

Non-financial and Organoleptic Feasibility Analysis of Sumbawa Sweet Uwir Milk Candy

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Abstract—*Non-financial feasibility in terms of legal aspects, market and marketing aspects, technical and technological aspects, as well as aspects of management and human resources is needed in running a business. This study aims to determine the non-financial feasibility of UD. D&D and organoleptic test of the uwir manis milk candy. The method used in this research is descriptive method to find out the business feasibility of non-financial and organoleptic tests to determine the level of panelists preference for uwir manis milk candy product. The results of research on non-financial feasibility analysis of UD. D&D are declared feasible to run. Based on organoleptic test of uwir manis milk candy product with 3 weeks experiment showed that the level of color preference on the likes and very like scale, that is the first week with an average of 4.12, the second week 4.12 and in the third week showed an average of 4.16. The level of taste preference shows the likes and very like scales, which the first, second and third weeks at a scale of 4.16. The level of aroma preference is on a somewhat like-to-like scale, with an average first week of 3.64, a second week of 3.68 and a third week of 3.52, while the panelist's preference level in terms of texture shows the scale rather like to like with the average of the first week 3.48, the second week 3.76 and the third week 3.52.*

Indexed Terms— *Non-Financial Feasibility, Organoleptic Test, Uwir Manis.*

I. INTRODUCTION

Fresh cow's milk is a very high nutritional food, not only for humans but also for rotting microorganisms, therefore milk is a very perishable commodity, so if the handling is not good, dangerous diseases will arise (Putri, 2016).

Milk processing aims to obtain dairy products that are diverse, high quality, have high nutritional content, shelf life, facilitate marketing and transportation and increase the exchange value and usability of raw materials. With the advancement of information technology and supported by increasing public awareness about health, people will be more critical in choosing healthy food products with a pleasant taste. By

Thus, the negative impact of consuming a food product can be minimized. Seeing this trend can spur food producers to innovate products by paying attention to good nutritional content, in this case not only has a good taste but also does not cause adverse health effects (Rofifah and Machfudz, 2014).

The home industry is one of the mainstays for producing milk candy in Sumbawa. The existence of a milk candy processing industry in Sumbawa Regency is quite promising, because it can increase income, create jobs and reduce the unemployment rate. Thanks to the hard work of the community, especially milk candy entrepreneurs, milk candy has now become a typical souvenir of the Sumbawa region.

The milk candy processing industry in Sumbawa Regency has the potential to increase income, create jobs, and reduce unemployment. This is because the industry is labor-intensive, meaning that it requires a lot of workers. The industry also has the potential to generate foreign exchange, as milk candy is a popular souvenir among tourists.

Thanks to the hard work of the community, especially milk candy entrepreneurs, milk candy has now become a typical souvenir of the Sumbawa region. Milk candy is often sold in local markets and souvenir

shops. It is also available online, through e-commerce platforms.

In running a business, a study is needed to measure whether the business is feasible or not to run. In addition to financial feasibility, non-financial feasibility is also very much needed, non-financial feasibility is seen in terms of legal aspects, market and marketing aspects, and technical and technological aspects, management and HR aspects. However, non-financial feasibility rarely gets attention from business people, because business people only focus on financial feasibility.

One of the milk candy processing industries in Sumbawa is UD D&D. The industry was established eight years ago and has marketed its products to the city of Mataram. Although it has penetrated a fairly wide market, this industry has not analyzed the non-financial feasibility of the industry or the level of panelists' liking for its products. So this study aims to determine the non-financial feasibility of UD's milk candy business. D&D and the level of panelists' liking for sweet uwir milk candy.

II. RESEARCH METHOD

- Tools and Materials

The tools used are: Plastic cup as a place to put the sample and stationery to write panelist responses. Sweet Uwir milk candy samples obtained at UD. D & D in three weeks of production (first week, second week, third week).

