

## SWOT Analysis on the Export-oriented Ceramic Industry Centre in Purwakarta, Indonesia

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### ABSTRACT

This study aims to examine the strategic management on the export-oriented ceramic industry centre in Purwakarta, Indonesia, by using an analysis tool based on strengths, weaknesses, opportunities and threats (SWOT). The type of study adopted is qualitative descriptive research, collected through surveys and guided interviews. Informants are export-oriented ceramic craftsmen, related government parties and college experts. The results are presented descriptively with regard to SWOT. On the basis of the final calculation result, the export-oriented ceramic industry centre is in the growth position if supported by the adequate production capacity of the organisation. The export-oriented ceramic industry centre in Purwakarta is suggested to improve the internal environment of the business in management and technology such that it can take advantage of market opportunities that remain wide.

Keywords: strategic management, SWOT analysis, ceramic industry

### 1. INTRODUCTION

The world of business and industry in Indonesia is currently facing a tight level of business competition with the free trade of ASEAN in the form of the ASEAN Economic Community (AEC) in 2015. The import duty tariff of at least 96% of the total goods traded amongst ASEAN countries has been 0% (ASEAN Integration Report, 2015). The AEC completed the previous free-trade agreements: the ASEAN Free Trade Area (AFTA) in 1992, ASEAN Plus Three (APT; China, Japan and Korea) in 1997 and ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) in 2009.

In Indonesia, the small- and medium-scale industries play an important role in employment. At least 97.3% of the workforce remains dependent on small industries. In the current global competition, small industries with the ability to export to overseas markets play an important role in the economic development of Indonesia. In this case, the ceramic industry centre in Purwakarta is included.

The ceramic industry centre in Purwakarta has been established since 1904, and its products are marketed nationwide throughout Indonesia. In 1984, the centre managed to

penetrate the export market, such as Singapore, Australia, the United States and the Middle East. However, since 2004 until 2016, a decline from 264 to 221 business units was observed. Amongst these business units, only 27 continued to export their products. The Head of District stated that the condition of this business declined due to many factors, including competition with products from Japan, Korea and China, with cheap but similar type of ceramic products. This situation compelled the ceramic industry centre in Purwakarta, which is mainly export oriented, to redesign its strategic plan to remain competitive in the global market.

This study aims to analyse and design the strategic plan of the export-oriented ceramic industry centre by using an analysis tool based on strengths, weaknesses, opportunities and threats (SWOT).

## **2. THEORY FRAMEWORK**

### **2.1. Export-Oriented Small and Medium Enterprises**

The era of globalisation is presently an opportunity and a threat for SMEs. Broad market access is also an increasingly competitive level, demanding SMEs to improve their business capabilities to take advantage of this opportunity, where international markets expand and local markets narrow. The international market provides wide long-term and profitability opportunities for SMEs. A previous research also explains that the challenges and complexity of the international market are not a crucial obstacle for SMEs although many problems and obstacles are also experienced by the SMEs of other countries (Julien et al., 1994).

Export-oriented SMEs, according to Tambunan (2003), are categorised into two: exporter manufacturer (direct exporter) and indirect exporter. SME exporter manufacturers produce products and directly sell them to overseas buyers (importers). On the contrary, SME indirect exporters produce products but do not market directly to importers, i.e. through domestic export agents or exporters. In Indonesia, 99.81% of the total SMEs are exporting indirectly or simply selling in the domestic market. Despite the value of exports, the market of indirect exporters is large, but direct exporter profits remain large. Two factors cause export-oriented SMEs to be incapable of exporting directly, namely, export trading and financing problems. The export trading problem occurs due to the high risk of export activities, such as the risk of payment and delivery of goods, the grace period of payment and the high export costs. By contrast, financing problems occur due to the limited capital of SMEs and the lack of support from financing institutions and export guarantee to SMEs.

