



## ANALYSIS OF INDONESIA'S TIRE EXPORT DEVELOPMENT STRATEGY

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### ABSTRACT

*This study aims to analyze the policy strategy to improve the competitiveness of Indonesia's tires to the global market. The analytical method used in this study is the SWOT Analysis Method. The results of the study have shown that the development strategy for Indonesia's tire exports to the global market, based on the SWOT analysis above, can be formulated with 12 alternative strategies, which are the solutions chosen, including: three alternatives for SO-Strategy, four alternative for WO-Strategy, two alternative for ST-Strategy and three alternatives for WT-Strategy, namely: a) Increase competitiveness; b) Increasing access for business actors to develop; c) Encouraging investors to be able to invest; d) Repair and development of infrastructure; e) Facilitating access to international export markets; f) Improve product quality; g) Increasing the ability and quality of human resources; h) Improve product quality; i) Looking for new markets/trading partners; j) Encourage the government to conduct a conducive business climate; k) Improving pricing and promotion strategies, and l) Evaluating policies that hamper export development*

**KEYWORDS:** Strategy,, eksport development, Tire

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### 1. INTRODUCTION

Indonesia's natural rubber production is as much as 81.6 percent produced by smallholder plantations, while the rest is 7.2 percent produced by large state plantations and 11.3 percent by private plantations (Directorate General of Plantation 2016).

One of the rubber-based products is tires that can absorb 70 to 80 percent of the world's total natural rubber production. While the remaining is used by other downstream rubber industries such as the shoe industry, household appliances, and other consumer products (Erni in Ardiansya, 2018).

**Table 1**  
**Area and Production of Natural Rubber in Indonesia**

| Year | Area in hectare (Ha) | Growth (%) | Production (ton) | Growth (%) | Export (ton) | Growth (%) |
|------|----------------------|------------|------------------|------------|--------------|------------|
| 2006 | 3.346.427            | 2,01       | 2.637.231        | 4,47       | 2.286.897    | 5,30       |
| 2007 | 3.413.717            | 0,30       | 2.755.172        | -0,03      | 2.407.972    | -5,20      |
| 2008 | 3.424.217            | 0,32       | 2.754.356        | -11,40     | 2.283.158    | -47,80     |
| 2009 | 3.435.270            | 0,30       | 2.440.347        | 12,06      | 1.991.533    | 18,10      |
| 2010 | 3.445.415            | 0,31       | 2.734.854        | 9,33       | 2.351.915    | 8,68       |
| 2011 | 3.456.128            | 1,44       | 2.990.184        | 0,73       | 2.556.233    | -4,37      |
| 2012 | 3.506.201            | 1,41       | 3.012.254        | 7,47       | 2.444.503    | 10,50      |
| 2013 | 3.555.946            | 1,41       | 3.237.433        | -2,60      | 2.701.995    | -2,91      |
| 2014 | 3.606.245            | 0,41       | 3.153.186        | -0,24      | 2.623.471    | 0,26       |
| 2015 | 3.621.102            | 0,50       | 3.145.398        | 0,40       | 2.630.313    | -28,10     |
| 2016 | 3.639.092*           | -          | 3.157.780        | -          | 1.889.164    | -          |

2006 – 2015

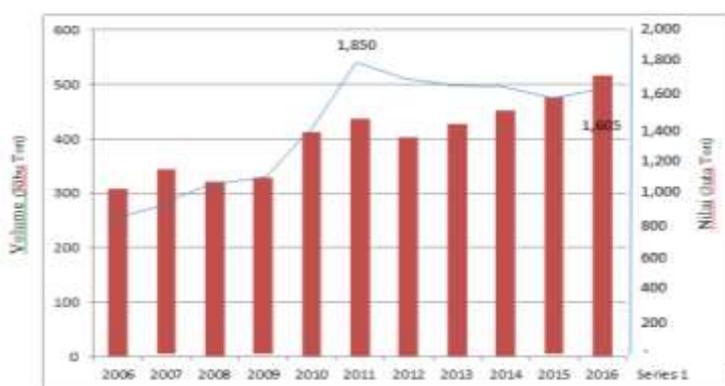
Source: Directorate General of Plantations (2016)

