The Asian Journal of Technology Management Vol. 13 No. 3 (2020): 213-228

Application of Combined SWOT and AHP for Strategy Development: A Case of Slow Fashion Brand in Bandung, Indonesia

Dandy Aldilax*[1] and Waldemar A. Pfoertsch[2]
[1]Department of Continuing Education, University of Oxford, United Kingdom
[2]Business School, University of Pforzheim, Germany

Abstract. *Raising global awareness in a sustainable environment intrigued many young designers and environmental activists to create environmentally friendly products. Slow fashion is a new solution to overcome issues caused by fast fashion, which promotes concern about the environment and sustainability of the products proven by materials, process, and disposal of the products. However, there is lack of empirical evidence about strategy development for Slow Fashion brand in Indonesia. This study aims to identify an appropriate strategy for slow fashion brand in Bandung, Indonesia. Bandung is one of the most creative cities in Indonesia, according to UNESCO, and be the main area of the research. Based on the result, researcher can determine several strategies for slow fashion brand in Indonesia. This research used quantitative approach through questionnaire filled during Forum Group Discussion (FGD). In developing the strategies, internal and external factors were carried out from environment scanning and discussion, then analyzed use hybrid methodology of SWOT-AHP. The result of the study concludes four strategies by considering both internal and external factors overall priority score. This study is important in understanding the most important factors to consider in developing strategies to grow a slow fashion brand in Indonesia.*

Keywords: *Analytical Hierarchy Process , Slow Fashion, Strategic Planning , SWOT*

1. Introduction

Fashion is close in our day to day activity. Apparel is the biggest contributor to fashion industry and its revenue remains strong these days. Statista (2020) predicts that in Indonesia, apparel industry gain revenue around USD 8 billion and will hit its peak in 2025 by USD 25 billion. It implies that apparel industry still growing and potentially become one of the biggest industry among consumer goods. It was reasonable given the textile and fashion are a primary need (Maizer, 2016). In the rising of apparel industry, many fashion experts heavily discussed two fashion made, which are slow fashion and fast fashion.

Wagner (2020) described fast fashion as a business model whereas many fashion collections as possible brought to the market as quickly as possible. Attracting consumers to follow the trend buy the latest fashion collection, even when they do not need it. Slow fashion is suggested to be the opposite of fast fashion (Aldilax, Hermawan, & Mayangsari, 2020).

Slow fashion is ethically way better than fast fashion (Kowalski, 2018) as slow fashion aims to introduce a fashion mode that concerned about environment and sustainability of the products (Kjellevand & Kjellevand, 2018).

The raising of global awareness in sustainable environment, intrigued many young designer and environment activist to create environmental friendly product and ‚generally, many slow fashion brand gain success in United States of America The Good Trade (2020). A recent study from Handoyo (2018) found that the level of environmental conscious performance from the majority (63,2%) of participants is adequate. Adequate environmental performance level indicates that many Indonesian consumers are more aware of the environment than a decade ago.

*Corresponding author. Email: dandy.aldilax@conted.ox.ac.uk
Received: September 12th, 2020; Revised: November 30th, 2020; Accepted: December 15th, 2020
Doi: http://dx.doi.org/10.12695/ajtm.2020.13.3.3
Print ISSN: 1978-6956; Online ISSN: 2089-791X.

Correspond with this fact, slow fashion brand try to promote environmental-friendly value on each product and has attracted some group of people to pay more attention (Aldilax et al., 2020). However, as one of the country that considered have lower-middle-income (The Jakarta Post, 2020), it is generally hard to promote slow fashion brand as introducing new concepts in fashion is complicated and need right penetration based on customer behavior. Slow fashion brand that is mostly categorized in small and or medium enterprises has limited resources to develop their business. They need to compete with big enterprises and create better strategies to promote their product. One example from young slow fashion brand in Indonesia, namely Sukku Collective, has struggled for years to better understand consumer and market in a slow fashion industry. Sukku Collective is a start-up launched at the beginning of 2018 and owns by 3 business students in Indonesia with actively raising people's awareness and promoting the importance of appreciation (Aldilax, Lazuardi, & Chrisdira, 2018).

Although big players continue to expand or operate in most of Indonesia's largest cities, there are other opportunities for fashion players beyond those serving the affluent of Southeast Asia (Kim, Potia, & Wintels, 2002). Beaver and Ross (2000) showed that strategic thinking is an essentials ingredient in enterprises' survival, performance, and growth. Therefore, examining the internal and external factors of a slow fashion brand can help understand the potential of a slow fashion brand and develop its strategies to compete with the fast fashion industry. Lack of empirical evidence about Indonesian slow fashion brand makes Indonesia an interesting region to conduct the research.

This research's object is slow fashion brand in Bandung, Indonesia and the aim is to develop appropriate strategy for slow fashion brand in Indonesia with a case study of Bandung. Bandung has been chosen because UNESCO (2015) considers it as one of the most creative city in Indonesia. This research will include the process of internal and external factors identified through environmental scanning and forum group discussion (FGD) with slow fashion brand expertise and practitioner in Bandung. Then followed by analysis and decision making that provides company with the criteria for attaining competitive advantages with hybrid methodology of SWOT-AHP.