Hardono (2006) corroborated that SMEs have classic barriers, namely, low-quality human resources (HR), poor business management, difficult access to finance and market sources and low-quality information and technology. SMEs that have barriers and business constraints related to exports are classified into two, namely, internal and external. Internal barriers are caused by the inadequacy or weakness inherent in SMEs themselves, such as low-quality HR, capital and production technology. External barriers are caused by external factors that are not attached to SMEs, such as unreliable raw material suppliers, complex buyer requirements and government regulatory burdens.

## 2.2. Strategy Concept and Strategic Management

A strategy is a key word for all companies to be able to compete with similar companies based on internal performance or external companies (Raharja, 2017). Strategy is a tool for achieving long-term goals. Business strategies may include geographic expansion, diversification, acquisition, product development, market penetration, business reductions, divestitures, liquidation and joint ventures. Strategies are potential actions that require top management decisions and large amounts of enterprise resources. In addition, strategies affect the long-term prosperity of the company, especially for five years, and orientation to the future. Strategies have multifunctional and multidimensional consequences and should consider internal and external factors (David, 2009). According to Chandler, strategy is a tool to achieve long-term company goals, as well as resource allocation priorities. According to Learned et al., strategy is a tool to create competitive advantages. Thus, one strategic focus is to decide whether the business should exist or not.

According to Hamel and Prahalad, strategy is an incremental (continuous) action and based on the viewpoint of what customers expect in the future. The new market innovation speed and changes in consumer patterns require core competence (Rokhmad). Numerous alternative strategies are utilized for business development in various forms. These alternatives include integration, intensive, diversification and defensive strategies (David, 2009).

By contrast, strategic management is defined as the art and knowledge to formulate, implement and evaluate cross-functional decisions that enable the organisation to achieve its goals. Strategic management focuses on integrating management, marketing, finance/accounting, production/operations, research and development and computer information systems to achieve organisational success (David, 2009). The goal of strategic management is to utilise and create new opportunities for future and long-term planning and to try to optimise current trends for the future.

Strategic management includes environmental observation, company strategy and evaluation and control. Strategic management emphasises the observation and evaluation of environmental opportunities and threats by looking at the strengths and weaknesses of the company. Jones (2001, cited by Raharja, 2017) defined organisational environment as 'the set of forces surrounding an organisation that has the potential to affect the way it operates and its access to scarce resources'. Strategic management is a way to manage all resources to develop long-term competitive advantages. The strategic management process is the path through which goals and strategic decisions are formulated. The strategic management process consists of three stages:

1. Strategy formulation includes developing visions and missions, identifying external opportunities and threats, determining internal strengths and weaknesses, establishing long-term goals, formulating alternative strategies and selecting specific strategies to be implemented.
2. Implementation strategy requires companies to set annual goals, create policies, motivate employees and allocate resources such that strategies that have been formulated can be executed. Implementation strategies involve developing a culture that supports strategy, creating effective organisational structures, directing marketing efforts, preparing

budgets, developing and empowering information systems and linking employee performance to organisational performance.

3. Strategy evaluation is the final stage in strategic management. Three stages of the basic activity of strategy evaluation are reviewing the external and internal factors underlying the strategy, measuring performance and taking corrective action. Evaluation is needed because the success of today does not guarantee the success of tomorrow. Success always brings different new problems, and satisfied companies will fail (David, 2009).

### 2.3. SWOT Analysis

SWOT analysis involves the identification of various factors to formulate the company's strategy. This analysis is based on logic that can maximise strength and opportunities, but can simultaneously minimise weaknesses and threats. The company's strategic decisions must consider internal factors that include strengths and weaknesses and external factors that include opportunities and threats. Therefore, important considerations for SWOT analysis are important (Freddy, 2004). SWOT analysis has two types of approaches as follows:

#### a. SWOT Matrix Qualitative Approach

The SWOT matrix qualitative approach developed by Kearns presents eight boxes. The top two boxes are the external factors (opportunities and challenges), whereas the remaining two boxes are internal factors (strength and gratitude). The other four squares refer to a box of strategic issues that arise as a result of a common point between internal and external factors.