\*) Temporary number

\*\*\*) Temporary numbers to September 2016

Indonesia's total natural rubber production amounted to 3.1 million tons in 2015. Of the total domestic rubber production, only about 17 percent can be absorbed by the domestic rubber finished products industry, while the rest can be exported (Table 1). Indonesia's natural rubber exports are primarily in the form of the Indonesian Standard

Rubber (SIR) crumb rubber. The market for SIR crumb rubber accounts for more than 96 percent of Indonesia's natural rubber exports (Hendratno 2015). That natural rubber would become one of the mainstay commodities of Indonesia's exports, contributing large amounts of foreign exchange.



Source: 2017 Trademap

**Figure 1** Development of Indonesia's Tire Exports in 2006-2016

Tire products are mainly intended for the export market, allowing the tire industry the largest foreign exchange earner in the rubber-based manufacturing sector. The value of tire exports

increased by USD 1.85 billion in 2011, compared to USD 1.60 billion in 2016.



**Table 2**  
**Development of Tire Production in Indonesia in 2006 - 2016**

| Year        | Tire Production 4 wheels (million units) | Growth Tire Production 4 Wheels (%) | Tire Production 2 wheels (million units) | Growth Tire Production 2 Wheels (%) |
|-------------|------------------------------------------|-------------------------------------|------------------------------------------|-------------------------------------|
| 2006        | 41,3                                     | -                                   | 21,7                                     | -                                   |
| 2007        | 42,0                                     | 1,70                                | 23,9                                     | 9,89                                |
| 2008        | 42,8                                     | 2,03                                | 28,8                                     | 20,26                               |
| 2009        | 39,1                                     | -8,68                               | 28,4                                     | -1,17                               |
| 2010        | 50,0                                     | 27,81                               | 40,4                                     | 42,21                               |
| 2011        | 51,8                                     | 3,76                                | 41,7                                     | 3,12                                |
| 2012        | 56,7                                     | 9,37                                | 50,3                                     | 20,67                               |
| 2013        | 61,6                                     | 8,60                                | 56,7                                     | 12,62                               |
| 2014        | 61,7                                     | 0,25                                | 59,9                                     | 5,69                                |
| 2015        | 65,3                                     | 5,78                                | 59,4                                     | -0,91                               |
| 2016        | 70,2                                     | 7,40                                | 61,8                                     | 4,14                                |
| Growth Rate |                                          | 5,80                                | 11,65                                    |                                     |

Source: Dekarindo 2018

Based on data from BPS (2015), 19 large-scale tire factories are operating in the country. Domestic tire production continues to increase, with Indonesia producing 70.2 million units of four-wheeled vehicle tires in 2016, an average increase of 5.80 percent, and 61.87 million units of two-wheeled vehicle tires, an average increase of 11 percent, or 65 percent, compared to 2011. The increase in production was driven by increased capacity through investment in new factories and the expansion of the factory..

Lusiana (2012) stated in her study that factors affecting the development of the tire industry include raw materials, the technology used, and labor in the rubber goods industry, in particular tires. Looking at the data on Indonesia's natural rubber production, which tends to increase, and Indonesia 's tire production continues developing, and at the same time as the development of the automotive industry continues, Indonesia should be able to become a major player on the world tire market. The development of Indonesia 's export market share is not in line with Indonesia 's position as one of the largest natural rubber producers in the world.

## 2. RESEARCH METHODOLOGY

This study analyzes the competitiveness of Indonesian tire commodities with ASEAN countries. The data used in this research method are primary and secondary. Primary data were obtained from interviews with the North Sumatra Province of the Industry and Trade Office, business actors, users, and stakeholders. Secondary data were derived from the 2014-2018 ITC (International Trade Center) time-series data.