2. Literature Study / Hypotheses Development

2.1. SWOT Analysis

Strengths, Weakness, Opportunities, and Threat (SWOT) analysis is an ordinarily utilized instrument for examining internal and external conditions to accomplish a precise methodology and backing for a decision making process (Kahraman, Demirel, & Demirel, 2007). Zavadskas, Turskis, and Tamosaitiene (2011) defined SWOT as a situational assessment tool applied by strategic planners of the project or business organization to evaluate current status to choose the best alternatives for the future direction. SWOT analysis can help researcher to weight importance of factor and sub-factors that will lead to prioritization of future strategy in various industry such as government (Kahraman et al., 2007), Energy and Security (Stojčetović, Nikolić, Živković, & Bogdanović, 2019, Tourism (Falcone, 2019; Nikolic et al., 2019), and Food and Agronomy (Olum et al., 2018; Zarei & Paghaleh, 2011). SWOT also applicable for decidinf the most contextual strategy out of available alternatives (David, 2004; Hill & Westbrook, 1997).

2.2. Analytical Hierarchy Process

Analytical Hierarchy Process (AHP) introduced by Saaty (1980). AHP is one of methodology among other multi-attribute evaluation method. AHP is considered the most widely used technique among all multi criteria decision making techniques (Basset, Mohamed, Sangaiah, & Jain, 2018). AHP uses pair-wise comparisons and matrix algebra to

weigh criteria, then decision is made by using the derived weights of the evaluative criteria (Saaty, 1980).

Begin with construction of problem, then matrices of pair-wise comparisons (Eq. (1)) are obtained (Saaty, 1980). Saaty further explained that in this matrix, the element $a_{ij} = 1/a_{ij}$ hence, when $i = j, a_{ij} = 1$. The value of w_1 may vary from 1 to 9, and 1/1 indicates equal importance while 9/1 indicates extreme or absolute importance.

$$A = (a_{ij}) = \begin{bmatrix} 1 & w_1w_2 & \cdots & w_1w_n \\ w_2w_1 & 1 & \cdots & w_2w_n \\ \vdots & \vdots & \cdots & \vdots \\ w_nw_1 & w_nw_2 & \cdots & 1 \end{bmatrix} (1)$$

Some inconsistencies can be expected and accepted (Kahraman et al., 2007). When A contain inconsistencies, the estimated priorities can be obtained by using the matrix (Eq. (1)) as the input using eigenvalue technique (Eq. (2)) (Saaty, 1980).

$$A - \lambda_{max} I)q = 0 \ (2)$$

Where λ_{max} is the largest eigenfactor and matrix A of size n; q, is its correct eigenfactor; and *I* is the identify matrix of size *n*. The correct eigenfactor ,q, constitutes the estimation of relative priorities. It is the first principal component of the matrix of pair wise comparisons. If the matrix does not include any inconsistencies, i.e., a decision maker's judgments have been consistent ,q, is the exact estimate of the priority vector. Each eigenfactor is scaled to sum up to one to obtain the priorities.

Saaty (1977) explained that $\lambda_{max} = n$ is a necessary and sufficient condition for consistency. Inconsistency may arise when λ_{max} deviates from n due to inconsistent responses in pair-wise comparisons. Therefore, the matrix A should be tested for consistency using index, CI, has been constructed (Eq. (3)) (Saaty, 1980).

$$CI = \lambda_{max} - n)/(1 - n) \ (3)$$

CI estimates the level of consistency with respect to a comparison matrix. Then, because CI is dependent on n, a consistency ratio CR is calculated, which is dependent of n (Eq. (4)) (Saaty, 1980).

$$CR = CI/RI \quad (4)$$

CI is the consistency index; RI is random index (RI) generated for a random matrix of order n, and CR is consistency ratio (Saaty, 1993). The general rule is that CR ≤ 0.1 should be maintained for the matrix to be consistent. Otherwise, all or some of the comparisons must be repeated in order to resolve the inconsistencies of the pair-wise comparisons (Kahraman et al., 2007).

Thus, the comparisons' results are quantitative values expressing the priorities of the factors included in SWOT analysis (Kurttila, Pesonen, Kangas, & Kajanus, 2000).

2.3. SWOT Analysis and AHP Hybrid Method

Kahraman et al. (2007) found that one limitation of SWOT analysis is that the important factor of each factor in decision-making cannot be quantitively measured. Kahraman et al. (2007) further explain that AHP is a way to deal with dynamics that includes organizing various decision rules into a progressive system, surveying the general significance of these rules, looking at options for every model, and deciding a general positioning of the other options. Hence, combination methodology with Analytical Hierarchy Process (AHP) enables quantitative measure to SWOT approach, especially for importance weight in each factor (Ananda & Herath, 2003; Kurttila et al. 2000; Saaty, 1993). AHP can systematically weight factors through pair-wise comparisons (Basset et al., 2018). AHP's association with SWOT yields diagnostically decided needs for the components remembered for SWOT investigation and makes them commensurable (Kahraman et al., 2007).

Hybrid method of SWOT and AHP has been extensively used. Muzahidul et al. (2020) used a combination of SWOT and AHP for strategy development in pottery industry. Their study found that the use of SWOT-AHP has assisted in realizing idiosyncrasies of

pottery industry qualitatively and quantitatively. On the other hand, Stojčetović et al. (2019) used SWOT-AHP method to determine current situation and define strategies for energy security improvement. Basset et al. (2018) also found that by adding AHP to SWOT analysis, the SWOT analysis performance is enhanced by determining the quantitative values that lead to improved decisions. Contemporary research has repeatedly shown that strategic thinking and planning is strongly related to small business performance (Ross, Jones, & Adams, 2008). Recent study by Ross et al., (2008) showed that strategic thinking is an essentials ingredient in enterprises' survival, performance, and growth. Another research (Entrialgo, Fernandez, & Vazquez, 2000) have demonstrated that entrepreneurship is positively correlated to innovation-based differentiation strategy, analysis, flexibility, focus of planning, horizon, and strategic controls. It means that small and medium enterprises is influenced by strategic management practices and by its competitive strategy.

