Volume 1 Number 2
p-ISSN: 2549-1849 | e-ISSN: 2549-3434
http://jurnal.unimed.ac.id/2012/index.php/jcrs/article/view/9344

STRENGTH-WEAKNESS-OPPROTUNITY-THREAT (SWOT) ANALYSIS TO ENHANCE PRODUCTIVITY OF *BATIK* INDUSTRY CENTRE IN EAST JAVA PROVINCE INDONESIA

Ika Atsari Dewi[1*], Susinggih Wijana[1], M. Andhy Nurmansyah[2], Romy Setiawan[3], Wendra G. Rohmah[1], Nur Lailatul Rahmah[1], Rheysa Permata Sari[1]

[1]*Agro-industrial Technology Department, Universitas Brawijaya, Malang, Indonesia*
[2]*English Literature Department, Universitas Brawijaya, Malang, Indonesia*
[3]*Fine Arts Department, Universitas Brawijaya, Malang, Indonesia*
*Corresponding Author: ikaatsaridewi@ub.ac.id

Abstract

It is acknowledged that the struggle faced by the batik industry, particularly in the Province of East Java, dealing with growth challenges caused by several factors: less attractive design, the conventional use of manual handling, and less governmental-institutional support. The purpose of this study is to analyze the performance of centers of Batik industry in Sampang, Trenggalek and Tuban Regencies highlighting their related-production quality and quantity. The location selection of batik production centers is based on coordination with Department of Industry and Trade in each area. Data is collected through surveys and interviews. This study concludes several things. There are six production system elements analyzed in this research included technology (production capacity of batik), funding, raw material, human resources, marketing, and pattern design.

Keywords: *batik pattern, micro small medium entreprises, productivity*

1. INTRODUCTION

Batik is one of the original Indonesian technique in cloth dyeing, using wax to cover specific patterns so they will not receive the colour. *Batik* is not only an art, but also a craft, which become more popular as one of the creative industry sectors. UNESCO inscribed Indonesian *Batik* on the Representative List of the Intangible Cultural Heritage of Humanity in 2009 (Bungin, 2005). In the present the needs of market and production of *batik* are very high not only in the form of cloth, but also various crafts.

The development of *batik* craft centers in East Java has not been as encouraging as in Central Java Province. *Batik* craft centers in East Java include Madura, Malang, Jombang, Tulungagung and Kediri Regencies. Among these areas, the region of Madura experiences rapid development with its center in Sampang, Pamekasan and Sumenep Subdistrict. The various centers of East Java *batik* nowadays have been trying to develop designs with various innovative *batik* products, but the results achieved have not been maximized.

The fundamental weakness faced by handicraft centers in East Java is the lack of development of *batik* design and still the traditional production technology used. Both of these have an impact on low product competitiveness due to the small production capacity and the sluggish innovation of existing *batik* patterns. Apart from the technological aspects of the institutional aspects involved in the development of *batik* SMEs are also not developed as well as in the region of Central Java. Institutional role should be able to accelerate the ability of *batik* artisans in improvisation of design and technology adoption, improvement of production efficiency, expansion of marketing network and efficiency of promotion media for all artisans in *batik* craft area. The aim of this study was to find out the qualitative Strength-Weakness-Opportunity-Threat (SWOT) analysis of some *batik* industry centres in East Java Province, Indonesia.

2. METHOD

This research is limited to evaluation and planning of solution strategy in the scope of component of *batik* production system such as Technology (Low production capacity), Capital (Low capital interest), Raw material (Low availability and High price), Human resource (Lack of skillful batik-dyeing process), Marketing (Weak partnership system), and Design (Motive predominantly by natural resources, cultural motif has not yet emerging).

Research is also limited to recommendations to companies not until implementation. This research uses qualitative method with Strength-Weakness-Opportunity-Threat (SWOT) analysis and quantitative calculation with scoring method. There are nine owners of *batik* SMEs in Sampang, Trenggalek and Tuban Regencies as rrespondents. This

Received: 12 December 2017; Reviewed: 9 March 2018; Approved: 15 March 2018

study uses three criterias: cost affordability, ease of implementation, and effectiveness of resource use. Twenty eight variables are used, which consists of a list of corporate strengths, weaknesses, opportunities, and threats (SWOT) analysis results. The research variables can be seen in Table 1.

