

Competitive Advantage Analysis of Shipyard Companies in Indonesia

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Abstract—the development of the shipping and shipyard industries in Indonesia over the past ten years has been very slow. Some of the causes, including low productivity and capacity, are the main reasons for this industry's penetration. In addition, the weakening of the national economy as a result of the weakening of the global economy also affected the domestic shipping industry. The competitiveness of the shipping and shipyard industry is influenced by industrial competitiveness and national competitiveness, so that shipyard industry problems must be solved comprehensively, accompanied by strategic and systematic steps in order to be able to compete sustainably. This study aims to analyze the strategies used by several shipping companies and shipyard companies to be able to survive and compete to win and get through severe conditions. This study uses descriptive qualitative method, which is supported by semi-structured interview techniques to obtain the data used in determining the resource person, using a purposive sampling method. The data collected is then tested for validity by using the triangulation of data sources to process the data obtained in developing alternative strategies using SWOT analysis (Strength, Weakness, Opportunities, Threat) In addition to the combination of SWOT methods. The findings of the research results state that all companies carry out defensive strategies so that they are a company that still exists today.

Keywords—analytic hierarchy process (AHP), competitive advantage, SWOT analysis, tug & barge.

I. INTRODUCTION

The weakening of the national economy as a result of the weakening of the global economy also affected the domestic shipping industry. The Indonesian National Shipowner Association (INSA) noted that in 2015, the domestic shipping industry was down due to the slowing pace of national economic growth. As a result, 15-20 percent of the approximately 14,000 Indonesian vessels currently only parked and did not work because there was no cargo. As stated by INSA Secretary General for the 2015-2019 period. Time Charter Equivalent (TCE), which is the shipping industry standard, is used to calculate the average daily income performance of a ship. TCE is calculated from shipping income minus shipping costs and then divides the total by the operational period. TCE in shipping company X has decreased, TCE in 2012 can reach an average of Rp.600 million / month/ship while in 2016, it only reached an average of Rp. 350 million / month/ship or the average decrease in TCE reaches 40. The low TCE due to competition between shipping companies to obtain coal cargo is also due to the sluggishness of other mining businesses as a result of the enactment of the Mining Law Number 4 of 2009, which has been formulated and ratified since 2009 and implemented in Indonesia on 12 January 2014. This law

has an effect so that all mineral raw materials such as gold, nickel, bauxite, iron ore, copper, and coal undergo a value-added process before being exported. This regulation also requires business owners to build smelters, a mining product processing facility that serves to increase the content of metals such as tin, nickel, copper, gold, and silver to reach levels that meet the standards.

The focus of this research is the analysis of the competing strategies of shipping companies and shipyards with Sub-focus of this research are as follows: (1) Internal and external factors of the Company that make strengths, weaknesses, opportunities, and threats, (2) Strategies carried out so that they can remain "Exist" to this day. (3) The strategy used by almost all companies to remain "exist". By looking at the background, problems, and things that have been conveyed above, the formulation of the problems raised in this study is as follows: (1) What are the Company's internal and external factors, which are strengths, weaknesses, cues, and threats? (2) What strategies have been carried out by the Company to survive and win the competition? (3) From the strategies carried out, which strategies make the Company survive and win the competition. The purpose of this study is to analyze the formulation of the ideal strategy by the Company to survive and win the competition. The scope of research is developing companies and shipyard companies and large companies.

II. LITERATURE REVIEW

A. Competitive Advantage

According to [3], competitive advantage is the core of a company's performance in a competitive market. It means having a low cost, profit differentiation, or successful focus strategy. It exists when a company is able to provide the same benefits as a competitor but at a lower cost (cost advantage) or provide benefits that exceed those of competing products (profit differentiation). Competitive advantage is a theory that seeks to overcome some of the criticisms of comparative advantage. The theory of competitive advantage shows that countries and

