Marketing strategy to increase sales volume using the AHP method in business XY Tebing Tinggi City

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ABSTRACT

Business xy is one of the culinary industries typical of the city of Tebing Tinggi which operates in the bakery sector which is located in Rambutan District, Tebing Tinggi City, North Sumatra. Xy's business experienced a decline in sales due to increasingly fierce competition selling similar products and a decline in sales due to failure to implement appropriate marketing strategies. By considering these problems, to increase product sales volume, it is necessary to create a marketing mix strategy that uses the Analytical Hierarchy Process (AHP) method. This method will evaluate how consumers view the marketing mix features of peanut bread products. Apart from that, several alternative strategies will be given as references to be implemented in company xy, Tebing Tinggi City. The result of determining the marketing mix priority weights that must be applied to market products is that the strategy to increase market share (41%) focuses on the promotional mix. Alternative strategies that can be implemented include maintaining product quality as the main priority in the product mix (42%), setting prices with quality as the main priority in the product mix (31%), strategic sales locations (44%) as the main priority in the place mix, and increasing market share (44%) as the main priority of the venue mix, and increasing promotional activities on social media (35%) of the promotional mix.

Keywords: Analytical hierarchy process (AHP); marketing mix strategy; sales volume.

1.   INTRODUCTION

Business XY is a culinary souvenir industry typical of Tebing Tinggi which operates in the bakery sector. Business XY is a home industry business that was established in 2008 and developed in 2010, located in Rambutan District, Tebing Tinggi City. This bread has several flavors including strawberry, black bean, cheese, cappuccino, green bean, chocolate, durian, chocolate cheese, and pineapple. Peanut bread has a relatively short shelf life, the shelf life of peanut bread can only last for 7 days. Business XY is a business that has been around for quite a long time in the community, especially in Tebing Tinggi City. Based on initial observations in Tebing Tinggi City, there are 3 well-known brands of peanut bread, one of which is Business XY. With the emergence of several competitors selling similar products, business sales experienced a decline. Another factor that causes xy business sales to decline is because the marketing strategy used is not appropriate [1][2]. After interviewing the peanut bread owner, they only implemented a word-of-mouth marketing strategy and promoted the product by placing a banner in front of the peanut bakery factory/shop [3][4]. However, current developments are largely determined by technology, including social media [5][6]. Based on this description, business XY certainly needs an appropriate marketing strategy to be able to increase and stabilize its production activities and be able to compete in the market [7][8].

2.   METHOD

The strategy has meaning related to the implementation of an idea, design, and implementation of activities over some time [9]. Strategy has a long-term goal of empowering the company's existing resources to achieve goals [10]. Apart from that, the strategic goal is to achieve the company's main goals, namely profit and profit growth [11].

Marketing is an activity that is influenced by political, economic, and cultural factors [12]. Apart from that, marketing is a business system designed to determine prices, promotions, and distribution of goods/services to consumers [13][14].

Marketing strategy is seen as an action carried out continuously regarding consumer desires [15]. Focus on marketing strategy, namely increasing communication and keeping the company in a normal market share environment [16].

The marketing mix is a strategy that combines several specific marketing elements to achieve marketing targets [17]. The marketing mix consists of price, product, distribution, and promotion, where the marketing mix contains marketing mixing activities for customer satisfaction [18][19].

Sales and Sales Volume: Sales is the total amount charged to consumers for goods purchased by consumers. In sales, there is face-to-face interaction between the buyer and the seller. To maintain a mutually beneficial exchange. Meanwhile, sales volume is the total sales generated. Technically, low sales value can be caused by lower product quality, less affordable product prices, and less creative marketing techniques [20].

AHP is a problem-solving method that is organized into components [21]. Where in AHP discrete and continuous ratio measurements are carried out. In AHP the following stages are carried out: a) Problem definition. b) Determine element priority. c) Synthesis/comparison in the form of calculations carried out on matrix elements. d) Measuring questionnaire. e) Calculate the Consistency Index (CI) value. f) Calculate the CR/consistency ratio. g) Check hierarchy consistency.

With hierarchy, a complex problem can be divided into a set of groups which are then arranged in a hierarchical form so that the problem appears more structured and systematic [22].

Population and sample: A survey was conducted by distributing questionnaires to consumers to obtain information regarding the marketing strategy of the business. The population is the entire research object where in this research there is a population of 50 people and this population will be narrowed down by calculating the sample using the Slovin method [23].

$$n = \frac{N}{1 + N(e)^2} \tag{1}$$

Where :
n = Sample size/number of respondents
N = Population Size

e = Accuracy allowance percentage = 10 %
Based on sample calculations, the respondents in this study were 33 respondents from all buyers. This sampling was carried out using the incidental technique or sampling based on chance.