- Data Collection Methods

To find out and answer the problem, this research was carried out Several data collection methods to obtain accurate data from the field. The author uses several methods as follows:

- Observation method

Is a data collection tool that is carried out by observing and recording systematically the symptoms being investigated (Cholid and Abu, 2009). In this research, the author made direct observations to the entire process of operational activities related to the object of research at UD. D&D. An interview is a process of interaction and communication between the researcher

and the respondent in which the interviewer is expected to convey questions to the respondent orally, stimulate respondents to answer it, explore the answer further if desired and record it (Zulganef, 2013). In this study, the authors conducted interviews with the management and management of the industry to obtain data and information related to the object that the authors studied.

- Organoleptic test

The organoleptic test was conducted to determine the level of panelists' liking for the processed Uwir Manis milk candy product with 3 trials, namely experiments on products produced in the first, second and third weeks. In this study there were 25 panelists who would give an assessment based on color, taste, aroma and texture. This research was conducted using the hedonic method with a rating scale of 1-5 with the provisions of (1) very dislike, (2) dislike, (3) somewhat like, (4) like, (5) very like.

- Data Analysis Method

Data analysis is the process of systematically organizing data obtained from field research and laboratory research so that the findings can be informed and understood by others (Sugiono, 2012).

- Descriptive analysis

The data obtained are collected, analyzed, and interpreted as a result of qualitative analysis (Lexy, 2005). In this research, the descriptive method is used to analyze qualitative data regarding legal aspects, market and marketing aspects, and technical and technological aspects, management and HR aspects.

Analysis of organoleptic test results

In this study, the analysis of organoleptic test results was processed using the SPSS application with a complete randomized design model.

III. RESULTS AND DISCUSSION

- Non-Financial Aspects

The non-financial aspects discussed in this section are legal, market and marketing, technical and technological, and management and human resource aspects.

• Legal Aspects

Legal aspects are all matters relating to the legality of the company that must be fulfilled by business actors. UD processing industry. D&D has business license letters as in table 1.

Table 1. License and Certificate UD. D&D

| N | Letter/Certificate | Letter number |
|---|----------------------------------|-------------------------|
| 1 | Micro and small business license | 556/11/EKBANG/II I/2017 |
| 2 | Company Registration Certificate | 230254778933 |
| 3 | Trade Business License | 946/SIUP/KPPT/P MK/2015 |
| 4 | Industrial Registration Mark | 15/TDI/KPPT/XI/2015 |
| 5 | PiRT | 2095204010101-22 |
| 6 | Halal MUI | 27120015320617 |

From the results of research on legal aspects, it is known that UD. D&D is good from the legal provisions of the company and its products. This is because it has fulfilled all forms of legal provisions and licenses to run a business.

Non-financial feasibility analysis of legal aspects is feasible if an industry has obtained a business license and the legality of the products sold in accordance with applicable legal provisions (Maulana, 2008).

• Market and Marketing Aspects

The marketing aspect is used to examine the market potential of "Uwir Manis" products in terms of demand, supply and price as well as the marketing strategies implemented by companies related to the marketing mix, including price, product, promotion and place.

a) Inquiry

Based on the results of the research conducted, the market demand for "Uwir Manis" milk candy is quite high. The demand for milk candy comes not only from Sumbawa but also from outside Sumbawa. The increasing number of visits/tourists who come to Sumbawa increases the demand for milk candy. The momentum of holidays and vacations is one of the triggers for increased demand for milk candy.

b) Offer

The high market potential is not only seen from the amount of demand, but also from the amount of supply. The level of supply of milk candy is still said to be low because currently the industry that offers milk candy commercially, especially in the BTN Bukit Indah area, is only UD. D&D. The amount of milk candy production UD. D&D every month reaches 150 kg, this amount has not met market demand, as evidenced by the products that are always sold out. Seeing this, it can be said that the milk candy business is a promising business.

c) Marketing Strategy

The marketing strategy carried out by UD.D&D in order to market the milk candy product "Uwir Manis" can be explained as follows:

1) Products

UD. D&D produces milk candy products under the brand name Uwir Manis. The main composition of the candy is fresh cow's milk and sugar. The strategy used by UD. D&D to improve the quality and attractiveness of its products is by using fresh cow's milk as raw material. which has obtained Veterinary Certificate No. 011262 and Animal Product Sanitation Certificate Number: 2018 1. 0405 0.K12 K.00645.