The sampling techniques used was purposive sampling, a data collection with a technique of sampling collection from data resources considered mastering material expected so that can ease the research process (Sugiyono, 2014). Data collection methods used was semi-structured interview and observation. Observation is a data collection method that can be used to collect the data which can be observed by the researcher (Bungin, 2005).

Through the researcher's consideration, respondents chose to help this research are those having Small and Medium Enterprise (widely known as UKM in Bahasa) in *Batik* production to get information on internal and external environment condition of the company. Another consideration to decide the point of the main weakness, strength, opportunity, and threat until the solution alternative determination was done with a discussion between researcher and respondents.

Table 1: SWOT Analysis to the Components Of *Batik* Production System

No	Production System Element	Element SWOT	Problem Statement
1.	Technology (Low capacity of *batik* production)	Strength	• *Batik Tulis* (hand-drawn batik) has been longer mastered by the craftsmen in East Java. • *Batik Tulis*, especially those colored with natural color is relatively more expensive than printed batik.
		Weakness	• The production capacity of *batik tulis* is low since depending on the women labor's skill. • Natural color for *batik tulis* is hard to be widely produced since the lack of availability of raw material.
		Opportunity	• Production development into the semi-printed technology with a bigger capacity through appropriate technology introduction of printed-drawn and Sablon-drawn combination.
		Challenges	• Not all UKM in *Batik* production based in a regional area has a skill on printed and Sablon, for that matter, education and training on it are required. • Production technology changes into the semi-printed technology must be offset by market development effort so that all *batik* products can be absorbed.
2.	Capitalization (Low-interest capital is plentiful, UKM is not able to absorb)	Strength	• There are many capitalizations offering debt for equity with low-interest credit for UKM development.
		Weakness	• There are no many UKMs in *batik* production which is able to access credit debt for equity with low interest.
		Opportunity	• Maximization of the number of UKM which is able to access capital credit with low interest.
		Challenges	• The ability of production management and marketing of UKM engaged in *batik* production is inadequate, in order to enhance the capability, long-terms empowerment (structured-training and an additional account) are still required.
3.	Raw material (low availability and high price)	Strength	• The number of UKM in *batik* production that has been existed and its possibility of development in the future.
		Weakness	• The lack of facility provided by government or private sector to build a cooperative of facility and infrastructure for *batik* development which is able to provide an affordable *batik* production needs.
		Opportunity	• Establishing economic entity of raw material and additional material procurement for *batik* production.
		Challenges	• In order to establish a cooperative providing facility and infrastructure for *batik* development, it needs a commitment between related stakeholder (departments and *batik* craftsman association), funding planning, and the human resources ability to manage cooperative.
4.	Human Resource (skilled-*batik*	Strength	• A skill to produce *batik tulis* has been mastered by an old generation which will be easy to be taught to the younger

	craftsman is getting low)		generation.
		Weakness	• Younger generation interest in working at *batik* production sector is low, the reasons influencing are income and prestige to prefer work at a factory.
		Opportunity	• Younger generation skill is directed into the semi-printed technique so that the production capacity is high, and the old generation craftsmen are directed into the *batik tulis* which the price is relatively expensive.
		Challenges	• UKM consciousness to the importance of craftsman's skill development and the compensation to the performance given.
5.	Marketing (Not developed yet a tough partnership system)	Strength	• The needs of *batik* have an increase dispositional with the existence of strengthening from the local government and society's consciousness.
		Weakness	• UKM skillfulness to perform low-market development, the vast majority depend on traditional marketing system
		Opportunity	• Establishing a mutual market institutional to facilitate *batik* marketing from various regions
		Challenges	• The difficult to meet related side (departments) entrepreneur to build a mutual marketing network for UKM.
6.	Design (Most of the pattern is dominated by Human resources, typical pattern of culture does not appear yet)	Strength	• A culture to create a natural resources-based *batik* design has existed at all of the UKMs
		Weakness	• There is no more *batik* with cultural design produced in East Java
		Opportunity	• Regional cultural utilization to develop *batik* in East Java
		Challenges	• Has not mastered yet cultural exploration technique that can be applied for *batik* design. • There is not yet an education and training of local cultural-based *batik* design development

