

EXPLORING THE ROLE OF LOGISTICS MANAGEMENT AND HUMAN RESOURCE COMPETENCE IN SHAPING LOGISTICS PERFORMANCE: STUDY AT PT POS INDONESIA KENDAL BRANCH OFFICE

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Abstract. *The purpose of this study was to analyze and determine the effect of Logistics Management and HR Competencies simultaneously on Logistics Performance at PT Pos Indonesia Kendal Branch Office. The method used in this research approach is quantitative research using a survey method with a casual statistical analysis method using Structural Equation Modeling (SEM) based on Partial Least Square (PLS). Researchers conducted surveys and data collection using sampling techniques (sampling techniques) Probability Sampling with Simple Random Sampling. The sample of this study was 73 members of PT Pos Indonesia Kendal Branch Office. The results of this study indicate that Logistics Management and HR Competencies have a significant effect partially or simultaneously on Logistics Performance with an R square value of 0.937 which means it shows the model is in strong criteria.*

Keywords: *HR Competencies; Logistics Management; Logistics Performance; SEM PLS*

1. INTRODUCTION

The times and technological advances have had a significant impact on various sectors, including the expedition and shipping services sector. The expedition business is experiencing rapid growth, given its very important role in connecting people and businesses through the delivery of goods, both for personal and business purposes. Delivery of goods is currently not only limited to domestic areas, but has penetrated to various corners and other countries in the world. This phenomenon is further strengthened after the pandemic, where more and more online transactions affect the volume of shipping goods between cities and between countries. This encourages logistics companies to continuously improve their operational performance to meet increasingly complex market demands.

Logistics, as one of the essential elements in the distribution system, plays a strategic role in supporting economic development by improving efficiency and effectiveness in the process of storing, handling, and transporting goods. In an increasingly competitive logistics industry, companies need to maintain good relationships with customers through reliable, responsive, timely and communicative services. In addition, retaining existing customers is more profitable than finding new customers. Therefore, it is important for companies to always focus on improving Logistics Performance as part of their long-term strategy.

Based on World Bank data, Indonesia's Logistics Performance Index (LPI) ranking has fluctuated significantly. In 2012, Indonesia ranked 59th, then improved to 46th in 2018, making it one of the leading countries among lower middle-income countries, behind Vietnam (39th) and India (44th). However, in LPI 2023, Indonesia experienced a significant drop in rank, placing 61st with a score of 3.0. Meanwhile, Singapore ranked first with a score of 4.3, followed by Malaysia (3.6) and Thailand (3.5). This decline shows that attention to Indonesia's Logistics Performance still needs to be improved, especially in the face of increasingly stringent global challenges.

Efficient Logistics Management is an important key to increasing the competitiveness of logistics companies, including PT Pos Indonesia. One of the factors that influence the effectiveness of Logistics Management is the competence of human resources (HR). HR who have the right skills and knowledge in logistics will support smooth operations and improve overall company performance. Therefore, good HR management, which includes developing competencies relevant to the demands of the dynamic logistics industry, is essential in creating a competitive advantage for the company (Assabane, 2022).

Research shows that knowledge-based HRM, which utilizes the skills and knowledge of employees, can improve operational efficiency, accelerate decision-making, and reduce risks in the logistics process. Good logistics capability serves as a mediator linking HR management with improved Logistics Performance. In this context, competent HR has an important role in facilitating the smooth flow of goods and information, which directly impacts Logistics Performance and company competitiveness (Amalia, 2024).

PT Pos Indonesia as one of the major companies engaged in postal and logistics services in Indonesia, has a big challenge to continue to improve Logistics Performance to meet increasingly complex market demands. The role of efficient Logistics Management is very important in achieving this goal. On the other hand, qualified HR competencies in logistics will support smooth operations and make the right decisions in carrying out business processes.

Knowledge-based people management, which involves using the knowledge and skills possessed by employees, has been shown to have a significant impact on the performance of logistics organizations. Previous research shows that knowledge-based managerial practices can improve operational efficiency, speed up decision-making, and reduce risks that may occur in the logistics process. This positive impact is further strengthened by logistics capabilities that serve as a mediator, linking HRM to improved Logistics Performance. Logistics capabilities, which include managerial, technical, and operational aspects, play an important role in ensuring the smooth flow of goods and information, which in turn has a direct impact on Logistics Performance and corporate competitiveness (Lei, 2023).

In the highly competitive logistics industry, it is important for companies to have an efficient and innovative HR management system. This aims to not only retain the best talent in the organization, but also to drive performance improvement and adaptation to market changes (Evangelista et al., 2023). Companies that are able to manage HR effectively will be better able to innovate, increase productivity, and maintain a competitive position in an ever-evolving market. Therefore, the integration between good human resource management and reliable logistics capabilities is a very important factor for the long-term success of logistics companies.