2) Price

In determining the price of milk candy, producers strongly consider the factor of the amount of production costs, especially the cost of procuring raw materials, namely milk, which reaches 35% of the total direct production costs. Determining the price of milk candy at UD. D&D uses the Competition Based Pricing method by going rate pricing, namely that producers set prices based on competitor prices and pay less attention to costs and demand.

3) Promotion

The uwir manis milk candy processing industry usually promotes on Facebook social media. Promotion through Facebook is expected to increase the number of consumer requests for sweet uwir milk candy products. Promotions that are carried out are not that frequent and still use personal accounts belonging to employees from UD. D &D.

4) Distribution

Apart from being sold directly, sweet uwir milk candy products are also sent to several cities in NTB. The distribution process of sweet uwir milk candy products is carried out by the producers themselves. Products that have been packaged are then sent to restaurants or shops in the Sumbawa, Mataram and Bima regions. Apart from being sent to shops, there are also consumers who come directly to UD. D&D to buy milk candy for consumption. The flow of the distribution process of sweet uwir milk candy can be seen in Figure 1.

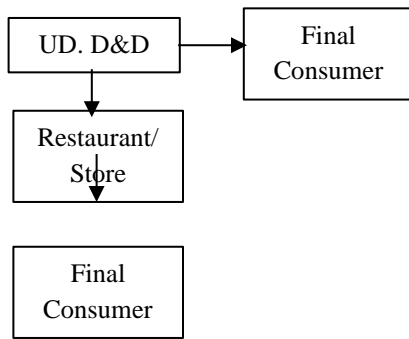


Figure 1. Distribution Process Flow Of Uwir Sweet Milk Candy

5) Segmentation strategy

Based on research and information from the leadership and marketing department, it is known that the form of market segmentation chosen by UD. D&D is segmentation based on social class or demographic segmentation. The social class chosen is the lower middle social class. The consideration for choosing the lower middle social class is because industry managers assume that the number of lower middle class people is far greater than the number of upper middle class people. In addition, the price of the products offered is also quite affordable for the lower middle economic class.

6) Targeting strategy

Based on the size of the segment that has been determined previously and also the competitive position that exists within the intended segment, the manager of the milk candy industry decides to choose a target market in the form of a single market. In this case UD. D&D chooses one segment, namely the lower middle class and concentrates its marketing efforts only on customers in that segment. By

concentrating on a single segment, the company hopes to provide services to its customers as well as possible.

7) Positioning strategy

After the target market is determined, the next step is to position the product (positioning). Based on the results of interviews with the owners and managers of UD. D&D, it is known that product positioning is based on price and quality. Owner of UD. D&D believes that the products offered have good quality based on the type of raw materials used and also the products produced can satisfy consumers. In terms of the price of the products offered, the price of sweet uwir milk candy is not much different from the price of other milk candy products.

• Market and marketing aspect analysis results

Based on the analysis of market potential and marketing of milk candy above, it can be concluded that this milk candy business is feasible. This is due to the large market potential for milk candy products seen in terms of demand, supply, and marketing strategies which include product, price, promotion, and distribution. The amount of demand that reaches 180 kg per month cannot be met by the amount of supply of 150 kg per month, this imbalance creates a great opportunity for the milk candy business, especially UD. D&D.

The market and marketing aspect of the industry is feasible if there is demand and supply and the industry is viable. Effective marketing strategies support the achievement of higher sales (Rahayu, 2015).

• Technical and technological aspects

Analysis in technical aspects and Technology includes business location, availability of raw materials and additives, technology and production processes. The following are the results of the analysis on each technical and technological aspect criteria.

a) Business Location

Location of UD. D&D is located at PPN Bukit Indah RT.002 RW. 006 Seketeng Village, Sumbawa District, Sumbawa Regency. The business location close to the city can minimize costs and facilitate the product distribution process to shops in the Sumbawa city area. In addition to saving costs and facilitating the distribution process, the location selection is also

based on the lack of milk candy business competitors, especially in the Bukit Indah VAT area.

