

Analysis of External Factors Based on Porter's Five Forces Method at PT Gipan Metal Teknik Indonesia

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Abstract

The industrial company providing and fabricating abrasion-resistant steel PT Gipan Metal Teknik Indonesia (PT GMTI) will face competition in the business, so the company must increase efficiency and optimize its potential. This study aims to determine the competitive advantage strategy of PT GMTI based on Porter's Five Forces method. Analysis of external factors as a planning strategy to find out opportunities and threats in running business processes so that they can affect the sustainability of the company. Michael A. Porter describes the five forces module as an analytical tool in industrial competition. The results of this analysis are in the form of external factors of the company in facing the Competitive Force used by the company in facing business competition. External factors faced by PT GMTI in running its business based on Porter's Five Forces method are a) Threat of New Entrants namely the need for company capital and government regulations, b) Rivalry Among Existing Competitors namely the quality of products offered and marketed, c) Bargaining Power of Buyers namely the number of similar competitors, d) Bargaining Power of Suppliers namely the price of raw materials from suppliers, e) Threat of Substitute Products, namely the quality of substitute products. The results of this study show that the strategy that can be developed by PT GMTI is to increase business capital and training employees so that the company can develop and maintain the quality of services and products for business continuity. The determination of variables used in Porter's Five Forces analysis is based on the experience of one of our members who works as a supplier of abrasion-resistant materials and also works in one of the heavy equipment companies in Indonesia.

Keywords: *Porter's Five Forces, External Factor, Competitive Force, Fabrication, Steel*

Introduction

Competition between companies in the abrasion-resistant steel provider and fabrication industry is very competitive, the emergence of similar companies with innovations and services that can increase selling power makes the industry varied. This happened because of the increasing industrial need for abrasion-resistant steel products. One of PT GMTI is a company engaged in providing and fabricating abrasion-resistant steel.

The company continues to adapt and develop its business to have the ability to compete in the future. The sustainability of a company can be influenced by external factors because by knowing this, the company can know the opportunities and threats in carrying out its business processes. The competitive force used to analyze external factors is *Porter's Five Forces Analysis*.

Threat of New Entrants, Rivalry Among Existing Competitor, Bargaining Power of Buyers, Bargaining Power of Suppliers, dan Threat of Substitute Products (Gide, 1967) into five factors of external analysis of the company. By analyzing these external factors, it is hoped that PT GMTI can improve and develop more efficient and innovative business processes to compete in the abrasion-resistant steel industry in Indonesia.

Research Methods



Framework Porter’s Five Forces
(Source: Robert M. Grand Contemporary Strategy Analysis)

Table 1 Assessment Index Porters’s Five Forces

Parameter	Value
Low	1,00 – 1,66
Keep	1,67 – 2,33
Tall	2,34 – 3,00

(Source: Porter’s, 2008)

If the results of quantitative calculations of Porters's Five Forces Analysis are in the range of 1.00-1.66 can be categorized as low, where the company is in a competition that is not too competitive. In the range of 1.67-2.33, it is categorized as medium, that is, the company is in a fairly intense competition. Results from 2.34 to 3.00 are categorized as high parameters which means the company is in an industry that has a high level of competition and is highly competitive.

Results and Discussion

Threat of New Entrants

Capital Requirements

To create a company engaged in stockist and metal fabrication requires a capital of Rp 22 billion. The capital requirement is to purchase several necessary assets such as the provision of large enough land, installation of electrical installations, purchase of electrical power, lifting equipment (cranes), and operational vehicles, as well as several fabrication machines. For this variable is given a weight with a value of 0.3 and an index of 2.

Branding

Companies need company branding to be better known by customers in increasing sales so that a product sticks in the customer's mind. Branding is a characteristic of the company in the form of names, logos and slogans. It serves to build the company's image, provide characteristics, promotion and attractiveness, as well as a means of controlling the market. PT GMTI makes logos that are tailored to products produced with attractive designs (eye catching). Branding is also done through the company's website, advertisements on social media, and exhibitions of manufacturing industry companies. For this variable we give a weight with a value of 0.2 and an index of 1.

Access to Distribution Channels

In building its business to grow and develop, PT GMTI needs distribution channels to introduce its products. By trying to build mutually beneficial relationships with other business people with the aim of developing their business potential. PT GMTI builds relationships with heavy equipment manufacturing, construction, power plant, mining, palm oil and cement industries. For this variable is given a weight with a value of 0.2 and an index of 2.