The data collected shall include:

- The value of tire commodity exports from Indonesia, Malaysia, Thailand, Singapore, Cambodia, and Vietnam in 2014 - 2018.
- The total export value of Indonesia, Malaysia, Thailand, Singapore, Cambodia, and Vietnam in 2014 - 2018.
- The value of the global's tire commodity exports in 2014-2018.
- Total value of global exports in 2014 - 2018.

The scope of this study leads to the export performance of vehicle tires in Indonesia using a SWOT analysis.

## 3. LITERATURE REVIEW

Development is the process by which individuals, groups, organizations, institutions, and communities improve their ability to:

1. Perform standard assignments, solve problems, set and achieve goals.
2. Understand and link their development needs broadly and continuously (Milen, 2004).

According to Sirojuzilam (2005), regional development is essentially an increase in the value of the benefits of the area for the people of a particular area who can accommodate more residents, with an average level of community welfare improving, as well as showing more facilities/infrastructures, goods or services available and increased community business activities, both in terms of type and intensity.



The tire industry in Indonesia is one of the potential industries and has become a priority industry to be developed, according to Indonesia's industrial development policy in 2010 - 2025 (Deprin 2005). The tire industry is a natural rubber industry with the highest export value. The raw material for making tires supplied from various sources at home and abroad. Natural rubber obtained from domestic suppliers such as North Sumatra, West Sumatra, Jambi, West Kalimantan, and West Java.

JS Mill's theory in Sobri (1999) states that a country produces and exports a product with the greatest comparative advantage and imports items with a comparative disadvantage (an item that can be produced more cheaply and import products that, if produced on its own, costs a great deal). According to Heckscher-Ohlin 's book Sobri (1999), a country will trade with another country because it has a comparative advantage, namely technology excellence and the superiority of production factors.

According to Tarigan (2007), economic base theory bases his view that the rate of economic growth of a region is determined by the size of the increase in exports from the region. Exports are various kinds of goods and services that are produced domestically and then sold abroad (Mankiw, 2006). In terms of expenditure, exports are one of the most important factors of the Gross National Product (GNP), so that with changes in the value of exports, people's income directly will also change.

An important function of the export component of foreign trade is that the country gains profits and national income rises, which in turn increases the amount of output and the rate of economic growth. With a higher level of output the vicious cycle of poverty can be broken and economic development can be increased (Jhingan 2005). Exports are one component of aggregate expenditure. Therefore exports can affect the level of national income that will be achieved. If exports increase, aggregate expenditure will increase and will increase national income. But on the contrary national income can not affect exports. Exports do not automatically rise if national income rises or exports adjust even though national income stays unchanged. The Exports, therefore, have the same form as the investment function and the type of government expenditure.

The simplest demand theory in the law of demand states that, in Ceteris Paribus, if the price of the item rises, the number of goods demanded will decrease and vice versa, if the price of the goods falls, the goods demanded will rise (Nicholson, 1999). The export demand of an individual or a group for an object is determined by some factors, the most important of which are as set out below:

1. The price of the item.
2. The price of other goods is very closely linked to the item.

3. Household income and community average income.
4. Total population.
5. Taste.
6. Predictions that will occur in the future.

#### 4. RESULT

##### Policy Strategies to Increase the Competitiveness of Indonesian Tires in the Global Market

In designing a government strategy to improve the competitiveness of Indonesian tires on the global market, a deep analysis needs to be conducted in advance. The data analysis method used in this study is the SWOT Analysis (Strengths, Weaknesses, Opportunities, and Threats Analysis), i.e. the analysis of potential/strengths, weaknesses, opportunities, and threats/barriers. This study starts with an inventory and classification of problems/weaknesses and potential/strength, both internally in Indonesia and externally in Indonesia.

##### Data Input Analysis

The analysis process begins with the deepening or identification of the strategic environment, then continues with the analysis of internal factors and external factors. The analysis process will produce several assumptions or strategic opportunities to obtain success factors.

