A Framework Regarding The Drivers And Obstacles To The Development Of Craft SME Product Innovation Using QSPM Analysis

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Abstract. The growth of regional Small and Medium Enterprises (SMEs) in various fields in Indonesia has experienced significant developments. The existence of SMEs is part of driving the regional economy and also overcomes the problem of employment. In 2022, SMEs are recorded as contributing 60.3 percent of the Gross Domestic Product (GDP) and absorbing 97 percent of the workforce in Indonesia. The three sub-sectors of the creative economy that contribute most to national GDP are culinary, fashion and handicrafts where one of the handicraft-producing regions is East Kalimantan. However, there are obstacles experienced by the handicraft industry in East Kalimantan in the form of a lack of organizational skills, organizational innovation, marketing and government involvement in efforts to foster and develop the organization. The purpose of this research are (1) to analyze the characteristics of the East Kalimantan handicraft industry and what obstacles it faces; (2) to identify and evaluate internal and external factors, (3) to formulate strategies in SME's development programs, and (3) to make recommendations. This study uses qualitative and descriptive methods with data analysis using IFE (Internal Factor Evaluation) matrix, EFE (Eksternal Factor Evaluation) matrix, and QSPM (Quantitative Strategic Planning Matrix) analysis. The results of this study are the classification of East Kalimantan craft organizations into micro, small and medium enterprises in terms of the workforce and the locality of the business. From QSPM analyze, The structured strategic priorities are: creating sustainable product innovations; Building a product branding strategy; building cooperation with the government, academia and other business actors (triple helix); diversification product; resiliensi organization strategies.

Keywords: SMEs, Handicraft, Kalimantan Timur, QSPM, Organization Strategies

1. Introduction

Small and Medium Enterprises (SMEs) are the main supporter of the Indonesian economy because the number of MSMEs, especially micro businesses, is very large and the absorption of labor is very large. Data from the Ministry of Cooperatives, Small and Medium Enterprises (KUKM) in 2018, the number of SMEs is 64.2 million or 99.99% of the number of business actors in Indonesia and the absorption capacity of the MSME workforce is 117 million workers or 97% of absorption of the workforce in

the business world. The contribution of SMEs to gross domestic product (GDP) was 61.1%, and 38.9% was contributed by large businesses.

Indonesia's National Statistics Bureau (BPS) notes that exports from January to June 2019 were down by 8.57%, while imports fell by 7.63% [1]. In the final quarter of 2020, it was recorded that Indonesia's economic growth had decreased to negative (-2.19%) from the previous year which was 4.96%, resulting in a decrease in the contribution of Micro, Small and Medium Enterprises (MSMEs) to gross domestic product (GDP)) of 37.3% of GDP [2]. Efforts to improve economic performance have been carried out quite well by reviving SME activities by business actors and strengthened by people's purchasing power for SME products which are very good during 2021, this can be seen by an increase in the value of Gross Domestic Product (GDP) in the fourth quarter of 2021 by 5.06%. Currently, SMEs are one of the main drivers of the Indonesian national economy because the number of SMEs is more numerous and widespread in Indonesia compared to large businesses[3]. The development of SMEs is said to be an important factor in policies to create jobs and generate income for the community.

Behind SMEs as one of the drivers of the economy, the problems that occur in SMEs are very complicated. the problems of Indonesian SMEs include problems with capital[4], lack of knowledge about global markets and agreements, lack of promotion, constraints on distribution transportation[5], also expensive kindergarten fees [6], abundant workforce but inadequate skills owned [7], as well as managerial capacity and ambidexterity behavior[8] and also lack of innovation and crativity[9]. The increasingly fierce business competition, business actors are required to continue to evaluate their business so that they can continue to survive and create effective and efficient strategies, and provide value to their production.

In both developed and developing countries, the formulation of economic strategies is directed at increasing profits and superior organizational performance. In previous studies, SWOT analysis was significantly applied in various fields of management to determine weaknesses, strengths, opportunities and threats in organizations [10;11;12]. In this study, SWOT analysis is combined with the Quantitative Strategic Planning Matrix (QSPM). The aim of QSPM are for decision making[13] and prioritizing key internal, external and competitive information needed in developing an effective strategic plan [14;15]. QSPM analysis determines the best appropriate strategy at the decision-making step [16] to prioritize various factors that influence the planning strategy[17].

The Government of the Republic of Indonesia through the Ministry of Tourism and Creative Economy has identified the scope of the creative economy. Based on Presidential Regulation no. 72 of 2015 concerning Amendments to Presidential Regulation Number 6 of 2015 concerning the Creative Economy Agency, the government stipulates 16 economic sectors, but three of them are the biggest contributors to the performance of the creative economy, namely the culinary, fashion and craft industries.