Government Regulation

The government through the Minister of Finance issued a regulation on the list of restricted imports of goods through the Decree of the Minister of Finance No. 23/2022. In the regulation, import restrictions cover iron or alloy steel products and their derivatives which are a follow-up to Minister of Trade Regulation 25/2022 concerning amendments to Minister of Trade Regulation No. 20 of 2021 concerning Import Policies and Regulations. With the government regulation, it will affect the business run by PT GMTI as a stockist and fabrication of abrasion resistance plate material because the material is 100% imported. For this variable is given a weight with a value of 0.3 and an index of 2.

Rivalry Among Existing Competitor

Number of Competitors

Along with the increase in national steel consumption in recent years and is predicted to reach 100 million tons by 2045, it has a positive impact on the growth of steel supply and fabrication companies. Business development and innovation are needed so that companies are able to compete and survive in the industry. But at this time there is no competing company that combines the two business lines, so many customers have to find more than one supplier to order products according to the desired specifications. We give this variable a weight with a value of 0.4 and an index 1.

Table 2. List of Competing Companies

No	Company Name	Business Line	Location	Status
1	PT. Core Creation of Success	Stockist	Kota Bekasi	PMDN
2	PT. Bima Bisalloy	Stockist	Kab. Bekasi	PMA
3	PT. Steel Force Indonesia	Stockist	Kab. Bekasi	PMA
4	PT. Shibaura	Factory	Kab. Bekasi	PMA
5	PT. Burangkeng	Factory	Kota Bekasi	PMDN

6	PT. Sigma Rekayasa Prima	Factory	Kab. Bekasi	PMDN
7	PT. Bahrul Alam Persada	Factory	Kota Bekasi	PMDN
8	PT. Binar Cakra Prima	Factory	Kab. Bekasi	PMDN
9	PT. Jordila True Partner	Factory	Kota Bekasi	PMDN
10	PT. Karangmas Unggul	Factory	Kota Bekasi	PMDN

(Source: Writing Team, 2022)

Product Quality

Product quality is very important in business, competitors always make continuous product quality improvements. The human resources and machines used greatly affect the quality of the product. PT GMTI will recruit human resources who have certification of expertise and fabrication machines in accordance with the latest technology so that the products produced are of high quality. In addition, PT GMTI sets prices according to the quality of the products produced in order to compete with other products. For this variable we give a weight with a value of 0.3 and an index of 3.

Barriers to Exit

Barriers to exit are economic, strategic, and emotional factors that prevent companies from leaving the industry. High exit barriers keep the company competitive with competitors providing and fabricating abrasion resistance steel materials. This industry has a high barrier to exit, because it takes a large enough capital to build a business, for example buying equipment and business support machinery that tend to be expensive.

So that companies tend to have already invested a lot of money in these equipment and machines. Because if the company decides to leave, the company must think about how much funds will be wasted because unused machines will be more difficult to resell. The machine tools used are very specific and the human resources must have special skills. For this variable is given a weight with a value of 0.3 and an index of 2.

Bargaining Power of Buyers

Number of Companies

The increasing national steel consumption in the infrastructure and non-infrastructure sectors is inseparable from the government's policy to continue strategic projects after the Covid-19 pandemic declined. In the non-infrastructure sector, including the mining, power plant, automotive, and heavy equipment industries, experienced a significant increase.

In the mining industry, coal production realization rose 7.2% in 2021 to 606.22 million tons compared to 2020, which was 565.69 million tons and is projected to be 637 – 664 million tons in 2022 (databox and bisnis.com, 2022). Meanwhile, the realization of heavy equipment production in 2021 reached 6,740 units, and the projection of heavy equipment production in 2022 is estimated to reach 10,000 units, an increase of 67.4% from the previous year (Hinabi, 2022).

The increase in production in some of these industries affects the increase in demand for abrasion resistance type steel, while companies that can meet these needs are still limited. Therefore, customers cannot easily change suppliers to meet the needs of

abrasion resistance type steel. For this variable is given a weight with a value of 04 and an index 2.

Figure 1 is an example of an increase in production in the coal sector mining industry from 2014 to 2021, where the peak occurred in 2019 with a total production of 616.16 million tons. In 2020 it decreased to 565.69 due to the Covid 19 pandemic, but in 2021 it increased to 606.22 million.