**Table 1. SWOT Matrix by Kearns**

	Eksternal	<b>Opportunity</b>	<b>Treaths</b>
Internal			
<b>Strength</b>		Comparative Advantage	Mobilization
<b>Weakness</b>		Divestment/ Investment	Damage Control

#### b. Quantitative Approach SWOT Analysis

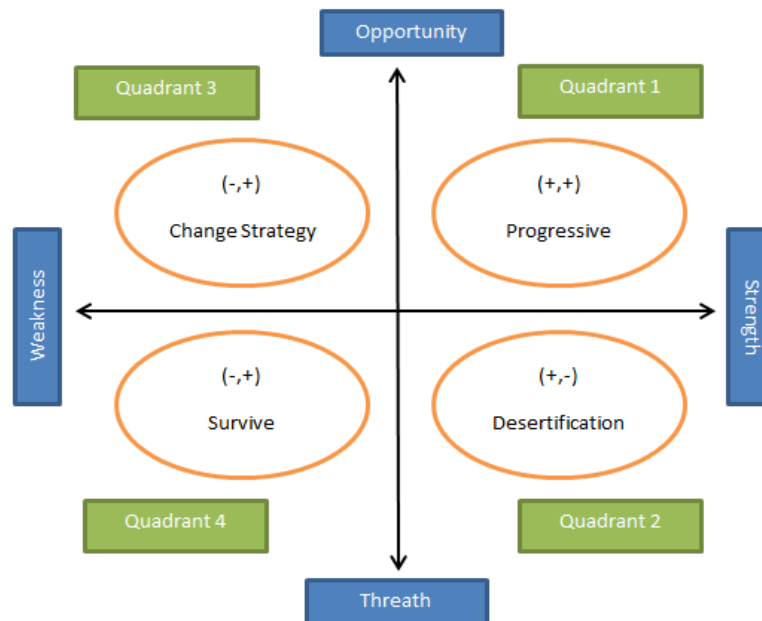
The qualitative SWOT data previously presented can be developed quantitatively through the SWOT analysis developed by Pearce and Robinson (1997) to determine the exact position of the real organisation. The calculation is conducted through three stages:

1. Perform calculation of score (a) and weight (b) point factor set a total number of multiplication score and weight ( $c = a \times b$ ) on each factor SWOT. The scores (a) of each factor point are calculated independently (the assessment of a factor point should not be

influenced by the assessment of other factor points). The selected scale range determines the accuracy of the assessment, but 1–10 is commonly used, assuming that the value of 1 is the lowest score and 10 denotes a high competitive score. The weight (b) of each factor point is calculated interdependently. That is, one point factor is assessed by comparing its level of importance with that of the other factor points. The value that has been obtained from the calculation (the value range is equal to the number of factor points) is divided by the number of points.

2. Reducing the total number of factor S with W (d) and factor O with T (e): the numbers ( $d = x$ ) and ( $e = y$ ) become the values or points on the X and Y axes.
3. Investigating the position of the organisation shown by the point (x, y) in the SWOT quadrant.

**Diagram 1 SWOT (Pearce and Robinson)**



### Quadrant I (positive, positive)

This position signifies a strong and potential organisation. The recommended strategy is progressive, indicating that the organisation is in tip-top condition and steady; hence, continuing to expand, enlarge growth and achieve maximum progress is possible.

### Quadrant II (positive, negative)

This position indicates a strong but challenging organisation. The recommended strategy is diversification, meaning that the organisation is in a stable condition but faces numerous challenges that the estimated wheel of the organisation will have difficulty to continue spinning only on the previous strategy. Therefore, the organisation is advised to

immediately expand the range of tactical strategies.

### **Quadrant III (negative, positive)**

This position demonstrates a weak but highly probable organisation. The recommended strategy is change, signifying that the organisation is advised to change the previous strategy. The reason is that the old strategy might have difficulty capturing the opportunities that exist while improving the performance of the organisation.

### **Quadrant IV (negative, negative)**

This position signifies a weak organisation and faces major challenges. The recommended strategy is defensive, indicating that the organisation's internal condition is in dilemma. The organisation is, therefore, advised to use defensive strategies to control internal performance and avoid further mudslides. This strategy is maintained while continuing to work on itself.