2.4. Concept of Strategic Management

Strategic management is a set of managerial decisions and actions that help determine an organization's long-term performance (Wheelen & Hunger, 2015). Strategic management provides overall direction to an enterprise and involves specifying the organization's objectives, developing policies and plans to achieve those objectives, and then allocating resources to implement the plans (Ayitey, 2010)

At its heart, strategic management involves identifying how the organization stacks up compared to its competitors and recognizing opportunities and threats facing an organization, whether they come from within the organization or from competitors (Kenton & Mansa, 2020). To maintain the vision, mission, and goals, every company need to define their strategic management. It is undeniable that strategic management holds important role in every successful company. On the other hand, strategic management help company to achieve their competitive advantages in the market. The conceptual framework of strategic management has been expanded and refined by business practitioners and researcher to find right formulation.

Strategy Formulation is the development of long-range plans for the effective management of environmental opportunities and threats, in light of corporate strengths and weaknesses (SWOT) (Wheelen & Hunger, 2015). The process of strategy formulation is essentials for an organization because it provides a theory, framework, and guidelines to determine company strategy to achieve the goals. A strategic plan also enables an organization to evaluate its resources, allocate budgets, and determine the most effective plan for maximizing ROI (return on investment) (The Saylor Foundation, 2013). Strategy formulation also refers to the process of choosing the most appropriate course of action for the realization of organizational goals and objectives and thereby achieving the organizational vision (Juneja, 2020). Wheelen and Hunger (2015) also clearly defined three different strategies. The typical business firm usually considers three types of strategy: corporate, business, and functional.

3. Methodology

3.1. Research Design

The method used in this research is exploratory. This research used quantitative method. The method was used to find the right importance factors for slow fashion brand and generate right strategy for SMEs of slow fashion brand in Indonesia. Data being analyzed with AHP to efficiently assess SWOT factors and proportionate their forces. In the event that it is utilized in mix with AHP, SWOT approach can give a quantitative proportion of significance of each factor on decision making process (Saaty & Vargas, 2001).

3.2. Data Collection and Analysis

Data collected by conducted a focus group discussion (FGD) to discuss a SWOT of a slow fashion brand and questionnaire was constructed based on discussion. Then, all respondents agreed on the importance of each factor and filled the questionnaire. The respondents were selected based on the experience of its involvement in the slow fashion industry, which at least one year experienced. As AHP is subjective approach for addressing specific issues, data collection under this methodology does not require large sample size (Baby, 2013; Waris et al., 2019). Hence, 5 experts and practitioners of slow fashion brand in Bandung were gathered virtually to discuss and answered the questionnaire.

The following full data collection and analysis steps refer to previous study (Basset et al., 2018; Kurttila et al., 2000).

Step 1*: SWOT Analysis is carried out*

The external and internal environment's relevant factors are identified during FGD and included in SWOT analysis (Kurttila et al., 2000). When standard AHP is applied, it is suggested that the quantity of factors inside a SWOT should not surpass 10 on the grounds that the quantity of pairwise examinations required in investigation increment quickly (Saaty, 1980). The internal factors will consist of Strengths (S) and Weakness (W), while external factors consist of Opportunity (O) and Threat (T). SWOT gather from observation and slow fashion practitioners.

Step 2: *Structure of the hierarchy of problem*

Basset et al. (2018) explained that the hierarchy should include four levels. The first level is the goal that organization wants to achieve. The second level consists of the four strategic criteria that are defined by SWOT analysis (criteria). The third level is the factors included in each strategic factor of the previous level (sub-criteria). The final level includes the strategies that should evaluate and compare.

Step 3*: Pair-wise comparisons between SWOT factors are carried out within every SWOT group*

Questionnaire constructed based on result of **step 1**. Then Slow Fashion practitioner filled in the questionnaire in which the data obtained use to do comparisons both for **step 3** and **4**. When making the comparisons, the questions at stake are: (1) which of the two factors compared is greater (strength, opportunity, weakness, or threat); and (2) how much greater. With these comparisons as the input, the factors' relative local priorities are computed using the eigenvalue method (described below). These priorities illustrated how the decision maker perceived the relative importance of each factor.

Step 4*: Pair-wise comparisons are made between the four SWOT group*

The factor with the highest local priority is chosen from each group to present the group. These four factors are then compared as in Step 2. These are the scaling factors of the four SWOT groups, and they are used to calculate the global priorities of the independent factors within them. This is done by multiplying the factors' local priorities (defined in Step 2) by the value of the SWOT group's corresponding scaling factor. The global priorities of all the factors sum up to one.

Step 5*: The result is utilized in the strategy formulation and evaluation process*

The contribution to the strategic planning process comes in the form of numerical values for the factors. New goals may be set, strategies defined, and such implementations planned, taking into close consideration the foremost factors. In this step, SWOT strategy matrix is developed. The purpose is to formulate possible strategies by referencing the set of relevant elements obtained in the previous steps. The matrix will select the most appropriate strategies to achieve the proposed objective.

