

The Marketing Mix Strategy of Train Cargo Transportation: Evidence from Indonesia

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Abstract: - This research aimed to understand the marketing mix implemented by the Cargo Transportation Unit of Kereta Api Indonesia Daop 6 Yogyakarta, Indonesia, and to study and know its position. The main problem was that many cargo transportations used the service handling system of Door-to-Door, which was relatively cheaper than cargo transportation using a train that still implemented the Station-to-Station service. The research method used the Boston Consulting Group matrix to know the market growth, market share, and quadrant position of Kereta Api Indonesia Daop 6 Yogyakarta. The collected data were then analyzed using the calculation of Market Growth Rate, Relative Market Share, and Boston Consulting Group Matrix. From the Market Growth Rate calculation, the result was as much as 8.5%, and from the total Relative Market Share, the result was $0.5 < 1$. Furthermore, based on the Boston Consulting Group matrix, Quadrant IV (Dogs) shows alternative strategies to implement: Divestment, Retrenchment, and Liquidation. The main factor causing the low market growth of the Cargo Transportation Unit of Kereta Api Indonesia Daop 6 Yogyakarta is a crucial finding of this research.

Key-Words: - train cargo transportation, marketing mix strategy, relative market share, market growth rate.

Received: June 22, 2022. Revised: February 16, 2023. Accepted: March 5, 2023. Published: March 15, 2023.

1 Introduction

Today Kereta Api Indonesia (KAI), through its Cargo Transportation Unit, serves cargo transportation for commodities such as coal, container, cement, Pertamina fuel, hazardous and toxic materials, and various retail goods. In addition, the Cargo Transportation Unit of KAI also rents railway coaches provided for train logistic service companies to run their business using the Dangerous Good system or on a contractual basis. However, not a few consumers compare the price or tariff of cargo transportation using a train to those using general trucking from

expedition companies where they use the handling service system of Door-to-Door. It is relatively cheaper than cargo transportation using a train which still implements a Station-to-Station service where the cargo owner carries out the handling process.

In line with the increase of people's needs and the advancement of technology, KAI continues to innovate and transform digitally to provide faster and better cargo transportation services. Today, all distribution processes must run quickly and safely in line with the cargo demand, [1]. Therefore, companies providing logistic services, especially

distribution, continue to grow in Indonesia. The competition emerges much with the other cargo transportation mode or trucking that offers cargo transportation services in various relations. This business competition increasingly attracts people's interest in being involved. So, it is necessary to formulate an appropriate marketing strategy to grab consumers.

One of the strategies used by the cargo transportation unit of KAI Daop 6 to focus on attracting and retaining consumers is the marketing mix strategy. The marketing mix is a combination of the core variables of the marketing system consisting of product, price, promotion, and distribution that the company integrates to maximize the results that can be obtained, [2], [3]. Furthermore, some studies concerning the sustainability of the marketing mix contribute actively to the purchase decision, [4], [5]. For example, related to the train customers, explain that railway transportation companies with a clear indication can develop market-oriented offers, [6], [7], [8], [9].

With the marketing mix of 7Ps, passengers will benefit from increased knowledge of core products and additional products related to railway transportation services, [10], [11]. In addition, many people are interested in sending goods, making this business perspective. After implementing this marketing strategy, companies can understand and know the position of the products or services offered at the company, [12]. The work here indicates the comparison of market growth and market share of many companies competing in the same business.

The Boston Consulting Group (BCG) approach can determine the company's position. BCG is a method used to determine strategic business unit planning by classifying the profit potential for a company. The design of the BCG Matrix can help companies formulate their strategy, [13]. The advantage of the BCG matrix is that it is a strong enough aid for primary uses in making the most straightforward decision compared with other types of matrix. Only by reading the graph a company or entrepreneur can easily see the position where it is now, [14]. According to matrix analysis, in the research of Sarfaraz et al., [15], the trains on the urban line are better than those on the suburban. A study of the impact of the Covid-19 crisis on pricing strategies for the European rail market uses BCG by comparing supply/supply before and after the first wave of the pandemic, [16].