## **3. RESEARCH METHODS**

This study adopts qualitative research with a descriptive approach, which aims to conduct analyses systematically, factually and accurately about the facts and properties of research objects. Sugiyono (2013) affirmed that descriptive statistics are statistics that serve to describe or provide an overview of the object under study through sample data or population as is, without conducting analysis and providing conclusions that apply to the public. Informants for this study are potential experts, including those from the government, academics and ceramic exporters, to provide accurate data or information.

Data collection was performed by filling out questionnaires regarding the assessment of problem handling on the scale of 1–10. Overall data were collected through questionnaire interviews and literature study. The time of study is July to September 2017, and the location is at the ceramic industry centre in Purwakarta, Indonesia.

This study uses SWOT analysis to compare the internal factors (strengths and weakness) with external factors (opportunities and threats). Internal factors are incorporated into a matrix, namely, Internal Factor Analysis Summary (IFAS). External factors are incorporated into a matrix, namely, external factor matrix or External Factor Analysis Summary (EFAS). After the matrix of internal and external strategic factors is completed, the results are incorporated into the quantitative model of the SWOT matrix to formulate the company's competitive strategy.

## **4. DISCUSSION**

### **4.1. IFAS Analysis**

In the internal analysis, the strength and weakness factor of the export-oriented ceramic industry centre will be discussed. The five most significant strength factors from the results of interviews with experts are as follows:

- a. The natural conditions that provide clay raw materials are endless. This condition is evidenced by the availability of land for clay raw materials although the area has been

dredged since the early nineteenth century.

- b. The culture of local people who are already experts at creating ceramics for three generations. The expertise of ceramic craftsmen in this area is already integral with everyday life. Their skills are passed down to the next generation in the family environment. This situation has become the culture of this industry from the number of craftsmen involved in this ceramic industry centre. From 221 units of the ceramic handicraft business in Purwakarta, more than 2000 craftsmen are involved in supporting from various fields of the business, including raw materials processing, forming, decoration, drying, burning and finishing field.
- c. The design and quality of ceramic materials are good. Raw materials and production processes are completed through high quality and control standards such that the resulting ceramics have high quality. Ceramic design also involves the ability of the craftsmen supported by various parties, including government, academics and export agents, to always produce a design or ceramic motif that suits the specific needs of every segment of the current consumer.
- d. The marketing capability is good enough although large export marketing still relies on exporter agents, but one local craftsman can already directly export to the foreign market. This local craftsman at least follows the exhibition/expo for two times in a year and already has a database of overseas consumers who are regularly followed up with the latest news or ceramic products.
- e. No considerable problem emerges regarding the difficult access to finance in banking. The reason is that they can work with other large craftsmen or exporter agents to address their capital needs.

Meanwhile, the five largest weaknesses of this ceramic industry centre are as follows:

1. The local craftsmen's manpower has begun to decrease in number because many have moved to other sectors in the city.
2. The character of craftsmen remains generally comfortable with the traditional culture although the changing needs of the global market is fast. In addition, the average level of education is low (generally only graduated elementary school).
3. Production continues to use the traditional technology, where the length of time for one production cycle can reach 10 days. Certainly, the academics have been trying to conduct research to provide a waiting technology that can burn ceramics fast. However, unfortunately, despite the use of stove technology from the academics, the craftsmen prefer to re-use the traditional furnace technology because the cost of production is cheap although it has a long burning time.
4. Generally, their production capacity is still small; hence, penetrating the export market remains dependent on export agents that have good market access capability, sufficient capital and knowledge of export-specific needs and the standards of good foreign market segments. This is still less than most local ceramic craftsmen Purwakarta.
5. Access to finance in banking is difficult. The ceramic business is less favoured by banks due to its dynamic business character and the unique character of its craftsmen. In fact, their area has a cooperative, which, if functioning properly, can be an alternative in financing small ceramic artisans. Unfortunately, even this

cooperative did not function as a business of lending–saving but focuses on the business of providing ceramic raw materials.

