000, which is the price of the premium package, less than 50% of respondents chose the package, so the package was removed. Due to the removal of the premium package plan, the consultation with a nutritionist was also removed, as the cost was too expensive if included in the package, which ideally cost IDR 750,000.

As a more feasible replacement, the consultation with a nutritionist was changed to consultation with third-party applications such as Halodoc and Klikdokter. Therefore, the key partners have changed slightly from health professionals to third-party consultants. Adding channels and key partners, namely the needitary application because the company matches the value proposition and goals that the company wants to achieve. Considering that everyone's needs are quite different, the value proposition is added to "menu customization based on consumer AKG". In the revenue stream, a new type of income was added in the form of income from catering services at certain events or events. Based on these updates, an improved business model canvas was verified as shown in Figure 7 below, and will be verified through 3 types of verification.

**The Business Model Canvas**

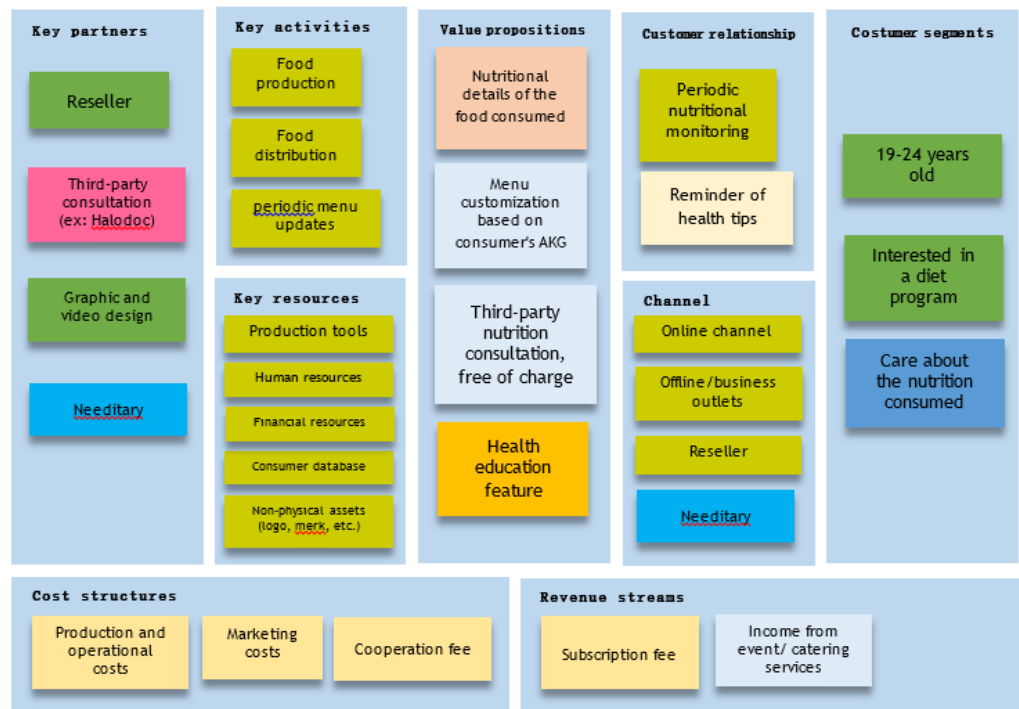


Figure 7. BMC update phase two (BMC<sub>2</sub>)

**5.3.2 Product Suitability to The Market**

Product suitability can be measured by the solutions that have been given to the problems faced by potential customers. The details of each solution provided are as follows: (a) Irregular eating patterns are solved by the daily meal reminder feature which also acts as one of the Customer-Relationships; (b) Consumers who state that they care about the amount of nutrition of the food consumed. This catering service answers by providing details about the number of nutrients they consume from the food ordered. In addition, they are also given alternative tips to fulfill their daily needs apart from heavy meals from this catering service; (c) Their tendency to consume foods with high sugar is solved by providing foods that are high in calories but have low sugar content; (d) The vulnerability of target consumers who are overweight or obese. The problem is solved by the value of daily reminders of health tips and periodic monitoring of nutrition. The health consultation feature with a third party can also be an alternative solution to the problem.

**5.3.3 Customers and How to Achieve Them**

This business has a customer segment of those who are 19-24 years old and have a concern for health and are located in Jabodetabek. Along with the increasing economic level in Indonesia and also the increasing trend of diet in Indonesia. It is certain that consumers will increase every year. From the results of the solution test, it is found that the way to reach consumers can be done online and offline. Offline through resellers and through word-of-mouth. Online methods are also used by using promotion services. In addition, the website can also be used as an alternative media, where the website is not only a marketing medium but also a product catalog. Ordering media can also be attempted in full, starting from ordering media through resellers, line media, or by coming directly to the business location. Based on the data from the solution test that has been conducted, most respondents are willing to pay for catering services at IDR 750,000/15 days. In addition, catering services can also get additional income by participating in certain events.

