Available online at: http://publikasi.mercubuana.ac.id/index.php/ijiem

IJIEM (Indonesian Journal of Industrial Engineering & Management)

ISSN (Print) : 2614-7327 ISSN (Online) : 2745-9063

Marketing Strategy Analysis to Increase Income Using SWOT and Analytical Hierarchy Process (AHP) (Case Study: Sablon Dzain Art)

J.J.Z Hariadi Fadillah*, La Ode Ahmad Safar Tosungku, Theresia Amelia Pawitra
Mulawarman University, Jalan Sambaliung No.9, Samarinda City, East Kalimantan 75119 Indonesia

ARTICLE INFORMATION

Article history:

Received: 25 March 2024
Revised: 15 July 2024
Accepted: 12 November 2024

Category: Research paper

Keywords:
Strategy
Marketing
SWOT matrix
Analytical hierarchy process

DOI: 10.22441/ijiem.v6i1.26449

A B S T R A C T

Dzain Art is a business that offers clothing screen printing services. The development of Dzain Art's business has not been optimal due to its relatively small income. The marketing strategies employed have not been optimal in attracting the market's interest in using clothing printing services. The right marketing strategy will influence potential customers to use the offered clothing printing services, which will have a positive impact on the business's development. Designing a marketing strategy using the SWOT method to formulate strategies that can be applied in marketing clothing printing and the Analytical Hierarchy Process (AHP) method to prioritize the best marketing strategies for Dzain Art. Score of the Internal Factor Evaluation (IFE) Matrix is 3.0118 and the score of the External Factor Evaluation (EFE) Matrix is 2.6765. Dzain Art's position based on the IE Matrix is in Quadrant IV, which indicates that the clothing printing business is in the Growth and Build condition. In Growth and Build position, Dzain Art is suitable for implementing intensive and integrative strategies. The formulation of marketing strategies on the SWOT Matrix produces nine marketing strategies that can be implemented to market clothing printing. The priority order of marketing strategies that Dzain Art can apply in marketing clothing screen printing using the Analytical Hierarchy Process (AHP) method is increasing and expanding collaboration with institutions or communities in providing uniform clothing,second priority is enhancing promotion through social media, and third priority is utilizing digital printing production equipment.

Corresponding Author
J.J.Z Hariadi Fadillah
E-mail: Jidejed58@gmail.com

1. INTRODUCTION

Marketing is conducted by companies to communicate or promote the products they offer to the market. Effective marketing strategies can influence a company in attracting consumers and facing business competition. According to David (2009), formulating marketing strategies can be done by considering internal and external factors. An analysis of internal and external factors provides strategies based on the company's capabilities and market conditions. Businesses can be categorized based

on the number of employees working for them. A micro business is a business that employs between 1 to 4 people, and a small business has a workforce ranging from 5 to 19 people. (Badan Pusat Statistik, 2022). One of the small businesses that is popular now is the printing service business. The clothing printing is in demand due to its large market share and the cost used can be reached by the middle class.

Dzain Art is a businesses offering services in screen printing. Dzain Art is located on Pangeran Antasari Street, 7th Alley, Air Putih Village, Samarinda Ulu district, Samarinda, Kalimantan Timur. Dzain Art started its service business in 2012 and currently has a workforce of 8 people, consisting of the business owner, administration, and production staff. The target market is organizations and communities that require printing services. Dzain Art's income is small and has a limited impact on the company's finances. Dzain Art frequently lays off employees due to the unpredictable production levels each period. The small income from Dzain Art's screen printing business is attributed to low sales and the company's weak competitive edge in attracting customers to use its screen printing services. Dzain Art's income is also influenced by the numerous businesses offering similar services in Samarinda. Additionally, the business's location in a small alley makes it difficult for the public to know about Dzain Art. The high level of competition and several other weaknesses in Dzain Art require the company to develop appropriate strategies to attract customers.

Good strategy planning is done by examining the internal and external conditions faced by the company. According to Rangkuti (2015) SWOT analysis is the identification of various factors systematically to formulate the strategy of a company. Strengths represent positive factors that can be controlled by the company, weaknesses are business factors that can undermine the company and require improvement, opportunities are external factors that can help the company carry out its business, and threats are external factors that can endanger the company. The use of the SWOT matrix will provide alternative strategies for Dzain Art in marketing. According to Saaty (2004) in Indrayana and Utomo (2022) Analytical Hierarchy Process (AHP) is one of the decision support system methods that can be used to make decisions with multiple criteria and using pairwise comparison matrices. The Analytical Hierarchy Process (AHP) method can be used by decision-makers to choose the best decision among many criteria that are solutions to problem-solving. The problems with Dzain Art's screen printing income need to be analyzed and improved for the sustainability of the screen printing business. By using the SWOT method, the internal and external conditions of the company will be known. The SWOT analysis will produce the best strategies that can be implemented by the company to increase income from the screen printing business. The strategies that Dzain Art can implement need to be ranked using the Analytical Hierarchy Process method so that the company can prioritize the strategies it will implement.