The SWOT strategy matrix adopted from Weihrich (1982) lists a set of four strategic groups from crossing the internal and external factors in SWOT analysis. Prioritizing those sub-factors that have gained greater relevance in the previous phase, it is generally in this last phase important to maximize strengths and

opportunities and minimize weaknesses and threats (Lenis Escobar, Rueda López, García Guerrero, & Salinas Cuadrado, 2020). Table 1 shows the SWOT Matrix.

Table 1.
SWOT Strategy Matrix by (Weihrich, 1982)

		External Factors	
		Threats	**Opportunity**
Internal Factors	Weaknesses	"WT-mini-mini" strategies Try to minimize both weaknesses and threats, thus reducing the risks that may arise.	"WO-mini-maxi" strategies Seek to minimize weaknesses and maximize opportunities. In this sense, it is a question of identifying internal weaknesses that prevent the seizing of opportunities
	Strengths	"ST-maxi-mini" strategies The goal of these strategies is to maximize those strengths capable of minimizing threats from abroad.	"SO-maxi-maxi" strategies The purpose of these strategies is to maximize those strengths that will allow for seizing or developing opportunities.

4. Findings and Discussion

4.1/ SWOT Analysis for Slow Fashion Industry
Identify internal and external factors that might impact the industry is the initial stage to select appropriate strategies for Slow Fashion Industry. Environment Scan and Discussion were performed to identify internal (strengths and weaknesses) factors and external (opportunities and threats) factors. Hence, table 2 shows the sub-factors of SWOT analysis.

Table 2.
SWOT Matrix of Slow Fashion Brand

No	**Internal Factors**	
A.	**Strength (S)**	**Weaknesses (W)**
1	Strong Brand Identity	Low Production Quantity
2	Integrated Marketing Communication	Long Business Process
3	Extraordinary Design	Limited Number of Sashiko Expert
4	Targeted Market Segment	Quality Control Process
5	Product Quality	Inconsistency Number of Sales
6	Strong Connection to Existing Brand	Low Rate of Research and Development Process
No	**External Factors**	
A.	**Opportunity (O)**	**Threat (T)**
1	High skilled labor	Copyright Issues
2	New Fashion Trend	Fast Fashion Retailer
3	Eco-Friendly Brand	High Invested Competitor
4	Raw Materials always Available	Change of Fashion Trend
5	Create lot of New Jobs	Regular Jeans has Lower Price
6	Support Creative Economy Program	Foreign Country Competitor

4.2. Hierarchy Structure Development

The hierarchical structure according to the proposed methodology and SWOT analysis is presented in figure 1. The figure shows $S_1 \ldots S_{10}$ are the strength sub-factors as listed orderly in SWOT Analysis of Slow Fashion Brand. Also $W_1 \ldots W_6$, $O_1 \ldots O_6$, and $T_1 \ldots T_6$ are weakness, opportunities, and threats sub-factors of Slow Fashion Brand SWOT Analysis, respectively, as shown in Table 1.

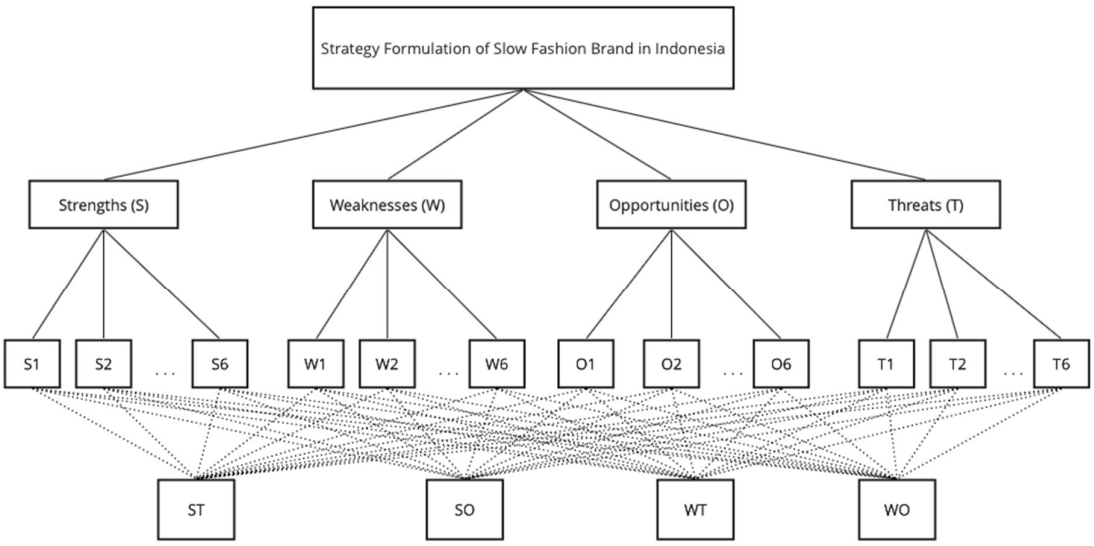

Figure 1
The Hierarchical Structure of Problem

4.3. Pair-wise comparisons

The pair-wise comparisons matrices among SWOT groups (table 2) and sub-factors of SWOT group (table 3-6). Practitioners in Slow Fashion Industry filled these matrices.