## 6. Discussion

The four stages of the customer development model developed by Blank and Dorf (2012) include customer discovery, customer validation, customer creation, and company building. This research specifically analyzes the customer discovery stage which includes the formulation of hypotheses from the Business Model Canvas obtained at the beginning, hypothesis testing (test the problem), solution testing (test the solution), and business model verification. Hypothesis formulation is carried out by first identifying the problems of the customer segment of this business, namely consumers who have an age range of 19-24 years. These efforts are made to increase market potential and company profits. Nielsen (2012) mentioned that the wrong business model can cause financial losses and market loss, thus increasing the potential to exit the business.

Based on the results of the literature review that has been carried out, problems related to diet and nutritional needs. These problems include being prone to overweight or obese, irregular eating patterns, poor food quality, and experiencing nutritional deficits that are prone to obesity. Research before also mentioned that eating behavior affects obesity problems (Evan et al., 2017; Sudargo et al., 2018; Kusdalinar et al., 2022). In addition to this, consumer behavior analysis is needed to develop a business model canvas that suits consumer needs. Hoyer et al. (2012) explain that consumer behavior is the overall consumer decision related to the acquisition, consumption, and disposition of goods, services, time, and ideas from the decision-making process. The majority of respondents have a meal frequency that is still outside the recommendation, namely only eating 1-2 times a day. The majority of respondents also felt quite concerned about nutritional consumption and said they were very interested in diet programs. However, on the aspect of understanding the adequacy of personal Nutritional Allowance (NAC), more than half of the respondents did not know about it.

Preparation for the solution test was carried out by creating a Minimum Viable Product (MVP) in the form of menu options ranging from breakfast, lunch, to dinner that can be selected by respondents if they subscribe to healthy catering. Ries (2011) defines MVP as a new version of the product that allows for the collection of validated learning from customers. The menu in this MVP is compiled based on the calorie needs of a 500-calorie deficit diet, to lose weight by 2 kg per month which is the safest limit for dieting. In previous research by Dewantari and Ambartana (2017), low-fat and low-calorie diet interventions were carried out, resulting in significant weight loss. In addition, previous research states that physical activity in the form of regular exercise is also needed to maintain a healthy lifestyle (Ardiani et al., 2021). Other factors that influence dietary practices mentioned by Kim and Kim (2008) include income, dietary awareness, dietary knowledge, body image, and Body Index Mass (BMI).

The results of the MVP that have been compiled are then tested, assessed, and validated by research respondents. As a result, the response regarding MVP from respondents was then improved and compiled in the form of a prototype. The prototype of "Go Healthy" catering contains the main menu (breakfast, lunch, and dinner menu) for 15 days. Previous research found that menu planning and individual counseling can have an effect on diabetes conditions (Soria-Contreras et al., 2014). The prototype has also included some of the respondents' favorite menu choices. This is done based on research by Solikhah et al. (2016) showing that marketing strategies related to consumer interest are related to motivational factors and brand image. Furthermore, a verified Business Model Canvas (BMC) was compiled based on the results of the solution test that had been carried out. Business Model Canvas is a method of creating business models with an approach that is easily implemented by business organizations in an effort to evaluate and change the company's business model, so as to create a new business model that is more appropriate and suitable for the company to implement (Osterwalder & Pigneur, 2010). The Business Model Canvas can also provide clear direction regarding the efforts that the company needs to achieve because this business model focuses on the most important strategic elements (Amanullah et al., 2015). Based on the

verified BMC results, verification of product suitability to the market, verification of customers and how to reach them, and verification of the company's ability to generate revenue.

Some of the efforts that need to be made from the results of the verified business model design include providing a detailed menu structure along with nutritional information, making affordable prices, and making online and offline sales. Asgha (2016) through his research found that consumers with higher education and income tend to read and use nutritional value information labels on food products. Osterwalder and Pigneur (2012) explain that the advantages or added value that can be offered can be in the form of new products, better product/service quality, unique design, status or brand, lower/competitive prices, ease of access, and others. Another study conducted by Fadliyah et al. (2021) found that consumer behavior is related to aspects of exposure and acceptance of product advertisements, environmental factors, and individual differences. Regarding the sales system, consumers tend to make offline purchases due to service quality and low shopping risk, while online purchases are chosen by consumers who are concerned with prices and promotions (Ugolkov et al., 2020). So collaboration between online and offline sales is needed for each consumer's preference. In addition, consumer loyalty can be strengthened by providing regular nutritional monitoring. This is reinforced by the results of Widiyanti and Afriani's research (2019) which found that nutritional monitoring such as SMS reminders is effective in improving dietary compliance. The limitation of this research is that it only focuses on the customer discovery approach.