To face the competition and survive, the Cargo Transportation Unit of KAI Daop 6 Yogyakarta

uses the marketing mix strategy to obtain and retain consumers and to know the position of a product or service offered in the market. In this article, the authors use the approach of the marketing method of BCG with the benefit provided by the BCG matrix, which makes us pay more attention to the cash flow and the need for investment as well as the need for various units in a company. The company should analyze the market of customers and know the position of the services they offer to people. In addition to knowing the position of products and services, a company should fix the existing deficiencies to increase consumer trust and loyalty. The aims of this research are (1) to understand the marketing mix strategy implemented by the Cargo Transportation Unit of KAI Daop 6 Yogyakarta, (2) to study and know the position of the Cargo Transportation Unit of KAI Daop 6 Yogyakarta in the quadrants of BCG matrix.

2 Literature Review

2.1 Marketing Mix

The marketing strategy, known as the marketing mix, is vital in influencing customers to buy the company's products or services, [17]. It becomes essential for the company to implement this marketing strategy because the marketing mix is the consumer's primary consideration in deciding whether they will use the service we offer. This situation is indeed a challenge for companies that play in the business. The implication is that companies must make various efforts to improve their performance in the increasingly competitive environment and the high consumer expectation. Lahtinen et al., [18], argue that a marketing mix strategy can enhance the marketing activities to obtain consumers in the company's product marketing activities. The marketing mix is a basic marketing theory that controls the combination of mixed elements describing the mix as a procedure and marketing policy that marketers rely on while designing a marketing strategy, [19]. The marketing mix consists of all aspects of the company controlled to satisfy customers. A marketing mix combines tactics a company uses to achieve its goals by effectively marketing the products or services to specific target customers, [20], [21], [22]. A marketing mix combines various decision variables, such as marketing decisions, strategy, and tactics the organization uses to market its product and services to achieve the company's goals.

2.2 Boston Consulting Group (BCG)

The BCG method helps develop a business plan by classifying a company's abilities to make a profit, [23]. BCG matrix allows the management of product portfolios. It is an effective tool for strategically planning product performance at the industrial level by indicating market opportunity. However, it initially makes extreme downsizing to use only two dimensions, the matrix axis, and the inappropriate instrument, [24], [25]. BCG matrix illustrates the divisional differences of two sizes: (1) the position of relative market share on the x-axis and (2) the industrial growth rate on the y-axis. By checking these two dimensions for each division about other divisions in the organization, BCG allows a multidivisional organization to manage its business portfolio. Relative market share is the ratio of market share in specific industries against the market share owned by the biggest competitor in the industry, [26]. In addition, the matrix will also help determine the decision in distributing the resources and the analysis method

of marketing, strategic management, and portfolio analysis.

Figure 1 shows the BCG matrix consisting of two rows, columns, or four quadrants. The four cells represent four categories of company product portfolio based on two dimensions of business unit classification: market growth rate and relative market share. For example, stars symbolize the four quadrants, Question Marks, Cash Cow, and Dogs, [27]. Although Cash Cow is less attractive in the BCG matrix from the growth perspective, it is valuable in the business, [13]. Meanwhile, Star in the BCG matrix is a product with a high market share and growth rate so that companies can invest in Star, [25]. On the other hand, the Question Mark aspect can turn into Dogs and become Star and Cash Cow when the market growth slows. Meanwhile, the Dogs business company in quadrant IV must be avoided and minimized in an organization, so the target of Question Mark is that Star Dogs must share cash to prevent liquidation, [28].