Table 3.
Priorities of SWOT Groups

With Respect to the goal	Strengths	Weakness	Opportunities	Threats
Strengths	1	5	2	3
Weakness	1/5	1	1/3	2
Opportunities	1/2	3	1	5
Threats	1/3	1/2	1/5	1

Table 4.
Priorities of Strength Sub-Factor

With respect to strengths group	S1	S2	S3	S4	S5	S6
S1	1	3	5	4	1/5	3
S2	1/3	1	5	3	1/4	3
S3	1/5	1/5	1	3	1/5	1/3
S4	1/4	1/3	1/3	1	1/5	1/2
S5	5	4	5	5	1	3
S6	1/3	1/3	3	2	1/3	1

Table 5.
Priorities of Weakness Sub-Factor

With respect to weaknesses group	W1	W2	W3	W4	W5	W6
W1	1	2	3	3	3	5
W2	1/2	1	3	4	4	5
W3	1/3	1/3	1	1/3	1/4	3
W4	1/3	1/4	3	1	1/3	3
W5	1/3	1/4	4	3	1	5
W6	1/5	1/5	1/3	1/3	1/5	1

Table 6.
Priorities of Opportunity Sub-Factor

With respect to opportunities group	O1	O2	O3	O4	O5	O6
O1	1	2	3	3	4	4
O2	1/2	1	3	2	3	4
O3	1/3	1/3	1	1/3	1/3	3
O4	1/3	1/2	3	1	2	3
O5	1/4	1/3	3	1/2	1	3
O6	1/4	1/4	1/3	1/3	1/3	1

Table 7.
Priorities of Threat Sub-Factor

With respect to threats group	T1	T2	T3	T4	T5	T6
T1	1	1/3	5	1/3	4	5
T2	3	1	5	2	4	4
T3	1/5	1/5	1	1/4	3	2
T4	3	1/2	4	1	4	4
T5	1/4	1/4	1/3	1/4	1	3
T6	1/5	1/4	1/2	1/4	1/3	1

Using pair-wise comparisons given above and Microsoft Excel software package, the following priorities of the SWOT Group subfactors have been obtained. The result presented in table 8. To further explain the steps to generate the priority, each calculation steps will be explained below.

Table 8.
Priorities and Consistency Ratios of Comparisons of The SWOT Group and Factor

SWOT Group	Priority of the Group	SWOT Factors	Consistency Ratio	Priority of the Factor within the Group	Overall priority of the factor
Strengths	0,464	Strong Brand Identity	0,068	0,300	0,139
		Integrated Marketing Communication		0,091	0,042
		Extraordinary Design		0,131	0,061
		Targeted Market Segment		0,055	0,025
		Product Quality		0,321	0,149
		Strong Connection to Existing Brand		0,103	0,048
Weaknesses	0,120	Low Production Quantity	0,094	0,327	0,039
		Long Business Process		0,277	0,033
		Limited Number of Sashiko Expert		0,073	0,009
		Quality Control Process		0,108	0,013
		Inconsistency Number of Sales		0,175	0,021
		Low Rate of Research and Development Process		0,041	0,005

Table 8. *(Continued)*
Priorities and Consistency Ratios of Comparisons of The SWOT Group and Factor

SWOT Group	Priority of the Group	SWOT Factors	Consistency Ratio	Priority of the Factor within the Group	Overall priority of the factor
Opportunities	0,325	High skilled labor	0,065	0,345	0,112
		New Fashion Trend		0,237	0,077
		Eco-Friendly Brand		0,087	0,028
		Raw Materials always Available		0,159	0,052
		Create lot of New Jobs		0,121	0,039
		Support Creative Economy Program		0,051	0,017
Threats	0,091	Copyright Issues	0,088	0,195	0,018
		Fast Fashion Retailer		0,341	0,031
		High Invested Competitor		0,086	0,008
		Change of Fashion Trend		0,257	0,023
		Regular Jeans has Lower Price		0,072	0,007
		Foreign Country Competitor		0,048	0,004

The first step is to calculate all number in each column in Table 3. The result will be 2.03, 9.5, 3.53, and 11.00, respectively. Afterward, each number in the column was normalized by dividing the column's sum. Hence, the result obtained in the first line of the matrix are 0.492, 0.526, 0.566, and 0.273. Lastly, the Strength factor's priorities are calculated by taking an average of all the number in the first row. In this case, the result of Strength's priorities is 0.464. This steps calculation applied to each row in Table 3 to get number of each factors priorities. The priorities of the factors within the group were obtained in the same steps by using matrices in table 4 to table 7.

Consistency of practitioners in answering questionnaire to assign score for each pair-wise comparison matrices were checked by calculating the consistency ratio. If the CR is much over 0.1 the judgments are untrustworthy because they are too close for comfort to randomness and the exercise is valueless or must be repeated (Saaty, 1980). Consistency Ratio checked by calculating formula given in literature review. In the table 8, consistency ratio of each factors is less than 0.10. Even though some factors show a quite high consistency ratio, 0.094 and 0.088, these numbers still within the tolerable ratio and practitioner judgment still consider consistent. In addition, consistency ratio of the comparisons between four SWOT groups is 0.025.

From Table 8, we can see that Strengths and Opportunities have high priorities compare to other groups. Strengths has priority 0.464, followed by Opportunities group with 0.325, then Weaknesses and Threats group 0.120 and 0.091, respectively. This result imply that Slow

Fashion Brand focus to prioritize their potential both internal and external. This could be a consideration to develop strategies from combination of Strengths and Opportunities (S-O). S-O strategies means Slow Fashion Brand needs to using its strength to maximize the potential opportunities.

