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Conference Paper

Developing a Marketing Strategy Based on Market Segmentation Through Clustering Method in Food and Beverage Industry in Bandung: Case Study of Bola Ubi Yama

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Abstract

Food and beverage industry has been highly developing throughout time varying the industry into smaller sub-industries and more varieties of product available for the market to choose. Since it is one of the lowest barriers to penetrate out of all industries, the industrial competitiveness is very high due to its demand and supply.

Bola Ubi is a traditional food coming from West Java. Bola Ubi has a unique sweet yet savory taste with its crunchy yet chewy texture. As traditional food, Bola Ubi is relatively popular. As time goes by, there are brands coming up to sell this kind of product. One of these companies is Yama. Yama launched their first store in February 2018 in Taman Sari Food Festival. As time goes by Yama reveals a downward trend in its sales. Referring to create, delivery, and capture metrics, Yama has an equal, if not better in creating the value and capturing it to the customer. The only difference that Yama have is the delivery metrics.

Although in hindsight the solution is to just change the location of Yama's store, it would not create a substantive competitive advantage in the long run. Based on the data analysis, the study found that the way forward is to position ourselves firmly into one existing specific market to capitalize the lack of focus of our competitor.

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1. Introduction

1.1. Company Description

1.1.1. Company Background

The initial idea of Yama started from the first day of brainstorming in Jatinangor Town Square as a second choice to replace the education startup idea named Berisi. It continues in the culinary night at Cibadak to watch the potential food or beverages business. The beginning of plan always correlates with social entrepreneurship that become Yama goal and spirit to enhance the welfare of the people in any form of future business they design.

The social spirit that Yama bring was happiness with the form of yam or known as *Ubi* in Indonesia. Yama (山) came from Japanese means mountain because yam is identical to the plants that grow in mountainous areas. We also done market research about yam ball as typical food of Bandung. Lots of culinary types are offered in the city of Bandung. Everyone who comes or lives in Bandung will easily find a variety of food in various places from morning until night, with a variety of prices. Foods that are found-can be either traditional to modern food or even a mixture between the two.

Behind the development of the culinary industry is quite rapid in Bandung, there are some obstacles associated with traditional foods that are considered low-end and now less popular, can be seen in the current conditions, traditional food traders began to decrease. While some still retain traditional food, they still have hygiene, health, and food sellers who are not paying attention to the environmental impact. Such as the use of plastic waste or waste that is difficult to decompose.

W saw an opportunity to open a sweet potato snack business, specifically 'Bola Ubi' or sweet potato ball that aim to spread happiness in Bandung city and introduce traditional food to be acknowledged by people. Moreover, we hope that 'Bola Ubi' snack could be a gift for the family in hometown.

We believe through the business creation, more people can taste traditional food which using one of commodities (ubi) as the main ingredients and also another product development in the future. As the beginning, we market 'Bola Ubi' as our primary product.

Other than developing such resources, we see that this is one of the up-trending foods in big cities. By introducing traditional food to the new generation, we would also keep our tradition alive and give bigger impact out of it.

1.1.2. Company Profile

Company Description

Yama Co. was built on 7 September 2017 as a company that provide local delicacies. The beginning of plan correlates with social entrepreneurship that becomes Yama goal and spirit to enhance the welfare of the people in any form of future business they design. Yama was a yam ball or 'bola ubi' seller. Yama consists of four co-founders which are Andri, Asnawi, Bestra, and Eric.

The social spirit that Yama bring upon is happiness with the form of yam or known as Ubi in Indonesia. Yama (山) came from Japanese means mountain because yam is identical to the plants that grow in mountainous areas. Our main store was located in Taman Sari Food Festival, which allows us to grab high market share in traffic area, but currently our store is located in Antapani. Our pricing is slightly cheaper than our competitors and our quality is on average.

Vision, Mission and Objectives

Visi2n: Yama wants to reintroduce traditional cuisines to the younger generation with new presentation to preserve Indonesia's culture. Mission: Yama aims to be 'bola ubi' leading seller in 3 years by giving the best quality and service in Bandung and nearby. Objective:

- Gain the production capacity, efficiency and effectiveness at least 2% of minimum level.

- Raising brand awareness, product's position, and market share

- Save yearly usage of funds and manage expenses to fit sales conditions

- Productivity and achievement goes according to plan, minimize problem with the condition of employees, relationships and corporate culture well established

- Operational staff understand working flow, working consistently 9 hours per day, achieve 90% successful production rate

- Collecting, preparing and interpreting reports, budgets, accounts, and financial statements, to maintain healthy financial

1.2. Organizational Structure

The organizational structure is shown in table 1 below.