2. LITERATURE REVIEW

Marketing

According to Tjiptono (2019), marketing activities are the main focus in developing a business so that it can be sustainable and achieve the profits targeted by the company. The success of a company heavily depends on the marketing carried out. Marketing strategies to be implemented must be reviewed and developed in line with the development of a market and market environment. Marketing is related to efforts made to create and deliver value to customers.

According to Tjiptono (2019), marketing strategies for services can be implemented through several alternatives developed in a market or product expansion matrix.

1. *Market Penetration*

The company continues to sell existing services to the current market segment and aims to increase sales of products to existing customers. The company can implement strategies that encourage current customers to be more loyal and increase their usage of the services.

2. *Market Development*

The company expands the market for existing services to new markets. Market development can be achieved through geographical expansion and targeting new markets.

3. *Service Development*

The company engages in service development and modifies the services offered to meet consumer needs.

4. Diversification

The company can offer new services to new markets. Expansion can be achieved through business integration via new distribution channels, acquiring suppliers, engaging in raw material supply business, and diversifying by developing different businesses from the current market applied by the company.

Formulation of Marketing Strategy

According to David (2009), suggests that the formulation of marketing strategy techniques can be carried out by creating a framework consisting of several stages. These stages include the input stage, the matching stage, and the decision stage. The input stage consists of the Internal Factor Evaluation Matrix and the External Factor Evaluation Matrix. The matching stage consists of the IE Matrix and the SWOT Matrix. The decision stage involves selecting the best strategy that can be implemented by the company. According Sedarmayanti (2014) in Pratama et al. (2020), IFE (Internal Factor Evaluation) matrix is used to identify the internal factors of the company. Internal factors relate to the strengths and weaknesses of the company in conducting business activities. Internal factors of the company can be seen from management, finance, human resources, marketing, information systems, production, and operations. EFE (External Factor Evaluation) matrix is used to identify the external factors in conducting business. External factors consist of opportunities and threats faced by the company. Data related to external factors include economic, social, cultural, demographic, environmental, political, governmental, legal, and technology.

According to David (2009), Internal-External Matrix is divided into three main sections that have different strategic impacts. Divisions falling into cells I, II, or IV are referred to as grow and build. In these divisions, intensive strategies such as market penetration, market development, or product development are the best strategies for the company. Divisions falling into cells III, V, or VI are best managed with defensive and maintenance strategies such as market penetration and product development. Divisions falling into cells VI, VIII, or IX are best suited to use harvest or divestiture strategies. According to Hidayah et al. (2017) in Maria and Elina (2021), Internal-External matrix will indicate the business's position based on the total score obtained from the IFE Matrix and the total score on the EFE Matrix. On the internal-external matrix, there are 9 cells that represent the business conditions based on the total score. The total score on the IFE Matrix is used as the X-axis, and the total score on the EFE Matrix will be used as the Y-axis.

According to Sinambela et al. (2018) in Erina and Tullah (2021), SWOT analysis is based on the relationship or interaction between internal factors within an organization or company, such as strengths and weaknesses, and external factors, such as opportunities and threats. According to Hutama (2015) in Noviyanti and Astuti (2023), SWOT analysis is conducted by structurally identifying all factors to formulate company strategies. SWOT analysis is grounded in logic that maximizes strengths and opportunities while simultaneously minimizing weaknesses and threats

Decision Support System

Darmawan (2019) Analytic Hierarchy Process (AHP) is a method used to measure intangible factors in decision-making. The Analytical Hierarchy Process is carried out by evaluating paired items. In multi-criteria problems, these steps are combined using a hierarchy to select the best solution from several alternatives. According to Rimantho and Sulandri (2022), Analytical Hierarchy Process method is widely used for decision-making in solving problems related to planning, priority setting, alternative selection, system planning, performance evaluation, optimization, and problem solving. The advantages of Analyticak hierarchy process include its ability to handle complex and non-linear problems, ease of evaluation, and the guarantee of consistency levels