Overall priority of the factor shows priority of each sub-factor after multiplying the priority within the Groups and priority of the group itself compare to other four groups. High priority of Strengths and Opportunities were impacted the domination of the sub-factors among 24 sub-factors analyzed. Product Quality (S-5) achieved the highest score of overall priority. Strong Brand Identity (S-2) came as second-highest overall priority and imply that maximize strengths, especially S-1 and S-2, is the most priority for Slow Fashion Brand. Likewise, high skilled labor (O-1) and new fashion trend (O-2) have relatively high overall priority score. In contrast, foreign competitor (T-6) is the least factor prioritize in Slow Fashion Brand. This probably because of their strengths in quality and brand identity, which is also supported by the new fashion trend.

After calculating the priorities of each group and each subfactor within the group, the data were used to formulate and select alternative strategies for Slow Fashion Brand with respect to each group and each sub-factor in each group. Hence, the next step is to formulate possible strategies for Slow Fashion Brand.

4.4. Alternative Strategies

Carried out result of SWOT-AHP analysis and according to the hierarchical proposed with respect to hierarchical level 4, it is possible to use SWOT strategy matrix to define various cross SWOT groups strategies in order to achieve the objective set. Table 9 sets SWOT strategy matrix for Slow Fashion Brand.

Table 9.
SWOT Strategy Matrix for Slow Fashion Brand in Indonesia

		External Factors	
		Threats	**Opportunity**
Internal Factors	**Weaknesses**	**"WT-mini-mini" strategies** Create product diversification (W1,2,5 & T2-6)	**"WO-mini-maxi" strategies** Determine lead time in supply chain and Identify market changes and development early (W1-3,5-6 & O1-2,4)
	Strengths	**"ST-maxi-mini" strategies** Manage copyright of design to government authority (S1,3,5 & T1)	**"SO-maxi-maxi" strategies** Join community and event activities in denim industry and Increase publication and advertisement in social media (S1-6, O1-3,6)

The domination of strengths and opportunities sub-factor also need balanced from weaknesses and threat. This is to minimize the risk of lacking capabilities or factor that might impact to the business in the future. Therefore, the strategy was designed to maximize the capabilities equipped by Slow Fashion Brand and ensuring this could cover the disadvantages factors, thus it respecting the success in achieving proposed objective.

WT strategies provide a solution for slow fashion brand to overcome their production issues, W1 and W2. They also need to prepare for the fierce competition given by fast fashion retailers, T2, which governed high-output production to fulfill market demand. Slow fashion brand can copied fast fashion strategy in which their diversified the products (Segura, 2016). This will enable slow fashion brand to prepare for any production issues to come up with alternative products. Hence, create product diversification is needed.

Fashion brand had faced mismatched demand and supply and inability to determine how much raw materials need to be purchased (Lazuardi, 2019). Controllable lead time is also sensitive to productivity, and the result can help vendors find optimal productivity to obtain a win-win solution (Li, Kang, & Xu, 2015). Slow fashion brand can maximize O3 where raw material always available. To overcome the weakness, WO strategies, slow fashion brand should determine and control its lead time to have better production planning. Both WO and WT strategies cover the production and capability of slow fashion brands to fulfill market demand. This could lead to customer satisfaction which the strategies further develop in SO strategies.

SO strategies utilizes all strengths that slow fashion brand have to capture opportunities. The slow fashion trend, O3, is a momentum of slow fashion brand to be known by wider audience. Study shows that the most significant influence of purchase intention in slow fashion is peer influence (Aldilax et al., 2020). Having customer involvement in the brand helps the firm co-create value, co-create competitive strategy, and collaborate in its innovation process (Schau, Mūniz, & Arnould, 2009). This imply that platform or spaces where potential customer to gather and involve with the brand is needed.

Slow fashion brand can join community and event in denim industry as well as increase advertisement in social media. Slow fashion brand need to enhance communication strategy with publication and advertisement that will create people awareness of the brand. As raising a variety of communication and sales channels makes customers constantly switch their buying process, information transparency provided by the internet produces well-informed customers who compare online offerings and price (Kotler, Pfoertsch, & Sponholz, 2020). Slow fashion brand needs to emphasize slow fashion movement and the value behind it. At this point, marketing strategy based on story telling marketing will catch customer emotional and awareness.

Lastly, ST strategies provides slow fashion brand with strategies to protect its identity, originality, and exclusivity. Conclude that exclusivity was found to be a significant antecedents for creating customer value in slow fashion context. Jung and Jin (2016). Furthermore, Joy, Sherry Jr, Venkatesh, Wang, & Chan (2012) found that aesthetics and artisanal quality are critical in promoting sustainable fashion. These studies imply that extraordinary design is important for slow fashion brand, S3, and is at the edge of manipulation from competitors. Hence, it is suggested that fashion design obtain copyright to protect their design (Nordin & Bakar, 2012; Roth & Jacoby, 2009). Thus copyright registration to government authority propose to be one of the strategic solution for slow fashion brand.

5. Conclusions

There have been various scientific research to define strategies for certain industries. This research provides SWOT analysis by integrating with AHP that provides appropriate strategies for slow fashion brand. The research using the hybrid methodology of SWOT-AHP to generate appropriate strategies for slow fashion brand.

Slow Fashion Industry has been rising these days. In Indonesia, slow fashion brand needs a holistic strategy to overcome fast fashion

brand with the emphasis of slow fashion movement as part of environmental-friendly product. The framework explained in this research provides direction for strategy development for slow fashion brand. The case study of slow fashion brand in Indonesia provides illustrative reference strategy decision-making. This model would be beneficial for slow fashion practitioners and marketers to evaluating slow fashion brand strategy in another nation.