TABLE 1: Organizational Structure

```
                    Bestra Tomassa
                         CEO

      Bestra        Grimal M      Asnawi M.      Grimal M
      Tomassa        CHRO          Alam           CMO
                                   COO

              Employees      Employees      Employees
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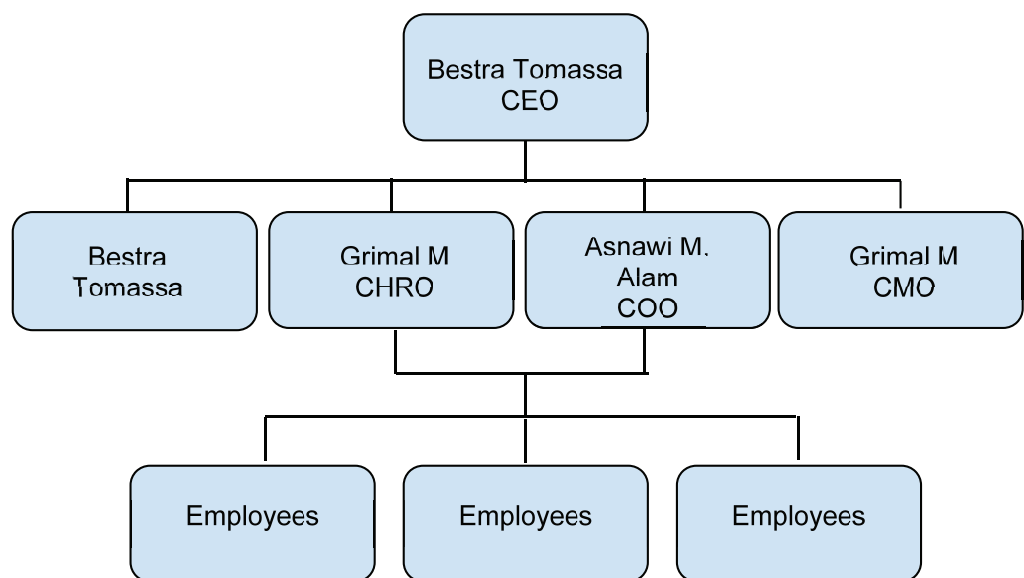
1.3. Business Model Canvas

Business Model Canvas is a tool to represent a business straight forward with its model. Through 9 building blocks from value, customer, delivery, relationships, resources, activities, partners, costs, and revenues, business model canvas enables a business to see its overview of its stakeholders (Strategyzer.com).

1.3.1. Value Proposition

Yama has a value of taste, price, and location. We were located in the city center where our competitors were a bit far from the main target market which were people living in Bandung city center.

1.3.2. Customer Segment

Initially Yama was trying to serve millennials as their main target market, especially ITB Students. We opened up store in Taman Sari Food Festival which was located next to ITB.

1.3.3. Channel

Yama's first store was located in Taman Sari Food Festival. It was an ideal location to serve our main target market which was ITB Students. Yama also opened up pop up stores in several exhibitions like Festpreneur, UprealState, Bandung Food Festival, and Young Entrepreneur Festival in order to increase sales and brand awareness.

1.3.4. Customer Relationship

Yama aimed to have a high brand loyalty with its customers and maintain its market share of people who wants bola ubi near its location

1.3.5. Key Resources

Yama key resources consists of infrastructures like its store, exhibition tools, cooking utensils, ingredients, employees, co-founders.

1.3.6. Key Activities

In order to leverage Yama's business and activate the resources, Yama's activities are production, sales, store maintenance, business development through product development and marketing strategy, human resource development, etc

1.3.7. Key Partners

To run the business, there were direct stakeholders that enables Yama to run the business better such as investors who invested financially in our business, suppliers of our ingredients and materials, business mentors who help Yama in networking and decision making, and landlords.

1.3.8. Cost Structure

In operating our business there are fixed costs and variable costs. In short, the costs consists of operational, marketing and human resource

1.3.9. Revenue Stream

Yama's main revenue stream comes from sales through 2 channels which are store sales and bazaar. Most of the revenue comes from 2 channels.

1.4. SWOT Analysis

SWOT (strengths, weaknesses, opportunities, and threats) analysis is a framework used to evaluate a company's competitive position and to develop strategic planning. SWOT analysis assesses internal and external factors, as well as current and future potential (investopedia.com)

1.4.1. Strength

Yama has strength in progressiveness of business. Compared to the other sellers, Yama is the only one selling with a startup concept. Most of our competitors are running business in conventional method. Targeting city center of Bandung, they also have location advantage to market.

1.4.2. Weakness

Yama's weakness in running the business is experience and time. The co-founders have very few experiences in running a food business and very limited time because the co-founders are also students.

1.4.3. Opportunity

Yama has an external advantage in running the business which are better human resource and knowledge, and also location advantage compared to competitors. Yama was run by students of entrepreneurship ITB which has better knowledge in growing and scaling a business based on their knowledge. They also have better access to

networking such as investors, business mentors, and other businesses in the same industry. Surrounded by these resources, Yama is able to scale far better than their other competitors.

Other than that, Bola Ubi is a snack where the trend is showing growth. This opportunity and timing in opening the business enables Yama to play with the wave and consume less resources in market education about the product.

1.4.4. Threat

The downside of playing with trends is food trends does not last very long. It is a zero sum game where Yama needs to be able to move fast and grab as high market share as they can and take most profit out of it.

1.5. Competitor Analysis

Yama has several competitors in the same city. The ones mentioned above are 2 of the most famous competitors which are bola ubi Gardujati and bola ubi Bolbi. Based on the location, Yama is the closest location to the center of the city, locating in Taman Sari, Dago. Bola ubi Gardujati is located in Gardujati street with lots of branches nearby the location. Bolbi is located in pasir kaliki. Both of Yama's competitors are located in the perimeter of the city.

