

The Effect of Logistic Performance on Operational Performance at Pt. Daya Guna Motor Indonesia

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Abstract:- The aims of research were 1) to describe logistics performance at PT. DayaGuna Motor Indonesia; 2) To describe operational performance at PT. DayaGuna Motor Indonesia and 3) to determine the influence of logistics performance on operational performance at PT. DayaGuna Motor Indonesia. The research method is a quantitative research method. The exogenous variable was logistics performance (X). The endogenous variable was logistics performance (X). The research population were employees of PT. DayaGuna Motor Indonesia were 103 employees. The sampling technique used in this research was saturated sampling with a sample size of 103 people. The data analysis method was SEM (Structural Equation Modelling). The research results showed that the description of logistics performance at PT. DayaGuna Motor Indonesia with the average value of logistics performance shows that logistics performance is relatively good. This is based on the results of an analysis of the average value of 3 logistics performance indicators, namely logistics cost efficiency, logistics performance and logistics performance time, amounting to 3.25. Description of operational performance at PT. DayaGuna Motor Indonesia with the average operational performance value shows that operational performance is still relatively good. This is based on the results of an analysis of the average value of 4 operational performance indicators, namely cost, quality, flexibility and delivery, amounting to 3.24. Based on each path coefficient, logistics performance has a significant effect on operational performance with a positive relationship of 0.826. Thus, logistics performance has a direct effect on operational performance, which means that if logistics performance increases, operational performance will increase and conversely, if logistics performance decreases, operational performance will decrease.

Keywords:- Management, Performance, Logistics, Operations and Transportation.

I. INTRODUCTION

The development of transportation in Indonesia is increasing over time, both sea, land and air transportation. One of them is sea transportation as a part of the national transportation system which plays an important and strategic role in the mobility of passengers, goods and services both within the country and to and from abroad.

Transportation plays an important role in the smooth running of trade because it has high economic value, including large carrying capacity, and relatively low costs to support trade and cargo traffic. Ports were created as nodal points for the movement of goods where ships can dock, berth, and carry out transportation. loading and unloading activities (Sartono and Prakoso, 2021).

Transportation is not only limited to transporting people and goods from one place to another, but also has an impact on regional economic conditions. Large transportation costs can mean geographical, social and economic isolation which becomes an obstacle for poor communities. Supply chain management applies synchronization, integration and collaboration of various parties and is realized in an effective institutional and organizational structure and is supported by logistics service providers, necessary to realize integrated national logistics system (Mulyadi, 2015)

Integrated logistics management is a logistics management activity that includes two related fields, namely: the field of logistics organization and the field of logistics coordination. The field of logistics operations is a physical activity. Physical distribution management concerns the problem of transporting products to customers. In physical distribution, subscriptions are seen as the last stop in the marketing funnel. Material management concerns the acquisition (procurement) and transportation of materials, spare parts and/or finished goods inventory from the place of purchase to the place of manufacture/assembly, warehouse or retail store (Harimurti, 2017).

Logistics performance is the result obtained from activities such as warehousing, distribution of goods, transportation of goods and order management (sales order processing). Various companies implement supply chain management to increase efficiency in logistics processes (Van Hoek, 2016).

According to Sobandi and Kosasih (2014), operational performance can be interpreted as process suitability and performance evaluation of the company's internal operations in terms of costs, customer service, delivery of goods to customers, quality, flexibility, and process quality of goods or services. Performance is something produced by a company in a certain period with reference to established standards (Prabowo and Jaya, 2015).

One company that has also improved its operational performance and improved its logistics performance is PT. Dayaguna Motor Indonesia was founded on April 7 2000 as an official Hino dealer that focuses on serving vehicle needs. In 2005, PT. Dayaguna Motor Indonesia as Hino's

official business representative in Indonesia, also trusts us to become a Hino Authorized Dealer 3-S (Sales, Service, Spare Parts). The development of Hino car unit sales is explained in Table 1 below.