2.1. SMEs Condition Analysis and Solution Strategy Planning with SWOT Analysis

Through consideration of researchers and respondents, the analysis of the condition of SMEs *Batik* using SWOT both from the internal and external aspects of the company with qualitative way will produce research variables. Formulation of alternative solution also obtained from qualitative method that is with discussion between researcher with respondent and consider research variable. Hence, the alternative formulation of the solution will be divided into four categories containing of combinations of two aspects: SO (Strength-Opportunity), ST (Strength-Threat), WO (Weakness-Opportunity), and WT (Weakness-Threat). Explanation of the comparison matrix is among others (Rangkuti, 2006):

a. SO strategy is based on the company's way of thinking, by utilizing all the power to seize and take advantage of opportunities as much as possible
b. Strategy ST is made by using the strength of the company to overcome the threat.
c. WO strategy is applied based on the utilization of existing opportunities by minimizing the weaknesses owned by the company.
d. WT strategy is based on activities that are defensive and try to minimize the weaknesses of the company and avoid threats.

2.2. Determining Alternative Solutions with Scoring Solutions

Alternative solutions analyzed using scoring is an alternative solution that has been formulated with consideration of internal and external factors of the company. Scoring methods are used to get the main priority of alternative solutions that must be done for the most optimal improvement. The assessment of alternative solutions is based on the criteria that influence the selection of those alternatives. The first scoring is done by assigning a weighted value to each of the criteria. The weighted value scale is given in the range of 0 to 1, with the total weight of all criteria is 1. Both provide a ranking rating against the alternative solutions that have been formulated. The rated scores for ratings of 1 to 5 with 1 are the worst and 5 is the best value. The results obtained the average total score of the multiplication of weights and the ranking of each alternative solution. The result of the highest score is then become an alternative solution with the top priority.

3. RESULTS AND DISCUSSION

3.1. Result of Alternative Solution Formulation with SWOT Analysis

Referring to the internal and external factors of the company, the SWOT analysis gives the alternative consideration of the solution not from the positive side of the company but also from the negative side of the company such as

weaknesses and threats so that alternative solutions will become more in line with the company's ability to be realized. The results of alternative formulated solutions can be seen in Table 2 below.

Table 2: Solution Alternative With SWOT Matrices

Internal / External	***Strength* (S)**	***Weakness* (W)**
***Opportunity* (O)**	**SO Strategy** • Production is directed into the combination of *batik* tulis technology and printed or Sablon, tool investment is relatively cheap (A) • Design development training for UKM (B) • Explorative study of typical local culture that can be used to design culture (C)	**WO Strategy** • Establishing a *batik* craftsman association (Cooperative or *Batik* association) in each district area (D) • Entering *batik* knowledge into one of the extracurricular activities (kindergarten or TK, elementary school or SD, junior and senior high school or SMP and SMA) (E) • Building a *batik* producer and trader (marketing) partnership which is conducive and takes the UKM development (F) • Legal facility for competent UKM (G)
***Threat* (T)**	**ST Strategy** • Enhancing trade volume by actively participating in exhibitions, fashion show, etc (H) • *Batik* promotion at various prestigious events (national & international) (I) • Design-build competition of local *batik* pattern at various activities (event) (J) • Community development of oversight committee of local *batik* (K)	**WT Strategy** • Training on various technological method of production for UKM engaged in *batik* (L) • Enlarge market with participating in a marketing partnership through cooperative outlet etc. (M) • Establishing marketing network of *batik* outside the district (N) • *Batik* craft introduction since the early childhood (O)

Fifteen alternative solutions are formulated on the basis of root causes such as low-cost traditional *batik* production because of relying on human skills, stamp techniques and high-speed printing speeds, but selling low-price products, not dominating the market (relatively small product demand), most craftsmen rely on sales system with cash payment, the absence of workshop materials raw materials capable of serving the quantity and continuity high, and low prices, the job requires skill and perseverance that is meticulous, low income workers, image of *batik* work for younger generation decreased, business between SMEs and traders (distributors), *batik* motifs obtained by self-taught and modeled, mostly patterned SDA, not many local cultural motives, depending on the trend / model real needs market, and very few *batik* motifs that get Patent. The root of the problem is used as a reference in the formulation of alternative solutions so that the alternatives formed can minimize the existing problems and even eliminate them.

3.2. Result of Calculation of Alternative Preference Solution with Scoring Method

Alternative solutions that have been formulated fifteen then assessed the total score of each to see how big the priority level in each alternative solution. The alternative assessment of this solution also takes into consideration the criterion value used as a consideration in running the alternative solution. The results of the average score calculation can be seen in Table 3.