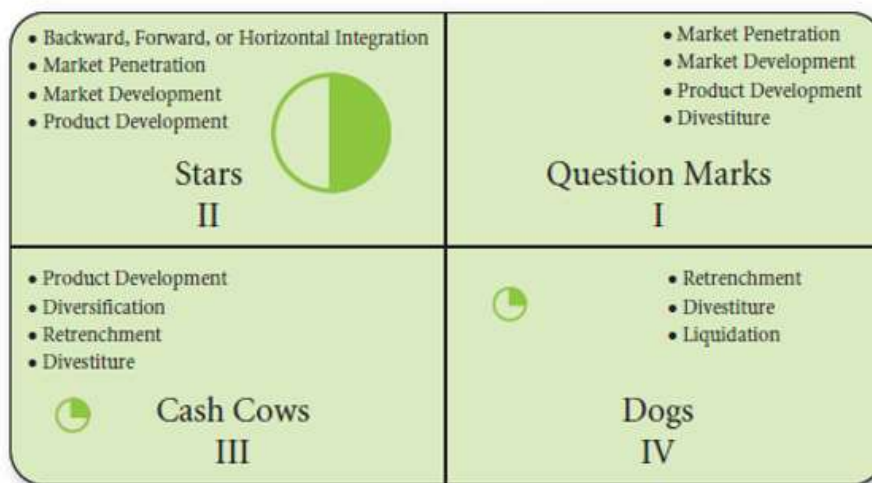


Fig. 1: Boston Consulting Group Matrix

3 Research Method

This research used the Junior Manager of Cargo Transportation and Assistant to the Marketing Manager of the Cargo Transportation Unit of KAI Daop 6 Yogyakarta as the objects of writing. Furthermore, secondary data for this research comes from processed data on Cargo Transport Sales Volume KAI Daop 6 Yogyakarta and its competitor in the cargo shipping industry as a trucking company, PT XYZ Indonesia, during 2020 and 2021. The research data comes from interviews with purposive sampling based on interests, understanding, and experience related to the information needed in the scope of operational and marketing activities of the KAI Daop 6 Yogyakarta Cargo Transport Unit.

This research used the Boston Consulting Group (BCG) matrix to know the market growth and share and the quadrant position of KAI Daop 6 Yogyakarta. The BCG matrix was chosen and used because it could illustrate the cash flow, characteristics, and interests of each multi-division in the Cargo Transportation Unit. For example, a division in an organization would generally turn from Dogs to Question Mark until they become Star and then Cash Cow, turn back into Dogs, operating continuously in the cycle. The dimensions of market growth vary; this study defines up to 20%, which is feasible as a high

market growth rate, while below 20% indicates low growth.

To determine the position of a company in the quadrants of the BCG Matrix, it needed a thorough calculation of the studied company's Market Growth. After knowing the percentage of the market growth, the next step was determining the Relative Market Share by calculating the company's sales volume divided by the competitor's last year's sales volume. After knowing the Relative Market Share, the final step was determining the company's position or coordinate point in the quadrants of the BCG matrix based on the calculation result and providing solutions by the category of the quadrant in the matrix. Figure 2 shows the conceptual framework for determining a company's position in the industry based on the BCG matrix analysis.