Table 1: Development of Hino Unit Car Sales

| No | Year | Sales (Units) |
|----|------|---------------|
| 1 | 2017 | 2,517 |
| 2 | 2018 | 4,985 |
| 3 | 2019 | 4,556 |
| 4 | 2020 | 1,553 |
| 5 | 2021 | 2,554 |
| 6 | 2022 | 3,530 |

Source: PT. DayaGuna Motor Indonesia (2023)

Based on Table 1, it is explained that there is fluctuating sales development. Therefore, it requires proper logistics management. Logistics management refers to the plans and actions that determine and monitor a company's product line (Chalotra, 2013; Ogah, Asiegbu, and Lagos, 2022). Inventory management activities vary by company, industry, and sector, according to Karim, Nawawi, and Salin (2018). In addition, logistics management also improves internal controls to ensure high-quality catalogs offer value to clients (Karim et al., 2018; Sitienei and Memba, 2015). This essentially lowers logistics waste, shortages, theft, and production costs while maintaining sales progress, client

satisfaction, competitiveness, and, ultimately, business continuity.

Bowersox (2013) believes that there are 5 (five) components that combine to form a logistics system, namely, facility location structure, transportation, inventory, communication, and handling and storage. However, from pre-survey data that was carried out on PT. The Power of Indonesian Motorcycles in Jakarta, it is known that there is a delay in delivery units. Factors causing delays in unit delivery are explained as follows:

Table 2: Unit Delivery Delay Data PT. The Power of Indonesian Motorcycles

| No | Problem | Delivery time | Reason |
|----|----------------------------------|---------------|--|
| 1 | Not on time according to request | 3 – 10 days | Empty inventory at the distribution center Transportation |
| 2 | Inaccuracy according to order | 3 – 20 days | Empty inventory at the distribution center Transportation Location too far |

Source: Initial survey results

Based on the data in Table 2, it can be seen that there are problems with logistics PT. The Power of Indonesian Motorcycles which of course will affect the company's operational performance. There is a phenomenon about that the delay in delivery of Hino units affected the company's operations.

The objectives of research were 1) to describe logistics performance at PT. DayaGuna Motor Indonesia; 2) To describe operational performance at PT. DayaGuna Motor Indonesia and 3) to determine the influence of logistics performance on operational performance at PT. DayaGuna Motor Indonesia.

II. RESEARCH METHODS

The method used in this research is a quantitative research method with hypothesis testing (hypothesis testing) which is causal or causal in nature (Sugiyono, 2019). This research is included in explanatory research. The research population is employees of PT. DayaGuna Motor Indonesia is 103 employees. The sampling technique used in this research was saturated sampling with a sample size of 103 people.

The exogenous/independent (free) variable in this research is logistics performance (X) measured using indicators of logistics cost efficiency, logistics performance, logistics performance based on time, namely: (Toyli et al., 2008). Operational performance has been previously determined that what is measured is unit production costs, quality, inventory, speed of introducing new products, flexibility, and delivery. Operational performance indicators are explained below. (Haleem et al. 2017)

The analysis technique in this research uses the SEM technique. The model used in this research is a causality model and to test the hypothesis proposed in this research the analysis technique used is SEM (Structural Equation Modeling) which is operated through the AMOS program.

III. RESULTS AND DISCUSSION

This research was conducted by distributing questionnaires to respondents. Research respondents were employees involved in logistics and operational staff. 103 respondents filled out the questionnaire directly. As a result of filling out the questionnaire, the first 20 data were used for instrument testing. Next, data was collected from 83 respondents. Based on the 103 questionnaires distributed, the

number of questionnaires filled out by respondents and processed further for SEM analysis is beyond the data used for instrument testing.

Most of the respondents were aged 30-40 years, namely 50 people or 39%. This shows that generally employees of PT. Daya Guna Motor Indonesia is already mature and approaching increasingly productive ages. The highest age of employees is 45-50 years, amounting to 13 people or 13%, indicating that employees of PT. Daya Guna Motor Indonesia is mature but not old and still productive in doing work.