TABLE 2: Yama's industrial comparison

	Yama	**Gardujati**	**Bolbi**
Location	Taman Sari	Gardujati	Pasirkaliki
Product Category	3	1	3
Market segment	ITB Students	Broad	Broad
Price Range	10000- 15000	12000 - 15000	13000

Bola ubi Gardujati has the lowest variety of product category, which is only the plain bola ubi without any unique taste or toppings. On the contrary, Yama and Bolbi both have several taste variation including topping and custom taste.

Although their competitors are targeting broad market, Yama has a unique market which was focused on ITB Students. This resulted in a narrow marketing strategy executed by Yama. Pricing range are not far different between the 3 businesses.

1.6. Business Issue Definition & Problem Solving Objective

1.6.1. Business Issue Definition

Yama first store in Taman Sari Food Festival had experienced a downfall since its first inception. During its first couple of months, the store gained a steady increase in terms of revenue. Unfortunately, the trend didn't last long as sales starts to decrease. The downward trend kept on going until finally the store experience a negative profit at the 6 months period. At this rate, we started to realize that there is a fundamental problem with Yama's business model.

A business model can be defined as "the rationale of how an organization creates, delivers, and captures value" (Osterwalder et al, 2010). It reflects the way the organization conducts its primary activities through its internal resources to generate its main value. Delivering values focuses on how organization targets its market and choose the appropriate channel to reach it. Capturing focuses on how organization monetize its value in terms of profit.

Applying this rationale to Yama, we conducted a preliminary analysis of Yama's internal and external operations to approximate the general reason in sales declining. To create an objective assessment, we put forth several metrics to determine the performance of Yama in each category; create, deliver, and captures. Moreover, we benchmark our performance with two of our competitors to give an understanding of how Yama is doing compared to others in each respective field. The metric for create is "product category". Delivery metric is set to "market segment" following the concept proposed by Osterwalder that the most common failure of a startup is not the creation of product, but the delivery of product to the right customers. And last, capturing performance is reflected by "price range". By conducting preliminary analysis, we can narrow down the problem into specific area that we can manage within the boundaries of our resources.

TABLE 3: Yama's industrial comparison

	Yama	Gardujati	Bolbi
Location	Taman Sari	Gardujati	Pasirkaliki
Product Category	3	1	3
Market segment	ITB Students	Broad	Broad
Price Range	10000- 15000	12000 - 15000	13000

From the analysis, we can clearly see that in the area of create and capture, Yama has an equal, if not, over performed in both categories, namely "product category"

and "price point". However, in the category of market segment, being located in a very specific location narrows Yama limits its segment to just student, more specifically, ITB students. Other competitors have a much broader range of segment.

Although in hindsight the solution is to just change the location of Yama's store to a place that appeals to a much wider range of customers, we firmly believe that it would not create a substantive competitive advantage in the long run. The reason being is that we do not want Yama's competitive advantage to rely solely on location. For a startup to be profitable in its early days, it is imperative that the startup has a firm foothold in a very specific market, or what is sometimes referred to as niche market (Aulet, 2015). By merely changing the location, without a fundamental change in the market positioning of Yama, we fear that Yama would experience the same upward-downward sales trend as the first store. This phenomenon is common in the food and beverage industry as customers tend to try new things yet uphold zero loyalty to new brand due to low switching cost to competitors' products.

We believe that the way forward is either finding an underserved market that has a need for Yama product, which is very unlikely to happen as the nature of Yama product can be considered as a tertiary need (nice to have), or position itself firmly into one existing specific market to capitalize the lack of focus of Yama's competitors. By having one specific market, Yama can drive all its marketing initiatives into it and create substantial value. Unfortunately, at the current moment, there is no existing data for the market of Bola Ubi in Bandung. Thus, this research is aimed in breaking down the market of Bola Ubi in Bandung and choosing the most appropriate one to exploit by Yama based on our resources and accessibility.