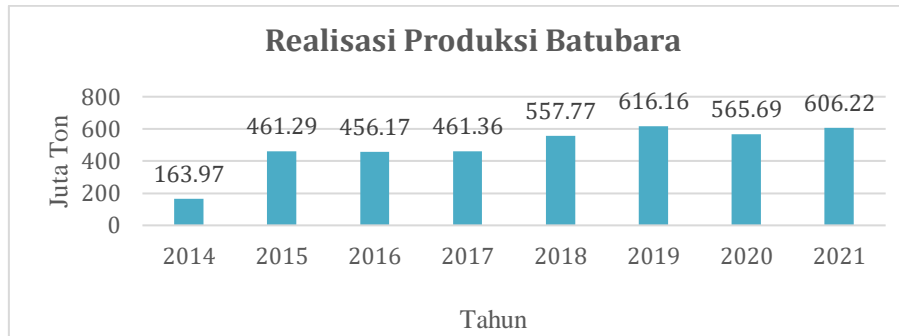


Figure 1. Realization of Coal Production in 2014 – 2021

(Source: Databoks, December 28 2022)

Customer Loyalty

Customer loyalty is a customer's commitment to a brand, store, or supplier based on very positive traits in long-term purchases (Tjiptono, 2004: 110). In an effort to increase customer loyalty, PT GMTI strives to provide maximum service to customers regarding quality, price, and timely product delivery. Customer loyalty is very influential on the next purchase decision, meaning that the higher the customer loyalty, the higher the purchase decision. This will affect the profitability and growth of the company. For this variable is given a weight with a value of 0.3 and an index 2.

Switching Cost

The difficulty and lack of supply of abrasion resistance steel material on the market makes switching costs high. It takes a long time to find the type of steel material and fabrication, because it uses machines that have special specifications. Consumers must check directly the material and fabrication process whether it can really process the order or not. The material used must be ascertained whether the type of abrasion resistance steel or not, because there are still often artificial or fake materials found in the field. For this variable is given a weight with a value of 0.3 and an index 1.

Bargaining Power of Suppliers

Number of Suppliers

In running its business, PT GMTI cooperates with several suppliers, especially suppliers of abrasion resistance steel materials which are the company's core business. Suppliers of this type of steel come from Europe, Asia, China, and Australia with various brands and quality advantages respectively. In addition to raw steel material, the fabrication process requires other supporting materials such as CO₂ gas cylinders, LPG, O₂, engine oil, welding wire, and so on. These types of production supporting materials are very widely available in the local market, so PT GMTI is given the convenience to

choose and cooperate with the best suppliers who can provide company profitability. For this variable we give a weight with a value of 0.4 and an index 2.

Supplier Product Prices

Companies in determining the selling price of their products are greatly influenced by the purchase price of products from their suppliers. Price is the main consideration factor in determining or choosing suppliers in addition to quality factors and timeliness of delivery. The large number of suppliers who provide products for the stockist business and abrasion resistance steel fabrication makes it easier for companies to make product price comparisons between suppliers, so that companies can choose suppliers with the best prices to be partners. For this variable is given a weight with a value of 0.4 and an index of 3.

Switching Cost

Low switching costs make suppliers compete for loyal customers by providing benefits to buyers in various ways such as providing special prices for purchases with a certain amount, free product samples for trials, quality guarantees and ease of payment. Another advantage offered is technical support for assistance during product trials and problem solving. For this variable is given a weight with a value of 0.2 and an index 1.

Threat of Substitute Products

Eco-Friendly Products

At this time the steel production manufacturing process still uses fossil energy which produces high carbon dioxide. According to the International Energy Agency, steel production requires 8% of the volume of global energy demand and produces 7% of global carbon dioxide emissions. By 2021, global carbon dioxide emissions are expected to reach 1.5 million tons, so the world increasingly needs environmentally friendly production processes.

SSAB as the world's leading steel producer and supplier is determined to be the first steel producer to produce steel using hydrogen. The prototype steel product is available in 2021 and will be mass produced in 2026 to replace steel products produced using fossil energy. For this variable is given a weight with a value of 0.3 and an index 2.

Relative Price

Along with the growth of national steel consumption for infrastructure and non-infrastructure needs, many business actors are developing their businesses in the steel industry either as providers or fabrications. The increase in heavy equipment and mining production affects the increase in consumption of abrasion resistance steel types. The high price of this type of steel makes producers from various countries compete to provide competitive prices, one of which is China which has succeeded in producing abrasion resistance steel types at prices below competitors.

So many consumers are doing trials with Chinese-made steel. If the results of the product trial are in accordance with the established quality standards, consumers will switch to using these steel products. Of course, this is a threat to abrasion resistance steel producers from other countries. For this variable is given a weight with a value of 0.3 and an index 2.

Product Quality

Currently there are many brands of abarasion resistance steel on the market, one of which is a product originating from Europe (Swedish). The advantages of these products are the quality and accuracy of their dimensions (thickness, width, and length) compared to other brands of similar products so that many customers are loyal to the product because they are satisfied with the results. One example of an industry that requires using these products is PLTU Indonesia Power. This will be very risky if a company only depends on one brand of product, if the supplier has problems it will affect the smooth running of its business. For this variable is given a weight with a value of 0.4 and an index 2.