Munthafa and Mubarok (2017) stated that the limitations of the AHP method lie in the primary input, which is the perception of an expert with subjective evaluation. The model in AHP becomes useless if an expert provides incorrect evaluations. The Analytical Hierarchy

Process decision-making method is purely mathematical without statistical testing, so there is no limit to the confidence of the model's accuracy. In the Analytical Hierarchy Process method, criteria or alternatives must be consistent. The level of consistency depends on the assignment of values to each paired item in the matrix based on the maximum eigenvalue. With the maximum eigenvalue, the level of inconsistency in the paired matrix can be minimized.

$$CI = \frac{\lambda max\text{-}n}{n\text{-}1}$$

Description
CI = Consistency Index
λmax = maximum eigenvalue
n = matrix order

According Saaty (1993) in Pribadi et al. (2020), the matrix resulting from comparisons made randomly will inevitably produce an inconsistent matrix. From the random matrix, a consistency index value will be obtained, also known as the random index. The inconsistency index will be transformed into a consistency ratio by dividing it by a random index. By comparing the CR and RI, a benchmark will be established to determine the consistency level of a matrix.

$$CR = \frac{CI}{RI}$$

Description
CR = Consistency Ratio
CI = Consistency Index
RI = Random Index

According to Saaty and Vargas(2012) in Rimantho and Sulandri (2022), The tolerance for consistency of a comparison matrix is 10. If a comparison matrix is considered consistent, the CR (consistency ratio) of the matrix should not exceed 0.1.

Table 1. RI value

N	RI
1	0
2	0
3	0,58
4	0,9
5	1,12
6	1,24
7	1,32
8	1,41
9	1,45
10	1,49

Kurttila et al. (2000) in Cahyadi et al. (2018) stated that the use of SWOT analysis has several limitations, including only identifying internal and external factors and the lack of importance levels in formulating strategies. Parhusip (2019), noted that the Analytical Hierarchy Process can be used to break down unstructured situations into several components in a hierarchical structure and to determine which variables have the highest priority to influence the situation.

3. RESEARCH METHOD

The research was conducted on the clothing printing business Dzain Art located on Pangeran Antasari Street, 7th Alley, Air Putih Village, Samarinda Ulu District, Samarinda, East Kalimantan. Data collection was carried out through observations and interviews with relevant parties involved in clothes screen printing. Data related to the internal condition of Art Design, such as market segmentation, target market, market position, and marketing mix (product, price, place, and promotion). External conditions related to the clothes printing business include the economy, politics, and technological development.

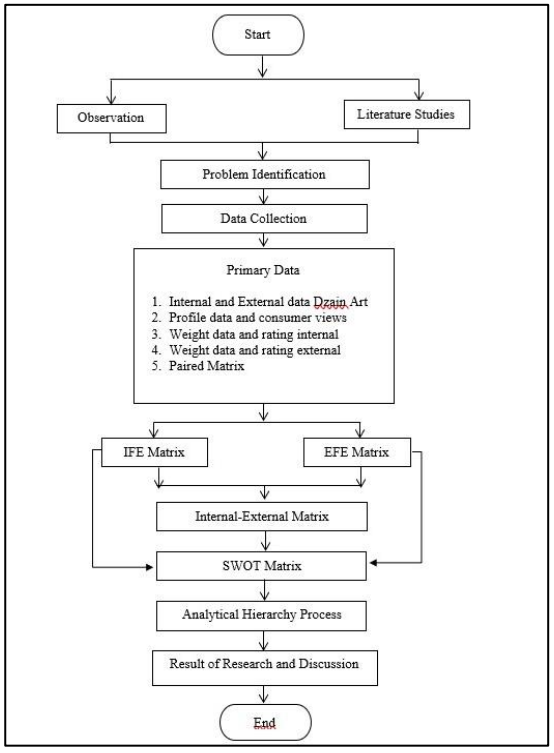

Figure 1. Research framework

4. RESULT AND DISCUSSION

Based on the results of observations and interviews conducted with informants, several factors influencing Dzain Art in marketing T-shirt printing products were identified. These factors include internal factors possessed by Dzain Art, consisting of strengths and weaknesses, and external factors faced by Dzain Art, consisting of opportunities and threats. Factors internal and external to the marketing of Art Design can be seen in Table 2.