1.6.2. Problem Solving Objective

Research Question

Based on the problem statement above, there comes several research questions:

1. How can we segment the market of Bola Ubi in Bandung?

2. Which of the segment should Yama target based on our resources and accessibility?

3. How can we devise a marketing strategy for Yama in order to penetrate its intended market?

Research Objective

To get the best result out of the research, there are several objectives to be achieved:

1. To break down the market of Bola Ubi in Bandung.

2. To propose a specific market for Yama to target.

3. To devise an early stage marketing strategy for Yama to penetrate its intended market.

1.7. The Scope and Limitation of Research

The scope of this research is limited on its case which is the company of Yama. The object that will be analyzed is the market segmentation method of Yama in determining the best market segmentation to serve. The scope of the product is Yama's core product which is Bola Ubi in the snack sub-industry.

2. Conceptual Framework and Methodology

2.1. Conceptual Framework

2.1.1. Marketing

Based on American Marketing Association,*"Marketing is an organizational function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders"* (Rownd & Heath, 2008). A company needs to be able deliver their values to the customer. In addition to the definition above, marketing is a process of identifying, creating, and communicating values, as well as maintaining relationships that satisfy customers to maximize corporate profits (Hasan, 2013).

The science and art of exploring, creating, and delivering value to satisfy the needs of a target market at a profit. Marketing is the process by which companies create value for customers and build strong customer relationships in order to capture value from customers in return (Kotler & Armstrong, 2011).

2.1.2. Marketing Strategy

Marketing strategy is the core strategy on which a business finds the best way to deliver their value to the market. The output form such marketing strategy analysis and choice (or strategic marketing decision) is a marketing strategy statement

2.1.3. Clustering Segmentation

Segmenting a market can be done in various methods, and clustering is one of them. Clustering methods are used to identify groups of similar objects in a multivariate data sets collected from fields such as marketing, biomedical and geo-spatial.

2.1.4. Demography

Demography comes from Greek, as the word demos that means people, and English word graphy refers to graphs and statistics. So it is the study of statistics such as births, deaths, income, or the incidence of disease, which illustrate the changing structure of human populations. In this case, the factors that we consider in the industry are age, gender, and income.

2.1.5. Purchasing Behavior

Purchasing behavior is the decision processes and acts of people involved in buying and using products (Pride & Ferrell, 2009). As a company, Yama needs to be able to understand what are the things that customers consider when they buy a certain type of product, in this case a snack. The factors may differ based on what type of the corresponding product. In the snack industry, factors like taste preference, hospitality, sanity are very important to consider as a company running in Food and Beverage Industry.

2.2. STP Marketing Strategy

Segmenting

Segmentation is a process of segmenting or classifying customers based on particular indicators such as needs, preferences, lifestyles, or other factors which shows a certain pattern. According to Hassan & Craft (2012) consumers are divided into various groups,

and the market is divided to meet their needs. Segmentation involves understanding the individual needs of different groups of customers and grouping them for the target product benefits (Hassan & Craft, 2012). This method enables businesses to engage customers with their products by addressing their needs, and aligns it with the necessary engagement methods to maintain their competitive level.

Targeting

After identifying their market segmentation, a business needs to decide which one of those segmentations are they going to serve with their values. In taking decisions on their targeting, a business may choose to apply a single or multiple marketing strategies such as mass marketing, a strategy that does not differentiate its marketing strategy, single segment where there are differentiation in their strategy, or multiple segment where there are more concentrated marketing strategy towards specific segmentation. The marketing strategy applied are dependent on multiple factors such as number of market, value of the product, industrial competitiveness, product homogeneity, and other affecting factors. By targeting specific population, a marketing strategy becomes more organized, cost efficient, and effective in applying their strategy, instead of just offering it to mass market

