The development strategy of batik Small and Medium Enterprises (SME) in Kampung Batik Jetis Sidoarjo

D T Setiawan¹ and B Wirjodirdjo²

¹ Department of Technology Management, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia
² Department of Industrial Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia.

Abstract. Batik industry is one of craft, textile and clothing industry’s sub sector, part of creative economy and part of the Processing Industry sub-sectors that contributes on Sidoarjo’s Gross Domestic Regional Products (GDRP) about 617.3157 Billion or 0.39% in 2016. Kampung Batik Jetis is a batik center which still exists to this day. Until 2018, many development strategies for Kampung Batik had been implemented by the City Government as well as Provincial Government, but those strategies were considered less optimal by Batik Craftsmen. This research was focused on Batik SME that is still in progressing. The aim of this research were to obtain the internal and external environmental factors that influence the development of Batik SME and also choose the suitable strategy for the development of Batik Industry in Jetis using SWOT and QSPM analysis. The results of this research were Internal and External Factors that influence the development of Batik SMEs. The suitable strategies for the development of Batik Industry in Kampung Batik Jetis Sidoarjo are increasing capacity production and improving the quality of batik products, namely market opportunities, the images of Batik Jetis, an appropriate management system and the optimum production prices while maintaining the characteristics of Batik Jetis.

1. Introduction
The Batik Industry is one of craft sub-sector part, where the craft sub-sector is one of the compilers of the East Java’s creative economy GDRP structure amount 19.87 percent. Based on data from the Creative Economy Agency (Central Bureau of Statistic, 2017), the GDRP number of the creative economy sector in East Java Province in 2016 was 170.86 trillion or 9.21 percent of the GDRP’s East Java Province. Based on the 2016 Sidoarjo’s GDRP (Statistics Indonesia, 2017) stated that one of the constituents of the GDRP structure was the manufacturing industry sector by 46 percent, and the textile and apparel industry sub-sector which is part of the manufacturing industry sector has created a GDRP of 617.3157 billion.

Batik is a high artistic craft and has become a legacy of Indonesian culture, especially Java. The inauguration of Indonesian batik as a Humanitarian Heritage for Oral and Non-Material Culture (Masterpieces of the Oral and Intangible Heritage of Humanity) by the United Nations Education Scientific and Cultural Organization (UNESCO) on 2 October 2009 made Indonesian people interested again in wearing batik clothes. From here, Indonesian batik art began to get attention from foreign people to know more about batik art.

In East Java, almost all districts/cities have their own batik art, each region has different characteristic ranging from motifs and colors. Kampung Batik Jetis is located in Sidoarjo District and produces the traditional batik of Sidoarjo. This area stands in Lemah Putro Village, Sidoarjo Sub District. The business of Batik Jetis has existed since 1675 and in 2008 the Kampung Batik Jetis was established with
a total of 30 batik entrepreneurs, and it increased to 45 entrepreneurs in 2011. Surprisingly in 2012, the operator number of Batik business was 25 operators with a total of 82 workers able to be absorbed. In 2017 there were 22 Batik SME businessmen with data on Batik entrepreneurs with the number of workers absorbed between 5-10 employees per business.

Up to 2017, efforts have been made to develop Batik SME in Kampung Batik Jetis, both from the Provincial Government of East Java and the Sidoarjo Regency Government, such efforts include training and mentoring to SMEs (batik, financial administration, and developing batik motifs), granting access to capital, facilitation of product marketing through exhibitions, and others. However, the intended strategy is still felt to be less than optimal by the SMEs of Batik.

Batik SME Scale Business Conditions in the Kampung Batik Jetis Sidoarjo Regency are mostly with developing conditions. This is indicated by the designs/motives are still limited, financial administration has begun to be separated from family finances, has gained access to capital from both cooperatives and banks, marketing scope has reached regional scale through the Pabean Surabaya market, has not provided labor insurance, batik process is still traditional, the number of workers is 5-19 people, monthly income is <10 million, the average number of outlets is 1, and some have standardized products.