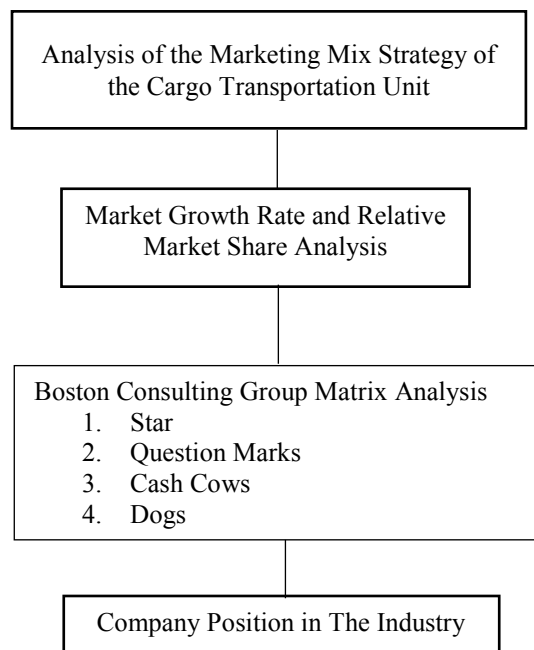


Fig. 2: Conceptual Frame

4 Results and Discussion

The market growth rate generally consists of two classifications: high or low. Meanwhile, the relative position of competitors is distinguished based on market share. Therefore, based on market share, the BCG matrix method can determine the percentage of the market growth rate of the KAI Daop 6 Yogyakarta Cargo Transport Unit market. The BCG matrix depends on the Market Growth Rate, the percentage of market growth shown on the vertical axis, and the strength of the market share on the horizontal axis as Relative Market Share.

4.1 Market Growth Rate

To find out the growth rate of the KAI Drop 6 Yogyakarta Cargo Transport Unit market, refer to BCG matrix calculation data, [29]:

$$\text{Formula of Market Growth Rate} = \frac{\text{Freight Transport 2021} - \text{Freight Transport 2020}}{\text{Freight Transport 2020}} \times 100\%$$

$$\text{Market Growth Rate} = \frac{54.675.190.000 - 50.387.465.000}{50.387.465.000} \times 100\%$$

$$= 0,085095072 \text{ or } 8,5\%$$

Based on the calculation of the BCG matrix, it shows that the Market Growth Rate for the KAI Daop 6 Yogyakarta Cargo Transport Unit is 8.5%. Therefore, the cargo Transportation Unit has a reasonably low market growth rate. Therefore, this research supports Özemre and Kabadurmus, [25], because BCG Matrix is the most suitable model for knowing the Market Growth Rate.

4.2 Relative Market Share

The analysis of Relative Market Share reveals that KAI Daop 6 Yogyakarta has a low sales volume of cargo transportation products compared with its competitor, XYZ Indonesia. Relative market share is a part of the company's total sales in a particular market. The data used by KAI Daop 6 Yogyakarta is the sales volume in 2020 and 2021 and the competitor's data of sales volume (XYZ Indonesia) in 2020 and 2021, divided by the total sales volume of KAI Daop 6 Yogyakarta Cargo Transportation Unit in 2020 and 2021.

Based on the data of 2020 and 2021, BCG Matrix is used to know the Relative Market Share of KAI Drop 6 Cargo Transportation Unit, Yogyakarta 2021:

The formula of Relative Market Share

$$\text{Relative Market Share} = \frac{\text{Last Year's Sales Volume}}{\text{The Competitor's Last Year's Sales Volume.}}$$

$$\begin{aligned} \text{Relative Market Share} &= \frac{\text{Freight Sales Volume 2021}}{\text{XYZ Indonesia Sales Volume 2021}} \\ \text{Relative Market Share} &= \frac{54.675.190.000}{95.251.000.000} \\ &= 0,5 < 1 \end{aligned}$$

Based on the calculation of the BCG matrix, it shows that the relative market share of the KAI Cargo Transport Unit in 2021 is $0.5 < 1$. Therefore, this calculation indicates that KAI's Cargo Transport Unit has a lower market share than XYZ Indonesia because its relative market share is lower than one. Thus, the conclusion is that KAI's Cargo Transport Unit's close market share is lower than its competitor, XYZ Indonesia. Therefore, this research supports the study of Özemre and Kabadurmus, [25], because it uses the BCG matrix, the most appropriate model considering the relative market share.

4.3 The Position of Cargo Transportation Unit in BCG Matrix

Based on previous calculations shows that the growth rate of the KAI Daop 6 Yogyakarta Cargo Transport Unit is 8.5%. Therefore the Cargo Transport Unit has a low market growth rate. Then based on calculation, its relative market share in 2021 is obtained as many as 0.5. Therefore, the steps in the BCG matrix find that: The Cargo Transport Unit is in the Dog position. Dogs fall into the quadrant with products with low market share. Compete in an industry that grows slowly or does not grow at all. Therefore, this position needs investments because of meager human resources and financial sources. Since their weak internal and

external parts, this business is frequently liquidated, divested, or depreciated with retrenchment.

