



Paper 64

Market Evaluation of Changes in Size and Ingredient of Roti Pisang Production

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Abstract - The pandemic that occurred in 2020 had an impact on the growth of the food and beverage industry managed by SMEs in Indonesia. However, in 2021 there has been a 5% increase in the food and beverage industry. One of them is the bakery business which has increased sales of bread to reach Rp. 18.7 billion. The high demand makes the competition in the bakery business increasingly tight, so UKM Bakery E tries to make various innovations to develop its business but finds some problems in developing it. This happened after a decline in sales of the "Roti Pisang" product so the researchers help by interviewing the owner to find the main problem using root cause analysis and the main problem is product quality instability. Then use the experiment method by changing the size and the ingredient in the production process. The sample that has been made is tested on market with a questionnaire and the result shows that changing the size can help improve the quality of "Roti Pisang" so it can help increase the sales of Bakery E.

Keywords - Quality Product, Size, Ingredient, SME

I. INTRODUCTION

Since the pandemic occurred in 2020, many SMEs in Indonesia have suffered losses and not many have gone bankrupt. However, in 2021 the food and beverage industry will grow 2.54% to Rp775.1 trillion when measured by GRDP at constant prices (ADHK) 2010. This makes for a 1.58% increase in the food and beverage industry. This increase can be seen in Figure 1.

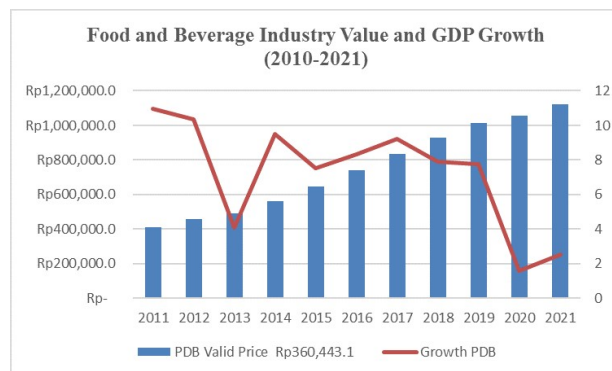


Fig. 1. Food and Beverage Industry Value and GDP Growth (2010-2021)

This increase occurs because the demand for food and beverages is high because people still need to consume nutritious food to increase their immunity to maintain health. In addition to increasing immunity, food is one of the basic needs for human life, so the need for food increases. When the demand for food increases, the food and beverage industry will also increase. One of the food and beverage industries that has experienced an increase is the bakery business which has succeeded in increasing sales of bread to reach USD 18.7 billion (Rp 2.6 trillion) in Indonesia in 2021. The following is an increase in bread consumption in Indonesia as shown in table 1.

Table 1 - THE AVERAGE CONSUMPTION OF FOOD AND BEVERAGES PER CAPITA IN 2016 - 2020

Food Items	Units	Year					Growth Averag 2016-2020 (%)
		2016	2017	2018	2019	2020	
Ordinary Bread	Small Pack	-	19.132	19.085	18.693	17.733	-
Other Bread	0.1 Kg	-	57.578	58.498	60.272	58.869	-
Cookies	0.1 Kg	19.449	20.017	22.824	23.095	22.834	4.250%
Boil or Steam Cake	Unit	67.264	70.112	74.626	78.838	77.160	3.547%
Fried Food	Piece	59.036	178.807	181.510	178.203	169.821	1.855%
Porridge of Mungbean	Portion	-	5.802	6.313	6.776	6.625	-
Kind of Salad With Peanuts Sauce	Portion	10.220	11.177	11.078	10.811	10.189	0.080%
A Place of Rice Accompanied by a Mixture Peanuts Sauce	Portion	38.899	42.938	43.273	42.173	40.740	1.306%
Fried Rice	Portion	8.499	9.913	10.256	10.369	9.838	4.019%
Rice	Portion	8.551	11.149	12.743	14.890	15.008	15.579%
Rice Steamed in a Banana Leaf or Coconut Leaf	Portion	12.045	10.708	10.895	11.211	10.535	-3.121%
Soup	Portion	8.030	8.364	9.087	9.340	8.944	2.837%
Roasted Meat on Skewer	Portion	-	4.482	4.910	5.133	4.967	-
Noodle (with Meatball/Boiled/Fried)	Portion	29.774	30.679	31.433	30.963	29.594	-0.104%
Instant Noodle	Portion	-	4.576	4.701	4.722	4.287	-
Snack for Children	0.1 Kg	39.524	38.606	39.316	37.058	35.967	-2.293%
Fish (Fried, Roasted, etc)	Piece	6.935	7.352	8.096	8.480	8.712	5.902%
Chicken/Meat (Fried, Roasted, etc)	Piece	9.855	9.923	11.281	12.736	13.213	7.755%
Other Prepared Food	Piece	-	18.010	23.563	25.411	24.270	-