## **7. Conclusions**

Based on the result and discussion of the research, there are several problems related to diet and nutritional needs, namely (1) Prone to being overweight or obese, (2) Irregular diet, (3) Poor food quality, and (4) Many experience nutritional deficits that are prone to obesity. Prototype of "Go Healthy" diet catering in the form of a main menu arrangement for 15 days. The menu in one day consists of breakfast (20%), lunch (30%), and dinner (30%). For the interlude menu (20%), catering is not provided so that consumers are free to choose the interlude menu even though the calories are still limited.

Verified business model design of "Go Healthy" diet catering with several values, namely providing detailed information about the complete menu structure with nutritional content, affordable prices, and sales through online channels (for example social media) and offline at business places and resellers. To increase customer loyalty, regular nutritional monitoring is also carried out. Customer acquisition promotion is carried out by providing certain discounts so that potential customers want to try them. "Go Healthy" catering in its sales will cooperate with third-party health education and health consultation platforms such as Halodoc, as well as Needietary; (b) "Go Healthy" catering has many potential consumers, namely those aged 19-24 years, mainly in Greater Jakarta (Jabodetabek) and adequate strategies to reach them; (c) "Go Healthy" diet catering has a revenue stream from consumer subscription fees and catering services from certain events and events.

## **8. Recommendation**

Based on the limitations of the research, data analysis, and research results that have been produced, the author suggests several things that can be done in the future. First, future research can continue advanced research such as customer validation, customer creation, and company building so that the verified business model that has been found can be realized. Based on the problems of diet and nutritional needs problems in this study, it is also necessary to develop the catering business through cooperation with platforms with educational and consulting features such as 'Needietary' so that the value proposition is better conveyed. Finally, exploring business locations in other regions is also needed for business development because, based on the research results, it was found that Jabodetabek has many potential consumers.

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### References

- Amanullah, A. N. A. A., Aziz, N. F. A., Hadi, F. N. H. A. H., & Ibrahim, J. (2015). Comparison of Business Model Canvas (BMC) among the three consulting companies. *International Journal of Computer Science and Information Technology Research*, 3(2), 462-471.
- Ardiani, H. E., Permatasari, T. A. E., & Sugiatmi, S. (2021). Obesity, diet, and physical activity in managing diabetes mellitus during the Covid-19 pandemic. *Muhammadiyah Journal of Nutrition and Food Science (MJNF)*, 2(1), 1-12.
- Asgha, B. (2016). Analysis of the use of nutritional value information labels on food products by consumers in Semarang City. *Buletin Studi Ekonomi*, 21(2), 128-135.
- Blank, S., Dorf, B. (2012). *The Startup Owner's Manual: The Step-by-Step Guide for Building a Great Company*. California, CA: K&S Ranch Inc. Publisher.
- [BPS] Badan Pusat Statistik Republik Indonesia. (2021). 2020 Population Census Results. Jakarta, ID: BPS
- Dewantari, N. M., Ambartana, I. W. (2017). Effect of diet composition and aerobic exercise on weight loss. *Gizi Indonesia*, 40(2), 59-68. <https://doi.org/10.36457/gizin.do.v40i2.239>
- Evan, E., Wiyono, J., & Candrawati, E. (2017). The relationship between diet and the incidence of obesity in students at Tribhuwana Tungadewi University Malang. *Nursing News: Jurnal Ilmiah Keperawatan*, 2(3), 708-717.
- Fadliyah, H., Nurwahyuni, A., & Faradiba. (2021). Community Consumption of Traditional Medicine and Health Supplements During the Coronavirus Disease-2019 Pandemic: Community Consumption of Traditional Medicine and Health Supplements During the Coronavirus Disease-2019 Pandemic. *Journal of Consumer Sciences*, 6(2), 92-110. <https://doi.org/10.29244/jcs.6.2.92-110>.
- Hoyer, W. D., MacInnis, D. J., & Pieters, R. (2012). *Consumer behavior*. South Western: Cengage learning.
- Husna, N. L. (2013). The relationship between body image and dieting behavior (Research on women at Rita Pati Gymnastics studio). *Developmental and Clinical Psychology*, 2(2), 44-49.
- [Kemenkes] Kementerian Kesehatan Republik Indonesia. (2017b). Gerakan Nusantara Tekan Angka Obesitas (GENTAS). Jakarta(ID): Kemenkes.
- [Kemenkes] Kementerian Kesehatan Republik Indonesia. (2018a). Key Results of Riskesdas 2018 Jakarta(ID): Kemenkes.
- [Kemenkes] Kementerian Kesehatan Republik Indonesia. (2018b). Obesity Epidemic. Jakarta, ID: Kemenkes.
- [Kemenkes] Kementerian Kesehatan Republik Indonesia. (2017a). Healthy Catering Menu. Jakarta(ID): Kemenkes.
- Kim, M. R., & Kim, H. C. (2008). A study on diet behaviors and related factors in dieting college students. *Journal of the East Asian Society of Dietary Life*, 18(1), 135-148.
- Kusdalinah, K., Mutia, A., & Jumiyati, J. (2022). Diet and physical activity on the incidence of adolescent obesity during the Covid-19 pandemic. *Journal of Nutrition College*, 11(1), 26-34.
- Lenarduzzi, V., and Taibi, D. (2016). MVP Explained: A Systematic Mapping Study on the Definitions of Minimal Viable Product. 42nd Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Limassol, Cyprus, 2016, 112-119, doi: 10.1109/SEAA.2016.56.