Thus, based on both results, the position of the Cargo Transportation Unit of KAI Daop 6 Yogyakarta can be depicted in the following BCG matrix (Figure 3).

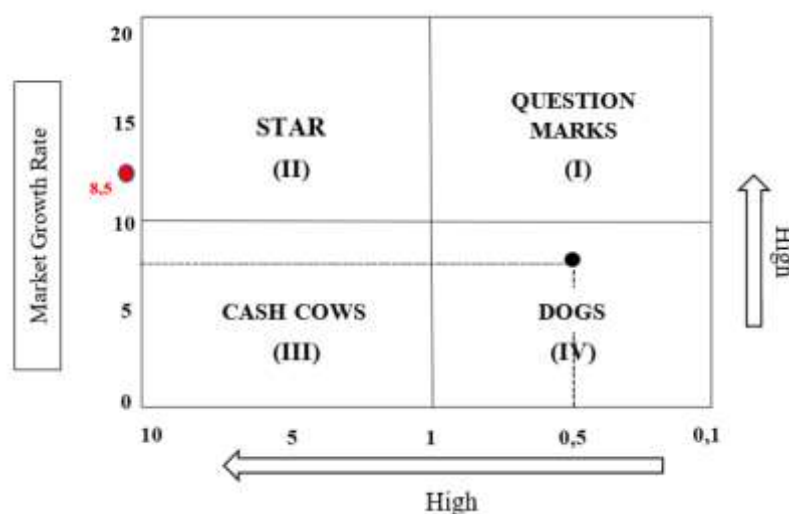


Fig.3: The Company Position in the Quadrant of BCG Matrix

Figure 3 shows that in the BCG matrix of the KAI Daop Cargo Transport Unit, 6 Yogyakarta is in Quadrant IV (Dogs) with a coordinate point of Market Growth Rate of 8.5. Relative Market Share of 0.5 means that this quadrant has a low market growth rate and market share. So, Cargo Transportation Unit does not need to consider another effort because it has a common market share and operates in the market with low growth. Otherwise, is it necessary to keep the business running? If not, the risk is a business or product divestment to release money trapped in the industry, increase the market growth, and remove the company position from the Dogs quadrant to the Question Mark quadrant.

The result of this research shows the company's position in the industry is in the Question Mark quadrant after obtaining the growth rate of +5%; however, it is in line with its low relative market share, which is less than one ($0 < 1$). Therefore, the question Mark quadrant means the company has a high market growth rate and a low relative market share. Thus, the company needs to choose an appropriate strategy, such as market penetration, market development, and product development, so that the company can retain its position and has an opportunity to become *Star* when the product grows continuously.

4.4 Analysis of the Cargo Transportation Unit's Strategy

After knowing the position of the Cargo Transportation Unit of KAI Daop 6 Yogyakarta in the BCG matrix, the authors subsequently analyze the appropriate strategy for the Cargo Transportation Unit according to its position in the BCG matrix. Since part of the Cargo Transportation Unit is in the Dogs quadrant, the process that the Cargo Transportation Unit must choose is between retrenchment, divestment, and liquidation to release an amount of money or asset trapped in the business. As a result, the company needs to reconsider the investment in human resources and the money to raise the product's market share. Based on observation, the main factor that causes the low market growth of the Cargo Transportation Unit is the operational implementation that depends on trends like national days, holidays, and Ied.