b) Raw Materials

The raw material used for the production process of sweet uwir milk candy is cow's milk obtained from a regular supplier. This raw material selection is carried out directly by the business owner based on the need for quality, and the price of the material. The milk used in the process of making sweet uwir milk candy comes from the Banyuwangi area which has a Veterinary Certificate No. 011262 and Animal Product Sanitation Certificate Number: 2018 1. 0405 0.K12 K.00645. Apart from buying raw materials, the owner of UD. D&D also has its own cattle farm to overcome if at any time there is no supply of cow's milk from suppliers. In the process of making milk candy, granulated sugar is also used as a candy sweetener. The sugar used in making this candy is obtained from a subscription shop in the Sumbawa city area.

c) Technology

Based on the research results, the production process of sweet uwir milk candy has used the help of machines assembled by the owner of UD. D&D. This milk candy processing machine is used during the process of stirring milk into caramel, basically the stirring process is the core process in making milk candy. The churning machine is washed after the end of the production process. The milk candy stirring machine is composed of a frame made of iron, the stirring part is made of stainless steel still and the container is made of iron like a pan in general. The molding and packaging process still uses human labor because this process can be said to be a light process.

d) Production Process

In the process of making sweet uwir milk candy, the owner uses a special meter to calculate the amount of sugar added while the milk used amounts to 11 liters to produce 3 kg of milk candy. The process of making sweet uwir milk candy is as follows: 1) Preparing tools and materials, the materials used are 11 liters of cow's milk and sugar which are measured using a special measure. 2) Put the milk into the stirring machine, stir until it thickens, after the milk starts to thicken add the sugar that has been measured. 3) After the milk begins to thicken like caramel and begins to detach from the surface of the stirring machine container, the cooking

process is complete and the dough is immediately removed. 4) Put the dough into the pan, after which the dough is cut into rectangles. 5) The last process is to wrap the candy with the packaging that has been prepared.

e) Scale of production

The production of sweet uwir milk candy at UD. D&D is carried out every day with a production amount of 11 liters of milk to produce 3 kg of sweet uwir milk candy.

The results of the analysis of technical and technological aspects

From the results of the analysis of technical and technological aspects, it can be said that the business of making sweet uwir milk candy in technical and technological aspects is feasible to run. In terms of business location UD. D&D is located in BTN Bukit Indah which is close to the city which can reduce distribution costs around the Sumbawa city area. The raw material for sweet uwir milk candy also has a supplier who already has a Veterinary Certificate to guarantee milk quality, in the production process UD. D&D has implemented technology, namely using machines as a tool that can help and speed up the process of making sweet uwir milk candy become easier and faster.

The technical and technological aspects of an industry can be said to be feasible if, in terms of location if the business location is strategic, and easy access to transportation, availability of electricity and water sources. Raw materials are also quite easy to obtain and have good quality. In addition, the production process is also in accordance with the flow or operating standards used (Hadiyanti, 2014).

• Management and HR Aspects

Management and HR aspects are studied to see the management aspects of the company and also human resources in carrying out their work. Based on the results of the interview, it can be seen that UD. D&D in running its business is still managed simply. However, the management or manager has got their respective roles and duties. In this section, the researcher will present the research results in

accordance with 4 management functions in accordance with POAC theory:

- a) Planning Stage (Planning) Planning carried out at UD. D&D starts from determining the right technology application plan so that it can help in the production process and the use of quality raw materials. In addition to the application of technology and the selection of raw materials, improving the skills and creativity of workers is also a factor that is considered to get quality milk candy products.
- b) Organization Stage (Organizing) The organization carried out at UD. D&D is carried out by dividing tasks in each part including the company owner who acts as the industry leader, the person in charge of finance, the person in charge of production, and the auxiliary employees. The owner or industry leader has the authority to carry out all company activities, especially to plan strategies, make decisions, supervise the course of company activities, set policies related to suppliers and agents, and evaluate activities in the company. The person in charge of finance is responsible for the company's financial transactions and bookkeeping that is directly related to the owner of the company. The person in charge of production is responsible for the course of production starting from the preparation of raw materials, recruitment and training of labor, packaging of finished products to then be ready for market as well as the process of distribution of goods and is directly related to the owner of the company. There are two helper employees and are tasked with assisting in the production process, packaging, marketing to the distribution process of goods and in contact with the person in charge of production.
- c) Actuating is the act of striving for all members of the organization to achieve goals in accordance with the plans that have been set. The movement carried out to get good quality candy products has been carried out at UD. D&D. To get good quality milk candy, the manager of UD. D&D has used certified raw materials and has used machines that can help the milk candy production process. In addition, workers at UD. D&D have undergone a training process and are given prior teaching to reduce errors while working.
- d) Supervision Stage (Controlling) Supervision is carried out directly by the owner of UD. D&D on

