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Developing Marketing Strategies for MSMEs through SWOT Analysis and the Analytical Hierarchy Process (AHP)

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ABSTRACT

The Giriloyo Batik Village Gallery serves as a sales center for batik products from various MSMEs around the Giriloyo area has face decrease in sales. This problem caused by unoptimal marketing strategy, resulting in unmet sales targets, especially during the new normal. Giriloyo Batik Village itself is a batik center with distinctive classic, palace-themed motifs and significant market potential. This study aims to formulate an effective and sustainable marketing strategy for the Giriloyo Batik Village Gallery. The method used was a SWOT analysis to identify internal and external business factors, which were then prioritized using the Analytical Hierarchy Process (AHP) method. Data collection was conducted through questionnaires distributed to MSME heads and one representative of the gallery management. The results showed that online marketing was a key factor in strategy development, especially due to the limited use of social media and digital platforms. Based on the AHP calculations, the highest-priority strategy is creating a sales account on the Shopee e-commerce platform, with a weighting of 73.51%. Other supporting strategies include improving information technology literacy, optimizing promotions through WhatsApp, Instagram, and Facebook, participating in exhibitions, developing innovative batik motifs with high-quality materials, and improving human resources to strengthen product competitiveness.

Keywords : Sales Decrease; SWOT Analysis; Marketing Strategy; AHP Method.

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INTRODUCTION

Yogyakarta is one of the cities producing batik. Batik is a term used to describe patterned fabric created using a resist technique using wax [1], [2], [3]. Giriloyo Batik Village itself is a producer of hand-drawn batik with a variety of attractive motifs. Giriloyo Batik Village is a community association with comprehensive facilities, from the batik-making process to sales. Giriloyo Batik Village is home to 12 MSMEs. The names of these 12 MSMEs are Sekar Arum, Sri Kuncoro, Bima Sakti, Giri Indah, Sungsang, Sido Mukti, Suka Maju, Sekar Kedhaton, Berkah Lestari, Sido Mulyo, Sari Sumekar, and Pinggir Gunung.

The batik-making process is carried out at the homes of each MSME member, and sometimes also at Giriloyo Batik Village. Once finished, the products are sold at the Giriloyo Batik Village Gallery. The gallery takes a 10% profit from the price of hand-drawn batik sold by 12 MSMEs in the association. The Giriloyo Batik Village Gallery itself has not implemented an efficient marketing strategy so that sales do not reach the predetermined target and there is a decline in sales. The limitations of MSMEs in seeking information and market reach, workforce networks, and obtaining strategic locations to start a business [4]. This study aims to formulate the right marketing strategy for the batik gallery in order to achieve the desired target. The SWOT (Strength, Weakness, Opportunity, Threats) analysis approach shows the existence of risks by the same product and the existence of risks from other companies, but has the ability to promote to product buyers, therefore buyers increase [5]. The marketing strategy used by the company is still general and hereditary. In this study, Microsoft Excel was used to calculate AHP so that the calculation results were consistent.

METHOD

This study uses the SWOT analysis method to identify internal and external conditions within the company and formulate a corporate strategy. The SWOT analysis is used to determine future goals, in accordance with the company's current conditions, and it is hoped that targets will be more easily achieved [6]. The results of this condition analysis will determine the top priorities in solving problems. The AHP method was chosen as an effective decision-making tool by simplifying and accelerating the decision-making process by solving problems[7], [8]. The AHP method also helps solve complex problems by structuring a hierarchy of criteria, stakeholders, outcomes, and by drawing various considerations to develop weights or priorities [9].

The object of this research was conducted at the Giriloyo Batik Village Gallery, located on Jl. Imogiri Timur, km 14, Karang Kulon, Wukirsari, Imogiri, Bantul, Special Region of Yogyakarta. Questionnaires were distributed to 13 respondents: 12 heads of MSMEs within the gallery and one child of one of the MSME heads who will manage this marketing strategy going forward. Before distributing the questionnaire, face validity was conducted to ensure it was easily understood by respondents [10]. The questionnaire consisted of criteria and alternatives derived from a hierarchical structure.