With this background, this research aims to identify SMEs internal and external environmental factors and choose the suitable strategy for the development of the Batik Industry in Jetis. The limitation of this research is to focus on the developing SME of Batik.

2. Methods
The researcher choose to use descriptive research methods, methods that aim to collect actual information in detail that describes the symptoms that exist, identify problems or check the conditions and practices that apply, make comparisons or evaluations and determine what others do in dealing with problems that are and also learn from their experiences to set plans and decisions in the future. The strategy is formulated using the SWOT Analysis method, strategy analysis of the organization's external and internal views is seen from the internal organization in the form of strengths and weaknesses, and also the organization's external form of threats and opportunities (Rangkuti, 2006). Meanwhile, to determine the right strategy for the development of Batik SME using Quantitative Strategic Planning Matrix (QSPM) analysis. Based on Rangkuti (2004) the main components of QSPM consist of key factors, strategic alternatives, weight, attractiveness score, total attractiveness score and sum attractiveness score.

3. Result and Discussions
The Kampung Batik Jetis has been inaugurated by the Sidoarjo Regent in 2008 and has become the location for producing Batik Tulis Sidoarjo which is well known to the public. It is said that Kampung Jetis has been known as a producer of traditional Batik Tulis since 1675 and in the past in this village there were many skipper Batik Tulis artisans who owned a batik business with a number of workers (batik workers) personally. By the time the business of batik also experienced ups and downs until finally some could survive as is known as the Kampung Batik Jetis today. Some of the existing batik artisans today are the generation of many of the artisans and batik workers in the past.

Based on the identification of SME Batik, there are 19 SME Batik craftsmen who are still active in Kampung Batik Jetis with details of 3 SME Batik craftsmen with advanced business scale, 10 Batik UKM craftsmen with developing business scale, and 6 Batik UKM craftsmen with undeveloped business scale. For research purposes, additional samples are needed from outside of Kampung Batik Jetis area with a growing business scale, and there are 11 SME Batik craftsmen, so that the total sample of SME Batik is 21 persons.

Based on the results of the validity and reliability test, it was found that 14 (fourteen) question items obtained the results of the validity test found that all questions have a valid status, because the r count of ten questions is greater than r table value of 0.433 and the reliability test results obtained Alpha Cronbach value of 0.843, the value is higher than the r table value of 0.433, so it can be said that 14 (fourteen) questionnaire questions have fulfilled valid and reliable criteria to be used in research.
The results of the identification of internal and external factors carried out on 21 (twenty one) SME Batik entrepreneurs with a scale of developing business, obtained the factors: Strength includes the preservation of motives, the existence of government policy support, the ability/skill of SME in batik business, and Batik added value (exclusive). Weaknesses include Lack of Batik Product Development, Traditional Managerial Systems, Limited Manpower, Lack of Product Standardization, Limited Marketing Media, and Not applying the Use of New Technologies. Opportunities include high demand for batik products and job creation. Threats include limited capital access and the exchange rate of Rupiah to US Dollar.

After obtaining internal and external environmental factors, a questionnaire was given to 5 (five) stakeholders including the Regional Development Planning Agency and the Cooperatives and Micro Enterprises Office Development Planning Agency of Sidoarjo, the Office of Cooperatives and Micro Enterprises of Sidoarjo, the Academics, the Batik Association of Sidoarjo and the SME Batik in Kampung Jetis in relation to the weighting and ranking of the internal and external variables, which are then weighted using the paired comparison matrix method.

Table 1. Internal Factor Evaluation (IFE) Matrix

| Internal Factors                          | Weight | Rating | Score (Weight x Rating) |
|------------------------------------------|--------|--------|-------------------------|
| **Strength**                             |        |        |                         |
| 1. Preservation of Motives               | 0.108  | 3      | 0.323                   |
| 2. Support from government’s policy       | 0.140  | 4      | 0.560                   |
| 3. Ability / Skill of Batik SMEs          | 0.109  | 3      | 0.327                   |
| 4. Added Value Batik (Exclusive)          | 0.080  | 2      | 0.160                   |
| **Weakness**                             |        |        |                         |
| 1. Lack of Batik Products Development    | 0.096  | 3      | 0.287                   |
| 2. The managerial system is still        | 0.072  | 3      | 0.217                   |
|    traditional                           |        |        |                         |
| 3. Limited of Manpower                   | 0.120  | 2      | 0.240                   |
| 4. Lack of Product Standardization       | 0.118  | 2      | 0.236                   |
| 5. Limited of Marketing Media            | 0.102  | 2      | 0.204                   |
| 6. Not Applying the Use of New Technology| 0.056  | 4      | 0.222                   |
| **IFE Total**                            | 1.000  |        | 2.776                   |