The increase in sales of bread makes the competition between bread businesses increasingly tight so that bakers compete with each other to maintain and improve the quality of their products to attract consumer interest. A company must be able to create products with quality in accordance with market desires so that consumers can be satisfied where customer satisfaction can provide benefits for the company. As the Wilujeng et.al. (2021) stated that the conditions in bread manufacturing have been significantly affected by good quality control of the

Quality improvement can be done with innovation in bakery products in the form of improving the quality of ingredients to improve the taste of the product, changing or adding color variations to attract the attention of the eye, and changing the size or shape to attract consumers interest, attention, and so on. In addition to satisfying consumers, improving product quality can also help develop businesses so that they can continue to survive and compete in the market. As has been done by SME Bakery E, Bakery E is an SME located in the Blora district and the reason for seeing Bakery E is because of the researchers' interest in the problem. Bakery E has made various innovations in improving the quality of its bakery products. However, in developing its business, Bakery E made various innovations to develop its business but found several obstacles in developing it. This happened after a decline in sales of one Bakery E product, namely Banana Bread, the researcher would help by interviewing the owner to find out the main problem which then helped solve it in order to increase sales of Banana Bread products at Bakery E.

[illegible]

Fig. 2. Root Cause Analysis of Bakery E

II. METHODOLOGY

The experimental method is a method that can affect certain variables so that it can test the hypothesis of a causal relationship when used correctly (Fraenkel, Wallen & Hyun, 2012) [4]. The experiment itself consisted of finances that were not recorded properly, equipment that did not work optimally, scarcity of raw materials, unsatisfactory service to customers, unstable quality control, and unclear working hours and job descriptions. This research focuses on solving the problem of unstable product quality. Problem-solving for unstable product quality due to the results of RCA analysis. In addition, solving these problems can also help solve the problem that the service is not satisfactory to consumers and the hardship of raw ingredients so that it can increase sales at Bakery E.

Improving product quality can increase customer satisfaction with a product, so improving product quality requires constant attention and commitment from every individual in the company. One of the factors that can affect product quality is raw materials. Raw materials are components that can affect the quality of products produced by the company, so raw materials are very important. Therefore, controlling the quality of raw materials is a very important factor so a company needs to pay attention to the selection and storage of raw

materials to minimize the possibility of using lower-quality raw materials in the production process. The choice to focus on improving product quality in raw materials was due to the results of interviews, RCA analysis, and the business situation of Bakery E (Kamaludin, & Sulistiono, 2013) [5].

Then the experiment itself was carried out by conducting interviews with customers as primary data. The interviewees were asked about bread preferences, problems they face, and also products they would like more attention to. When interviews provided solid evidence that the issues were aligned, the next experiment was carried out by making three different types of bread; add more eggs, reduce the size, and both. The experimental variables were given to the interviewees and then they filled out the experimental assessment form.

III. RESULTS

From 49 respondents, that the number are set because it representing the pool sample of Blora residents of 93.779, it was found that 51% are men and 49% are women, 55% are aged between 31-45 years old, 39% of them are students, and 49% have an income between IDR 1.000.000 to IDR 1.500.000. As for the bread itself 76% choose roti pisang (banana bread), 41% choose roti keju (cheese bread), and 47% choose roti ayam (chicken meat bread).

