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## Macro Environment Analysis of Automotive Industry in Indonesia

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### Article Info

### Abstract

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environment

Indonesia remains attractive for economic study. Its development makes Indonesia interesting for investment with no exception to automotive industry. Indonesia is the country holding the biggest car purchase record South East Asian countries. There will be more challenges along with opportunities ahead therefore industrial analysis is required in order to help automotive players in Indonesia to prepare appropriate strategies for their sustainability and growth. In this paper, PEST analysis was utilized to identify politic, economic, social and technology environment of current Indonesia automotive industry and 5 Forces Michael Porter analysis was utilized to measure the industry attractiveness. It was founded out that there is potential in production growth because government intervened by promoting local content requirement policy for all OEMs (Original Equipment Manufacturers) to be fully implemented in 2019. The opportunity has also come from growth of financial industry since 65% of Indonesian people buy car by credit. Infrastructure development and government spending will also drive industry growth for specific category of vehicles. However control from government is still needed to balance the use of personal vehicle and mass transportation, otherwise it will result in more traffic problem, air pollution and decrease comfort in big cities such as Jakarta. While rivalry, threat of substitute and bargaining power of suppliers are high, bargaining power of buyer is low and threat of new entrant for automotive industry in Indonesia is medium considering high initial investment

## **INTRODUCTION**

Indonesia country merely has attracted a lot of attention from researchers all over the world for its development. The automotive industry is one of the mainstay sectors that play a major role in the national economic growth. It is obviously visible from its contribution to Gross Domestic Product (GDP) reaching 10.16% in 2017 and able to employ direct labor of about 350,000 people and indirect labor as much as 1.2 million people (Hartarto, 2018).

Moreover, Indonesia is still the main destination for investment in the automotive industry sector. Indonesia's large population makes it an attractive market, especially in the context of automotive market. Among South East Asian countries, Indonesia is the largest automotive market followed by Thailand with the second largest market share. However, in terms of production, Indonesia's production capacity is still lagging behind Thailand, especially for car production. In 2017, the production capacity of Indonesia's four-wheeler industry is 2.2 million per year, while Thailand is 3.81 million units (Krungsri, 2017).

In order to empower automotive industry in Indonesia, Government has promoted a policy of industrial localization which has to be fully implemented by all OEM (original equipment manufacturers) in 2019. The action of government to support all contents to be produced locally within territory of Indonesia was written as regulation No 5/ 2018 that had been issued by Indonesian Ministry of Industry and will take effect for 4 wheels or more vehicles. The challenge and opportunities ahead will determine fate of automotive industries in Indonesia. The purpose of this paper is to present macro environment analysis toward automotive industry in Indonesia. PEST was utilized to identify challenges and opportunities for automotive companies in the context of politic, economic, social and technology. In addition 5 Forces Michael Porter analysis was utilized to automotive industry attractiveness from outside-in perspective.

## **Literature Review**

### **PEST Analysis**

According to Blokdyk (2018), PEST Analysis is an analysis of external environmental factors covering political, economic, social, and technological fields. Basically PEST Analysis determines how external factors such as politics, economics, social, and technology affect the performance and business processes of the organization. Here is the detail of PEST components:

1. Political factors in PEST Analysis include a variety of government policies, laws, and a variety of formal and informal rules of the environment that can affect the core business of organization. The main issues that focus on political factors are political stability, laws, regulations, and legislation that affect organizational performance. In the field of education, political factors include various government policies, educational laws, ministerial regulations and decree, and circulars relating to the implementation of education.
2. Economic factors in PEST Analysis include national economic and financial condition, welfare and public purchasing power, economic policy, economic globalization, equity of development, natural resources, and human resources become external factors that affect the economic environment of the organization. In the field of services, especially education, economic factors also include economic growth and the amount of costs offered.
3. Social factors in PEST Analysis are an external environment center on the judgments and attitudes of consumers or users of services to the organization itself. Social factors in general include culture, demography, education, labor, health, family, ethnicity, religion, time, and gender. Social and cultural factors have a direct impact on people's attitudes, consumers, and business behavior. Social trends greatly affect the operational organization. Planning and

strategies to improve the performance of the organization must refer to the social development of society.

4. Technology factors in PEST Analysis refer to technology that affects raw materials, operations, products, and services organization. Technology changes provide opportunities and threats to the products, services, and services provided by the organization. The era of technology information is able to enhance processes. Information technology is able to combine the reliability of functional skills with process speed thus providing the advantages of speed, efficiency, and quality of the integration process in customer service.