## 4.2. EFAS Analysis

In external analysis, the five most important external factors that became the determinants of the business of the export-oriented ceramic industry centre in Purwakarta will be discussed. The top five opportunity factors based on the results of interviews with experts are as follows:

- a. The attention of the government at the central and regional levels. The central government commonly provides exhibition facilities or events to bring together ceramic craftsmen with potential buyers and has also provided assistance in the form of ceramic heating furnaces. On the contrary, the local government sets up a special institution, namely, *UPTD R&D Ceramics* of Purwakarta, for research and development and fostering and serving the craftsmen and buyers to increase the business of the ceramic centre in Purwakarta.
- b. The existence of academics who pay attention to the progress of this export-oriented ceramic industry centre, especially in increasing the competence of the HR of ceramics craftsmen, regarding the Internet, design, finance and English. Moreover, in the field of production, academics have created faster ceramic heating furnaces than the traditional. However, the ceramic craftsmen prefer using the traditional stoves fuelled by firewood because the cost of operation remains expensive.
- c. The presence of exporting agents who are willing to work with small craftsmen, such that the constraints of production capacity, export quality standards and business capital they commonly face can be anticipated in synergy with export agents.
- d. The demand for ceramic products from abroad, whether Asia, Europe, the United States and the Middle East, proves that the quality of ceramic products in Purwakarta indeed can meet the quality standards of foreign parties. However, unfortunately, many cannot be served, due to the limited production capacity of ceramic centres, for foreign and domestic markets.
- e. The conducive macroeconomic conditions of the country of Indonesia, where the economic growth is always above 5%. In addition, the increased credit rating status of the standard and poor at least guarantees the stability of the Indonesian economy in supporting the growth of all industrial sectors, including the export-oriented ceramic industry centre in Purwakarta.

The five most significant threat factors for the ceramic industry centre in Purwakarta are as follows:

1. The implementation of free-trade areas, whether the AFTA, APT (China, Japan and Korea) or AANZFTA, will at least increase the high level of competition in the ceramic industry market.
2. The success of overseas technology (China) in rapidly producing ceramics from plastic materials, at a low cost and with attractive appearance, can be a serious threat in the competition of the export-oriented ceramic industry centre in Purwakarta.



3. Indonesia's policy of revoking some of the subsidies on the energy sector of gas and electricity has increased the operating expenses of the export-oriented ceramic industry centre, thereby reducing the competitiveness of its ceramic products at the global level.
4. The policies of several countries, including the United States, to restrict imports from abroad to build their domestic economic sector cause a slight decrease in the level of export of the ceramic industry centre in Purwakarta to their country.
5. Until now, no synergy with the global supply chain can facilitate ceramic products in Purwakarta to the global market, resulting in the increase in operating costs that can reduce the competitiveness of Purwakarta ceramics.

Table 4. Expert Scoring Response Results

NO	FACTORS	SCORE A	SCORE G	SCORE E	WEIGHT	TOTAL
	<b>STRENGTH</b>					
1	Nature condition	8	9	8	2	16,7
2	Culture	7	8	8	1	7,7
3	Ceramics quality	9	9	10	3	28,0
4	Marketing skill	9	9	9	3	27,0
5	Financial	6	7	7	1	6,7
	<b>TOTAL STRENGTH</b>				10	86,0
	<b>WEAKNESS</b>					
1	HR decrease	6	7	7	1	6,7
2	Less HR quality	8	9	9	3	26,0
3	Traditional technology	8	8	8	3	24,0
4	Production Capacity	9	10	9	2	18,7
5	Financial Access	7	7	7	1	7,0
	<b>TOTAL WEAKNESS</b>				10	82,3
	<b>IFAS difference</b>					<b>3,7</b>
	<b>OPPORTUNITY</b>					
1	Government Support	9	9	8	3	26,0
2	Academics Support	7	8	7	1	7,3
3	Exporter agent	8	8	9	3	25,0
4	Foreign market demand	8	10	10	2	18,7
5	Macro economics	7	8	7	1	7,3
	<b>TOTAL OPPORTUNITY</b>				10	84,3
	<b>THREATH</b>					
1	Free Trade Area	7	9	7	2	15,3
2	Chinese technology	8	9	9	2	17,3
3	oil & electicity price increased	7	8	7	2	14,7
4	Import has been limited	7	7	7	1	7,0
5	Expensive global supply chain	8	7	8	3	23,0
	<b>TOTAL THREATH</b>				10	77,3
	<b>EFAS difference</b>					<b>7,0</b>