Respondents consisted of men and women. However, in terms of quantity, the number of male respondents was greater than the number of female respondents, with 85 men (83%) and 18 women (17%). The large number of employees of PT. Daya Guna Motor Indonesia for men shows that logistics and operational work is generally carried out by men.

The education level of the majority of respondents was high school, namely 20 people or 19% due to PT participants. The average Indonesian motorbike user has a high school

education. However, there are 53 people or 51% with a bachelor's level educational background, so the employees already have a high level of thinking about PT logistics work. Daya Motor Indonesia in helping the company's logistics run smoothly. Apart from that, there are generally 20 employees with high school level education who are implementing it in the field or 19%. Therefore, people with higher education generally have a more efficient and effective mindset. This shows that field personnel also play an important role in completing company logistics.

Most of the respondents had Logistics Staff positions as many as 54 people (53%). Respondents who have the position of General Manager are 1 person (1%). In the Manager position there are only 2 people (1%) in the Supervisor position there are 5 people (5%) and in the Operational Staff position there are 41 people (40%).

A. Logistics Performance at PT. DayaGuna Motor Indonesia

Based on the results of respondents' answers, the descriptive results of the three logistics performance indicators can be explained in Table 3 below.

Table 3: Results of Descriptive Analysis of Logistics Performance Indicators

| No | Indicator | Average |
|----|-------------------------------------|---------|
| 1 | Logistics cost efficiency | 3.32 |
| 2 | Quality of logistics services | 3.17 |
| 3 | Logistics performance based on time | 3.25 |
| | Average | 3.25 |

Source: Primary data processed, 2024 (Appendix 3).

Based on Table 3, the average value of logistics performance is 3.25, indicating that logistics performance is still relatively good. The highest average score of respondents' answers was logistics cost efficiency of 3.32, while the lowest average answer score (3.17) was the quality of logistics services. Based on the results of the descriptive analysis, it can be explained that logistics performance is explained by 3 indicators, namely logistics cost efficiency, logistics performance and logistics performance time. The results of the descriptive analysis provide an overview of PT's logistics performance. The Usability of Indonesian Motorbikes.

Logistics cost efficiency is an estimate of the presentation of costs from types of logistics activities compared to sales turnover. The average value of logistics cost efficiency is 3.32, indicating that logistics cost efficiency is still relatively good. Logistics is the flow of goods or services from source to destination. A more detailed definition of logistics is the process of planning, implementing and controlling the efficient and effective flow of goods or services and related information from the point of origin to the point of use to meet customer needs.

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services from source to destination. A more detailed definition of logistics is the process of planning, implementing and controlling the efficient and effective flow of goods or services and related information from the point of origin to the point of use to meet customer needs. Logistics cost efficiency is measured by PT. DayaGuna Motor Indonesia carries out transportation cost efficiency, PT. DayaGuna Motor Indonesia carries out cost efficiency by running its own warehouse or using warehouse services and PT. DayaGuna Motor Indonesia makes capital cost efficiency tied to sales. Apart from reducing additional costs at the port, there is efficiency in other logistics costs.

Logistics performance is a service level that aims to characterize logistics performance for company partners, perfect order rates and cycle duration. This also cannot be separated from the issue of the supply chain, which is a very important part of the smooth running of a business. Implementing supply chain management for the supply and distribution of goods is very necessary for distributor companies. Optimal distribution will be the key to the Company's success in running its business. Supply chain management also allows for increased efficiency in the distribution process.

Logistics performance from an assessment of time-based logistics performance is logistics performance based on days of inventory, average sales of goods, and average company debt. Logistics maintenance also has several

objectives, including maintaining and ensuring that all existing logistics are still able to function as they should when the logistics are needed so that activities within the organization do not experience obstacles/stagnation. This is related to the operations of the logistics items being maintained. So that an item owned by a company or organization can continue to operate properly, maintenance is needed. So that later, when the item is to be used at any time, the item can still be operated without hampering the running of the organization.