Strategic Environmental Analysis influences the performance of policies aimed at improving the competitiveness of Indonesia's tires on the global market which divided into internal and external factors. Internal factors, including strengths (S = Strengths) and weaknesses (W = Weakness). While classified as external factors are opportunities (O = Opportunities) and threats (T = Threats). A list of internal and external factors in the policy strategy to boost the competitiveness of Indonesian tires in the global market is collected from field observations and interviews as follows:

##### Internal factors

Internal factors that are crucial in determining policy strategies to increase the competitiveness of Indonesia's tire exports on the global market by looking at the development of the Indonesia's tire industry, namely:

1. Has high competitiveness
2. It owns a rubber plantation
3. Owns the tire industry
4. Lots of human resources

Internal factors which are a weakness in determining the policy strategy to increase the competitiveness of Indonesia 's vehicle exports on the global market by looking at the development of Indonesia's tire industry as follows:

1. High export costs
2. Land use conversion
3. High production costs



4. Lack of quality HR

**External Factors**

Some opportunities that support the policy strategy to increase the competitiveness of Indonesia's tire exports in the global market by looking at aspects of government policy, namely:

1. Government policies to increase value for exports
2. Increased trade relations
3. The need for tires is increasing
4. There is an investor

Environmental factors that are at threat in the policy strategy to increase the competitiveness of Indonesia's tires on the global market from outside Indonesia, namely:

1. There are other countries with strong competitiveness
2. Declining global demand
3. The application of tariffs and import duties are not the same
4. Imported raw materials are expensive

**Internal and External Factor Analysis**

Based on the identification data that is adjusted to the existing condition of the tire industry , government policies and potential, there is an interrelation between the factors discussed, so that the elements derived from each of these factors show similarity after the elements are grouped between internal and external.

Furthermore, the elements which are beneficial for the development of tire exports to increase the competitiveness of Indonesia's tire exports in the global market that are internal are categorized as strengths and elements that are less favorable for the development of tire exports to increase the competitiveness of Indonesian vehicle tires in the market Global internals are categorized as weaknesses. While the elements that are beneficial for the development of tire exports to increase the competitiveness of Indonesia's tire exports in the global market that are external are categorized as opportunities and unfavorable elements for the development of tire exports to increase the competitiveness of Indonesia's tire exports in global markets that are external are categorized as threats.

The complete factors that are strengths, weaknesses, opportunities and threats can be seen in Table 3.

**Table 3**  
**SWOT Data on Tire Export Development to Increase the Competitiveness of Indonesia's Tires in the Global Market.**

| <b>Strengths</b>                                                                                                                                                                                                           | <b>Weaknesses</b>                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Has high competitiveness</li> <li>2. It owns a rubber plantation</li> <li>3. Owns the tire industry</li> <li>4. Lots of human resources</li> </ol>                               | <ol style="list-style-type: none"> <li>1. High export costs</li> <li>2. Land use conversion</li> <li>3. High production costs</li> <li>4. Lack of quality HR</li> </ol>                                                                                                   |
| <b>Opportunities</b>                                                                                                                                                                                                       | <b>Threats</b>                                                                                                                                                                                                                                                            |
| <ol style="list-style-type: none"> <li>1. Government policies to increase value for exports</li> <li>2. Increased trade relations</li> <li>3. The need for tires is increasing</li> <li>4. There is an investor</li> </ol> | <ol style="list-style-type: none"> <li>1. There are other countries with strong competitiveness</li> <li>2. Declining global demand</li> <li>3. The application of tariffs and import duties are not the same</li> <li>4. Imported raw materials are expensive</li> </ol> |

Source: Research 2019, data processed

Furthermore, based on Table 3, weighting, rating, and score of each of the internal factors of tire export development to improve the competitiveness

of Indonesia's tire exports in the global market can be seen in Table 4.