Positioning

Positioning is required by a business to differentiate their value from other similar businesses. This method refers to how do the business wants to be perceived by the customer, how are the customers going to engage and see the business' value.

2.2.1. Ps Marketing Strategy

2.2.2. Product

Product is either a tangible good or an intangible service that is seem to meet a specific customer need or demand. All products follow a logical product life cycle and it is vital for marketers to understand and plan for the various stages and their unique challenges (Martin, 2014).

Price

Price covers the actual amount the end user is expected to pay for a product. How a product is priced will directly affect how it sells (Martin, 2014). Pricing is more about what the market perceive out of the value rather than just the objective cost of a product.

Place

Place has to do with how the product will be provided to the customer. Distribution is a key element of placement. Placement defines the strategy that will help to assess which channel is best to deliver value to the customer.

Promotion

The marketing communication strategies and techniques all fall under the promotion heading. These may include advertising, sales promotions, special offers and public relations. Promotion helps our business to be able to get exposed to the market better so the market would know more about our product and go through the sales and marketing funnel.

2.3. Methodology

TABLE 4: Methodology
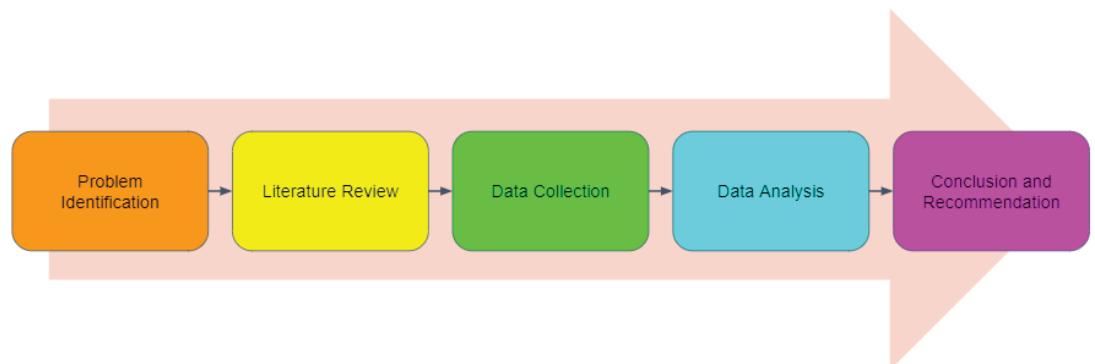
2.3.1. Problem Identification

The main problem for Yama is the decreasing trend of their revenue. After analyzing its root cause on the factors that affects this phenomenon, we concluded that Yama if

not equal, are better in creating and capturing the product. The only difference is in its delivery metric. So far unfortunately there are no clear market segmentation yet in the market of bola ubi. Yama had a difference in its delivery metric where we only target a small market which was ITB Students, which was only based on our location, rather than all of our competitors who has broad market.

This research is about analyzing the problem faced by Yama on developing a marketing strategy based on the segments available for them to serve. By addressing the right market segment and developing a marketing strategy that suits the market, it would enable Yama to increase efficiency in spending their resources and allows them to deliver their value effectively to their customer

2.3.2. Determine Research Question

Addressing the problem, research questions are required in order for the researcher to determine where the research is going. Based on the research question, it would enable the researcher to determine what kind of objectives are needed to be achieved for the research to succeed.

2.3.3. Data Collection

Data that are used in this research will be taken through primary data collecting using quantitative approach to the population which are living in Bandung. The total population of this research's sample is 2,490,622. Based on the Slovin theory, using a confidence level of 90% and error margin of 10%, our minimum sample size is 100 people. Our tools in taking the data is through questionnaire, with 4 approach on product, price, place, and promotion.

These are the general questions to ask:

Gender: Man, Women

1. How old are you: <18; 18-21; 22-25; > 25

2. How much is your income per month? <1,500,000; 1,500,000-5,000,000; > 5,000,000

3. How often do you consume snacks? (Eating intervals other than heavy meals in a week) 1 - Very rare (once a week); 5 - Very Often (Every Day)

4. How often do you buy snacks for your friends? 1 - Very rare (once a week); 5 - Very often (every day)

On product, these are the questions to ask:

1. What types of snacks do you like to consume? Packaging food; Street food (Street food); Cake

2. How much do you care about cleanliness when buying snacks? 1 - No Caring; 5 - Very Caring

3. Is the seller's hospitality important to you? 1 - No Caring; 5 - Very Caring

4. Select number 4 in the column below

On price, these are the questions to ask:

1. When buying snacks, how important is the price for you? 1 - Not Important; 5 - Very important

2. In one time, how much money do you usually spend to buy a portion of snacks? 0-5000; 5001-10000; 10001-20000; 20001-30000; > 30000

On place, these are the questions to ask:

1. How important is the distance to the location of food sales affecting your interest in buying snacks? 1 - Not Important; 5 - Very important

2. Which area do you live in Bandung? 1 - North Bandung; 2 - Bandung Kota; 3 - South Bandung; 4 - East Bandung; 5 - Bandung Regency

3. Which area do you think is the most affordable and you are interested in buying snacks? 1 - North Bandung; 2 - Bandung Kota; 3 - South Bandung; 4 - East Bandung; 5 - Bandung Regency

On promotion, these are the questions to ask:

1. What social media do you use most often? 1 - Facebook; 2 - Instagram; 3 - Line; 4 - Whatsapp

2. Where do you usually look for information about a product / service? 1 - Facebook; 2 - Instagram; 3 - Google

3. What makes you choose to buy a particular brand compared to other brands? How famous is the brand; Most recommended friends; According to own experience; See what appears first when on Google

Most of the questions above are using likert scale, but there are some exceptions. In order to analyze the data using Clustering K-means Method, we need to transform all of the provided data into numerical data so it can be analyzed using SPSS. We also have validity test to make sure our respondents are seriously answering the questionnaire by having a trick question. We would exclude data that are outliers and the ones that doesn't pass validity test.

2.3.4. Data Analysis

In order to acknowledge and understand about the topic that want to discuss, the researcher will use Clustering Method using K-Means as guidance to determine the cluster of Yama's market.

Clustering is one of the most common exploratory data analysis techniques used to get an intuition about the structure of the data. It can be defined as the task of identifying subgroups in the data such that data points in the same subgroup (cluster) are very similar while data points in different clusters are very different, while k-means algorithm is an iterative algorithm that tries to partition the dataset into Kpre-defined distinct non-overlapping subgroups (clusters) where each data point belongs to only one group (Imad Dabbura, 2018).

We use K-Means because the data has not been grouped yet and we want to see the clusters available to determine what kind of market segmentations are there. After choosing the segment to serve, we would develop a marketing strategy through segmentation, targeting, and positioning marketing strategy in order to differentiate our product from the competitors in the industry.

2.3.5. Solution Formulation

In this step the research will discuss on the result of the segmentation. After using the clustering method, there would be several segmentation with its characteristic. After having a clear market segment, Yama would define the best marketing strategy to apply.

2.3.6. Implementation Plan

Last step of this research is implementation plan. This research will discuss on how the marketing strategy would be implemented and suited to Yama's need based on their resources available and suitability of the market.

3. Business Issue Exploration

3.1. Analysis of Business Situation

3.1.1. Sales Report

Yama's main problem is the decreasing of their trend in revenue. The company's weekly sales been decreasing by looking at the moving average trend. Initially Yama's store in Taman Sari had sales to up to 195 product each week, but on the latest week Yama could only sell 134 product. From the analysis explained in the business issue chapter, we concluded that using the metric, Yama's main problem were their delivery metric, which needs a better understanding of who their market segment are.

TABLE 5: Sales Report
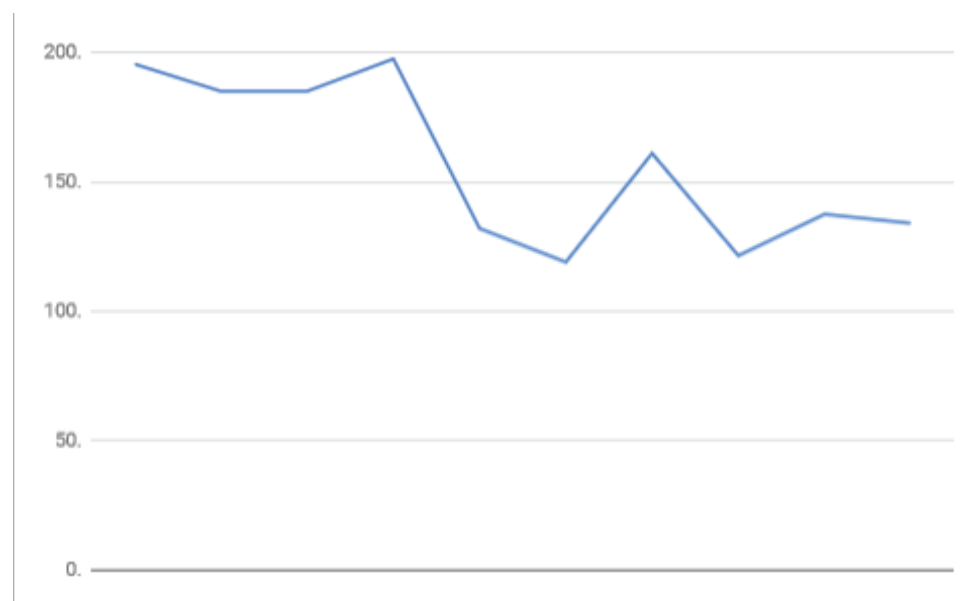
3.1.2. Social Media

Yama has a social media on Instagram. The username is bolaubiyama. It has 22 followers and few activities and posters of our logo and product. Yama often uploaded stories when it initially opened, but lacks in feed posting content.

3.1.3. Exhibitions

Yama attended several exhibitions as tenants throughout the year such as Festpreneur in ITB, UprealState in ClickSquare Bandung, Bandung Food Festival in Trans Studio Bandung, and Young entrepreneur festival in Telkom Hall. Festpreneur, also known as Festival of Entrepreneurship, an exhibition held in ITB, was Yama's first step in introducing its product to the market through becoming a tenant. The market attending this exhibition was people who lived in Bandung, with mostly students and families. UprealState was the first time Yama tried having an exhibition in a larger market. The event was held in ClickSquare Mall Bandung. The attendance were mostly mall visitors and entrepreneurs. Bandung Food Festival volume 20 was held in one of the biggest grade A malls, Trans Studio Bandung. The event was attended by more than 2000 visitors with more than 30 curated tenants. Young Entrepreneur Festival was a 2 days event held in Telkom Hall. Collaborating with TLE and BIM as community partner and lots of sponsors including BEKRAF, the event was attended by many huge names from the industry.

