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STRATEGY TO INCREASE THE COMPETITIVENESS OF INDONESIA TIRE INDUSTRY IN THE INTERNATIONAL MARKET

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ABSTRACT

Natural rubber is one of Indonesia's main commodities. Indonesia, together with Thailand and Malaysia, is one of the world's major producers of natural rubber. One of the rubber-based products is tire products that can take 70% to 80% of the world's total natural rubber production. Indonesia has been able to produce tires domestically. Most of Indonesia's tires are exported to various countries including the United States, Japan, Philippine, Malaysia, Australia, Europe and Middle East. Indonesian tire exports are fluctuated and Indonesia's export share is relatively stagnant compared to other tire producing countries. This study aims to formulate strategic priorities in increasing and developing the competitiveness of Indonesia tire industry. The method used is Analytic Hierarchy Process. Identification of the Analytic Hierarchy Process system uses factors that affect tire competitiveness which refers to the components contained in Porter's Diamond. The findings showed that in increasing and developing the competitiveness of the tire industry, the chosen priority strategy was to increase product promotion, enhance international cooperation, and strengthen the structure of the domestic raw material industry. The main objectives to be achieved are increasing company profits, increasing exports, and increasing tire production. The most important actors are the government, tire industry actors, and suppliers of raw and auxiliary materials.

KEY WORDS

Competitiveness, export, Indonesia, industry, strategy, tire.

Indonesia controls the world's natural rubber production by 25.5% right after Thailand with 36.3% control (Muenthaisong and Leemanonwarachai, 2016). From the total 3.1 million tons of Indonesian rubber production, only around 17% can be used by the domestic rubber-based industry, while the rest is exported in raw form. Commodity export in raw form is very vulnerable to changes in demand and prices. Indonesia must spur more exports of products with high added value and global competitiveness, especially rubber-based industrial products. Indonesia still has the opportunity to increase the added value of domestic rubber products.

One of the rubber-based products is tire products that can take 70% to 80% of the world's total natural rubber production (Erni 2006). Currently, Indonesia has been able to produce tires domestically. There are several companies in Indonesia that produce tires either national and multinational companies. Multinational companies that have factories in Indonesia include PT Bridgestone Tire Indonesia, PT Goodyear Indonesia Tbk., PT Sumi Rubber Indonesia, PT Hankook Tire Industry, PT Maxxis Internasional, and PT Kenda Rubber Indonesia. Meanwhile, national companies include PT Gajah Tunggal, PT Multistrada Arah Sarana, PT Suryaraya Rubberindo, PT Industri Karet Deli, and PT Elang Perdana. The tire products produced by those companies are mostly four-wheeled and two-wheeled passenger vehicle tires.

Domestic tire production continues to increase in which in 2016 Indonesia could produce 70.2 million units of four-wheeled vehicle tires and 61.87 million units of two-wheeled tires. Tires produced by domestic tire companies in addition to being used to meet domestic needs, are also export mainstay products. The main countries for Indonesia's tire product exports are the United States, Japan, Philippine, Malaysia, Australia, Europe and Middle East (Table 1). Indonesia's tire exports are still dominated by the United States with an export value of USD 746.58 million (46.52% of total exports), followed by Japan with an export value of USD 127 million (7.91%), and Philippine with an export value of USD 70.23 Million (4.38%). The market structure of Indonesia's tire exports is strongly influenced by the economic development of developed countries such as the United States and Japan.

Table 1 – Countries of Destination for Indonesia's Tire Exports in 2016

No	Countries	Values (Million USD)	Contribution (%)	Volume (Ton)	Contribution (%)
1.	The United States	746.58	46.52	233,969	45.26
2.	Japan	127.00	7.91	43,835	8.48
3.	Philippine	70.23	4.38	25,567	4.95
4.	Malaysia	70.07	4.37	23,965	4.64
5.	Australia	62.52	3.90	20,341	3.94
6.	Germany	60.12	3.75	10,167	1.97
7.	Saudi Arabia	54.26	3.38	20,127	3.89
8.	Egypt	32.34	2.01	12,423	2.40
9.	United Kingdom	30.80	1.92	10,866	2.10
10.	Thailand	25.49	1.58	8,504	1.64
	Other Countries	325.61	20.28	107,14	20.73
Total Tire Exports to the World		1,605.02	100%	516.906	100%

Source: Trade map (2017a).