3. RESULTS AND DISCUSSION

3.1 Respondent Characteristics

Respondents taken in this study have characteristics in terms of gender, age, and occupation in answering questionnaire questions to improve the marketing strategy of business xy with a total of 33 respondents. The number of respondents' genders can be seen in Figure 1.
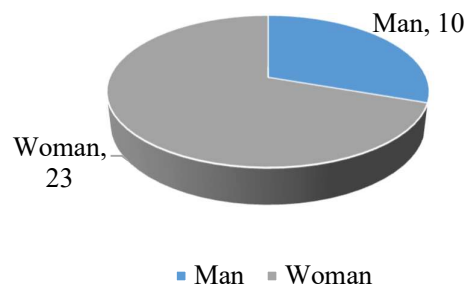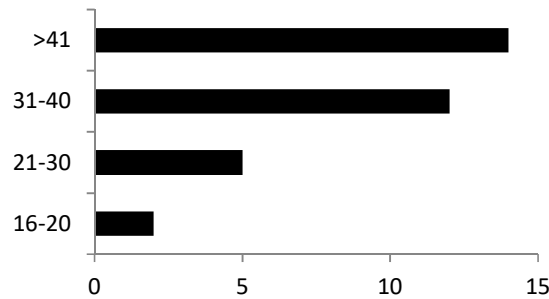

Figure 1. Gender of respondents.

In this study, the dominant gender was 23 respondents and 10 men. The age of the respondents can be seen in Figure 2 below:

Figure 2. Age of respondents.

The majority of respondents were aged >41 years followed by 12 people aged 31-40 years, 5 people aged 21-30 years, and 2 people aged 16-20 years. For a recapitulation of respondents' work, see Figure 3 of respondents' work below:
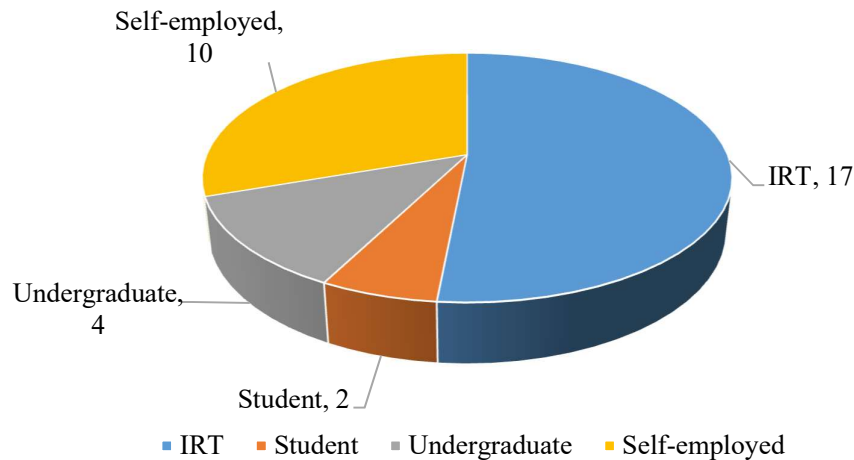
Figure 3. Respondent's occupation.

Respondents with the most jobs were 17 housewives, 10 entrepreneurs, 4 students, and 2 students.

3.2 Analytical hierarchy process (ahp) calculation

In calculating the AHP, several stages need to be carried out, namely as follows:

a. Determine the pairwise comparison matrix

To support decisions that will be taken in this marketing mix strategy, it is divided into criteria and sub-criteria:

- Criteria: sales, market share, and competition.
- Sub criteria: product, price, place, and promotion.

b. Calculation of weighting for all criteria and sub-criteria

The following is the weighting for the criteria, which can be seen in Table 1.

Table 1. Recapitulation of criteria weighting.

Criteria	Sale	Market Share	Competition
Sale	1	0.73	0,74
Market Share	1,4	1	1,4
Competition	1,37	0,71	1

For sub-criteria weighting, see Table 2. recapitulation of sub-criteria weighting criteria.

Table 2. Summary of sub-criteria weighting criteria.

Criteria	Product	Price	Place	Promotion
Product	1	0,94	0,98	0,54
Price	1,06	1	0,97	0,40
Place	1,02	1,1	1	0,91
Promotion	1,9	1,85	1,02	1

c. Calculation of the average weighting of alternative sub-criteria for weighting alternative sub-criteria, you can see in Table 3.

Table 3. Average weighting of alternative products.