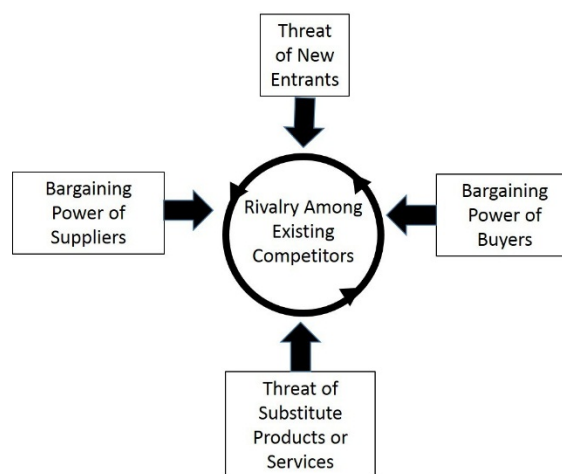
Government through various policies and laws become a reference in technological change.

Innovating and adopting technology is an important step in the era of information and communication technology as it is today. The government's focus on new technology, discovery and development, technological infrastructure, cost of procurement and uses of technology are factors that influence the organization's value capacity in delivering products and services. Technology refers to the means chosen to provide the effectiveness of a process, encompassing new developments that alter process patterns and systems, as well as improvements in materials, design, and methods (Gufta, 2013: 16).

### 5 Forces Michael Porter Analysis

Porter's five forces model is one method used to build a strategy in the business world and is also used to analyze industry. This method was published by Michael E. Porter who was a professor at Harvard Business School. This analysis will look at the extent of the influence of competition among existing competitors, new entrants, substitute products or services, the bargaining power of suppliers, and the bargaining power of customers towards the sustainability of the company's business. In the context of the competition strategy, there is a purpose in formulating a strategy that connects the company to its environment, in this context an analysis is conducted in the company's business competition environment. An industry can be said to be "unattractive" if there is a combination of these methods can reduce overall profitability. Therefore, an analysis by Porter was developed by combining five elements (Porter M, 2007), namely: threat of new entrant, power of supplier, power of buyer, threat of substitute, rivalry.

Picture 1  
5 Forces Michael Porter Model



Source: Porter, M (2007)

## **Methodology**

This research is type of qualitative research that used thematic analysis to gather and analyze the data. Source of data for PEST analysis was gathered from secondary data such as research output of research institutions, government and non-government organization, mass media, literature review from articles and books related to automotive industry in Indonesia. While source of data for 5 forces Michael Porter analysis was gathered from focus group discussion among 12 automotive experts in Indonesia which consist of 7 executives working for car companies, 2 business consultants and 3 automotive experts.

## **Result and Discussion**

### **PEST Analysis**

#### **Political Environment**

The political opportunity and challenge for automotive industry in Indonesia are identified as follow:

1. It was reported that Indonesian government has begun to promote a regulation for the minimum use of local content materials in domestically manufactured vehicles therefore all components must be produced within area of Indonesia. (Ribka, 2017)
2. Original Equipment Manufacturers from free-trade areas (ASEAN, China and Japan) may enjoy price reduction of about 20-50% because of no levies and low tariffs incentive for imported vehicle and its components. (IPSOS, 2016)
3. Current administration's five-year infrastructure plan is to develop new 2,650 KM non-toll and 1,000 KM toll roads across Indonesia. (IPSOS, 2016)
4. Many of reputable mass media such [www.militerhankam.com](http://www.militerhankam.com) released news that in 2017, government will allocate 200 trillion rupiah to military defense and they will focus on renewing old military vehicles.

#### **Economic Environment**

The economic opportunity and challenge for automotive industry in Indonesia are identified as follow:

1. Research about automotive industry in Indonesia by IPSOS (2016) revealed that by 2020, the growth of commercial vehicle (CV) will be a bit slowing down due to several factors. However the market for passenger vehicles (PV) remains good. CAGR (Cumulative Average Growth Rate) for passengers vehicle is estimated to remain at 6.8% by 2020, while the new technology low cost green car segment (LCGC) will experience its fastest growth with CAGR 8.1% at the same year. CAGR for Motorcycle (MC) growth is estimated at around 4.8% to 2020. Truck growth is estimated at CAGR 3.5% to 2020. In this segment, the gasoline light-duty truck segment (GLDT) is expected to experience the fastest growth at CAGR 4.6% to 2020 Bus growth is estimated at CAGR 1.9% to 2020 and in this segment, the medium-duty bus segment (MDB) is expected to experience the fastest growth at CAGR 3.2% to 2020. The demand growth for PV and CV will be focused in Greater Jakarta area as key region for growth driver. In other smaller sized cities, demand for PV will also increase over the next decade.
2. Down payment requirements reduced from 30% to 25% for all vehicles purchased on credit. (Indonesia Investments, 2017)
3. According to ASEAN Automotive Federation, Indonesia car purchase in 2016 is totally 1,061,735 unit of 3,164,742 all units sold in ASEAN, it brings Indonesia as the first rank

country for the number of car purchase, it happens due to the fact that Indonesia market is big with 258 million population and there is a significant economic growth in the middle class segment.