Human resources are not only responsible for carrying out administrative tasks, but also play a role in ensuring smooth business processes and achieving organizational goals. Competent human resources in the logistics field will not only affect the smooth operation, but also play a role in making the right decisions, risk management, and solving problems that may occur in the logistics process. The development of industry and technology has implications for the company's need for competent and motivated human resources to achieve sustainable growth. To ensure this sustainable growth, companies must ensure that their human resources have adequate knowledge, skills, and competencies to work effectively in dynamic Logistics Management (Mas'ud, 2022).

According to Tan and Nawawi (2021), Logistics performance can be measured by the quality and quantity of work achieved, which is certainly influenced by the level of motivation and understanding of work. Therefore, companies need to ensure that their human resources have competencies that match the demands of the job, both through training and providing the right motivation, in order to achieve optimal results. Good integration between effective Logistics Management and competent HR management is an important factor in improving Logistics Performance and company success in the competitive logistics industry.

Thus, this study aims to analyze the effect of Logistics Management and HR Competence on Logistics Performance at PT Pos Indonesia Kendal Branch Office, in order to provide deeper insight into the importance of these two factors in improving organizational performance. It is hoped that the results of this study can contribute to the development of a more effective Logistics Management strategy and HR management in improving company performance.

This research introduces new aspects by focusing on the interaction between Logistics Management and HR Competencies in the specific context of improving Logistics Performance at PT Pos Indonesia Kendal Branch Office. This research is expected to answer questions about the extent of the influence of these factors in creating a more efficient, competitive, and sustainable logistics system, as well as encouraging logistics management practices to implement more effective strategies in managing logistics resources and labor, so as to improve delivery timeliness, cost efficiency, and customer satisfaction. In understanding how synergies between logistics management and good HR management can contribute to increasing the competitiveness of the logistics industry as a whole.

2. LITERATURE REVIEW

2.1 Logistics Management

Logistics Management, according to Bowersox (2017: 13), can be understood as a strategic process in managing the movement and storage of goods, parts, and finished products, which involves coordination between suppliers, company facilities, and consumers. Logistics management aims to ensure the efficiency and smooth distribution of goods so that it can support the company's operational performance. Meanwhile, Siahaya (2019: 17) argues that Logistics Management involves the integration of various business resources, both from within and outside the organization, to build a competitive supply system. The main focus of this integration is the synchronization of product and information flows to create added value for customers (customer value). This integrated logistics system involves various actors, such as suppliers, manufacturers, warehouses, transporters, distributors, retailers, and consumers, who work efficiently so that the products produced can be distributed according to the right place, quantity, quality, time, and location. According to Fadilah & Kusuma, (2020) Logistics Management indicators have several important indicators, namely:

1. Inventory Control
2. Transportation Management
3. Warehousing Management
4. Order Processing.
5. Information Flow Management
6. Customer Service Management

2.2 Human Resources Competency

Competence is an embedded part of a person's personality that manifests itself in predictable behavior in a variety of work settings and activities. Criteria or standards are useful for predicting who is performing well and who is not (Risnawati, 2020). Human resources are a source of competitive advantage that is able to face various challenges when compared to other resources that are decreasing in efficacy such as product technology and production processes (Sugiyanto et al., 2021). Human Resource Competency is an ability to carry out or perform a job or task based on skills and knowledge and supported by the work attitude required by the job (Prayogi 2019). According to Lestari & Wiryawan, (2022) indicators of HR Competence, namely:

1. Knowledge
2. Skills
3. Attitude
4. Training and Development

5. Performance Evaluation
6. Recruitment and Selection

2.3 Logistics Performance

According to A.A. Anwar Prabu Mangkunegara in Anis Anshari Mas'ud (2022), Logistic Performance (work performance) is defined as the work achieved by an employee in carrying out his duties and responsibilities. The work results are measured from two aspects, namely quality and quantity, which describe how well and how much work is completed by employees in meeting the standards set by the organization. Optimal performance not only includes achieving the target amount of work, but also reflects the level of proficiency, skill, and discipline in completing the assigned tasks. Therefore, Logistics Performance is an important indicator that can describe the extent to which organizational goals can be achieved through individual contributions in their work. According to Yuniar & Susilo, (2023) the indicators of Logistics Performance are:

1. Delivery Timeliness
2. Cost Efficiency
3. Order Accuracy
4. Flexibility
5. Logistics Performance
6. Inventory Turnover

The hypotheses proposed in this study are:

H1: There is an influence of Logistics Management on Logistics Performance at PT Pos Indonesia Kendal Branch Office.

H2: There is an influence of HR Competence on Logistics Performance at PT Pos Indonesia Kendal Branch Office.