Source: Analysis, 2019

Based on the IFE Matrix Table, it can be seen that the main strength possessed by MSE Batik in Kampung Batik Jetis is the existence of Government policy support with a score of 0.56, while the main weakness is due to limited of marketing media with a score of 0.204.

Table 2 External Factor Evaluation (EFE) Matrix

| External Factors                          | Weight | Rating | Score (Weight x Rating) |
|------------------------------------------|--------|--------|-------------------------|
| **Opportunities**                        |        |        |                         |
| 1. High Demand of Products               | 0.308  | 4      | 1.233                   |
| 2. Create Employment                     | 0.125  | 2      | 0.250                   |
| **Threats**                              |        |        |                         |
| 1. Limited of Capital Access             | 0.292  | 4      | 1.167                   |
| 2. Rupiah Exchange Rate against US Dollar| 0.275  | 1      | 0.275                   |
| **EFE Total**                            | 1.0    |        | 2.925                   |

Source: Analysis, 2019
Based on the EFE Matrix Table, it can be seen that the main opportunity held by MSE Batik in the Kampung Batik Jetis is the high demand for batik products with a score of 1.233, while the main threat is due to the exchange rate of Rupiah against the US dollar with a score of 0.275.

Based on the IFE Matrix Table shows a total value of IFE of 2.776 which indicates a moderate internal position, then based on and the EFE Matrix Table shows a total EFE of 2.925 indicating a moderate external position, if both the IFE and EFE values set forth in the IE Matrix are in quadrant V namely Maintaining and Maintaining as IE Matrix Image, so that the right strategy to use is an intensive strategy in the form of Market Penetration Strategy and Product Development Strategy.

Weighting and rating are mostly influenced by the existing conditions of Batik SMEs actors, while there is a striking difference in values between factors influenced by the identification of Batik SMEs in determining the factors that influence the development of batik SMEs. So it can be concluded that the SMEs are currently still focusing on internal factors of the company, and have not made the company’s external factors a major consideration in the development of Batik SMEs.

**Figure 1. Matrix IE**

SWOT analysis is the formulation of conventional strategies that underlie the formation of strategies that can be adjusted to the position of SME Batik. The right strategy for developing SME Batik are:

1. **S-O Strategy**
   This strategy was made by using the power to take advantage of the opportunities that exist by the SME Batik craftsmen in Kampung Batik Jetis in the production process activities that are formulated alternative strategies; Increasing production capacity while still improving the quality of batik products; Developing and improve the image of Batik Jetis.

2. **W-O Strategy**
   This strategy is implemented based on taking advantage of opportunities in overcoming the weaknesses of SME Batik craftsmen in Kampung Batik Jetis in the production process activities that are formulated with alternative strategies; Developing a management system that is in line with the demands of global development to improve competitiveness; Developing Batik products to capture greater market opportunities; and Increasing the Human Resource’s capacity.

3. **S-T Strategy**
   This strategy is implemented based on using the power to overcome the threat of SME Batik in Kampung Batik Jetis in the production process activities that are formulated with alternative strategies to maximize the role of the government in facilitating access to capital; and Optimizing the price production while maintaining the Jetis Batik Characteristics.

4. **W-T Strategy**
   This strategy is implemented based on minimizing weaknesses and avoiding threats from outside the SME Batik craftsmen in Kampung Batik Jetis in the production process activities that are formulated
alternative strategies; Optimizing the role of each section for the production process; Looking for alternative suppliers while maintaining the quality of raw materials; and Using New Technology to increase production capacity.