Generally, Indonesia's tire exports continue to experience an increase, which peaked in 2011 with a value of USD 1.85 billion. Yet, in recent years the export value has decreased and the volume has fluctuated (Figure 1). The volume of Indonesia's tire exports experienced a decline in 2008 to 2009 which then increased in 2010 to 2011. Furthermore, exports again experienced a decline in 2012 to then rise again. In terms of the value, exports also experienced a similar pattern.

Figure 1 – Development of Indonesia's Tire Exports in 2006-2016 (Source: Trade map, 2017a)

In the international market, Indonesia only contributed 2.28% in 2016. The growth of Indonesia's tire export market share in the world is relatively stagnant compared to China and Thailand. The development of tire exports from China is quite rapid and able to dominate the world market share. China's tire exports continued to increase in which in 2001 it only controlled the export share of 4.43% to 18.34% in 2016. Thailand's export share also experienced a significant increase from 1.49% in 2001 to 5.06% in 2016. On the other hand,

tire producers, for instance: The United States, Japan, Germany and France experienced a downward trend in exports (Figure 2).

Figure 2 – Developments in the Market Share of Tire Export Value from the World Major Producers in 2001-2016 (Source: Trade map, 2017b)

World tire demand is dominated by global brands produced by multinational tire companies including Bridgestone, Michelin, Goodyear, Continental and Pirelli. The strong brand image of multinational tire products gives consumers the confidence to choose the tire brand. Thus, it is a challenge for tires with other brands to compete in the global market. Multinational tire companies build many factories in various countries to increase production and sales in certain regions. In Indonesia itself, there are several multinational tire companies that build factories domestically.

Regarding to Indonesia's position as the main producer of Indonesia natural rubber and increasing domestic tire production as well as tire demand that tends to increase, Indonesia should be a major player in the world tire market. However, in the reality, Indonesia's tire exports are fluctuated and Indonesia's export market share is relatively stagnant compared to other tire producing countries. Thus, this study needs to be carried out to formulate a priority strategy in increasing and developing the competitiveness of Indonesia tire industry in the international market.

METHODS OF RESEARCH

In formulating a strategy to improve competitiveness in supporting the development of the tire industry, this study applies Analytic Hierarchy Process (AHP) to model the problems faced by tire industry companies. The decision-making process using AHP follows a process flow that supports each other. The stages carried out in the AHP are system identification, hierarchy preparation, questionnaire compilation and calculation of the consistency of individual opinion ratios, combined matrix compilation, and vertical processing (Saaty 1990). The system identification, carried out in analyzing the factors that influence tire competitiveness, refers to the elements contained in Porter's Diamond (Porter 1990). The use of Porter's Diamond component in formulating industrial competitiveness strategies was carried out by Syahresmita (2000) and Setyawan (2016) for the rattan processing industry.

System identification is carried out through literature studies to study the system and conduct in-depth interviews with tire industry experts to obtain input on subfactors, actors, objectives, and alternative strategies. The hierarchy is made from the highest to the lowest level. The highest level is the main target that is followed by influential factors and subfactors, actors who are involved, objectives of each actor, and alternative strategies

which are considered to achieve the target. Assessment of the importance of each element is carried out through pairwise comparisons.

Respondents were selected using the purposive sampling method by determining which respondents were expected to answer the research problems. The respondents were 5 (five) people who were experts in the development of the tire industry; both representing the functions of the government and business actors.

RESULTS AND DISCUSSION

Competitiveness has become the key for a country to excel in cross-country economic activities. Competitiveness is a major issue that is considered in conducting international trade. Competitiveness is not only noticed by tire companies, but also becomes one of the bases for the government to issue policies in supporting economic performance.