Table 3: Priority Scale Calculation of Solution Alternatives with Scoring Method

Criteria	Weight	Solution Alternatives Types														
		A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**
Ease of Implementation	0,2	5	5	4	4	5	3	3	4	4	2	3	4	4	3	3

Affordable Cost	0,5	4	3	5	5	4	2	4	3	3	3	4	5	3	3	5
Effectivity Resources Utilization	0,3	5	4	4	3	4	3	4	5	5	3	5	3	4	3	2
Total Weight	**1**	**4,5**	**3,7**	**4,5**	**4,2**	**4,2**	**2,2**	**3,8**	**3,8**	**3,8**	**2,5**	**4,2**	**4,2**	**3,5**	**3,0**	**3, 7**
Priority Rank		**1**	**4**	**1**	**2**	**2**	**8**	**3**	**3**	**3**	**7**	**2**	**2**	**5**	**6**	**4**

The total weight value for each criterion is one. The values of each criterion include the ease of implementation of 0.2; affordability of the cost of 0.5 and the effectiveness of the use of resources 0.3. Criteria with the greatest weight is the affordability of costs, it is because cost is a very important factor for the company because it must be through consideration and adjustment with the ability of the company (Iwantono, 2011). The solution priority scale of problems in *Batik* SMEs centre development can be seen in Table 4.

Table 4: Priority Scale Of Problem Solution In A Center Of UKM Engaged In *Batik* Development

No	Solution Alternative	Symbol	Scale	Rationalization
1.	Product is directed into the combination of *batik* tulis technology and printing, tool investment is relatively cheap	A	1	• Integrated technology will enhance production capacity to decrease product price
2.	Explorative study of local typical culture which can be used to design a culture	C	1	• Cultural studies will result in an artifact and add design alternative or *batik* pattern with local typical culture nuance
3.	Establishing *batik* craftsman association (Cooperative or *Batik* association) in each district	D	2	• There is a medium to channel aspiration and production fulfillment
4.	Entering *batik* knowledge into one of the extracurricular activities (TK, SD, SMP, SMA) (E)	E	2	• Through introducing *batik* to the children will enhance their understanding, loving and innovative insight
5.	Establishing a community of local *batik* observer	K	2	• The existence of community will trigger a workshop, discussion, opinion acuity
6.	Training on various production technology methods for UKM engaged in *batik* production	L	2	• Technology training will enhance various methods in *batik* production
7.	Legal facility acquired for competent UKM	G	3	• Legal will enhance a sense of pride to the achievement in a *batik* design development
8.	Increasing trade volume by actively participating in a fashion show etc.	H	3	• Being participated in various events of exhibitions and fashion shows will increase UKM insight and competition map of *batik* design
9.	*Batik* promotion at various prestigious events (national and international)	I	3	• Through increasing, *batik* image at national and international's eye will create the sense of pride and market needs
10.	Design development training for UKM	B	4	• Design training will enhance design ability that will enhance the number of patterns and legal of *batik* in a local area
11.	*Batik* introduction since the early childhood	O	4	• Increasing children's love and like to the local culture
12.	Enlarge market by actively participating in a marketing partnership through cooperative outlet etc	M	5	• Getting involved in an outlet and product brand will result in to be more known by consumer • Craftsman concentrates to the production and design development

4. CONCLUSION

Based on SWOT analysis, the highest priority to do are Integrated technology will enhance production capacity to decrease product price and Cultural studies will result in an artifact and add design alternative or *batik* pattern with local typical culture nuance.

REFERENCES

Bungin, Burhan, (2005). *Penelitian Kualitatif*. Jakarta : Prenada Media Group.

Iwantono, S. 2011. **Kiat Sukses Berwirausaha**. Grasindo. Jakarta.

Juliandi, A., Irfan dan Manurung, S. (2014). *Metodologi Penelitian Bisnis*, Medan : UMSU Press.

Moleong, Lexy, J. (2005). *Metodologi Penelitian Kualitatif.* Bandung : PT Remaja Rosdakarya.

Rangkuti, F. 2006. **Analisis SWOT Teknik Membedah Kasus Bisnis**. PT Gramedia Pustaka Utama. Jakarta.

Sugiyono. (2014). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: CV Afabeta.

Suhalim, S. 2015. **Aplikasi Metode Analisis SWOT untuk Merumuskan Strategi Bersaing pada Pt Berkat Karya Lestari.** Jurnal AGORA 3 (2): 392-399.