SMEs engaged in the craft sector, namely all forms of fine art products, both functional and non-functional, which prioritize decorative values and handwork with high craftsmanship and generally explore unique traditional values. The key to the word craft product today is creativity to get ideas for making works. It is known that currently craft SMEs are starting to be in demand both locally and internationally,

especially crafts with exploration of natural resources in the form of wood. Indonesia is known to have abundant natural resources and creative human resources.

East Kalimantan (Kaltim) is a province in Indonesia which is also rich in handicraft products made from natural fibers, for example rattan, bamboo, sticks, doyo fiber, and nipa leaves. There are quite a lot of products produced and product marketing is national in nature and some of them have even reached the international level. Many craft products produced by the province of East Kalimantan include: rattan furniture, bamboo furniture, miniature sticks, bags, hats, plates of sticks, and many more. These products are in great demand from the local, national and international markets.

Currently, there are many foreign products entering the market in different and more interesting forms, so that the local East Kalimantan products are less competitive in the market. Many MSMEs in East Kalimantan have not yet touched the innovative side, even though there have been several renewal or development efforts provided either from the government or from collaboration with academics. Lack of assistance from related parties and competent parties in the process of developing the creative value chain through strengthening creativity, knowledge, skills, attitudes and resources needed by the craft subsector to improve the quality of creation, production, competitiveness and collaboration to empower, survive, adapt, develop to excel and synergize to face the changing world. Observing these problems, this research focuses on extracting data and developing innovative products by craft SMEs in East Kalimantan. The aim of this research are (1) to analyze the characteristics of the East Kalimantan handicraft industry and what obstacles it faces; (2) to identify and evaluate internal and external factors, (3) to formulate strategies in SME's development programs, and (3) to make recommendations.

2.   Method

This research is qualitative in nature with the formation of a substantive theory based on concepts arising from empirical data, but a descriptive approach is used to obtain facts and events in an accurate and structured manner about the characteristics of the population. This research will describe the characteristics and constraints experienced by SMEs in developing their business

a.   Collecting Data

In this study data collection was carried out using interviews, observation and documentation techniques. Respondents were craft SMEs in Kutai Timur, Kutai Barat, Penajam Paser Utara, Tenggarong dan Samarinda with a total of 30 entrepreneurs. Primary data collection using purposive sampling technique is an intentional sampling of some respondents who have been determined

b.   Data Analysis

    1.)   Characteristic of SMEs analysis. The analysis aims to describe the characteristics and problems of SMEs. The analysis aims to describe the characteristics of SMEs in terms of business scale, number of employees and income. Based on Law No. 20 of 2008 chapter IV, there are 3 criteria for SMEs, namely:

2.) Micro businesses are productive businesses owned by individuals who have assets of Rp. 50,000,000 and has a maximum sales of Rp. 300,000,000.

3.) Small business is a productive business that stands alone by business entities or individuals who have assets of Rp. 50,000,000 - Rp. 500,000,000 and has a maximum sales of Rp. 300,000,000 - Rp. 2,500,000,000.

4.) Medium-sized businesses are productive businesses that stand alone by business entities or individuals who have assets of Rp. 50,000,000 - Rp. 10.000,000,000 and has a maximum sales of Rp. 300,000,000 - Rp. 50,000,000,000.

5.) Large businesses are productive businesses that are carried out by business entities including state-owned/private national businesses, joint ventures and foreign businesses that carry out economic activities in Indonesia. large businesses and sales exceed medium businesses

6.) Problem analysis was carried out to identify what problems occurred in craft SMEs, especially in East Kalimantan. Problem analysis is carried out by mapping the problems obtained from the results of interviews and direct observation with business owners.

7.) The analytical analysis carried out in this study are: (1) Internal Factor Evaluation (IFE) Analysis. (2) External Factors Evaluation (EFE) Analysis. (3). SWOT analysis. (4) QSPM Analysis.

8.) The Internal Factor Evaluation Matrix (IFE) is a tool used to evaluate a company's internal environment and identify its strengths and weaknesses. Then, External Factor Evaluation Matrix (EFE) is a tool used to examine a company's external environment and identify existing opportunities and threats. IFE and EFE are intended to build a SWOT matrix

9.) SWOT analysis is a strategic planning technique that is useful for evaluating strengths, weaknesses, opportunities and threats in a business activity. SWOT assessment helps create a strategy to determine which priorities should be prioritized by the company.