In determining policies, it is necessary to formulate strategies that are capable of increasing and developing competitiveness. The formulation of the right competitive strategy in increasing and developing the daytime power of the tire industry is based on a preliminary review of the factors that influence the competitiveness of an industry and the study of literature to obtain the initial hierarchy. The initial hierarchy that was compiled was carried out confirmation of opinion to competent and related parties in the development of the tire industry through in-depth interviews and questionnaire assistance. Based on the results of the first stage of the questionnaire, 19 subfactors, seven actors who are involved, five objectives, and five alternative strategies in increasing the competitiveness of the tire industry were identified.

Based on the results of system identification as shown in Figure 3, from the six main factors based on Porter's Diamond elements, there are several sub-factors that influence efforts to improve and develop the competitiveness of Indonesia tire industry: (1) Condition of natural rubber owned by Indonesia, HR capability, technology, infrastructure in supporting the smooth flow of raw materials and products, and energy; (2) Demand conditions: ability of people's purchasing power and market desires; (3) Related industries and supporting industries: strength of raw material suppliers and strength of auxiliary material suppliers; (4) Structure and competition strategies: trade barriers, quality, brand image, price, and distribution channels; (5) Government's role: investment policy, export and import policies, and standardization policies; (6) Opportunities: free trade and currency rates.

Actors who are involved in increasing and developing the competitiveness of Indonesia tire industry are (1) tire industry actors, (2) suppliers of raw and auxiliary materials, (3) government, (4) tire industry associations, (5) labors (6) researchers, and (7) exporters/traders. In an effort to increase and develop the competitiveness of Indonesia tire industry, the objectives to be achieved are: (1) increasing tire production, (2) increasing brand image, (3) increasing company profits, (4) expanding export markets, and (5) increasing exports to increase the country's foreign exchange.

To achieve the above objectives, the proposed alternative strategies include:

- Increasing product promotion:

Tires produced by tire factories in Indonesia are still not widely known in the international market, especially tires with local brands that are intended for export markets.

- Strengthening domestic structure of raw material industry:

The raw material industry in Indonesia is still limited to meeting the needs of the tire industry. Although Indonesia has abundant natural rubber raw materials, it is still limited to other raw materials such as synthetic rubber, carbon black and other raw materials.

- Enhancing international cooperation:

To encourage the penetration of the export market, it is expected to expand market access to Indonesian tire products. Indonesia has free trade cooperation with various countries either bilaterally or regionally such as the ASEAN Free Trade Area (AFTA), the ASEAN Korea Free Trade Area (AKFTA), the Indonesian Japan Economic Partnership Agreement (IJEPA), the ASEAN China Free Trade Area (ACFTA) and several other trade agreements that have been or are under discussion.

- Increasing product innovation:

Product innovation continues to be carried out to produce products with better quality, according to market tastes, and competitive prices which are expected to increase Indonesia's tire competitiveness.

- Creating a conducive business climate through government policy support:

The policies issued by the government greatly influenced the development of Indonesia tire industry. The investment incentive policy in the tire industry and raw material industry is very much needed by the tire industry sector. The trade system policy that regulates exports and imports also influences the development of domestic industry competition.

Figure 3 – The hierarchical structure of the strategy for increasing and developing the competitiveness of Indonesia tire industry

Priority Factors in Increasing and Developing the Competitiveness of Indonesia Tire Industry. The decisive factors affecting the competitiveness of Indonesia tire industry are based on six elements in Porter's Diamond theory. To facilitate the decision of prioritization, each factor is divided into several smaller and specialized subfactors. The results of the AHP analysis show that the elements of related industries and supporting industries are the factors that most influence the competitiveness of the tire industry (0.312). The sub-factor of strength of raw material supplier is the most influential with a weight of 0.252. Then, the strength of auxiliary material supplier has a weight of 0.06. The structure of tire raw materials consists of several components, such as rubber (natural rubber and synthetic rubber), carbon black, steel cord, textile (tire cord), and other raw materials (Anne and Evans 2006). Currently, Indonesia is the second largest producer of natural rubber. Meanwhile, for synthetic rubber and carbon black, domestic production is still limited and not sufficient for the domestic tire industry; thus, most of them are still imported.