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businesses must pursue policies that create high-quality goods for sale at high prices in the market. [3] emphasize productivity growth as the focus of national strategies. It lies in the idea that ubiquitous cheap labor and natural resources are not needed for a good economy. Competitive advantage is needed for satisfied customers who will receive a higher value in the product delivered for higher-income what the owner requests from management and those requirements can be met with production organizations, higher applications, and the lowest possible production costs [5]. [7] found that there are many meanings of competitive advantage, and there is no agreement on a clear and unambiguous conceptual definition. Specifically, [7] argues that aside from some definitions in the literature that define competitive advantage in a rather vague way, all other statements, which implicitly define competitive advantage, can be classified into two main streams. The first flow defines competitive advantage in terms of performance, while the second flow defines competitive advantage in terms of sources or determinants. It is a deceptively simple idea of assessing a company's capabilities and market position by how they provide four relatives' advantages to competitors. It is mortal and only worth as much value as the market places on them. It has produced large volumes of academic output, both theoretical and empirical; the Company undertakes, by all accounts, seeking to identify, create and utilize competitive advantage; and it is universally accepted in strategic management courses and textbooks as important concepts in strategy. According to [9], organizational innovative activities significantly influence competitiveness based on skills and capabilities that are beyond reproach. Achieving higher competitiveness by means of innovation means producing cheaper products with better quality than those produced by competitors.

III. METHODS

The method being used is qualitative research using SWOT analysis methods. Sources of data in this study include primary data sources and secondary data sources. Primary data sources (primary data) in this study were respondents consisting of Top Management from shipping companies and shipyards who were directly involved in the formulation of the Company's strategy. The primary data source is obtained through a personal interview process with the respondent and to see the opinions of each respondent related to the questions that answer the problems in the study.

Secondary data sources (Secondary sources) in the form of annual reports, prospectuses, industry publications and analyzes by the media, websites and others. Yin recommends that there are six forms of data in a case study approach, namely, archives, interviews, direct observation, participant observation, and physical artifacts [6]. In the process of collecting data, interviews are done with interview protocols or interview guides.

According to [2], for the formulation of the Company's competitive strategy, an analysis of internal and external factors was carried out from each company sample. The internal environmental analysis consists of business and management functions. The external environmental

analysis consists of a macro analysis environment and an industrial environment using the Porter five-force model (Porter's Five Forces). Next is external factor evaluation (EFE), Internal factor evaluation (IFE), to see whether the strategies used by the sample companies match/match the evaluation results.

IV. RESULT AND DISCUSSION

A. Business Conditions of Shipping and Shipyard Companies

The problems that exist in the shipyard industry in general based on INSA (Indonesian National Ship owner Association) are:

1. Higher production prices due to the lack of component and other supporting industries so that it needs to wait for imported goods and cause longer production time.
2. Financing from financial institutions for shipbuilding is relatively difficult, interest rates are relatively higher than other industries.
3. Space or production capacity is still limited, unable to meet the needs of domestic vessels, especially large-sized vessels.

Based on the results of researcher interviews with Top Management in several shipyard companies that resulted in sluggish shipyard business conditions are as follows:

1. Business competition between shipyard companies is getting tougher. There is no agreed standard price so the shipyard becomes the victim of shipping parties that compare prices between shipyards. Shipyards with strong funds will be willing to give a bid price below the production price with consideration compared to no better income to lose to meet the fixed costs (fix cost) of the shipyard.
2. Price of Repair. In addition, even though the ship has been repaired (docked), the ship owner will set repairs in accordance with the ship owner's budget so that the value of the repair is reduced compared to when the price of coal is good.
3. Some ship owners ask for an extended payment tempo. When normal conditions for repayment of ship payments are made when the ship is finished docking and before the ship is withdrawn for sailing, currently the ship owner requests that the settlement be made 1 to 4 months after the ship leaves the shipyard. This is also one of the offering items that makes competition between shipyards. The longer the payment tempo is increasingly in demand by shipowners.

B. Industrial Environmental Analysis as the key to the success of Sustainable Competitive Advantages.

The strength that is the choice of shipping companies and shipyards according to the interview results is the competence of the organization both from the management side and from HR. Companies have realized that an increasingly competitive business environment requires companies to choose the right strategy. For the application of the right strategy, it needs to be supported by qualified human resources who are able to translate the strategy so that the Company's goals can be achieved. Or it can be said that the competency-based HR strategy is a strength that is owned by the Company so that it can survive until now. This is in line with the opinion of [8],

the pattern of human resources developments and activities that enable organizations to achieve their strategic goals. Companies that lose competent HR will experience major difficulties and are not easily recovered quickly.