This research involved a literature review procedure, which involved searching for references and related scientific literature. This initial step aimed to identify factors influencing strategy and provide suggestions for improvements to effective marketing strategies [11], [12]. Direct observation then identified existing problems in the gallery and collected data by analyzing and formulating the results of the questionnaires. The activities reviewed included distributing questionnaires and interviewing one of the administrators of the Giriloyo Batik Village Gallery. Data collection included asking questions related to the gallery's internal and external conditions. Several strategy formulations were then derived, weighted hierarchically, and the most appropriate strategy for the industry was selected.

RESULTS AND DISCUSSION

SWOT Analysis

This study first conducted interviews with the management of the Giriloyo Batik Village Gallery. Then, we determined the company's internal and external factors by preparing questions to guide the SWOT analysis. The SWOT analysis can be seen in Table 1.

Table 1. SWOT Analysis

No	Strength,	Weakness,	Opportunity,	Threats
1	Certain batik motifs	Less effective marketing HR	Known to guests from various countries	The quality of batik sometimes decreases
2	Quality products	Offline marketing, not online yet	Good relationship with consumers	Same product but different price from other MSMEs
3	The product has been shipped out of the area	Lack of understanding about online sites	There are superior products with high prices	Printed batik as a competitor
4	There are rarely any defective products	Less effective promotion	Defending the price argument	Plagiarized products in hand-drawn batik
5	Own batik brand	Website not working	The target market is very guaranteed	Endangered

This study used 13 respondents, each with gender and name data from each MSME. Before distributing the questionnaire, a face validity test was conducted to determine whether it was suitable for distribution to respondents [11]. The questionnaire was distributed offline, with direct instructions provided to respondents.

These respondents were selected based on the number of MSMEs. Representatives from each MSME, namely the head of each MSME, would then conduct sales at the Paguyuban Gallery and select appropriate marketing strategies based on the questionnaires distributed, which would then be implemented going forward. A questionnaire is a series of questions intended to obtain information and determine a person's opinion on a matter by distributing it to respondents[13]. The questionnaire used a Likert scale, which is a question that generates a level of agreement or disagreement between respondents on a scale of 1 to 9.[14]. Respondent data can be seen in Table 2.

Table 2. Data Respondent

Name	Gender	MSMEs
Imaroh	Female	Sri Kuncoro
Amiroh	Female	Sungging T
Giyanti	Female	Sido Mukti
Istirjanah	Female	Berkah Lestari
Khibtiyah	Female	Madana Batik
Nurjannah	Female	Sido Mulyo
Rusni W	Female	Giri Indah
Zuni W	Female	Sekar Arum
Warzinar	Female	Bima Sakti
Sri Utama	Female	Giri Canting
Giyarti	Female	Sungsang
Wasikhatun	Female	Sukma
Bahtiar	Male	Pengelola

As seen in Table 3, the questionnaire consists of main and alternative criteria obtained from the hierarchical structure. After the data from the questionnaire is obtained, the AHP calculation is carried out on the main criteria and the following results are obtained:

Table 3. Main Criteria Results

Rank	Criteria	%
1	Optimizing HR quality	28,26%
2	Creating innovative motifs	17,55%
3	Optimizing knowledge	15,06%
4	Creating e-commerce	8,52%
5	Create Whatsapp Promotion	8,34%
6	Attending the exhibition	7,93%
7	Creating promotions on Instagram	7,32%
8	Create a promotion on Facebook	7,01%

AHP Analysis

The initial step in the AHP process is creating a problem hierarchy [9], [15]. From the SWOT matrix, marketing strategies for SMEs, along with conditions within the SME environment, are identified. A hierarchical structure is then created for these strategies. The hierarchical structure for determining alternative marketing strategies at Kampoeng Batik Giriloyo can be seen in Figure 1, below:

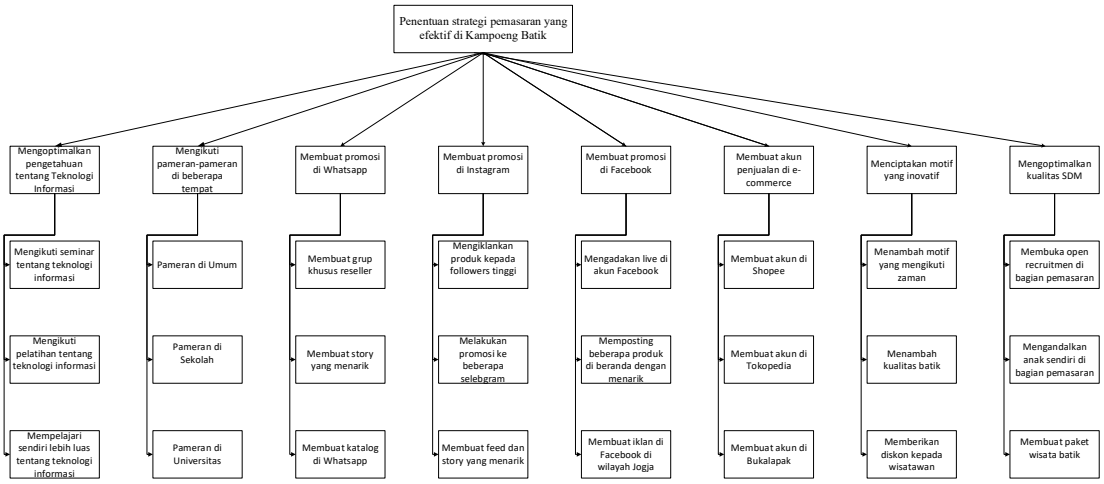

Figure 1. Hierarchical Structure

Next, a pairwise comparison matrix is created for each alternative choice according to Figure 2.

C	A_1	A_2	...	A_n
A_1	a_{11}	a_{12}	...	a_{1n}
A_2	a_{21}	a_{22}	...	a_{2n}

Figure 2. Pairwise Comparison Matrix [16]

Next, strategic priorities were created based on the main criteria to increase sales and competitive advantage through strengthening marketing strategies at the Giriloyo Batik Village Gallery, seen from the highest weighting, namely by optimizing the quality of human resources in the marketing department. In addition to the main criteria, AHP calculations were also carried out for 25 alternatives to obtain more detailed information on the marketing strategies to be implemented. As seen in Table 4, the following are the results of the AHP calculations for the alternatives:

Table 4. Alternative Strategy Results

Rank	Alternatif	%
1	Creating Shopee	73,51%
2	Attending Training	60,75%
3	Creating Feeds and Stories on Instagram	58,22%

Based on the table, the priority strategy in this alternative is to increase sales, with the highest weighting by creating a sales account on Shopee to make it easier for people to purchase products. Shopee is also one of the leading e-commerce platforms in Southeast Asia, providing an easy, safe, and fast online shopping experience for consumers through strong payment and logistics support through strengthening marketing strategies at the Kampung Batik Girloyo Gallery. The second-highest weighting is participating in information technology training, which is useful for implementing an online sales system to increase sales. Finally, with the third-highest weighting, is creating an attractive feed and stories on Instagram. Nowadays, Instagram is one of the most widely used social media platforms; almost everyone has an Instagram account, so this strategy can increase sales and be recognized by the wider community.