The second priority factor is the role of government with weight of 0.264. The role of government is an element that does not directly influence the improvement of a country's competitiveness, but greatly influences other competitiveness determinants (Porter 1990). Government policy greatly influences the development of the competitiveness of Indonesia tire industry. Investment policy has the highest weight (0.109), then the export import policy (0.084), and product standardization policy (0.070). The tax allowance policy for industrial investments issued by the government encourages domestic tire companies to increase their

production capacity. The role of the government is also a priority factor for attracting investment in the upstream tire sector; for instance, for the synthetic rubber industry, the carbon black industry in which until now it has limited supply capability.

The next priority factor is the condition of the factor (0.139) in which the production technology (0.032) is a subfactor that is considered as most priority factor. Current technological developments in the tire industry lead to technologies that produce eco-tire and green tire that are eco-friendly in terms of noise level, usage time, fuel efficiency level, safety and comfort level.

The fourth priority factor that is considered important is strategy, structure and competition with a weight of 0.126. In this factor, the subfactors which are sorted by the highest priority are product quality (0.036), brand image (0.033), trade barriers (0.027), and price (0.019) and distribution channels (0.011). The quality of tire products produced by companies in Indonesia is generally regulated in the applicable SNI (Indonesian National Standard); in addition to other standards that must be met during the export to destination countries such as DOT (United States), CE-mark (Europe), BPS (Philippine), GSO (Middle East), SASO (Saudi Arabia), In-Metro (Brazil). The quality tire products will create a good image for customers. A good brand image needs to be built so that it can generate customer confidence and trust in the quality of the product.

The fifth priority factor is the demand condition (0.103) in which the subfactor of the people's purchasing power is the most important with a weight of 0.062 and the market desire subfactor with a weight of 0.041. Tire products can be categorized as elastic products in which price changes will have an impact on supply. The last priority factor is opportunity (0.056). In this factor, the currency rate has the highest priority (0.035) compared to the free trade sub-factor (0.021).

Priority Actors in Increasing and Developing the Competitiveness of Indonesia Tire Industry. AHP calculation results show that the most influential actor in increasing and developing the competitiveness of Indonesia tire industry is the government with a weight of 0.240. In line with the results of the analysis at the factor level, the role of the government through various policies is expected to encourage increase and development of competitiveness. Investment policy support, both the tire industry and in the raw and auxiliary material industries, is needed to strengthen the structure of the domestic tire industry.

As the main actor in the production process, the tire industry has the second highest priority weight, which amounted to 0.220. Business actors play a role in increasing added value in the country, absorbing labor, increasing state tax revenues, and increasing foreign exchange for export-oriented products.

The third priority actor is the raw and auxiliary material supplier with a weight of 0.186. The presence of domestic raw and auxiliary materials industries is important in the tire industry, especially when there are currently main raw materials for tire manufacturing which are still limited in domestic supply. Indonesia's natural rubber is abundantly available. However, synthetic rubber, carbon black and other raw materials are still imported.

Exporters or traders (0.105) in this case play a role in facilitating product marketing, especially abroad marketing. The exporter or trader helps to facilitate the distribution and sale of products to the destination countries. The tire association (0.096) is a forum for tire companies to speak out their aspirations. Researcher (0.084) has a role in continuing the innovation of production process and products. The results of this investment can produce products that are in line with market developments and have better quality and efficient processes. Labor has a weight of 0.069. The tire industry is a capital-intensive industry, so the production process uses a lot of high-tech machinery. Collaboration of labor with machinery will increase labor productivity.

Priority Objectives in Increasing and Developing the Competitiveness of Indonesia Tire Industry. The strategy for increasing and developing the competitiveness of Indonesia tire industry has several objectives to be achieved. From the calculation of weights and priorities, the findings show that the highest priority is increasing company profits (0.243), then increasing exports to gain foreign exchange (0.236), and increasing tire production (0.233).