Sub-Criteria		Alternative			
		Product Quality	Flavor Innovation	Packaging Design	Volume
Product	Quality Product	1	2.21	2.01	2.94
	Flavor Innovation	0.5	1	1.82	2.68
	Packaging Design	0.50	0.50	1	1.47
	Volume (Content)	0.34	0.55	0.68	1
	Total	**2.29**	**4.26**	**5.51**	**8.09**
		Enhancement	Comparison	Determination	Giving
Price	Enhancement	1	2	1.6	0.79
	Comparison	0.50	1	1.86	1.01
	Determination	0.63	0.54	1	1.43
	Giving	1.27	0.99	0.70	1
	Total	**3.39**	**4.53**	**5.16**	**4.23**
		Location	Reach	Branch	Distributor
Place	Location	1	2.75	2.5	2.2
	Reach	0.36	1	2.24	2.52
	Branch	0.40	0.45	1	1.33
	Distributor	0.45	0.40	0.75	1
	Total	**2.22**	**4.59**	**6.49**	**7.05**
		Social media	Hub. Masy	Personal Selling	Advertisement
Promotion	Social media	1	1.51	2.03	1.49
	Hub. Masy	0.66	1	2.45	1.53
	Personal Selling	0.49	0.41	1	0.65
	Advertisement	0.67	0.65	1.54	1
	Total	**2.83**	**3.57**	**7.02**	**4.67**

d. Calculation of the consistency ratio of matrix criteria and sub-criteria the calculations carried out look at the results of calculating the average weighting of criteria and sub-criteria to determine consistent customer answers to the marketing strategy that will be taken. The consistency criteria and sub-criteria can be seen in Table 4 of the consistency matrix.

Table 4. Matrix Consistency.

Criteria	Sale	Market share	Competition	Total	Priority	Eigen Value	Rank	CR
Sale	0.3	0.30	0.24	0.8	0.27	1.00	III	
Market share	0.4	0.41	0.45	1.2	0.41	1.00	I	0,01
Competition	0.4	0.29	0.32	1.0	0.33	1.02	II	
Total	**1.00**	**1.00**	**1.00**	**3.0**	**1.00**	**3.02**		

$$CI = \frac{3,0-3}{3-1} = 0,01 \tag{2}$$

Because n = 3, the RI value = 0.58 (RI/RandomIndex Table)

$$CR = \frac{0,01}{0,58} = 0,01 \tag{3}$$

Because the CR value <= 0.1, the respondent's answer is consistent. For priority results, the priority with the greatest weight is market share with a value of 0.41, then there is are sales with a weight of 0.33 and sales with the lowest weight of 0.27.

After calculating the consistency of the criteria, the next step is to calculate the consistency of the sub-criteria which can be seen at Sub-Criteria Consistency Level 3 Table 5:

Table 5. Consistency of level 3 sub-criteria.

Alternative	P	H	T	P	Total	Priority	Value	Rank	CR	Consistency
Product	0.20	0.19	0.25	0.19	0.83	0.21	1.0	IV		
Price	0.38	0.21	0.24	0.14	0.97	0.24	1.2	III	0,06	
Place	0.21	0.22	0.25	0.32	1.00	0.25	1.0	II		Consistent
Promotion	0.38	0.38	0.26	0.35	1.36	0.34	1.0	1		
Total	**1.00**	**1.00**	**1.00**	**1.00**	**4.00**	**1.04**	**4.2**			

At level 3 hierarchy there are 4 sub-criteria, namely product (21%), price (24%), place (25%), and promotion (34%). It can be interpreted that promotional sub-criteria are very important in marketing strategies because in introducing a product to the public, promotional activities must be carried out that are better than previous promotional activities. No matter how good the quality of a product is, consumers will not be convinced if they have never heard of the product. Promotional mix marketing strategies can be carried out with social media marketing strategies.

Furthermore, the calculation of Alternative Sub-Criteria level 4 can be seen in Table 6 Consistency of Alternative Sub-Criteria Level 4 in Table 6.

Table 6. Consistency of level 4 sub-criteria alternatives.

Alternative	K	I	K	V	Total	Priority	Value	Rank	CR	Consistency
Quality	0.44	0.52	0.36	0.36	1.68	0.42	0.96	I		
Innovation	0.20	0.23	0.33	0.33	1.09	0.27	1.16	II	0,060	
Packaging	0.22	0.12	0.18	0.18	0.70	0.17	0.96	III		Consistent
Volume	0.15	0.13	0.12	0.12	0.52	0.13	1.06	IV		
Total	**1.00**	**1.00**	**1.00**	**1.00**	**4.00**	**1.00**	**4.15**			

XY business in marketing its products emphasizes product quality with quality raw materials. Strategy in maintaining the quality of XY business products by maintaining the quality of taste and existing quality variations so that they can compete with other competitors and fulfill consumer desires.

Furthermore, the calculation of alternative sub-criteria level 4 can be seen in the consistency of alternative sub-criteria level 4 in Table 7.

Table 7. Consistency of level 4 sub-criteria alternatives.