[1], in his book, said that competency-based HR strategies must consider external factors that refer to future trends and needs, demand and supply, government regulations, human needs in general, and employees in particular, competitive potential, social changes, demography, culture, and technology. The trend of environmental change will affect changes in corporate

strategy, which also means that the strategy of human resources needs to be carried out by considering the suitability of the Company's strategy, structure, culture, technology, corporate management system.

After all, the overall priority scores of the SWOT factor are calculated in Table. 1, the overall Priority is displayed in the following Table. 2.

Decisions Strategies for shipyard development are made based on the SWOT matrix that has been identified, and the following strategies are made for each SWOT element in Table. 3.

TABLE 1.
 SWOT ANALYSIS OF SHIPYARD COMPANIES

A	Internal Factors	Weight	Rating	Weighted Score
Strengths		0.50		1.49
1	Human Resources Competence and experience and experienced in their fields	0.05	3.75	0.19
2	Experienced Company in line with Business	0.05	3.25	0.16
3	Strategic Location	0.10	3.75	0.38
4	the management function has gone well	0.10	2.25	0.23
5	available report on the progress of daily repair work for customers	0.05	2.50	0.13
6	quality of work and the accuracy of work completion	0.15	2.75	0.41
Weaknesses		0.50		1.84
1	accuracy and speed in estimating profit margins	0.05	3.50	0.18
2	limited funds to back up cash flow and investment	0.10	3.00	0.30
3	limited number of marketing personnel	0.20	4.00	0.8-
4	heavy equipment and support need repairs	0.15	3.75	0.56
Total		1.00		3.33
B	External Factors	Weight	Rating	Weighted Score
Opportunity		0.35		1.03
1	Indonesia's geographical factor as an archipelago	0.05	3.50	0.18
2	the coal business is starting to improve	0.20	3.25	0.65
3	Government policy (Inpres NO. 5/2005) , Tax, etc.	0.05	4.00	0.20

4	Supporting Industry	0.05	4.00	0.20
Threats		0.50		2.00
1	the emergence of new shipyards from large companies	0.25	4.00	1.00
2	still lack of raw and supporting materials companies	0.15	4.00	0.60
3	limitations of sub-contractors	0.10	4.00	0.40
Total		0.85		3.03

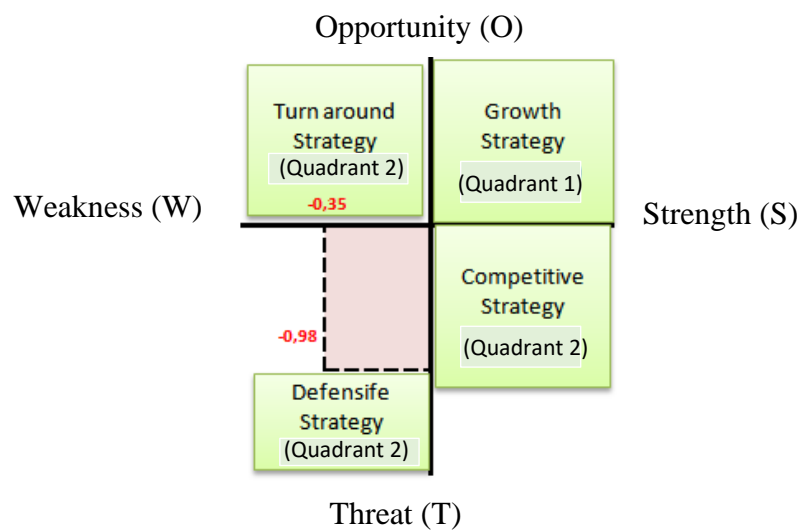


Figure. 1. Space matrix SWOT.