Many people believe that the main objective of a business company is to get maximum profits (Hussain 2012). By the increase in company profits, the company will have enough working capital to produce its products. Indonesia tire production is mostly intended for exports, so that the increased tire production will be followed by the increased exports. Exports are a source of foreign exchange. Lots of foreign exchange will have a major influence on the success of a country's development (Oktaviani and Novianti 2009).

Generally, Indonesia tires can be categorized into two. First is a global brand tire produced by multinational companies in the country. Examples of global tire brands are Bridgestone, Goodyear, Dunlop, Pirelli, and Hankook. Meanwhile, local brand tires are tires produced by domestic producers such as GT, Accelera, Achilles, Federal, and Mizzle. Global tire brands have relatively little difficulties in the international market, because besides having a strong brand image, the composition of exports has also been regulated globally. Meanwhile, local tire brands require more aggressive promotions to compete with other brands although their quality is not inferior to global brand tires. As an export-oriented product, Indonesia tires, especially local brand tires, are still unable to compete with global brands. Therefore, one of the objectives that will be achieved is increasing brand image of tires made in Indonesia on the global market; especially local brand tires.

Alternative Strategy for Increasing and Developing the Competitiveness of Indonesia Tire Industry. The main strategy that becomes a priority in increasing and developing the competitiveness of Indonesia tire industry is to increase product promotion with a weight of 0.271, followed by a strategy to increase international cooperation with a weight of 0.262. By the promotion and trade cooperation, in addition to increase exports, it can also increase access to more competitive raw materials. Promotion and trade cooperation are very important especially that are supported by improving product quality so that penetration in export to the destination countries will be easier and able to compete with other countries. Indonesia has also established a number of trade cooperation with various countries such as ASEAN, China, Japan, South Korea, Australia and New Zealand. In addition, there are several trade cooperation agreements that are still under discussion.

As explained earlier that one of the priorities of the objectives to be achieved is an increase in brand image. To improve the brand image, national tire companies carry out various promotional strategies, including sport branding, brand concept stores, participation in international scale exhibitions.

The third priority strategy is to strengthen the structure of the domestic raw material industry (0.212). The role of the raw material industry is very important. It is seen from the results at the factor level placing the related industries and supporting industries as the top priority. The presence of domestic raw material producers is not only to strengthen the structure of the domestic industry, but also to increase domestic added value, reduce import dependence, facilitate access to raw materials, save foreign exchange, absorb labor, and increase state revenues through taxes.

A conducive business climate needs to be created by the role of government through various policy products. The government has issued a policy to encourage investment in the tire industry and the raw material industry through the provision of tax incentives. The perceived benefits are the establishment of new domestic tire factories and domestic synthetic rubber raw material factories. Standardization policy also encourages the improvement of the quality of the production process and the quality of the products produced by the tire factory. Good tire quality will increase customer trust that the products are in accordance with safety, comfort and safety standards for driving.

CONCLUSION AND SUGGESTIONS

The priority strategy chosen in increasing and developing the competitiveness of Indonesia tire industry is to increase product promotion, followed by to increase international cooperation, and strengthen the structure of the domestic raw material industry. The increased promotion of products is intended to increase the brand image of Indonesia tires in the international market; therefore, it is expected to increase consumer confidence in

Indonesia tire products. The increased international cooperation is intended to facilitate market access for Indonesia tire products in export destination countries, as well as access to more competitive raw materials. Strengthening the structure of the raw material industry in the country can be carried out through various government policies through policies on investment incentive as well as policies on the import trade system.

The role of the government in building a brand image of domestic tire products is also still needed. The participation of various global marketing channels such as international level exhibitions and sponsorships in global scale activities is expected to increase customer knowledge of Indonesia tire products. The government is also expected to encourage the strengthening of the domestic raw material industry structure through tax relief facilities and ease of domestic investment such as tax allowance and tax holidays facilities to investors who are developing the tire raw material industry.

The ease of access for marketing Indonesia tire products, especially to European countries, the Middle East and other non-traditional countries, to increase export penetration, is very necessary. The cooperation among FTA Indonesia, Europe and Middle Eastern countries is expected to increase Indonesia's exports; regarding the large tire market in the country.

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