Table 2. Internal and external factor Dzain Art

Internal	
Strengths	**Weaknesses**
1. Competitive pricing	1. Using manual tool
2. Good quality	2. Less strategic location
3. Timely completion	3. Inexperienced workforce
4. Using high quality raw material	4. Business capital only from the owner
5. Free consultation and design services	5. Does not accept single-piece
External	
Opportunities	**Threats**
1. High demand for screen printing	1. Many competitors
2. Social media as a promotional tool	2. High cost of raw materials
3. Government support for small business	3. Competitors with digital printing
4. Many Clothing stores need vendor	4. People's purchasing power Decreases
5. A large number of institutions or communites	5. Late delivery of raw materials

Input Stage

The input stage consists of the Internal Factor Evaluation Matrix and the External Factor Evaluation Matrix. Factors internal includes strengths and weaknesses, and factor external includes opportunities and threats influencing Dzain Art's marketing are given weights and ratings by respondents who understand the business situation of Dzain Art. The selected respondents are business owners and production staff heads.

According to Rangkuti (2015), the weighting of each factor is based on the level of importance of each factor to the industry sector being implemented. The weight values range from 1 to 5 (1 being not important and 5 being very important). The total weight of internal factors must equal 1. The rating assigned to each internal factor of the company should be based on the company's ability to respond to the existing factors.

Table 3. Internal factor evaluation matrix

No	Internal Factor	Weight	Rating	Score
	Strenghts			
1	Competitive pricing	0,1059	4	0,4235
2	Good quality	0,1176	4	0,4706
3	Timely completion	0,1176	4	0,4706
4	Using high quality raw material	0,1059	4	0,4235
5	Free consultation and design services	0,1176	3,5	0,4118
	Weaknesses			
1	Using manual tool	0,0941	2	0,1882
2	Less strategic location	0,1176	1,5	0,1765
3	Inexperienced workforce	0,0471	2	0,0941
4	Business capital only from the owner	0,0706	2	0,1412
5	Does not accept single-piece	0,1059	2	0,2118
	Total	**1**		**3,0118**

Table 4. External factor evaluation matrix

No	External Factor Opportunities	Weight	Rating	Score
1	High demand for screen printing	0,1176	4	0,4706
2	Social media as a promotional tool	0,1176	4	0,4706
3	Government support for small business	0,0735	3	0,2206
4	Many Clothing stores need vendor	0,0588	3,5	0,2059
5	A large number of institutions or communites	0,1029	3,5	0,3603
	Threats			
1	Many competitors	0,1029	1,5	0,1544
2	High cost of raw materials	0,1029	1	0,1029
3	Competitors with digital printing	0,1029	3	0,3088
4	People's purchasing power Decreases	0,1176	1,5	0,1765
5	Late delivery of raw materials	0,1029	2	0,2059
	Total	**1**		**2,6765**

After calculating the IFE and EFE matrix, the total score for the IFE matrix is 3.018. This score indicates that the internal condition of Dzain Art is in good condition. The total score for the EFE matrix is known to be 2.6765. This score indicates that Dzain Art is able to respond well to the external conditions of the screen printing business.

Matching Stage

The matching stage in formulating the clothes printing strategy for Dzain Art utilizes the Internal-External Matrix and SWOT Matrix.

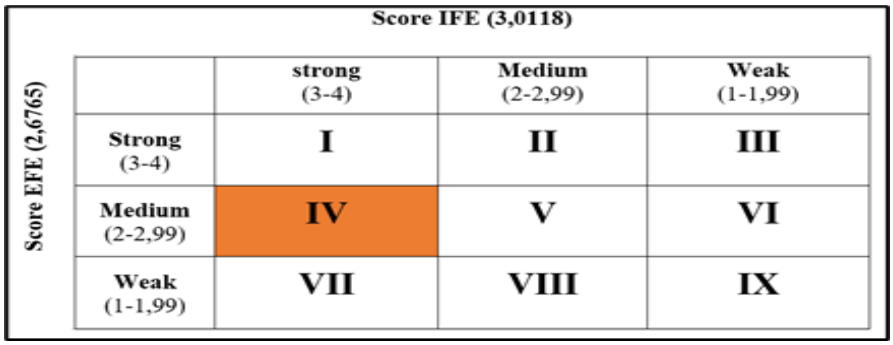

Figure 2. IE matrix Dzain Art

Based on Dzain Art's position on the Internal-External Matrix, it is found that the shirt printing business is located in quadrant IV. According to Sartoto and Nurhabiba (2021), positions in quadrants I, II, and IV represent the Build and Growth position. In the Growth and Build position, suitable strategies to apply are intensive and integrative strategies. Intensive strategies include market penetration, market development, and product development. In integrative strategy, controlling supplier strategy can be implemented. SWOT matrix Dzain Art for marketing strategi can be seen in Table 5.