TABLE 2.
 OVERALL PRIORITY SWOT FACTOR

SWOT GROUP	GROUP PRIORITY	SWOT FACTOR	PRIORITY FACTOR IN GROUP	OVERALL PRIORITY FACTORS
STRENGTHS	0.367	S1 : Human Resource Competence	0.121	0.044
		S2 : Company experience	0.103	0.038
		S3 : Work quality	0.391	0.143
		S4: Daily Report	0.385	0.141
WEAKNESS	0.15	W1: Cash Flow	0.70	0.10
		W2: accuracy of margin estimates	0.07	0.01
		W3: limited marketing workforce	0.07	0.01
		W4: the age of the machine	0.16	0.02
OPPORTUNITY	0.36	O1:Trading Activity	0.16	0.06

		O2: Coal business	0.24	0.09
		O3: Government policy	0.29	0.11
		O4: Geographical	0.31	0.11
THREATS	0.12	T1: Competitors	0.45	0.06
		T2: Supply of raw materials	0.26	0.03
		T3: Subcontractor	0.17	0.02
		T4: Market	0.12	0.01

TABLE 3.
SWOT MATRIX

MATRIX SWOT	O1: Trading Activity O2: Coal Business O3: Government Policy O4: Geographical	T1: Competitors T2: Supply of Raw Materials T3: Subcontractor T4: Market
S1: Human Resources Competence	SO Strategy	ST Strategy
S2: Company Experience	Strategies to take advantage of opportunities by optimizing strength	Strategies that use force to overcome threats
S3: Work Quality	1. Repair shipyard infrastructure	1. still prioritizing the competence of human resources through the consistency of requirements in recruiting employees and providing training according to employee needs
S4: Daily Report	2. Diversification of the Project, by looking for new shipbuilding opportunities	2. always a commitment to customer satisfaction through the determination of work completion and report accuracy
W1: Cash Flow	WO Strategy	WT Strategy
W2: Accuracy of Margin Estimates	Strategies to minimize weaknesses to take advantage of opportunities	Strategies that minimize weaknesses and avoid threats
W3: Limited Marketing Workforce	1. rejuvenation of heavy equipment and other facilities	1. Cooperating with fast-moving goods suppliers and main materials (concessions)
W4: The Age of the Machine	2. Add marketing experienced in the shipbuilding and shipping industry	2. subcontract selection and evaluation
	3. regulation of payment of vendor debt	3. perform routine maintenance of heavy equipment
	4. setting acceptance/evaluation of customer term of payment	4. competitive prices
	5. ensure the accuracy of margin calculations	
	6. do cost-efficiency	

TABLE 4.
PRIORITY TABLE WITH SWOT ANALYSIS

Priority Strategic	SWOT Methods
Priority 1th	WT (3,84)
Priority 2nd	ST (3,49)
Priority 3rd	WO (2,86)
Priority 4th	SO (2,51)

V. CONCLUSION

Based on the findings and discussion, the researcher can draw the following conclusions:

- 1) The sluggishness of the coal business in Indonesia has a significant effect on the revenue of both shipping companies and shipyard companies. The decrease or increase in coal prices directly affects the decline/increase in revenue of shipping companies but does not have a direct impact on shipyard companies because shipyard companies depend on shipping companies.
- 2) Indicators of shipping companies are Equivalent Time Charter, the average value of TCE for the last 3 years, with an average of Rp. 300 million (in 2014), Rp. 277 million (in 2015) and Rp. 420 million (in 2016). This correlates with the trend in coal prices where 2015 was the lowest price for the past 5 years. In 2016, TCE improved compared to the previous year, wherein November and December 2016 coal prices reached an average of 95 USD / ton.
- 3) Based on the space matrix (IFAS & EFAS), the shipyard company is in quadrant IV or defensive strategy. This strategy is indeed carried out by shipyard companies that still survive to this day, namely by implementing a defensive strategy through

efficiency programs in every line of business processes to reduce production costs and overhead costs.

- 4) Based on the analysis of AHP, the significant factors in the enhancement of shipyard business are the strength factor (Strengths) of 36.7%, Opportunity (Opportunity) 36.5%; Weakness 15%, and Threat 12%.
- 5) The Priority of strategy taking, based on the SWOT analysis, is the WT strategy, which has a score of 3.84 points. The same is a strategy to minimize weaknesses.

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