Second, logistics performance is aimed at ensuring that the lifespan of logistics can reach the optimal time limit (according to the specified time limit). This goal is related to the level of durability of the logistics. Every logistics item actually has an economic life, namely a time limit that is calculated from the useful life of the item. So that this time can be as planned, good and correct logistics maintenance is needed. Apart from that, it supports company efficiency. This

third objective is actually the main objective of logistics maintenance. This objective includes the two objectives of maintaining goods that have been described above. In this section, the purpose of maintaining goods is related to the sustainability of an organization's activities in terms of efficiency. The main goal of an organization is to achieve organizational goals effectively and efficiently. Therefore, good facilities and infrastructure are needed. These facilities and infrastructure are in the form of logistics goods owned by the company. So that later these goods can still be used by the company in the context of company efficiency, logistics maintenance is needed.

B. Description of Operational Performance at PT. DayaGuna Motor Indonesia

Based on the results of respondents' answers, the descriptive results of the three operational performance indicators can be explained in Table 4 below.

Table 4: Results of Descriptive Analysis of Operational Performance Indicators

| No | Indicator | Average |
|---------|-------------|---------|
| 1 | Cost | 2.95 |
| 2 | Quality | 3.11 |
| 3 | Flexibility | 3.18 |
| 4 | Delivery | 3.31 |
| Average | | 3.24 |

Source: Primary data processed, 2024 (Appendix 3).

Based on Table 4, the average operational performance value is 3.24, indicating that operational performance is still relatively good. The highest average answer score for respondents was 3.31, namely delivery, while the lowest average answer score (2.95) was cost.

Operational performance is explained by indicators *cost*, *quality*, *flexibility* and *delivery*. *Cost* states that to outperform its competitors, a company must be able to pursue a cost strategy that aims to cut expenditure and waste of resources to a minimum. *Quality* in terms of meeting customer needs and in accordance with customer expectation specifications. *Flexibility* is an attribute of a technological system or a company's ability to face uncertainty and be able to adapt and respond to changes that occur and *delivery* or *delivery* performance depends on the level of emphasis given to increasing *delivery* reliability or *delivery* speed to obtain a good competitive position.

Measuring a company's performance is used to improve the efficiency and effectiveness of operational management. According to Adem and Virdi (2021) operational performance is the company's ability to reduce operational management costs, order cycle times can be filled, increase the efficiency of raw material utilization, and *delivery* capacity can be met. Operational performance is related to costs, customer service, product quality, flexibility, *delivery* and production processes.

Results of respondents' assessment of PT's operational performance. The usability of Indonesian motorbikes shows the good category. Operational performance is very important for PT. DayaGuna Motor Indonesia is because it can provide production effectiveness, high product quality, customer satisfaction, and increased profit income. Optimal operational performance must be carried out by improving PT's operations. Maximize the usability of Indonesian motorbikes. Companies must also provide professional human resources, so that PT. Daya Motor Indonesia is able to meet the needs of employees in accordance with the company's requests and capabilities.

C. The Effect of Logistics Performance on Operational Performance at PT. DayaGuna Motor Indonesia

After carrying out validity and reliability tests on all indicator variables as well as SEM tests where the multivariate data is normal, and there is no multicollinearity and no outliers in the data, then these variables can be continued with model causality tests and significance tests in accordance with the research objectives, namely to prove and analyze the influence of performance. logistics on operational performance using the AMOS program. Based on the way the values are determined in the model, the variables tested for this first model are grouped into exogenous variables and endogenous variables. Exogenous variables are variables whose values are determined outside the model. Endogenous variables are variables whose values are determined through equations or from the relationship model that is formed. Included in the group of exogenous variables are logistics performance and endogenous variables operational performance.

The model is said to be good if the development of the hypothesis model is theoretically supported by empirical

data. The complete SEM analysis results can be seen in Figure 1.