3.1.4. Analysis

Even though Yama can easily change location, the researchers believe that it would not create a substantial advantage in the long term. For a startup to be profitable in its early days, it is imperative that the startup has a firm foothold in a very specific market, or what is sometimes referred to as niche market (Aulet, 2015). By only changing location, without a crucial change to the market positioning of Yama, we fear that the trend would repeat itself all over again. This is very common in food and beverage industry as customer has the tendency to try new things yet they don't have high brand loyalty.

By having a different delivery metric from Yama competitors, Yama has the option of serving a specific market to serve, which is unlikely to happen as the nature of the market in this sub-industry is a tertiary need, or position ourselves into an existing specific market to capitalize the lack of focus from our competitors.

In order to capitalize this market, we need to be able to define the characteristic of the market and its personas.

3.2. Analysis of Market Segmentation

Our approach to this research on market segmentation would be based on demography and purchasing behavior. We consider these factors to be the major decision making factors of our customers in their purchasing behavior because we believe that demography heavily determines their taste in buying a food product and purchasing behavior would be the most determining factors when it comes to buying the product.

Our approach to demography would consider 3 major factors such as gender, age, and income. Gender affects this decision making as women choose mainly sweet taste preference as a tendency to reward themselves (Wansink et al., 2003; Kandiah et al., 2006). Age also determines the decision making as sweet taste preference decreases with age (De Graaf C, Zandstra EH., 1999). Income determines the buying power of the customer on are they able to purchase our product or not.

Purchasing behavior factors that mostly affects people in this industry are taste preference, hospitality, sanity, consuming intensity, bulk purchase, price, buying power, and purchasing preference. These factors heavily determine the purchasing decision and the amount of purchase every customer has.

4. Business Solution

4.1. Business Solution Analysis

According to the clustering method, 110 out of 122 respondents are clustered into cluster 3 which has the characteristics of;

1. Live in Bandung

2. Age between 18 to 21

3. Men

4. Income of Rp.1,5M to Rp. 5M

5. Frequently consumes snack

6. Multiple purchase to share

TABLE 6: Clustering Analysis

	Cluster		
	1	2	3
Domisili	1	1	1
Usia	2	2	2
JenisKelamin	1	1	1
Pendapatan	2	2	2
KonsumsiCemilan	4	4	4
BeliUtkTeman	2	3	3
JenisCemilan	1	1	1
Kebersihan	4	3	4
Keramahan	3	3	4
Validity	4	4	4
Harga	4	4	4
BuyingPower	3	3	3
Jarak	3	4	4
TempatTinggal	2	7	2
LokasiToko	7	7	2
MediaSosial	2	2	3
SearchEngine	3	3	3
PreferenceMerek	2	2	2

7. Like to eat snack

8. Consider good hygiene

9. Consider good hospitality on service

10. Buying power of Rp. 10,000 - Rp. 30,000

11. Consider easy access to location

12. Live in Bandung Kota

13. Close access to Bandung Kota

14. Use line as social media

15. Searches product / service on google

16. Brand preference through friend recommendation

4.1.1. TOWS Analysis of Product

Based on the research above, the researchers are able to determine the action plan to be implemented based on TOWS Product Analysis::

TABLE 7

Product		
External / Internal	Strength S1: Taste Variation S2: Cook to Order S3: Unique Texture S4: Employee training	Weakness W1: Slow Production W2: Plain Packaging W3: Common Raw Material
Opportunity O1: Standardized Production O2: Materials and Tools are easy to find O3: Trending Product O4: Market have frequent purchasing behavior O5: Market loves to share the food O6: Market considers hygiene O7: Market considers hospitality	S1O2: Easy to develop new product S1O3: Easy product market fit S1O4: Easy to test product market fit S1O5: Product variation allows high number of purchase S4O6: Employee can be trained to maintain hygiene S4O7: Employee can be trained to increase hospitality	W1O1: Improve on production speed
Threat T1: Lots of substitute T2: Lots of competitor T3: Low industry barrier	S1T1: Increase product variation S1T2: Increase differentiation	W1T3: Improve quality W2T2: Improve differentiation

1. Yama needs to do rapid product development because it is easy to develop and easy to test. High product variety allows Yama to maximize it's profit

2. Yama needs to train its employees to maintain hygiene and hospitality

3. Yama needs to improve its production speed