4. In 2015, subsidy to solar fuel was removed by government. It was also to push people using mass transportation in order to cope with traffic jam issue in big cities such as Jakarta. Therefore the price of gasoline in the mid of 2015 had increase by 62.9%.

### Social Environment

The social opportunity and challenge for automotive industry in Indonesia are identified as follow:

1. It is estimated that today, about 65% of all car purchase in Indonesia is done by credit. (Indonesia Investments, 2017)
2. According to motivation research by Nielsen (2013), about 95% of Indonesian consumers will buy car because they financially capable and 78% of them said they will also buy car because they need it, different from India society who buy car because they love driving or Thai people who buy car as a symbol of their social status.
3. Used/second hand car market is gradually becoming more structured and well managed because of more flexibility in financing term and condition, standardization and authorization toward dealership channels and more transparency in information. (IPSOS, 2016)
4. Government does not still limit the age of vehicle to use on road, while by 2020 there will be over 11 million vehicles out of warranty, it will increase demand in automotive aftermarket as buying second hand car is getting more favorable for Indonesian passengers. (IPSOS, 2016)
5. According to Gaikindo (2017), in the first semester of 2017, 5 automotive brands from Japan take about 90% of Indonesia car market share, they are Toyota, Daihatsu, Honda, Mitsubishi and Suzuki. Japanese people have high nationalism so they will put priority on their own people as business partner or supplier.

### Technology Environment

The technology opportunity and challenge for automotive industry in Indonesia are identified as follow:

1. By 2020, State-owned port operator PT Pelabuhan Indonesia (Pelindo) is going to build about 22 ports all over Indonesia with total funding reaching up to USD3.57 billion. (IPSOS, 2016)
2. There are many cheap cars entering Indonesia market from China and India for example electric car from Wuling Motors and Tata Nano
3. The Indonesian Internet Service Provider Association stated that in 2016, there were estimate 132.7 million internet users in Indonesia which represents about 51.8% of all Indonesian population. It will open chance for online automotive market to grow up. (Indonesia Investment, 2017)

Table 1  
PEST Analysis Summary for Automotive Industry in Indonesia

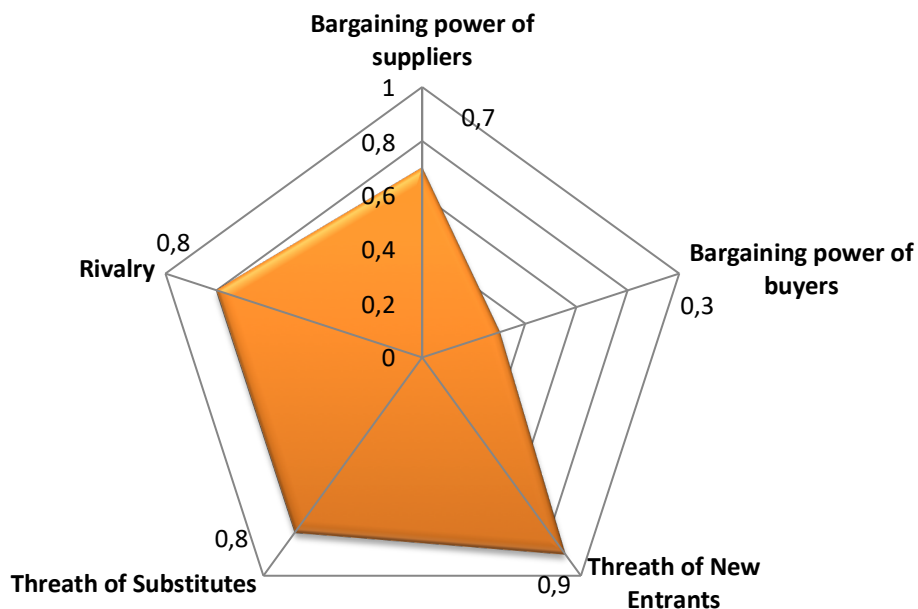
Dimension	Critical Factors
Politic	<ol style="list-style-type: none"> <li>1. Local content requirement policy</li> <li>2. Free trade area applies low tariff for import</li> <li>3. Five-year infrastructure plan across Indonesia</li> <li>4. Government spending on military vehicle increased</li> </ol>
Economic	<ol style="list-style-type: none"> <li>1. The market growth of passenger vehicle segment is interesting</li> </ol>