Previously, the marketing team of the Cargo Transportation Unit has implemented a marketing mix strategy to enhance the company's brand awareness and profit, namely the process of 7P, where each part of the marketing mix has a function to improve the performance of marketing

activities. In addition, the Cargo Transportation Unit makes an annual promotion in collaboration with the Directorate General of Railways, taking advantage of the going hometown moment by providing free motorcycle delivery using trains. Therefore, the strategies to be chosen by KAI's Cargo Transportation Unit based on the BCG matrix are reduction, liquidation, and product divestment to maintain the product and move the position from the Dogs to the question mark quadrant.

In the aspect of the Dogs quadrant, this research is in line with the study of Bellandi, [30], Haezendonck et al., [31], and Torquati et al., [14], which requires how to become a profitable product. This research is also in line with Özemre and Kabadurmus, [25] study, which will include value prediction for strategic market analysis through the BCG matrix. It is by using BCG to understand the market and optimize the allocation of resources owned by the company through the relation between market growth and market share. In general, this research supports the results of some studies by Bellandi, [30], Elbayoumi et al., [32], Myllylä and Kaivo-Oja, [33], and Pulubuhu et al., [34], use some aspects of the BCG matrix.

This research is also in line with the study of Birafane et al., [29], Chang et al., [35], Fakhira et al., [36], Feng et al., [37], and Pham et al., [38], for the use of BCG that classifies the products of some transportation modes, especially cargo transportation using a train, into the effects of Question Mark, Star, Cash Cow, and Dogs. However, the result of this research contradicts the research carried out by Hu et al., [39]. Furthermore, Özemre and Kabadurmus, [25], show that the company position is in quadrant III (Cash Cow). In other words, the strategy to be implemented by the company in this study is different from the one recommended.

KAI's cargo transport unit products transported by train are corporate and retail cargo. The price offered by the cargo transportation unit of KAI varies counted according to the cargo volume, weight, and distance of cargo delivery. The distribution of cargo through the railway connections in the Java area combined with the stations operating in each room for cargo delivery and transportation. KAI makes promotions through personal selling, publicity, advertising, direct marketing, and sales promotion. The employees working in the Cargo Transportation Unit of KAI are train crew, checkers, Supervisors, loading-unloading officers, and cargo control officers, [40]. The cargo delivery and receiving process is done

directly by the consignor and consignee at the cargo transportation booth. The waiting room facility is sufficient for customers or cargo senders to put cargo temporarily.

5 Conclusion

Based on the analysis of the BCG matrix where the dimension of growth is determined up to 20%. The Market Growth Rate obtained as much as 8.5%, and the Relative Market Share is $0.5 < 1$, so the company position is in Quadrant IV (Dogs). It means the company's relative market share is less than one. Therefore, the calculation results indicate that the company is in Quadrant IV (Dogs). This quadrant can be interpreted as the category with a low market growth rate and market share and competing in the industry that grows slowly or does not grow at all.

The main factor causing the low market growth rate of Cargo Transportation Unit Daop 6 Yogyakarta is the operational implementation that depends on the trend, such as national days, holidays, and led. In addition, the trend continued with the Covid-19 pandemic has impacted many cancelations of train travel carrying the company's products. Therefore, to increase the market growth, stabilize the market share, and make a profit.

The company needs to consider some investments in supporting activities for the members of company units, such as in technology and human resources, and reformulate the handling of the canceled train travels due to the Covid 19 pandemic.

Based on the category of Quadrant IV (Dogs), three alternative strategies can be used to uplift the company's position in the BCG matrix, namely divestment, reducing the loss burden by reducing the number of assets to obtain higher profit in the future. Retrenchment or rearrangement through lowering costs and investments to reverse the decrease in sales and profit. Besides that, involvement in the sale of land and buildings to raise the money needed does not rule out cutting product lines.

Finally, liquidation, closing the division or unit which is not required and selling their assets to cover the loss experienced by the company to raise the company's market share, which is in the category of Quadrant IV (Dogs) to move to Quadrant I (Question Mark).

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Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself
No funding was received for conducting this study.

Conflict of Interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

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