4.1.2. TOWS Analysis of Price

TABLE 8

Price		
External / Internal	Strength S1: Standard Price for snack	Weakness W1: Same price as competitor
Opportunity O1: Standardized price O2: High market buying power	S1O1: Decrease price to increase sales S1O2: Increase margin with increased value	W1O1: Chance to differentiate in price
Threat T1: Market are price sensitive	S1T1: Decrease margin to max sales	W1T1: Decrease margin to max sales

Based on the research above, the researchers are able to determine the action plan to be implemented based on TOWS Price Analysis:

1. Decrease price to increase sales quantity

2. Increase value to increase profit margin

4.1.3. TOWS Analysis of Place

TABLE 9

Place		
External / Internal	Strength S1: Located in the city center S2: Easy to access S3: Few constraints in opening up new store	Weakness W1: Parking
Opportunity O1: Few competitors in city center O2: Lots of vacant places to open up store O3: High traffic and preference for food in City Center	S3O1: High chance to grab market share S3O2: Easy to open up new store / franchise S1O3: High market size to grab	
Threat T1: Lots of substitute in city center T2: Expensive rent	S1T2: Need to maximize profit margin to cover cost S4T1: Low industry barrier, high competition	

Based on the research above, the researchers are able to determine the action plan to be implemented based on TOWS Place Analysis:

1. Aim to increase market share by growing and opening up franchises

2. Maximize profit margin and number of sales to cover rent cost

3. Increase product value to become a better competitor

4.1.4. TOWS Analysis of Promotion

Based on the research above, the researchers are able to determine the action plan to be implemented based on TOWS Promotion Analysis:

1. Increase social media engagement to market

2. Create a content that would highly influence market

3. Open Line Official Account for Yama as promotion channel

4. Recruit a full-time marketer to increase online traction

5. Maximize social media market share before competitors start

5. Implementation Plan

Yama should have plans to improve the business process, and in order to implement the plan there should be a clear timeline regarding what to execute first considering

TABLE 10

Promotion		
External / Internal	Strength S1: Strong social media engagement S2: Good content creator S3: Strong word of mouth through communities S4: Strong marketing mentor	Weakness W1: Inconsistency in promotion W2: Rarely makes unique promotion W3: No full time marketing designer W4: Low budget for promotion
Opportunity O1: Dominant competitors aren't strong online O2: Market can easily be influenced through social media O3: Market mostly use Line as social media O4: Market browses product in Google	S1O1: Increase our customer relationship engagement through social media to maximize market share S2O2: Create content to influence market S1O4: Increase search engine optimization S1O3: Promotion through Line	W1O2: Increase frequency of online approach to market W3O2: Recruit a full time marketer to increase online campaign
Threat T1: Social media is easy to create	S1T1: Maximize online engagement before competitors	

time and resources. To further explain the details on the implementation plan of the research above, the researchers provide a timeline to help Yama in implementing its business improvement.

		August				September				October			
	PIC	1	2	3	4	1	2	3	4	1	2	3	4
Develop new product	COO	■	■										
train employees to maintain hygiene and hospitality	CHRO	■	■										
Improve production speed	COO			■	■	■	■						
Decrease price to increase sales quantity	CMO	■	■	■	■	■	■	■	■				
Open up franchises	CEO									■	■	■	■
Activate Yama's Instagram	CMO	■	■	■	■	■	■	■	■	■	■	■	■
Open up Yama's Line Official Account	CMO	■	■										
Recruit a full time marketer	CMO	■	■	■									

Appendix

ANOVA

	Cluster		Error			
	Mean Square	df	Mean Square	df	F	Sig.
Domisili	.000	2	.000	119	.	.
Usia	.064	2	.107	119	.604	.548
JenisKelamin	.134	2	.248	119	.538	.585
Pendapatan	.060	2	.257	119	.233	.792
KonsumsiCemilan	.156	2	1.309	119	.119	.888
BeliUtkTeman	1.642	2	1.067	119	1.538	.219
JenisCemilan	.045	2	.076	119	.585	.559
Kebersihan	1.200	2	.845	119	1.419	.246
Keramahan	4.051	2	1.315	119	3.079	.050
Validity	.000	2	.000	119	.	.
Harga	.883	2	.753	119	1.172	.313
BuyingPower	.369	2	.415	119	.890	.413
Jarak	1.640	2	.957	119	1.713	.185
TempatTinggal	62.895	2	.355	119	177.282	.000
LokasiToko	129.482	2	.276	119	468.727	.000
MediaSosial	.280	2	.453	119	.617	.541
SearchEngine	.020	2	.223	119	.091	.913
PreferenceMerek	.776	2	.358	119	2.167	.119

The F tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

Number of Cases in each Cluster

Cluster	1	7.000
	2	5.000
	3	110.000
Valid		122.000
Missing		91.000

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