- Nielsen, C., (2012). The role of human resources in business model performance. *Journal of Human Resource Costing & Accounting*, 16(2), 777-780.  
<https://doi.org/10.1108/jhrca.2012.31616baa.001>.
- Osterwalder, A., & Pigneur, Y. (2010). *Business Model Generation: A Handbook For Visionaries, Game Changers, And Challengers*. Hudson(NJ): John Wiley & Sons, Inc.
- Osterwalder, A., Pigneur, Y. (2019). *Business Model Generation*. Jakarta(ID): Elex Media Komputindo.
- Ries, E., (2011). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses*. USA: Currency.
- Silalahi, U. (2012). *Social Research Methods*. Bandung, ID: PT. Refika Aditama.
- Solikhah, A., Hartoyo, H., & Yuliati, L. N. (2016). The Influence of Personality, Motivation, Brand Image, and Environment on Students' Intention in Choosing Bogor Agricultural University (IPB). *Journal of Consumer Sciences*, 1(1), 14-32.  
<https://doi.org/10.29244/jcs.1.1.14-32>.
- Soria-Contreras, D. C., Bell, R. C., McCargar, L. J., & Chan, C. B. (2014). Feasibility and efficacy of menu planning combined with individual counselling to improve health outcomes and dietary adherence in people with type 2 diabetes: a pilot study. *Canadian Journal of Diabetes*, 38(5), 320-325.
- Sudargo, T., Freitag, H., Kusmayanti, N. A., & Rosiyani, F. (2018). *Diet and obesity*. Yogyakarta(ID): UGM press.
- Sugiyono. (2014). *Management Research Methods*. Bandung(ID): CV Alfabeta.
- Sugiyono. (2016). *Quantitative, Qualitative, and R&D Research Methods*. Bandung(ID): CV Alfabeta.
- Suharsimi, A. (2010). *Research Procedure A Practical Approach*. Jakarta, ID: Rineka Cipta.
- Tanjung, J. A. (2019, September 5). Here are 7 Signs You're on the Wrong Diet. *Popbela*. Retrieved from <https://www.popbela.com/beauty/health/jennifer-a-tanjung/tanda-menjalani-diet-yang-salah/full>.
- Tim PPM Manajemen. (2012). *Business Model Canvas: Implementation in Indonesia*. Jakarta(ID): Penerbit PPM.
- Ugolkov, I., Karyy, O., Skybinskyi, O., Ugolkova, O., & Zhezhukha, V. (2020). The evaluation of content effectiveness within online and offline marketing communications of an enterprise. *Innovative Marketing*, 16(3), 26-36.
- Widhayanti, S. A. (2021). *Analysis and Design of Work From Home Scheme Work System in the Era of Covid-19 Pandemic (Study on Upscale.id)* (Doctoral dissertation, Universitas Brawijaya).
- Widiany, F. L., & Afriani, Y. (2019). Nutrition monitoring with SMS reminders is effective in improving dietary adherence of hemodialysis patients. *Jurnal Gizi Klinik Indonesia*, 15(3), 89-94.