Table 3. Analysis Porter’s Five Forces

<i>Threat of New Entrans</i>	Weight	Index	Value
Capital Requirements	0,3	2	0,6
<i>Branding</i>	0,2	1	0,2
<i>Access to Distribution Channels</i>	0,2	2	0,4
Government Regulation	0,3	2	0,6
Total Grade (Medium)			1,8
<i>Rivalry Among Existing Competitor</i>	Weight	Index	Value
Number of Competitors	0,4	1	0,4
Product Quality	0,3	3	0,9
<i>Barries to Exit</i>	0,3	2	0,6
Total Grade (Medium)			1,9
<i>Bargaining Power of Buyers</i>	Weight	Index	Value
Number of Companies	0,4	2	0,8
Customer Loyalty	0,3	2	0,6
<i>Switching Cost</i>	0,3	1	0,3
Total Grade (Medium)			1,7
<i>Bargaining Power of Suppliers</i>	Weight	Index	Value
Number of Suppliers	0,4	2	0,8
Supplier Product Prices	0,4	3	1,2
<i>Switching Cost</i>	0,2	1	0,2
Total Grade (Medium)			2,2
<i>Threat of Substitute Products</i>	Weight	Index	Value
Eco-Friendly Products	0,3	2	0,6
Relative Price	0,3	2	0,6
Product Quality	0,4	2	0,8
Total Grade (Medium)			2,0

(Source: Writing Team, 2022)

Information:

Weight: The closer to 1 (one) the more important it is to this industry.

Index:

- 1: Insignificant influence
- 2: The effect is significant
- 3: The effect is very significant

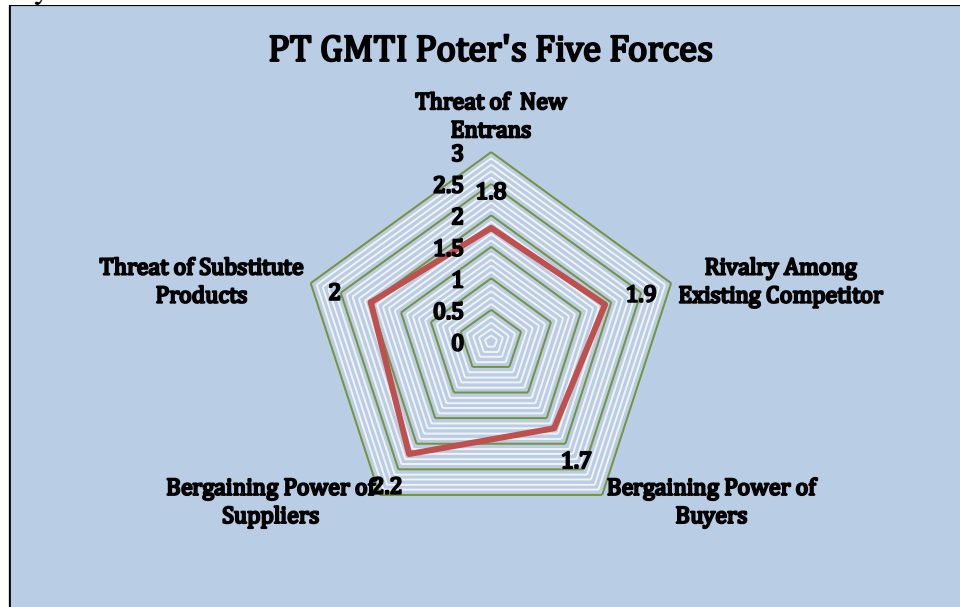
Table 1. Analysis Results Porter’s Five Forces

Factor	Total Nilai
<i>Threat of New Entrans</i>	1,8
<i>Rivalry Among Existing Competitor</i>	1,9
<i>Bargaining Power of Buyers</i>	1,7

<i>Bargaining Power of Suppliers</i>	2,2
<i>Threat of Substitute Products</i>	2,0
Average	1,92

(Source: Writing Team, 2022)

The following is a Spider Diagram illustration of Porter's Five Forces values owned by PT GMTI:



Picture 2. Diagram Spider Porter's Five Forces
(source: Author, 2022)

Conclusion

Based on the results of this study, it shows that the strategy that can be developed by PT GMTI is to increase business capital and training employees so that the company can develop and maintain the quality of services and products for business continuity. External factors faced by PT GMTI in running its business based on Porter's Five Forces method are a) Threat of New Entrants namely the need for company capital and government regulations, b) Rivalry Among Existing Competitors namely the quality of products offered and marketed, c) Bargaining Power of Buyers namely the number of similar competitors, d) Bargaining Power of Suppliers namely the price of raw materials from suppliers, e) Threat of Substitute Products i.e. quality of substitute products.

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