Table 5. SWOT matrix Dzain Art

INTERNAL / EXTERNAL	Strenghts (S)	Weaknesses (W)
	1. Competitive pricing 2. Good quality 3. Timely completion 4. Using high quality raw material 5. Free consultation and design services	1. Using manual tool 2. Less strategic location 3. Inexperienced workforce 4. Business capital only from the owner 5. Does not accept single-piece
Opportunities (O)	S-O	W-O
1. High demand for screen printing	1. Increasing and expanding collaboration with institutions or communities in providing uniform	1. Enhancing promotion through social media (W2, O1, O2, O5)

2. Social media as a promotional tool 3. Government support for small business 4. Many Clothing stores need vendor 5. A large number of institutions or communites	clothing (S1, S2, S3, S4, S5, O1, O2, O5) 2. Offering product discounts at specific events (S1, S2, S3, S4, S5, O1, O2, O5) 3. Partnering with existing distros in Samarinda (S1, S2, S3, S4, O1, O4)	2. Establishing store signage on main streets (W2, O1, O5) 3. Setting up a clothing store in a strategic location (W2, W4, O1, O3, O5)

Threats (T)	**S-T**	**W-T**
1. Many competitors 2. High cost of raw materials 3. Competitors with digital printing 4. People's purchasing power Decreases 5. Late delivery of raw materials	1. Maintaining product price and quality (S1, S2, S3, T1, T3, T4)	1. Utilizing digital printing production equipment (W1, W3, W5, T1, T3) 2. Having multiple first-hand supplier alternatives (W4, T2, T5)

Decision Stage

Formulation of strategies in the SWOT matrix produces various strategies that can be used by Dzain Art for the development of its business. The large number of strategies makes it necessary for Dzain Art to prioritize the best strategy to achieve its desired goals. According to Putri and Pulansari (2023), the Analytical Hierarchy Process can be used for decision-making. In the first hierarchy, there is a goal at the top, criteria containing factors at the next level, sub-criteria containing actors at the next level, and finally, alternative strategies at the lowest level.The marketing hierarchy structure for Dzain Art's screen printing business is shown in Figure 3.

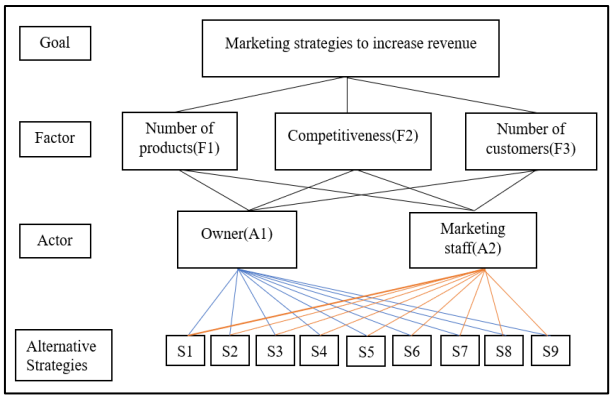

Figure 3. Hierarchy structure Dzain Art

Based on the hierarchical structure of Dzain Art's marketing strategy design, the goal is to achieve the best marketing strategy to increase income. The factors for achieving this goal are the number of products, competitiveness, and the number of customers. The actors in the hierarchical structure include the business owner and marketing staff. There are 9 alternative strategies derived from the SWOT matrix formulation.

1. Goal

The goal is to achieve a marketing strategy that Dzain Art can implement to increase income from the screen printing business.

2. Factor

The factors that influence achieving this goal include the number of products, competitiveness, and the number of customers.

Table 6. Matrix comparison factors

	F1	F2	F3
F1	1,000	3,000	2,000
F2	0,333	1,000	0,333
F3	0,500	3,000	1,000
Total	1,833	7,000	3,333

Next, the calculation is performed to determine the eigenvalue for each factor. The eigenvalue for each factor will produce a weight. The weight is used to determine the level of priority between factors relative to the goal.

Table 7. Eigenvalue on factors

	F1	F2	F3	Weight
F1	0,5456	0,4286	0,6001	0,5247
F2	0,1817	0,1429	0,0999	0,1415
F3	0,2728	0,4286	0,3000	0,3338
Total	**1,0000**	**1,0000**	**1,0000**	**1,0000**

Based on the calculation in Table 7, it is known that the main factor to achieve the goal is F1, or the number of products. Next, calculate the consistency ratio relative to the factor.

Table 8. Consistency ratio of factor

Lamda max	CI	RI	CR
3,0647	0,0324	0,5800	0,0558

Based on Table 8 above, it is known that the consistency ratio value is 0.0558, so it can be said that it is consistent.