#### 4.1. Quantitative-Based SWOT Analysis

The SWOT analysis with this quantitative approach applies several conditions in which the scale is 1–10. For ease of weighting is done by weighing the number of even weights 10, and the sum result is the average total from the scores of the three experts, so the

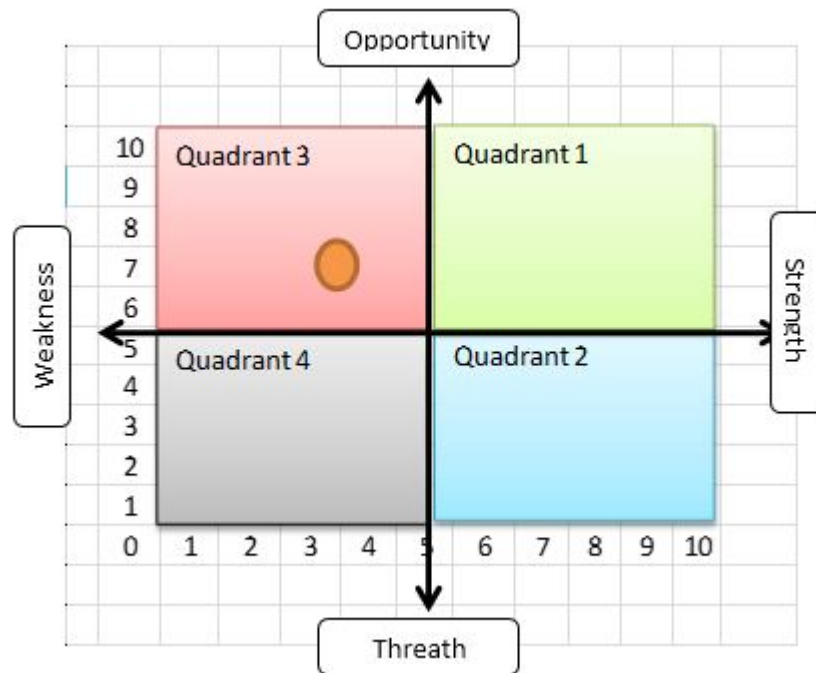
following will be exposed on scores from expert opinion from academics (Score A), government (Score P) and export-oriented ceramic craftsmen (PK Score):

Table 4 presents the scoring response of academic, government and export-oriented ceramic industry experts.

On the basis of the diagram, the combination of IFAS (x) and EFAS (y) differences produces a combination point located in the quadrant of area 3. In this quadrant, the weakness–opportunity combination strategy is recommended to be applied. In this case, the position of the export-oriented ceramic industry centre can be concluded to actually still have a significant market opportunity but remains unsupported by adequate production capacity and high-quality HR. Thus, in this case, the export-oriented ceramic industry centre in Purwakarta needs a strategic change to improve the internal aspects of the business, be it management and technology, to take advantage of market opportunities that remain wide.

On the basis of the table, the final result is obtained, i.e. the difference amounts of IFAS = 3.7 and EFAS = 7.0. Furthermore, the difference is combined in the following strategy diagram, where the IFAS difference represents line X, whereas the EFAS difference indicates line Y.

**Diagram 3. SWOT Strategy**



## 5. CONCLUSION

On the basis of the quantitative SWOT calculation, the strategy to focus on increasing overseas market opportunities is inappropriate because the export-oriented ceramic industry centre in Purwakarta actually has a vast overseas market potential, which is not yet optimally utilised. This case is due to the limited capacity and quality of HR. Therefore, proper strategies to improve the production of technology and appropriate HR

education system are required.

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