employee performance, especially the finance department. For the production and distribution workforce and distribution is carried out by the person in charge of production who will be responsible for all forms of activities during the production and distribution process to the industry owner.

In terms of human resources (HR), the recruitment of workers in this industry does not require the prerequisites of a formally educated workforce, but rather prioritizes special skills in processing milk candy considering that the production process also uses machines. UD D&D requires labor only in the packaging and distribution process to shops or restaurants. Labor needs with these specifications can be met by men or women without any special training. Results of the analysis of management and human resources aspects

Based on the research results above, it can be concluded that UD.D&D is feasible in terms of management and human resources. This can be seen from the clear organizational structure so that workers have received duties and authority in each section. Likewise, with the aspect of human resources, the employees who are employed have conducted training in advance so that they can work well and become experts and competent in their respective fields.

The company is quite feasible to run when viewed from the management aspect. Although the company does not yet have a formal organizational structure, it has a clear division of tasks between the owners and managers of business activities. This is because the company is still new and the scale of the business is small and it is a family business. So, it is quite natural that company has not prepared a formal structure for an organization or company (Maulana, 2008).

- Organoleptic Test

A food product is not only judged by the appearance of the packaging, but also by the level of favorability of the panelists or consumers of the product. To test the level of panelist liking, an organoleptic test is carried out, namely the hedonic test (liking). In this study, the hedonic test (liking) was carried out to determine the level of acceptance of panelists for sweet uwir milk candy products from UD. D&D.

a) Color

The results of the panelist's preference level for the color of sweet uwir milk candy with 25 untrained panelists obtained results as shown in Figure 2.

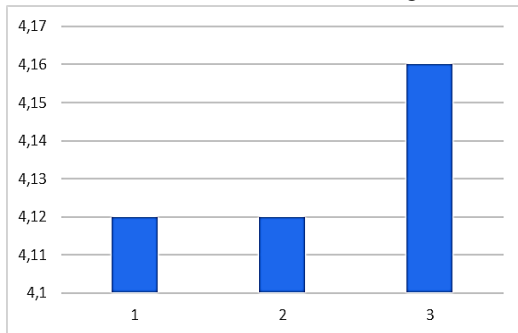


Figure 2. Graph of color preference of sweet Uwir Milk Candy

Figure 2 shows that the sweet uwir milk candy produced in the first week showed the level of panelist preference with an average of 4.12 which means that the level of panelist preference is on a scale of like to like very much. In the second week, it showed the panelists' level of liking with an average of 4.12, which means that the panelists' level of liking for the color of milk candy was on the scale of liking to very liking. While the third week of testing showed the level of panelist preference with an average of 4.16 which is on a scale of like to like very much.

b) Taste

Panelists' assessment of organoleptic properties in terms of the taste of sweet uwir milk candy with 25 untrained panelists can be seen in Figure 3.

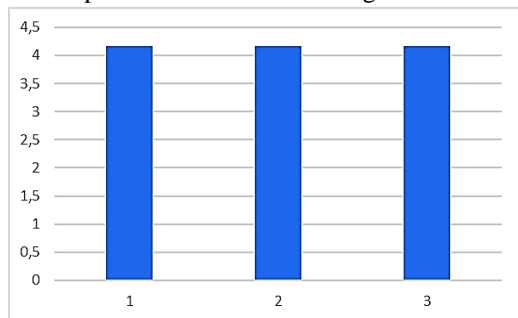


Figure 3. Graph of the level of liking for the taste of sweet Uwir Milk Candy

Based on Figure 3, the results of organoleptic testing of sweet uwir milk candy in the first week with an average value of 4.16, which means that the panelists show a scale from like to very like. In the second and

third weeks the results of organoleptic testing also showed an average value of 4.16, which means that the panelists showed a scale from like to very like. From the results of the average value of organoleptic testing above, it can be concluded that from the first to the third week of production of sweet uwir milk candy did not show a decrease or increase in the level of panelist preference. Based on the ANOVA test, the production time of the first, second, third week, shows a P-value $(1,000) > \alpha = 0,05$, so there can be no effect of production week on the level of liking of sweet uwir milk candy.