3. Actor

The actor is the party that implements the alternative choice to achieve the factors that affect the goal that is intended to be achieved. In the actor hierarchy, a comparison is made between actors against 3 item factors.

Table 9. Matrix comparison actor against F1

	A1	A2
A1	1	5
A2	0,2	1
Total	**1,2**	**6**

The eigenvalue calculation is performed on the actor against the number of products. The calculation of the eigenvalue will obtain a weight. The weight is used as the priority order of the actor against factor F1.

Table 10. Eigenvalue on actor

	A1	**A2**	**Weight**
A1	0,8333	0,8333	0,8333
A2	0,1667	0,1667	0,1667

The calculation of the ratio is performed to determine the level of consistency. If the value of the consistency ratio is less than 0.1, it can be said that it is consistent.

Table 11. Consistency ratio

Lamda max	CI	RI	CR
2,0000	0,0000	0,0000	0,0000

With a CR value of 0, it can be said that it is consistent. Next, a comparison is made between the actor and the other factors, namely F2 and F3, resulting in the following outcome.

Table 12. Weight actor against factor

	F1	F2	F3
A1	0,8333	0,6667	0,2500
A2	0,1667	0,3333	0,7500

Next, ranking is performed on the item actor. The ranking of the actor will determine the level of priority of the actor in the hierarchy.

Table 13. Actors priority

Actor	Weight	Priority
A1	0,6150	1
A2	0,3850	2

Based on the ranking in the comparison of the actor against the factor, it is known that the owner has a main role as the actor in the hierarchy of formulating marketing strategies for Dzain Art's screen printing business.

4. Strategy alternative

Alternative strategies are strategies generated from the SWOT matrix to increase Dzain Art's income in the screen printing business. The large number of strategies will undoubtedly burden the company in implementing marketing strategies, so it is necessary to perform ranking to determine the priority of strategies that need to be implemented by Dzain Art. The calculation of the comparison of alternative strategies is done by comparing each alternative strategy against the hierarchy above it, namely against the actor. The following is the weight of the comparison between alternative strategies against A1, which is the owner

Table 14. Matrix comparison alternative agains A1

	S1	S2	S3	S4	S5	S6	S7	S8	S9
S1	1,000	3,000	3,000	3,000	5,000	5,000	3,000	7,000	9,000
S2	0,333	1,000	3,000	0,333	2,000	0,333	0,500	3,000	5,000
S3	0,333	0,333	1,000	0,333	2,000	3,000	0,500	2,000	3,000
S4	0,333	3,000	3,000	1,000	3,000	5,000	3,000	5,000	7,000
S5	0,200	0,500	0,500	0,333	1,000	0,333	0,333	2,000	2,000
S6	0,200	3,000	0,333	0,200	3,000	1,000	0,333	2,000	2,000
S7	0,333	2,000	2,000	0,500	3,000	3,000	1,000	3,000	5,000
S8	0,143	0,333	0,500	0,200	0,200	0,200	0,333	1,000	3,000
S9	0,111	0,200	0,333	0,143	0,500	0,500	0,200	0,333	1,000
Total	2,987	13,366	13,667	6,043	19,700	18,367	9,200	25,333	37,000

After performing paired comparisons between elements in the alternative strategy against actor A1, which is Owner, the next step is to calculate the eigenvalue for the elements present in the alternative strategy.The eigenvalue will produce a weight that determines the priority.

Table 15. Eigenvalue alternative against A1

	S1	S2	S3	S4	S5	S6	S7	S8	S9	Weight
S1	0,3348	0,2244	0,2195	0,4965	0,2538	0,2722	0,3261	0,2763	0,2432	0,2941
S2	0,1116	0,0748	0,2195	0,0552	0,1015	0,0181	0,0543	0,1184	0,1351	0,0987
S3	0,1116	0,0249	0,0732	0,0552	0,1015	0,1633	0,0543	0,0789	0,0811	0,0827
S4	0,1116	0,2244	0,2195	0,1655	0,1523	0,2722	0,3261	0,1974	0,1892	0,2065
S5	0,0670	0,0374	0,0366	0,0552	0,0508	0,0181	0,0362	0,0789	0,0541	0,0482
S6	0,0670	0,2244	0,0244	0,0331	0,1523	0,0544	0,0362	0,0789	0,0541	0,0805
S7	0,1116	0,1496	0,1463	0,0827	0,1523	0,1633	0,1087	0,1184	0,1351	0,1298
S8	0,0478	0,0249	0,0366	0,0331	0,0102	0,0109	0,0362	0,0395	0,0811	0,0356
S9	0,0372	0,0150	0,0244	0,0236	0,0254	0,0272	0,0217	0,0132	0,0270	0,0239

After knowing the eigenvalue of the alternative strategy against A1, the weight of each element of the alternative will be obtained. Next, the consistency test will be performed on the comparison of the alternative strategy against actor A1. The consistency test is to determine the level of consistency of the expert's evaluation of the paired comparison between elements.