The steps in solving the problem under study are: first, describe the problem and select the desired solution. After that, compile a hierarchy of existing problems. Second, determine the element priorities. Third, calculate the matrix normalization by summing the values from each column in the pairwise comparison matrix, as shown in the equation (1).

$$n = \sum_{i=0}^{z} xij \quad (1)$$

Where:
n = Sum of each column
i = 1, 2, 3, …, z
x = Fixed value in cell
z = Number of alternatives

Then divide each column value by the total of the corresponding column to obtain the normalized matrix formulated in the equation in the equation (2).

$$m = \frac{xij}{n} \quad (2)$$

Where:
m = Normalization result
n = Total result for each column
x = Fixed cell value

Fourth, calculate the priority weight by summing the values from the rows and dividing the sum by the number of values to obtain the average value or priority weight, using the equation (3).

$$bp = \frac{\sum_{j=1}^{n} xij}{n} \quad (3)$$

Where:
bp = Average result/priority weight
j = 1, 2, 3, …, n
x = Fixed cell value
n = Number of criteria

Fifth, calculate the maximum eigenvalue to determine the consistency of the existing decision, as decisions based on considerations with low consistency are undesirable. The steps in this step are as follows: the first step multiplies each value in the first cell by the first priority weight, and the value in the second cell by the second priority. The second step sums the results for each row in the matrix. The third step divides the row sum by the corresponding relative priority element. The final step is to sum the lambda results for each criterion divided by the number of elements, using the formula:

$$\lambda maks = \frac{\sum \lambda}{n} \quad (4)$$

Where:
λmax = Maximum Eigenvalue
n = Number of criteria
Sixth, calculate the consistency index using the equation 4.

$$CI = \frac{\lambda maks - n}{n-1} \quad (5)$$

Where:
n = Number of elements
Seventh, by calculating the consistency ratio with the equation 5.

$$CR = \frac{CI}{RI} \quad (6)$$

Where:
CR: Consistency Ratio
RI: Random Index

Finally, by checking the hierarchical consistency, if the CR value is >0.1, the Judgment data assessment is inconsistent and should be revised. If CR <0.1 equation (6), the consistent data calculation is correct. The total calculation of strategic priorities based on the main criteria can be seen in Table 5.

Table 5. Total calculation of the main criteria strategy priorities

Rank	Criteria	%
1	Optimizing HR quality	28,26%
2	Creating innovative motifs	17,55%
3	Optimizing knowledge	15,06%
4	Creating e-commerce	8,52%
5	Create Whatsapp Promotion	8,34%
6	Attending the exhibition	7,93%
7	Creating promotions on Instagram	7,32%
8	Create a promotion on Facebook	7,01%

Based on the calculation results of all the main criteria and alternative strategies in Table 3 and Table 4, the highest is creating a sales account on Shopee with a weight of 73.51%, participating in training on information technology with a weight of 60.75% and creating an interesting feed and story on Instagram with a weight of 58.22%. The results of this study are almost the same as previous studies that have used the same method, namely SWOT-AHP to determine alternative strategies that are useful for achieving predetermined targets and minimizing losses experienced by Pudak Gresik MSMEs due to decreased demand during the Covid-19 pandemic[17][18]. By exercising strength and utilizing existing opportunities to maintain prices, providing discounts, and implementing an online sales system to be recognized by the wider community.

CONCLUSION

Based on the research results on the formulation of batik product marketing strategies using the SWOT and Analytical Hierarchy Process (AHP) approaches, it can be concluded that digital-based marketing strategies are the main priority that needs to be implemented by the Giriloyo Batik Village Gallery. Analysis of internal and external factors shows that the gallery has quite strong potential to develop online marketing, especially through optimizing the use of social media and e-commerce platforms. The results of the AHP calculation show that the strategy with the highest priority is creating a sales account on the Shopee e-commerce platform with a weight of 73.51%. This strategy is followed by improving human resource competency through information technology training with a weight of 60.75%, and optimizing digital promotions through Instagram (58.22%), WhatsApp (52.67%), and Facebook (51.41%). In addition, other supporting strategies include participation in public exhibitions (45.24%), improving the quality of batik products (49.07%), developing batik tourism packages (49.07%), and continuously improving the quality of human resources (28.26%). Overall, the implementation of an integrated marketing strategy between strengthening human resource capacity, improving product quality, and utilizing digital media and e-commerce is expected to be able to increase the competitiveness and marketing performance of the Giriloyo Batik Village Gallery in a sustainable manner.

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