Table 2 - THE RESPONDENT RESPONDS ABOUT TASTE ACCORDING TO EXPERIMENT VARIABLES

Respondent	Taste A	Taste B	Taste C
Value Percentage 5	84%	24%	39%
Value Percentage 4	12%	39%	20%
Value Percentage 3	4%	33%	33%
Value Percentage 2	0%	4%	8%
Value Percentage 1	0%	0%	0%

Table 2 showed about taste experiment that the Bread A (resize the product) counts in 82% as the most preferable, whereas the Bread B (adds the egg) counts in 39% as the quite preferable and Bread C (both resizes and adds the eggs) counts in 39% as the most preferable.

Table 3 - THE RESPONDENT RESPONDS ABOUT TEXTURE ACCORDING TO EXPERIMENT VARIABLES

Respondent	Texture A	Texture B	Texture C
Value Percentage 5	59%	22%	14%
Value Percentage 4	29%	37%	31%
Value Percentage 3	12%	39%	41%
Value Percentage 2	0%	2%	14%
Value Percentage 1	0%	0%	0%

Table 3 showed about texture experiment that the Bread A (resize the product) counts in 59% as the most preferable, whereas the Bread B (adds the egg) counts in 39% as the preferable and Bread C (both resizes and adds the eggs) counts in 39% as preferable.

Table 4 - THE RESPONDENT RESPONDS ABOUT AROMA ACCORDING TO EXPERIMENT VARIABLES

Respondent	Aroma A	Aroma B	Aroma C
Value Percentage 5	55%	12%	27%
Value Percentage 4	31%	45%	20%
Value Percentage 3	14%	37%	45%
Value Percentage 2	0%	6%	8%
Value Percentage 1	0%	0%	0%

Table 4 showed about aroma experiment that the Bread A (resize the product) counts in 55% as the most preferable, whereas the Bread B (adds the egg) counts in 45% as the quite preferable and Bread C (both resizes and adds the eggs) counts in 45% as the preferable.

Table 5 - THE RESPONDENT RESPONDS ABOUT APPEARANCE ACCORDING TO EXPERIMENT VARIABLES

Respondent	Appearance A	Appearance B	Appearance C
Value Percentage 5	69%	43%	57%
Value Percentage 4	12%	27%	6%
Value Percentage 3	14%	22%	37%
Value Percentage 2	4%	6%	0%
Value Percentage 1	0%	2%	0%

Table 5 showed about appearance experiment that the Bread A (resize the product) counts in 69% as the most preferable, whereas the Bread B (adds the egg) counts in 43% as the most preferable and Bread C (both resizes and adds the eggs) counts in 57% as the most preferable.

Table 6 - THE RESPONDENT RESPONDS ABOUT SATISFACTORY ACCORDING TO EXPERIMENT VARIABLES

Respondent	Satisfied A	Satisfied B	Satisfied C
Value Percentage 5	84%	6%	24%
Value Percentage 4	14%	61%	31%
Value Percentage 3	2%	29%	35%
Value Percentage 2	0%	2%	10%
Value Percentage 1	0%	2%	0%

Table 6 showed about satisfactory experiment that the Bread A (resize the product) counts in 84% as the most preferable, whereas the Bread B (adds the egg) counts in 61% as the quite preferable and Bread C (both resizes and adds the eggs) counts in 35% as the preferable.

Table 7 - THE RESPONDENT RESPONDS ABOUT PRICE ACCORDING TO
EXPERIMENT VARIABLES

Respondent	Price A	Price B	Price C
Value Percentage 5	2%	2%	2%
Value Percentage 4	20%	10%	8%
Value Percentage 3	10%	12%	12%
Value Percentage 2	14%	4%	2%
Value Percentage 1	53%	71%	76%

Table 7 showed about price experiment that the Bread A (resize the product) counts in 53% as the most unpreferable, whereas the Bread B (adds the egg) counts in 71% as the most unpreferable and Bread C (both resizes and adds the eggs) counts in 76% as the most unpreferable.

V. CONCLUSION

In this study, researchers found the results of their research using a market evaluation at Bakery E. The results of this study were a positive response from the Bakery E-market to the sample of bread A. Sample of bread A was an experimental product that had a variable change in the size of the bread.

As research conducted above, Bakery E clearly needs to resize its products as the data shown above prove that the product with changing in size compared to the respondent result are mostly positive except for the price. The preferences about sample of Bread A (resize the product) are positive in taste (82%), texture (59%), aroma (55%), appearance (69%), and satisfactory (84%).

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