10.) Quantitative Strategic Planning Matrix (QSPM) is a strategic design formulated by management to determine available alternative options, so that it becomes a recommendation on the 5WH QSPM questions that must be implemented.

3. Research Finding

Classification of the type of craft business based on the number of workers, business group, business capital and income earned, this craft business is classified as a local business, micro, small and medium in nature. The problem that exists in this kraft small business is the limited human resources who are interested in working in the craft field, so recruiting them requires a large amount of money. In addition, raw materials in the area of East Kalimantan are usually sent directly outside the island of Kalimantan due to limited knowledge about craft and its opportunities in the future, also the lack of creative power of workers in product development and diversification and the lack of government support in mentoring, coaching, capital to ukm craft

The first step is to analyze the EFE and IFE matrices. After evaluating with the weighting and ranking methods. The EFE analysis produces a number of opportunity and threat factors, and values are obtained as shown in table I .

The weight value is obtained from the sum of the response values from the questionnaire regarding opportunity and threat items. In the next step, the value of each opportunity item is divided by the total value of opportunities and threats. The rating value is obtained from the total of each opportunity and threat item divided by the number of respondents who filled out the questionnaire. Finally, the score is obtained by multiplying the value of each weight and rating.

The EFE analysis produces a number of strength and weakness factors. Evaluation of IFE is carried out by finding the average value of each of the internal key factors then compiled in matrix, and values are obtained as shown in table II below.

Tabel 1. EFE Scoring.

No	Matrix EFE				
	Opportunitty	Sig	Weight	Rating	Score
1	Wide market share	122	0.098	4.07	0.398
2	Become a media promotion of tourism	126	0.101	4.20	0.424
3	Regional characteristics of excellence	108	0.087	3.60	0.312
4	High purchasing power nationally or export	119	0.095	3.97	0.379
5	Environmentally friendly product diversification	111	0.089	3.70	0.329
6	Raw materials are abundantly available	120	0.096	4.00	0.385
	TOTAL	**706**			**2.227**
No	Matrix EFE				
	Threat	Sig	Weight	Rating	Score
1	Has many competitors outside the island	111	0.082	3.40	0.278
2	Natural resources become useless waste	127	0.084	3.50	0.295
3	Difficult to develop creativity and innovation	130	0.099	4.10	0.404
4	Limited human resource knowledge resulting in high local labor prices	108	0.084	3.50	0.295
5	Raw materials are directly sold to the island of Java	117	0.085	3.53	0.300
		593	0.434	18.033	**1.572**
	TOTAL EFE	**1299**			3.799

Tabel 2. IFE Scoring

No	Matrix IFE				
	Strength	Sig	Weight	Rating	Score
1	Have an SME establishment permit	126	0.101	4.200	0.422
2	Business commitment	114	0.091	3.800	0.346
3	Product capacity	124	0.099	4.133	0.409
4	Have good product qualityk	106	0.085	3.533	0.299
	TOTAL	**470**			**1.476**
No	Matrix IFE				
	Weakness	Sig	Weight		Score
1	Limited equipment	119	0.095	3.97	0.377
2	limited number of skilled employees	115	0.092	3.83	0.352
3	Lack of innovation and creativity	116	0.093	3.87	0.358
4	Lack of financial support from the government	112	0.089	3.73	0.334
5	Lack of training, and guidance from experts	106	0.085	3.53	0.299
6	There is no assistance from the government	110	0.088	3.67	0.322
7	Lack of involvement of local SMEs in government events	105	0.084	3.50	0.293
	TOTAL	**783**	0.625	26.1	**2.334**
	TOTAL	**1253**			**3.810**

	EFE		
	Strong 3,0 - 4,0	Average 2,0 - 2,99	Weak 1,0 - 1,99
IFE High 3,0 - 4,0	**I (grow and Build)** **(3,799 - 3,810)**	II (grow and Build)	III (hold and maintain)
Medium 2.0 - 2,99	IV (grow and Build)	V (hold and maintain)	VI (Harvest and Diverst)
Low 1,0 - 1,99	I (grow and Build)	VIII (Harvest and Diverst)	IX (Harvest and Diverst)

Table 3. IFE Matrix EFE - IFE

Based on Table I and Table II, it can be seen that the horizontal axis IFE matrix shows a total score of 3,799 and the vertical axis EFE matrix shows a total score of 3,810. The two scores are then reconciled according to the values obtained (3,799; 3,810). The position of this cell shows the growth and build of UKM Kraf in East Kalimantan. The matrix of values are obtained as shown in Table III above.