	<ol style="list-style-type: none"> <li>2. The market growth of commercial vehicle segment is a bit slowing</li> <li>3. Down payment for vehicle credit is decreased</li> <li>4. Indonesia is the best market for car purchase in ASEAN countries</li> <li>5. Fuel subsidy was removed by government in 2015</li> </ol>
Social	<ol style="list-style-type: none"> <li>1. About 65% of car purchase is done by credit</li> <li>2. about 95% of Indonesian consumers will buy car because they financially capable and 78% of them said they will also buy car because they need it</li> <li>3. Second hand car market is more structured and well managed</li> <li>4. By 2020 over 11 million passenger vehicles in Indonesia will be out of warranty</li> <li>5. In 2017, 5 automotive brands from Japan take about 90% of Indonesia car market share</li> </ol>
Technology	<ol style="list-style-type: none"> <li>1. High investment on ports by Pelindo Indonesia</li> <li>2. Cheaper technology or car from India and China are coming</li> <li>3. In 2016, about 51.8 % of the total Indonesian population</li> </ol>

## 5 Forces Michael Porter Analysis

Picture 2

## 5 Forces Michael Porter Analysis



### Bargaining Power of Supplier

- 1 The market is dominated by a few large suppliers rather than a fragmented source of supply
- 2 There are substitutes for the particular input
- 3 The supplier's customers are fragmented
- 4 The switching costs from one supplier to another are low

- 5 The buying industry supports the supplying industry in their development (e.g. interested to hear new releases of products)
- 6 The buying industry has high barriers to entry

### **Bargaining Power of Buyer**

- 1 Consumers buy low volume, there is no concentration of buyers
- 2 The company operates with high fixed costs
- 3 The product is undifferentiated and can be replaced by substitutes
- 4 Switching to an alternative product is relatively hard and costly because price of vehicle generally decreases from time to time
- 5 Buyers have low margins and are price-sensitive
- 6 Buyers could not produce the product themselves
- 7 The product is strategically important for the buyers
- 8 The buyers do not know about the production costs of the product
- 9 There is no possibility for the buyers integrating backwards (e.g. retailer sets up their own seasoning manufacturer)

### **Threat of New Entrants**

- 1 Minimum size requirement for profitable operation is high
- 2 High initial investments and fixed costs to set up automotive factory
- 3 Brand loyalty of customers is low
- 4 There is no protected intellectual property like patents, licenses etc
- 5 There is no scarcity of important resources, e.g. qualified expert staff
- 6 Access to raw materials is not controlled by existing players
- 7 Distribution channels are not controlled by existing players
- 8 Existing players have no close customer relations (e.g. from long-term service contracts)
- 9 High switching costs for customers
- 10 Legislation and government welcomes new company

### **Threat of Substitutes**

- 1 Brand loyalty of customers is high
- 2 The relationship between company and customer is not strong (e.g. it has contract for a period of time)
- 3 Switching cost for customers are low
- 4 Better and cheaper substitutes are available
- 5 Trend can change rapidly

### **Rivalry**

- 1 There are many players of about the same size
- 2 Players have similar strategies
- 3 There is not much differentiation between players and their products, hence, there is much price competition
- 4 High market growth rates (growth of a particular company is possible only at the expense of a competitor)
- 5 Barriers for exit are high (e.g. expensive and highly specialized equipment)

## Conclusion

The development of automotive industry in Indonesia is very attractive. There is potential increase in competitive advantage when local content requirement has been met which will bring more contribution to gross domestic product of Indonesia. Indonesia has potential increase its car production over Thailand along with development of infrastructure, government support for investment and economic stability. Financing car purchase by credit is very popular therefore Indonesia government should also focus on its financial industry and give more support to stimulate more relationship inter-industry. However control from government is still needed to balance the use of personal vehicle and mass transportation, otherwise it will result in more social problems such as traffic problem, air pollution and decrease comfort in big cities such as Jakarta.

Meanwhile, 5 Forces Michael Porter analysis showed that rivalry in automotive industry of Indonesia is high since there are many companies providing the same product with almost similar strategies, the power of supplier is also high because some components are provided by several suppliers with long term contract for at least 1 year. Threat of new entrant is medium, policy does not allow monopoly and always welcome new investors, however initial investment is not low and there should be high production to meet economic of scale. Buyers here have no high bargaining power because credit which is provided by Indonesia banks have made more people able to buy car and competitive price competition makes the price bargain between company and buyer difficult to happen at high rate, therefore the price can be concluded tight. Threat of substitute is high because Indonesia as the biggest market for automotive in South East Asia has made major companies never stop research and development to satisfy market, especially for the purpose of energy efficiency.

Future researcher is recommended to find out deeper about competitiveness of automotive industry in Indonesia compared to other countries, future research can also be focused on impact of local content requirement policy, the evaluation toward policy is essential because controversy about readiness of Indonesian OEM's to implement local industrialization is still coming up.

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