This study concludes that among all SWOT sub-factors, both strengths in product quality and strong brand identity are the most important sub-factors, whereas the sub-factors order followed by opportunities in high skilled labor and new fashion trend. As a result of the strategic analysis and decision process, facilitated by the methodologies used, the following set of strategies designed to achieve the objective of this research: WT: Create product diversification through R&D process; WO: Determine lead time in supply chain and Identify market changes and development early; ST: Manage copyright of design to government authority; SO: Join community and event activities in denim industry and Increase publication and advertisement in social media.

This research has limitations on demographical aspects. Researcher only studied slow fashion brand in Bandung, Indonesia. Other geographic areas might show different results. The research also does not consider the age of slow fashion brand itself and the brand's finance condition, which the researcher assumes that every brand has the same opinion about its SWOT.

For further research, a researcher should broaden the geographic area. Considering how long the brand has been established and revenue would be a good factor to be tested in future research, the data will represent and accommodate many brands.

References

Aldilax, D., Hermawan, P., & Mayangsari, L. (2020). The Antecedents of Slow Fashion Product Purchase Decision Among Youth in Bandung, Jakarta, and Surabaya. *KnE Social Sciences*, 849-864.

Aldilax, D., Lazuardi, A. S., & Chrisdira, V. A. (2018). *Annual Report 2018*. Bandung: Sukku Collective.

Ananda, J., & Herath, G. (2003). The use of Analytic Hierarchy Process to incorporate stakeholder preferences into regional forest planning. *Forest policy and economics*, *5*(1), 13-26.

Ayitey, W. (2010). *A Simple Approach to Strategic Management*. Ghana: Methodist Book Depot Ltd.

Baby, S. (2013). AHP modeling for multicriteria decision-making and to optimise strategies for protecting coastal landscape resources. *International Journal of Innovation, Management and Technology*, *4*(2), 218-227.

Basset, M. A., Mohamed, M., Sangaiah, A. K., & Jain, V. (2018). An integrated neutrosophic AHP and SWOT method for strategic planning methodology selection. *Benchmarking: An International Journal, 25*(7), 2546-2564.

Beaver, G., & Ross, C. (2000). Enterprise in recession: The role and context of strategy. *The international journal of Entrepreneurship and innovation*, *1*(1), 23-31.

David, F. R. (2004). *Strategic Management*. Upper Saddle River: Prentice-Hall.

Entrialgo, M., Fernandez, E., & Vazquez, C. J. (2000). Linking entrepreneurship and strategic management: evidence from Spanish SMEs. *Technovation*, *20*(8), 427-436.

Falcone, P. M. (2019). Tourism-based circular economy in Salento (South Italy): A SWOT-ANP analysis. *Social Sciences*, *8*(7), 216.

Handoyo, S. (2018). The Development of Indonesia Environmental Performance and Environmental Compliance. *Journal of Accounting Auditing and Business*, *1*(1), 69-80.

Hill, T., & Westbrook, R. (1997). SWOT analysis: it's time for a product recall. *Long range planning*, *30*(1), 46-52.

Joy, A., Sherry Jr, J. F., Venkatesh, A., Wang, J., & Chan, R. (2012). Fast fashion, sustainability, and the ethical appeal of luxury brands. *Fashion theory*, *16*(3), 273-295.

Juneja, P. (2020). Steps in Strategy Formulation Process. Strategic Management. Management Study Guide. Retrieved from https://www.managementstudyguide.com/strategy-formulation-process.htm

Jung, S., & Jin, B. (2016). Sustainable development of slow fashion businesses: Customer value approach. *Sustainability*, *8*(6), 540.

Kahraman, C., Demirel, N. Ç., & Demirel, T. (2007). Prioritization of e-Government strategies using a SWOT-AHP analysis: the case of Turkey. *European Journal of Information Systems*, *16*(3), 284-298.

Kenton, W., & Mansa, J. (2020, July 28). Strategic Management. Retrieved from https://www.investopedia.com/terms/s/strategic-management.asp

Kim, A., Potia, A., & Wintels, S. (2020). Southeast Asia: A Region of Nuanced Opportunity. In M. &. Company, The State of Fashion 2020 (p. 26).

Kjellevand, M., & Kjellevand, M. (2018). *Sustainable fashion: A study of information's affect on sustainable shopping behaviour Is the more informed consumer a more conscious consumer? Attitudes and behaviour towards sustainable fashion* (Master's thesis, Universitetet i Agder; University of Agder).

Kotler, P., Pfoertsch, W., & Sponholz, U. (2020). *H2H Marketing: The Genesis of Human-to-Human Marketing*. Springer Nature.

Kowalski, K. (2018, 11 23). Slow Fashion. Retrieved from https://www.sloww.co/slow-fashion-101/

Kurttila, M., Pesonen, M., Kangas, J., & Kajanus, M. (2000). Utilizing the analytic hierarchy process (AHP) in SWOT analysis—a hybrid method and its application to a forest-certification case. *Forest policy and economics*, *1*(1), 41-52.

Lazuardi, A. S. (2019). *Application of Demand Forecast and Material Requirement Planning in Fashion Small Medium Enterprise Case Study : Sukku Collective* (Unpublished Bachelor Thesis). Institut Teknologi Bandung, Bandung, Indonesia.