Tabel 4. Strategy SWOT Matrix

	Strength (S1,S2,S3, S4)	Weakness (W1, W2, W3, W4, W5, W6, W7)
Opportunity (O1, O2, O3, O4, O5)	Creating sustainable product innovations (A) Building a product branding strategy (B)	Building cooperation with the government, academia and other business actors (triple helix) (C)
Threat (T1, T2, T3, T4, T5)	Diversification Product (D)	Resiliensi strategi (E)

Tabel 5. Matrix QSPM

Parameter SWOT	TOTAL ATTRACTIVESNESS SCORE (TAS)				
	Strategy				
	TAS_A	TAS_B	TAS_C	TAS_D	TAS_E
O1	0.40	0.38	0.39	0.39	0.38
O2	0.41	0.40	0.38	0.44	0.41
O3	0.37	0.36	0.33	0.36	0.36
O4	0.36	0.38	0.38	0.40	0.39
O5	0.36	0.38	0.35	0.36	0.38
O6	0.33	0.40	0.39	0.41	0.37
T1	0.34	0.34	0.35	0.34	0.34
T2	0.35	0.33	0.34	0.38	0.33
T3	0.38	0.38	0.40	0.37	0.39
T4	0.35	0.35	0.34	0.34	0.34
T5	0.37	0.35	0.36	0.34	0.35
S1	0.41	0.41	0.41	0.44	0.42
S2	0.37	0.37	0.35	0.38	0.38
S3	0.42	0.41	0.40	0.37	0.39
S4	0.36	0.33	0.34	0.34	0.36
W1	0.35	0.37	0.37	0.39	0.40
W2	0.36	0.37	0.37	0.35	0.40
W3	0.38	0.38	0.40	0.39	0.37
W4	0.37	0.36	0.36	0.38	0.37
W5	0.33	0.34	0.36	0.36	0.36
W6	0.37	0.35	0.35	0.36	0.36
W7	0.35	0.35	0.34	0.35	0.34
TOTAL	8.08	8.09	8.06	8.24	8.17
PRIORITY	**3**	**4**	**5**	**1**	**2**

The priority strategy is carried out using the QSPM Matrix. The strategy is made based on the analysis of the IFE and EFE linkages (Table IV). There are five strategic alternatives determined by the attractiveness score (AS). Atrractive score for each strategy is obtained by multiplying the weight of each factor with the average value obtained from the strategy questionnaire. The total attractiveness score (TAS) matrix can be seen in matrix QSPM Table V.

4.   Discussion And Conclusion

Based on the results of the SWOT and QSPM analyzes carried out based on IFE and EFE, it is known that in the analysis the position of craft UKM is in cell 1, namely Growth and Build. Then, referring to the TAS value of each strategy, it is known that the sequence of alternative strategies that can be implemented by Craft SMEs in East Kalimantan. Structured strategic priorities are: Creating sustainable product innovations (A); Building a product branding strategy (B); Building cooperation with the government, academia and other business actors (triple helix) (C); Diversification Product (D); Resiliensi strategi (E).

From the results of the QSPM it can be recommended a number of things related to the UKM Kraft strategy that can be developed in order to increase work productivity and be able to compete with national or international business actors. The list of recommended action plans is shown in Tabel VI below:

Tabel 6. List Of Action Plan SME'S

No	Strategies	Action Plan
1	Creating sustainable product innovations (A)	Product development with due regard to the environment/eco innovation
		Looking for many product references that are environmentally friendly and have high innovation value
2	Building a product branding strategy (B)	Create a strong product identity
		Find the most appropriate, efficient and effective marketing network starting from the local, national and even export scale.
		Analyzing the market
		Product introduction through events such as exhibitions
3	Building cooperation with the government, academia and other business actors (triple helix)	Sharing knowledge and product innovation experiences with academics
		Conduct research collaborations, training with

		academics
		Collaboration with related agencies that often intensify SME's empowerment programs
		Participated in the SME incubator program held by the government
4	Diversification Product	Improve the ability of employees by participating product development training which is usually held by the Ministry of Industry, Trade and Cooperatives; Bank Indonesia; also with corporate social responsibility from the company
		Making self-managed craft product differentiation compared to competing products
		Become an active entrepreneur
5	Resiliensi strategi SMEs (E).	Do self-efficacy
		Build confidence
		Analyze the cause of the problem and create a solution strategy
		Improving the ability of organizational ambidexterity

REFERENCES

1. Irfan Ridwan Maksum, Amy Yayuk Sri Rahayu, and Dhian Kusumawardhani., A Social Enterprise Approach to Empowering Micro,Small and Medium Enterprises (SMEs) in Indonesia, MDPI, J. Open Innov. Technol. Mark. Complex. 2020, doi:10.3390/joitmc6030050.