**Table 4**  
**Internal Factor Analysis of Tire Export Development to Increase the Competitiveness of Indonesia's Tires in the Global Market**

| Strategic Internal Factors     | Weight      | Rating | Score       |
|--------------------------------|-------------|--------|-------------|
| <b>Strengths</b>               |             |        |             |
| 1. Has high competitiveness    | 0,14        | 4      | 0,56        |
| 2. It owns a rubber plantation | 0,13        | 3      | 0,39        |
| 3. Owns the tire industry      | 0,13        | 2      | 0,26        |
| 4. Lots of human resources     | 0,10        | 1      | 0,10        |
| <b>Weaknesses</b>              |             |        |             |
| 1. High export costs           | 0,13        | 4      | 0,52        |
| 2. Land use conversion         | 0,13        | 2      | 0,26        |
| 3. High production costs       | 0,13        | 3      | 0,39        |
| 4. Lack of quality HR          | 0,11        | 1      | 0,11        |
| <b>Total</b>                   | <b>1,00</b> |        | <b>2,59</b> |

Source: Research 2019, data processed

The results of the above analysis show that the dominant internal factor is: has high competitiveness, high export costs, owns the tire industry, high production costs, owns the tire industry, land use conversion, lack of quality HR, and lots of human resources.

The weighting, rating and score of each external factor of tire export development to increase the competitiveness of Indonesian vehicle tires in the global market can be seen in Table 5.

**Table 5**  
**External Factor Analysis of Tire Export Development to Increase the Competitiveness of Indonesia's Tires in the Global Market**

| Strategic External Factors                                       | Weight      | Rating | Score       |
|------------------------------------------------------------------|-------------|--------|-------------|
| <b>Opportunities</b>                                             |             |        |             |
| 1. Government policies to increase value for exports             | 0,14        | 4      | 0,56        |
| 2. Increased trade relations                                     | 0,12        | 2      | 0,24        |
| 3. The need for tires is increasing                              | 0,13        | 3      | 0,39        |
| 4. There is an investor                                          | 0,11        | 1      | 0,11        |
| <b>Threats</b>                                                   |             |        |             |
| 1. There are other countries with strong competitiveness         | 0,14        | 4      | 0,56        |
| 2. Declining global demand                                       | 0,13        | 3      | 0,39        |
| 3. The application of tariffs and import duties are not the same | 0,11        | 1      | 0,11        |
| 4. Imported raw materials are expensive                          | 0,12        | 2      | 0,24        |
| <b>Total</b>                                                     | <b>1,00</b> |        | <b>2,60</b> |

Source: Research 2019, data processed

The results of the above analysis show that the dominant internal factor is: government policies to increase value for exports, there are other countries with strong competitiveness, the need for tires is increasing, declining global demand, increased trade relations, imported raw materials are expensive, there is an investor, and the application of tariffs and import duties are not the same,

After four components (strengths, weaknesses, opportunities, and threats) can be identified, an effort is made by using the SWOT matrix to establish alternative strategies based on logic by optimizing strengths and using opportunities simultaneously to mitigate weaknesses (weaknesses) and predict threats.

From the SWOT matrix above, 12 alternative strategies can be formulated which are the chosen



solutions, including three alternatives for SO-Strategy, four alternatives for WO-Strategy, two alternatives for ST-Strategy and three alternatives for WT-Strategy, namely:

1. Increase competitiveness;
2. Increasing access for business actors to develop;
3. Encouraging investors to be able to invest;
4. Repair and development of infrastructure;
5. Facilitating access to international export markets;
6. Improve product quality;
7. Increasing the ability and quality of human resources;
8. Improve product quality;
9. Looking for new markets/trading partners;
10. Encourage the government to conduct a conducive business climate;
11. Improving pricing and promotion strategies, and  
l) Evaluating policies that hamper export development  
Peningkatan strategi harga dan promosi
12. Evaluating policies that hamper export development

## 5. CONCLUSION

Indonesia's tire export development strategy in the global market based on the above SWOT analysis can be formulated 12 alternative strategies.

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