Alternative	PNH	PRH	PNHB	PB	Total	Priority	Value	Rank	CR	Consistency
PNH	0.29	0.44	0.31	0.19	1.23	0.31	1.05	I		
PRH	0,15	0,22	0.36	0.24	0.97	0.24	1.10	II	0,060	
PNHB	0.18	0.12	0.19	0.34	0.83	0.21	1.08	IV		Consistent
PB	0.37	0.22	0.14	0.24	0.96	0.24	1.02	III		
Total	**1.00**	**1.00**	**1.00**	**1.00**	**4.00**	**1.00**	**4.15**			

It can be interpreted that the main priority for alternative prices is determining prices based on quality. Furthermore, the calculation of level 4 sub-criteria alternatives can be seen in the consistency of level 4 sub-criteria alternatives, Table 8

Table 8. Consistency of level 4 sub-criteria alternatives

Alternative	Location	Reach	Branch	District	Total	Priority	Value	Rank	CR	Consistency
Location	0.45	0.60	0.39	0.31	1.75	0.44	0.97	I	0,01	Consistent

Range	0.16	0.22	0.35	0.36	1.08	0.27	1.24	II
Branch	0.18	0.10	0.15	0.19	0.62	0.16	1.01	III
Distributor	0.20	0.09	0.12	0.14	0.55	0.14	0.97	IV
Total	**1.00**	**1.00**	**1.00**	**1.00**	**4.00**	**1.00**	**4.19**	

The overall results for the consistency ratio in the table above are <1.00, so the answers given by customers are considered consistent [24]. It can be interpreted that the main priority in promotional alternatives is increasing promotional activities on social media such as Instagram, Facebook, TikTok, and special websites [25]. The results of research from respondents can be concluded that carrying out interesting promotional activities on social media will make consumers interested in buying peanut bread because this strategy can provide information related to peanut bread products more widely which will increase sales volume.

After carrying out a series of analyses, improvement mapping was then carried out based on the AHP steps above for marketing strategies to increase sales volume. The proposed marketing strategy can be seen in Figure 4. Proposed Marketing Mix Strategy in Figure 4.
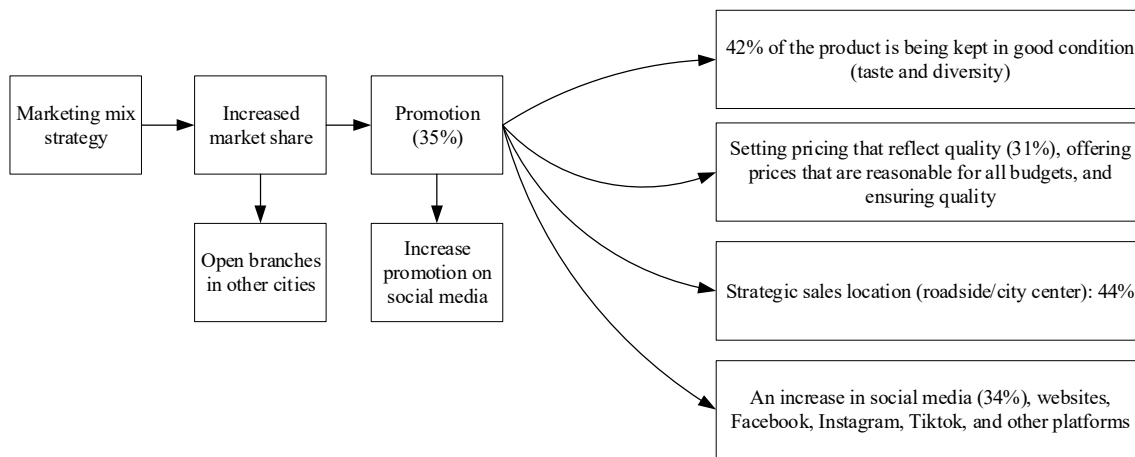

Figure 4. Proposed marketing mix strategy.

4. CONCLUSION

From the analysis carried out to increase sales volume using the AHP method, the following conclusions were obtained: 1) In the marketing mix strategy, the variable that has a big influence in increasing sales volume is the promotion variable at level 3 with a weight of (34%). 2) After getting the results from data processing, the strategy taken in marketing the product is to increase market share. The strategy to increase market share is opening shops in other areas and carrying out promotional activities such as participating in events/exhibitions, giving discounts to attract consumers, and creating special websites. for consumers to buy peanut bread by focusing on the promotional mix on social media. The marketing strategies that can be implemented in businesses are maintaining product quality (maintaining taste quality and quality variations) as the main priority of the product mix, setting prices with quality (affordable prices for all groups) as the main priority of the price mix, strategic sales locations (opening shops in other areas with locations in the city center/on the side of the highway) as the main priority location, and increasing promotional activities on social media (Facebook, Instagram, Tiktok and Website) as the main promotional priority.

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