2. Tarigan, Z. N. A. B., Dewi, F. N., & Pribadi, Y., Keberlangsungan Usaha Mikro, Kecil, dan Menengah di masa Pandemi: Dukungan Kebijakan Pemerintah. *Jurnal BPPK*, *15*(1), p.12–23, 2022.

3. Tambunan, T.T., The impact of the economic crisis on micro, small, and medium enterprises and their crisis mitigation measures in Southeast Asia with reference to Indonesia. Asia Pac. Policy Stud. 2019, 6,p. 19–39.

4. Wang, Y., What are the biggest obstacles to growth of SMEs in developing countries?— An empirical evidence from an enterprise survey. Borsa Istanb. Rev. 2016, 16, p.167–176.

5. Hamisi, S., Challenges and Opportunities of Tanzanian SMEs in Adapting Supply Chain Management, African Journal of Business Management, Vol. 54, 2011, pp. 1266-1276.

6. Tambunan, T.T.H., SME in Asian Developing Countries, London: Palgrave Macmillan Publisher, 2009

7. Pribadi, H and Kanai, K., Examining and Exploring Indonesia Small and Medium Enterprise Performance: An Empirical Study, Asian Journal of Business Management Vol. 3 No. 2, 2011, p. 98-107.

8. Nahiyah Jaidi, Siswantoyo, Jane Liu, Zahrotush Sholikhah, and Mega Murti Andhini., Ambidexterity Behavior of Creative SMEs for Disruptive Flows of Innovation: A Comparative Study of Indonesia and Taiwan, J. Open Innov. Technol. Mark. Complex. 2022, 8, 141. https ://doi.org/ 10.3390 / joitmc 8030141, https:/ /www. mdpi. com/ journal/ joitmc

9. Deni Pandu Nugraha, Budi Setiawan, Robert Jeyakumar Nathan, and Maria Fekete-Farkas., Fintech Adoption Drivers for Innovation for SMEs in Indonesia, J. Open Innov. Technol. Mark. Complex. 2022, 8, 208. https://doi.org/10.3390/joitmc8040208 www.mdpi.com/journal/joitmc.

10. Srivastava, P. K., Kulshreshtha, K., Mohanty, C. S., Pushpangadan, P., & Singh, A.Stakeholder-based SWOT analysis for successful municipal solid waste management in Lucknow, India. Waste Management, 25, 2005, p. 531–537. https://doi.org/10.1016/j.wasman.2004.08.01.

11. Reihanian, A., Noor Zalina Binti, M., Kahrom, E., & Hin, T. W., Sustainable tourism development strategy by SWOT analysis: Boujagh National Park, Iran, TourismManagement Perspectives, 4, 2012, p. 223–228. https://doi.org/10.1016/j.tmp.2012.08.005.

12. Suraj Kumar Mallick, Somnath Rudra, and Riya Samanta., Sustainable ecotourism development using SWOT and QSPM approach: A study on Rameswaram, Tamil Nadu', International Journal of Geoheritage and Parks, 8,2020, p.185–193.

13. Ahmadian, S., & Tabibian, M., A Cultural Tourism Approach Towards Revitalizing Urban Streets (Case Study : Imam Khomeini Street , Tabriz), Space Ontology International Journal, 5(4), 2016, p.61–68.

14. Gupta, M., Shri, C., & Agrawal, A, Strategy Formulation for Performance Improvement of Indian Corrugated Industry: An Application of SWOT Analysis and QSPM Matrix, Journal ofApplied Packaging Research, 7(3), 2015, p. 60–75.

15. Ghorbani, A., Raufirad, V., & Jafarian, Z., Ecotourism sustainable development strategies using SWOT and QSPM model: A case study of Kaji Namakzar Wetland, South Khorasan Province, Iran, Tourism Management Perspectives, 16, 2015, p.290–297https://doi.org/10.1016/j.tmp.2015.09.005.

16. Taslimi, M. S., Omeyr, A. K., & Arabkooshar, S,Formulating a strategy through quantitative strategic planning matrix (QSPM) based on SWOT framework (Case study : industrial group of Barez Tires), International Journal ofEconomy, Management and Social Sciences, 3(8), 2014, p. 451–457.

17. Resti Indriarti. Nova Rachmawati Chaidir, Penerapan Quantitative Strategic Planning Matrix (QSPM) untuk Merumuskan Strategi Bisnis", Jurnal Manajerial, Vol. 20 No.1, Januari 2021, Hal.159 http://ejournal.upi.edu/index.php/manajerial.