Table 16. Consistency ratio alternative agains A1

Lamda maks	CI	RI	CR
9,9839	0,1230	1,4500	0,0848

Based on the consistency test of the alternative strategy against actor A1, it is known that the CR value is 0.0848. Since the CR value is less than 0.1, it is known that the result of the calculation is consistent. Next, a paired comparison is made between the alternative strategy and the actor, staff marketing or A2, resulting in the following outcome.

Table 17. Weight alternative against A1 and A2

Strategy	K1	K2
Increasing and expanding collaboration with institutions or communities in providing uniform clothing (S1)	0,2941	0,0646
Offering product discounts at specific events (S2)	0,0987	0,1927
Partnering with existing distros in Samarinda (S3)	0,0827	0,0987
Enhancing promotion through social media (S4)	0,2065	0,0950
Establishing store signage on main streets (S5)	0,0482	0,0617
Setting up a clothing store in a strategic location (S6)	0,0805	0,0312
Maintaining product price and quality (S7)	0,1298	0,1100
Utilizing digital printing production equipment (S8)	0,0356	0,3150
Having multiple first-hand supplier alternative s(S9)	0,0239	0,0311
Consistency Ratio	**0,0848**	**0,0902**

After knowing the value of each weight of the alternative on each alternative strategy against the actor, the next step is to perform ranking. The ranking of the alternative strategy will result in the best strategy for Dzain Art in increasing income from the screen printing business. The value of the ranking on the alternative strategy is obtained by summing the multiplication of the weight of the item strategy against the weight of the actor. The following is the calculation to determine the ranking priority on the alternative strategy.

Table 18. Priority of Strategy Alternative

Strategy Alternative	Calculation	Weight	Priority
S1	(0,6150*0,2941)+(3850*0,0646)	0,2058	1
S2	(0,6150*0,0987)+(3850*0,1927)	0,1349	4
S3	(0,6150*0,0827)+(3850*0,0987)	0,0889	6
S4	(0,6150*0,2065)+(3850*0,0950)	0,1636	2
S5	(0,6150*0,0482)+(3850*0,0617)	0,0534	8
S6	(0,6150*0,0805)+(3850*0,0312)	0,0615	7
S7	(0,6150*0,1298)+(3850*0,1100)	0,1222	5
S8	(0,6150*0,0356)+(3850*0,3150)	0,1432	3
S9	(0,6150*0,0239)+(3850*0,0311)	0,0267	9

After performing the ranking of alternative strategies, the result shows that the first priority strategy is to increase and expand cooperation with institutions or communities in providing uniform clothing. Dzain Art can implement this strategy by establishing relationships or partnerships with institutions, ensuring that when an institution or group needs screen printing services, they already know that Dzain Art can meet their needs. On the second priority is enhancing promotion through social media. By intensifying promotion through social media, the public will become aware of Dzain Art existence. The third priority is utilizing digital printing production equipment. By using digital printing, the production process will undoubtedly be simplified, reducing production errors and making the process easier and faster.

5. CONCLUSION

Internal factors of Dzain Art's include strengths such as competitive pricing, quality of printing, timeliness, high-quality raw materials, and free design services. Weaknesses of Dzain Art's printing include still using manual tools, less strategic location, inexperienced workforce, owner's capital, and not accepting single-item orders. External factors present opportunities such as high demand for printed shirts, use of social media for product marketing, government support for SMEs, and numerous sports institutions or organizations in Samarinda. Threats include many competitors, high raw material prices, shirt manufacturers with more advanced equipment, sluggish economy, and delayed raw material deliveries.

There are nine marketing strategies that Dzain Art can implement to increase income from screen printing. The first priority strategy is to increase and expand cooperation with institutions or communities in providing uniform clothing, with a score of 0.2058, the second priority strategy is to increase promotion through social media, with a score of 0.1508, the third priority strategy is to utilize digital printing production equipment, with a score of 0.1753, offering product discounts on special occasions, with a score of 0.1349, maintaining product price and quality, with a score of 0.1222, partnering with existing distributors in Samarinda, with a score of 0.0889, establishing a clothing store at a strategic location, with a score of 0.0615, installing store signage on main streets, with a score of 0.0534, and having multiple direct supplier alternatives, with a score of 0.0267. Suggestions for future researchers to use other methods in formulating marketing strategies such as using the QSPM method in decision making.