c) Scent

The results of testing the level of favorability of 25 untrained panelists on the aroma of sweet uwir milk candy can be seen in Figure 4.

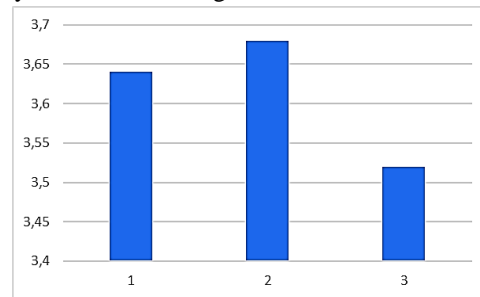


Figure 4. Graph of the level of liking for the scent of sweet uwir milk candy

From the picture above, it can be seen that the value of testing the aroma of sweet uwir milk candy in the first week shows an average value of 3.64 which is on a scale of somewhat like to like. In the second week, an average of 3.68 was obtained, which means that the panelists' level of liking for the aroma of sweet uwir milk candy is on a scale of somewhat like to like. Turning to the third week is not much different from the first and second weeks, the third week shows the average level of panelist preference is 3.52 which is on a scale of somewhat like to like. Based on this data, it can be concluded that the level of panelists' liking for the aroma of sweet uwir milk candy from the first to the third week is not much different, which is on a scale of somewhat like to like. Based on ANOVA testing the level of liking panelists showed a P-value $(0,492) > \alpha = 0,05$, thus there is no effect of production week on the level of panelists' liking in terms of the aroma of sweet uwir milk candy.

d) Texture

According to Sistanto, (2014) the level of tenderness of caramelized milk is closely related to the moisture content and characteristics of dairy products. The results of the organoleptic test of the panelists' level of liking for sweet uwir milk candy in terms of texture can be seen in Figure 5 in this case the research was conducted on 25 untrained panelists.

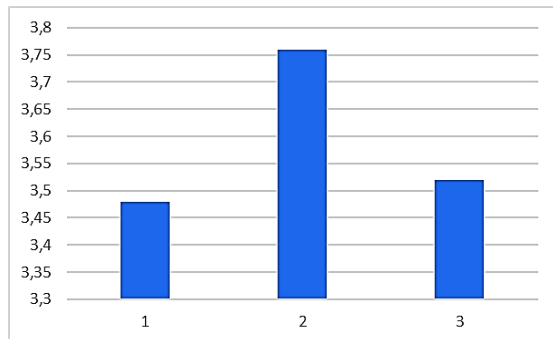


Figure 5 Graph of texture favorability of sweet uwir milk candy

Figure 5 shows that in the first week the average results of the panelists' assessment showed 3.48, which means that the panelists' level of liking was on a scale of somewhat like to like. Research conducted in the second week showed an average level of panelist preference in numbers, namely 3.76, which means that the level of preference is on a scale of somewhat like to like. In the third week of research, the results of the study were obtained with an average number of 3.52, indicating that the panelists' level of liking was on a scale of somewhat like to like. Based on the results of the ANOVA test which shows a P-value (0.096) > $\alpha = 0.05$, which means that the level of panelist preference for the texture of sweet uwir milk candy in three weeks does not show a significant difference.

CONCLUSION

Non-financial feasibility, namely legal aspects, market and marketing aspects, technical and technological aspects, and management and HR aspects of the sweet uwir candy making business run by UD. D&D is declared feasible to run and the level of panelist preference for color, taste, aroma and texture of sweet uwir milk candy does not have a significant effect on the three weeks of the experiment.

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