After identifying alternative strategies for developing SME Batik, the next step is to choose the suitable development strategy of SME Batik by using QSPM Analysis. Some alternative strategies analyzed using QSPM are:

1. Increasing the production capacity while still improving the quality of batik products;
2. Developing and enhancing the image of Batik Jetis;
3. Developing a management system in accordance with global development to improve competitiveness;
4. Developing Batik products to capture greater market opportunities;
5. Increasing Human Resource’s capacity;
6. Maximizing the role of government in facilitating access to capital;
7. Optimizing the production price while maintaining the Characteristics of Batik Jetis;
8. Optimizing the role of each part for the production process;
9. Looking for alternative suppliers while maintaining the quality of raw materials; and
10. Using New Technology to increase production capacity.

Based on the results of the QSPM assessment obtained the sequence from the highest to the lowest TAS. From that sequence, priority strategies can be created that can be implemented to Kampung Batik Jetis craftsmen to develop their SME Batik. From the results of the QSPM analysis, alternative priorities are obtained as follows:

1. Strategy 1 (TAS value of 4.98), which is increasing the production capacity while still improving the quality of batik products;
2. Strategy 4 (TAS value of 4.24), which is developing Batik products to capture greater market opportunities;
3. Strategy 2 (TAS value of 3.98), which is developing and improving the Batik Jetis image;
4. Strategy 3 (TAS value of 3.98), which is developing a management system in accordance with the demands of global developments to improve competitiveness;
5. Strategy 7 (TAS value of 3.78), which is optimizing price production while maintaining the Characteristics of Batik Jetis.

4. Conclusions
There are some conclusions that resulted from this study:

1. The internal and external factors of UKM Batik in Kampung Batik Jetis:
   a. The internal factors of the main strengths of SME Batik are the existence of government policy support (0.56), the ability/skill of SME in the batik business (0.327), Motive Preservation (0.323) and Batik added value (exclusive) (0.16).
   b. The internal weaknesses of the main weaknesses of SME Batik are limited marketing media (0.204), traditional managerial system (0.217), not applying the use of new technology (0.222), lack of product standardization (0.236), limited labor (0.24) and lack of Batik Product Development (0.287).
   c. External factors of the main opportunities for SME Batik are high demand for batik products (1.233) and job creation (0.25).
   d. The main external threats to SME Batik are the Rupiah exchange rate against the dollar (0.275), and limited capital access (1.167).
2. Based on the results of the IE Matrix, the position of SME Batik in Kampung Batik Jetis is in the Quadrant V, which is Guarding and Maintaining, so the suitable strategy is the Intensive Strategy. Then based on QSPM analysis, 5 alternative strategies are appropriate and good for the development of the Batik Industry in Jetis, Sidoarjo District: Increasing production capacity while still improving the quality of batik products (TAS = 4.98); Developing Batik products to
capture greater market opportunities (TAS = 4.24); Developing and improving the image of Batik Jetis (TAS = 3.98); developing a management system in accordance with the demands of global developments to improve competitiveness (TAS = 3.98); and Optimizing production prices while maintaining the Characteristics of Batik Jetis (TAS = 3.78).

5. References
[1.] Sidoarjo Central Bureau of Statistic. (2017). Sidoarjo in Figures 2017. Sidoarjo: Central Bureau of Statistic.
[2.] Sidoarjo Central Bureau of Statistic. (2016). Sidoarjo Sub-Distric in Figures 2016. Sidoarjo: Central Bureau of Statistic.
[3.] East Java Central Bureau of Statistic. (2016). East Java Report on the Development of Creative Economy GDP 2010-2016. East Java: Central Bureau of Statistic.
[4.] Rangkuti, Freddy. (2004). Analisis SWOT Teknik Membedah Kasus Bisnis. Jakarta: PT. Gramedia Pustaka Utama.
[5.] Rangkuti, Freddy. (2006). Teknik Mengukur dan Strategi Meningkatkan Kepuasan Pelanggan. Jakarta: PT. Gramedia Pustaka Utama.