REFERENCES

Badan Pusat Statistik. (2022). Kategori UMKM. Redrieved February 6, 2023, from Badan Pusat Statistik website: https://www.bps.go.id/subject/170/industri-mikro-dan-kecil.html

Cahyadi, F. D., Khakhim, N., & Mardiatno, D. (2018). Integrasi SWOT dan AHP dalam pengelolaan ekosistem mangrove di kawasan wisata bahari gugusan pulau Pari. *Jurnal Parawisata Pesona*, 3(2), 105-118. https://doi.org/10.26905/jpp.v3i2.2336

Darmawan, D. P. (2018). Analytic network process untuk pengambilan keputusan dalam lingkungan bisnis yang kompleks. Yogyakarta: Expert.

David, F. R. (2009). Strategic Management: concept. New Jersey: Pearson Education.

Elina, M., & Tullah, R, 2021, Analisis Strategi Bisnis Pada PT. Era Global Prioritas Di Bandar Lampung. *Jurnal Ilmu Manajemen Saburai*, 7(1), 77-92. https://doi.org/10.24967/jmb.v7i1.1270

Indryana, M dan Utomo, D.S. (2022) Selection Of Promotional Media With The Integration Of AHP Fuzzy And TOPSIS (Case Study In A Study Program). *Journal of Industrial Engineering and Halal Industries*, 3(1), 35-40. https://doi.org/10.14421/jiehis.3487

Munthafa, A. E., & Mubarok, H. (2017). Penerapan Metode Analytical Hierarchy Process Dalam Sistem Pendukung Keputusan Penentuan Mahasiswa Berprestasi. *Jurnal Siliwangi*, 3(2), 192-201. https://doi.org/10.37058/jssainstek.v3i2.355

Noviyanti, G & Astuti, R. D. (2023). Perumusan Strategi Pemasaran Menggunakan Metode Analisis SWOT dan AHP (Studi Kasus: Toko Nurfi, Desa Kepuh Kecamatan Palimanan Kabupaten Cirebon). *Jumantara*, 2(1), 16-22.

http://dx.doi.org/10.28989/jumantara.v2i1.1440

Parhusip, J. (2019). Penerapan Metode Analytical Hierarchy Process (AHP) Pada Desain Sistem Pendukung Keputusan Pemilihan Calon Penerima Bantuan Pangan Non Tunai (BPNT) di Kota Palangka Raya. *Jurnal Teknologi Informasi*, 13(2), 18-29. https://doi.org/10.47111/jti.v13i2.251

Pratama, A., Tambunan, W., & Sitania, F. D. (2020). Analisis Strategi Pemasaran Jasa Percetakan dengan Menggunakan Metode SWOT dan Analyitc Hierarchy Process. *Journal of Industrial and Manufacture Engineering*, 4(1), 12-21.
https://doi.org/10.31289/jime.v4i1.2972

Pribadi, D., Saputra, R. A., Hudin, J. M., dan Gunawan, 2020, *Sistem Pendukung Keputusan*, Graha Ilmu, Yogyakarta.

Putri, J. S. K., & Pulansari, F. (2023). Measurement of Supply Chain Management Performance in the Wood Pellet Industry Using the SCOR Method Based on AHP, OMAX, and Traffic Light System. *IJIEM-Indonesian Journal of Industrial Engineering & Management*, 4(3), 609-617. https://doi.org/10.22441/ijiem.v4i3.21617

Rangkuti F. (2015). Personal SWOT Analysis:Peluang di Balik Setiap Kesulitan. Jakarta: Gramedia Pustaka Utama.

Rimantho, D., & Sulandri, U. (2022). Analisis pengambilan Keputusan aplikasi metode Analytic Hierarchy Process (AHP). Bogor: PT Penerbit IPB Press.

Satoto, H. F., & Norhabiba, F. (2021). Perencanaan Strategi Pengembangan Usaha dengan Metode Quantitative Strategic Planning MatriksStudi Kasus UD. Intansari Raya. *Tiarsie*, 18(4), 109-115. https://doi.org/10.32816/tiarsie.v18i4.120

Tjiptono, P. (2019). Pemasaran Jasa: Prinsip, penerapan dan penelitian. Perpustakaan nasional: katalog dalam terbitan.