Lenis Escobar, A., Rueda López, R., García Guerrero, J. E., & Salinas Cuadrado, E. (2020). Design of Strategies for the Implementation and Management of a Complementary Monetary System Using the SWOT-AHP Methodology. *Sustainability*, *12*(17), 6849.

Li, G., Kang, Y. C., & Xu, G. (2015). Optimal decision for fashion supply chains with service level constraint and controllable lead time. *Mathematical Problems in Engineering*, *2015*.

Maizer. (2016, March 21). *Latest News*. Retrieved from Indotextiles: https://www.indotextiles.com/index.php?option=com_content&task=view&id=4405&Itemid=72

Muzahidul, M., Akter, L., Pervez, A. K., Nabi, M. N., Uddin, M. M., & Arifin, Z. (2020). Application of combined SWOT and AHP for strategy development: evidence from pottery industry of Bangladesh. *Asian Journal of Agriculture and rural Development*, *10*(1), 81-94.

Nikolic, D., Spasic, J., Zivkovic, Z., Djordjevic, P., Mihajlovic, I., & Kangas, J. (2015). SWOT-AHP model for prioritization of strategies of the

resort Stara Planina. *Serbian Journal of Management*, *10*(2), 141-150.

Nordin, R., & Bakar, S. S. A. (2012). Malaysian batik industry: Protecting local batik design by copyright and industrial design laws. *International Journal of Business and Society*, *13*(2), 117.

Olum, S., Gellynck, X., Okello, C., Webale, D., Odongo, W., Ongeng, D., & De Steur, H. (2018). Stakeholders' perceptions of agronomic iodine biofortification: a SWOT-AHP analysis in northern Uganda. *Nutrients*, *10*(4), 407.

Waris, M., Panigrahi, S., Mengal, A., Soomro, M. I., Mirjat, N. H., Ullah, M., ... & Khan, A. (2019). An Application of Analytic Hierarchy Process (AHP) for Sustainable Procurement of Construction Equipment: Multicriteria-Based Decision Framework for Malaysia. *Mathematical Problems in Engineering*, *2019,*1-20.

Ross, T. M., Jones, E. C., & Adams, S. G. (2008). Can team effectiveness be predicted?. *Team Performance Management: An International Journal*, *14*(5/6), 248-268.

Roth, J. S., & Jacoby, D. (2009). Fashion, Copyright, and the Proposed Design Piracy Prohibition Act. *IP Litigator*, *15*(6), 1.

Saaty, T. L. (1977). A scaling method for priorities in hierarchical structures. *Journal of mathematical psychology*, *15*(3), 234-281.

Saaty, T. (1980). *The Analytic Hierarchy Process.* New York: McGraw-Hill.

Saaty, T. L. (1993). The analytic hierarchy process: a 1993 overview. *Central European Journal of Operation Research and Economics*, *2*(2), 119-137.

Saaty, T., & Vargas. (2001). *Models, Methods, Concepts and Applications of the Analytic Hierarchy Process.* Boston: Kluwer Academic Publisher.

Schau, H. J., Muñiz Jr, A. M., & Arnould, E. J. (2009). How brand community practices create value. *Journal of marketing*, *73*(5), 30-51.

Segura, A. (2016, June 01). *Diversification and Segmentation in Fashion retail.* Retrieved from https://fashionretail.blog/2017/06/01/diversification-and-segmentation-in-fashion-retail/

Statista. (2020). *Fashion Indonesia.* Retrieved from Statista: https://www.statista.com/outlook/244/120/fashion/indonesia

Stojčetović, B. V., Nikolić, Đ. M., Živković, Ž. D., & Bogdanović, D. M. (2019). Swot-ahp method application to determine current energy situation and define strategies for energy security improvement. *Thermal science*, *23*(2 Part B), 861-872.

The Good Trade (2020). 35 Ethical & Sustainable Clothing Brands Betting Against Fast Fashion. Retrieved from https://www.thegoodtrade.com/features/fair-trade-clothing

The Jakarta Post. (2020, March). Indonesia still deserves special treatment in global trade: Economists. Retrieved from https://www.thejakartapost.com/news/2020/03/02/indonesia-still-deserves-special-treatment-in-global-trade-economists.html

The Saylor Foundation. (2013, September). *Strategy Formulation.* Retrieved from https://resources.saylor.org/wwwresources/archived/site/wp-content/uploads/2013/09/Saylor.orgs-Strategy-Formulation.pdf

UNESCO. (2015). *Bandung.* Retrieved from https://en.unesco.org/creative-cities/bandung#:~:text=About%20the%20Creative%20City%3A,hub%20for%20creativity%20and%20entrepreneurship.

Wagner, L. (2020, April 21). *Fast fashion vs Slow Fashion.* Retrieved from Sanvt: https://sanvt.com/journal/fast-fashion-vs-slow-fashion/

Weihrich, H. (1982). The TOWS matrix—A tool for situational analysis. *Long range planning*, *15*(2), 54-66.

Wheelen, & Hunger. (2015). *Strategic Management and Business Policy: Toward Global Sustainability*. New York: Pearson Education.

Zarei, M., & Paghaleh, M. J. (2011). Strategic management of business in food industry: by an integrated deployment of AHP and freeman model. *Business Management Dynamics*, *1*(3), 47-52.

Zavadskas, E. K., Turskis, Z., & Tamosaitiene, J. (2011). Selection of construction enterprises management strategy based on the SWOT and multi-criteria analysis. *Archives of civil and mechanical engineering*, *11*(4), 1063-1082.