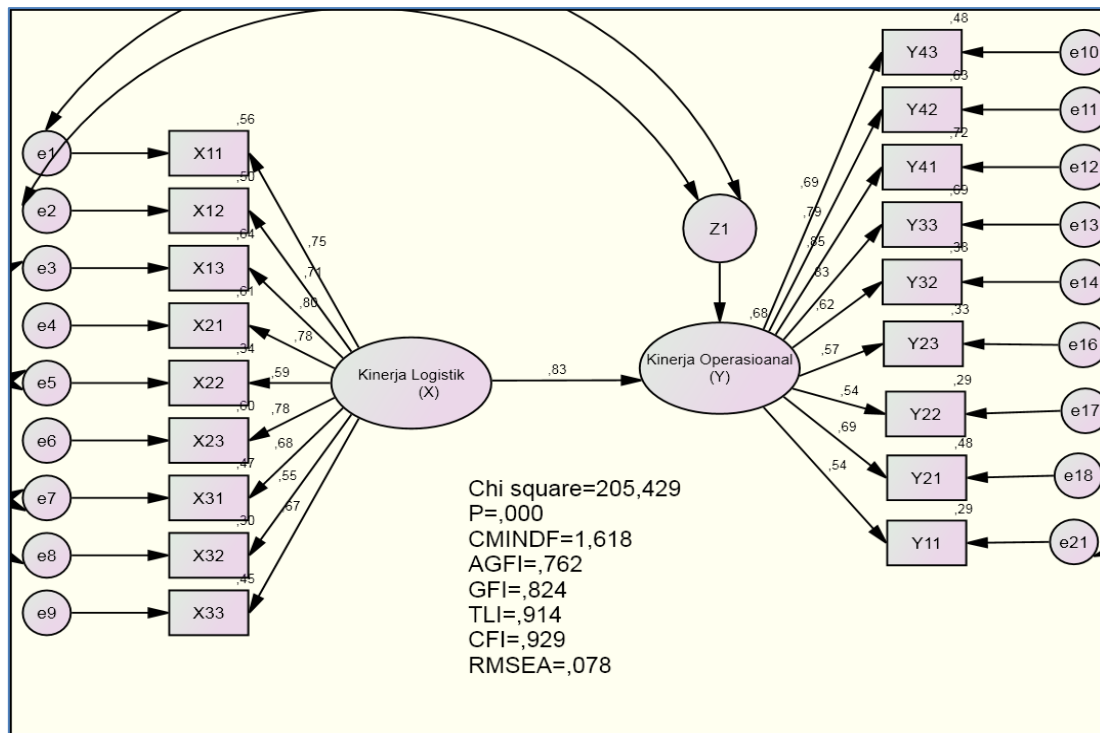


Fig. 1: SEM model

Model testing in SEM aims to see the suitability of the model, the results of the model suitability testing in this study are presented based on Table 6, it is known that of the seven criteria used to assess whether a model is appropriate

or not is met, and all the criteria are met, thus it can be said that the model is acceptable which means there is suitability of the model to the data. The model test results are shown in Table 6.

Table 6: SEM Model Fit Index

| Criteria | Cut off Value | The calculation results | Information |
|-------------|----------------------------------|-------------------------|--------------|
| Chi square | Expected to be smaller (127,689) | 205,429 | Marginal fit |
| Probability | >0.05 | 0,000 | Marginal fit |
| RMSEA | ≤ 0.08 | 0.078 | Good fit |
| GFI | ≥0.90 | 0.824 | Marginal fit |
| AGFI | ≥0.90 | 0.762 | Marginal fit |
| CMIN/DF | ≤ 2 or 3 | 1,618 | Good fit |
| TLI | ≥0.95 | 0.914 | Good fit |
| CFI | > 0.95 | 0.929 | Good fit |

Based on Table 6, it is known that the results of the goodness fit criteria are that for a Chi square of 205.429, it is expected to be smaller (< 127.689), probability > 0.05, RMSEA of 0.078 > 0.08, GFI of 0.824 < 0.90, AGFI of 0.762 > 0, 90, CMIN/DF of 1.618 ≤ 2 or 3, TLI of 0.914 <0.95, CFI of 0.929 > 0.95.

The next step is to test the causality of the hypothesis developed in the model, testing the path coefficients presented in Table 7.

Table 7: Results of Causality Testing

| Variable | Path coefficient | CR | Probability | Information |
|---|------------------|-------|-------------|-------------|
| Operational Performance_(Y) <---Logistics Performance_(X) | 0.826 | 5,609 | 0,000 | Significant |

The results of causality testing show that logistics performance influences operational performance with a path coefficient of 0.826 and a p-value of 0.000. Based on Table 7, the interpretation of each path coefficient is that logistics performance has a significant effect on operational

performance with a positive relationship. This can be seen from the positive path coefficient of 0.826 with a CR of 5.609 and obtained a significant probability (p) of 0.000 which is smaller than the required significance level (α) of 0.05. Thus, logistics performance has a direct effect on

operational performance, which means that if logistics performance increases, operational performance will increase and conversely, if logistics performance decreases, operational performance will decrease. These results support (accept) the first hypothesis in this research, which means that logistics performance has a significant effect on operational performance

The results of the analysis show the direct influence of logistics performance (X) on the operational performance of PT. Daya Guna Motor Indonesia (Y) is 0.826. The test results show that logistics performance has the largest direct effect on PT's operational performance. The Usability of Indonesian Motorbikes. This means that the latent variable logistics performance makes a big contribution in influencing PT's operational performance. The usability of Indonesian motorbikes is 0.826.

The SEM coefficient test results show that logistics performance has a significant effect on operational performance. Based on the test results, the hypothesis which states that logistics performance has a significant effect on operational performance is proven (accepted). This shows that logistics performance can be measured by logistics efficiency, logistics performance and time which will not be an assessment for patients so that it will lead to improved operational performance. Based on respondents' assessments and reasons regarding logistics performance indicators, it can be said that logistics performance. Having a good assessment from respondents will improve operational performance. In the process of building an advanced logistics company, the company must be able to run a good system. A good system is a system that can be implemented to minimize risks that occur in the company. Companies that implement quality control in their logistics systems will be increasingly aware and prepared to face the possibility of potential delays in logistics that occur as a form of recognizing the company's quality and can estimate handling scenarios. Quality control of logistics operations can reduce or avoid delays in logistics delivery when received by consumers, because good quality is quality that meets consumer desires.

Kurniawan and Rinofah (2016) explained that operational performance is performance regarding the quality of activities related to the flow and movement of goods, from raw goods being supplied to finished goods reaching the final consumer. The results of this study are consistent with the research results Samekto and Soejanto (2014) show that the performance of ship freight forwarding companies is increasing due to better logistics management. In addition, the results of this study are consistent with Ardiansyah et al (2015) also found that logistics performance simultaneously produces a significant influence on operational performance.

IV. CONCLUSIONS AND RECOMMENDATIONS

The results of data analysis can be concluded as follows: 1) Description of logistics performance at PT. DayaGuna Motor Indonesia with the average value of logistics performance shows that logistics performance is relatively good. This is based on the results of an analysis of

the average value of 3 logistics performance indicators, namely logistics cost efficiency, logistics performance and logistics performance time, amounting to 3.25. 2) Description of operational performance at PT. DayaGuna Motor Indonesia with the average operational performance value shows that operational performance is still relatively good. This is based on the results of an analysis of the average value of 4 operational performance indicators, namely cost, quality, flexibility and delivery, amounting to 3.24. 3) Based on each path coefficient, logistics performance has a significant effect on operational performance with a positive relationship of 0.826. This shows that logistics performance has a direct effect on operational performance, which means that if logistics performance increases, operational performance will increase and vice versa if logistics performance decreases, operational performance will decrease.

Suggestions that can be given in this research are PT. DayaGuna Motor Indonesia should improve the quality of logistics services where this indicator has the lowest rating by providing efficient delivery times in accordance with the contract, improving satisfactory logistics services for clients, increasing reliability in ordering raw materials and speed in ordering raw materials.

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