H3: There is an influence of Logistics Management and HR Competencies on Logistics Performance at PT Pos Indonesia Kendal Branch Office.

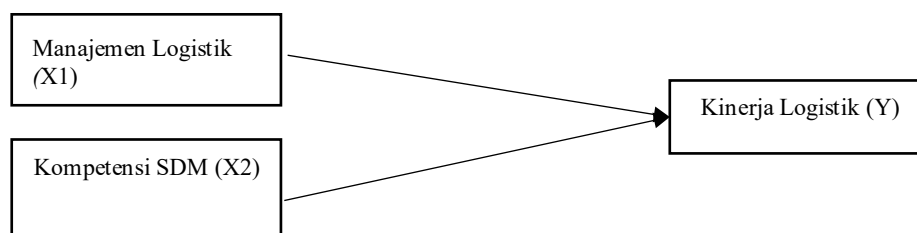


Fig.1 Path Diagram of the Relationship between Research Variables

3. RESEARCH METHODS

The research method used in this research is a verification method with a quantitative research approach. According to Sugiyono (2016: 4), quantitative research is "Research that analyzes data quantitatively by testing predetermined hypotheses and then interpreting the results of the analysis to draw conclusions".

The verification method is used to determine and examine the effect of Logistics Management and HR Competencies on Logistics Performance at PT Pos Indonesia Kendal Branch Office using SEM-PLS analysis using SmartPLS version 3.0 software. The sample for this study were 73 employees of PT Pos Indonesia Kendal Branch Office. The sampling method used in this study is non-probability sampling with total sampling or saturated samples.

4. RESULTS AND DISCUSSION

The PLS-SEM method was applied to evaluate the research model, which consists of two aspects: internal and external models. In the external model assessment, validity and reliability are the main focus. Convergent validity was established through a factor load criterion of at least 0.7 and an average variance extracted (AVE) value of at least 0.5. In addition, discriminant validity is tested using the Fornell-Lacker criterion, where the correlation between latent constructs must exceed the square root of the AVE (Fornell-Lacker). Model reliability is measured by composite reliability and Cronbach's alpha, both of which must reach a minimum value (≥ 0.70). Furthermore, the evaluation of the internal model aims to predict the relationship between latent variables, using the criteria of T-statistic value, P-value, and R-squared. R-squared values of 0.75, 0.5, and 0.25 indicate the strong, moderate, and weak influence of exogenous factors on endogenous variables, according to (Hair et al., 2021) the significance of the relationship between variables at the 5% level is determined by the t value > 1.65 and P-value < 0.05 .

Verification Analysis

In accordance with the research objectives, namely to determine the effect of Logistics Management and HR Competencies on Logistics Performance, the authors will conduct a series of quantitative analyzes that are relevant to the research objectives. From the data obtained through questionnaires using the Partial Least Square estimation method with the PLS algorithm, a full model path diagram is obtained in the following figure

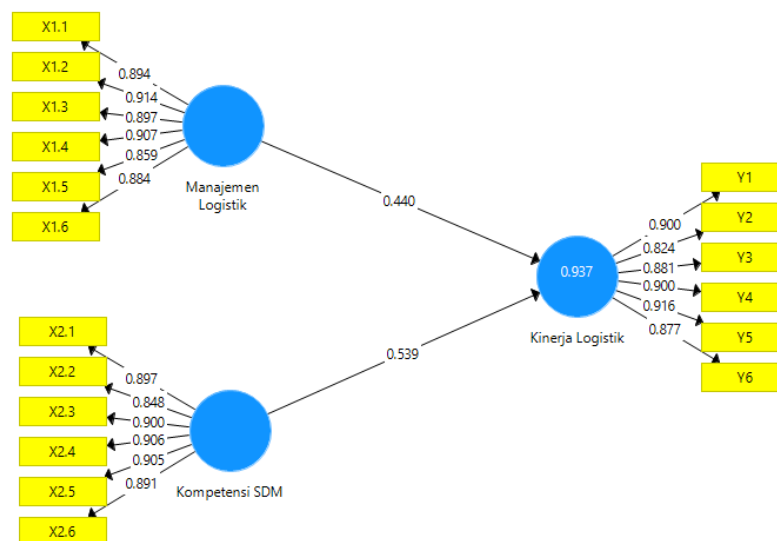


Fig. 2 Structural Modeling Standardization Coefficient

4.1 Outer Model Result

The data in Table 1 shows that all indicators meet the Convergent Validity requirements, with Factor Loading ≥ 0.7 and AVE ≥ 0.5 . These results are an important consideration in evaluating the outer model. Meanwhile, Table 2 shows the fulfillment of discriminant validity criteria, where the square root of AVE (Fornell-Lacker Criterion) is higher than the correlation between latent constructs. Furthermore, the model demonstrated Composite Reliability and Cronbach's Alpha of ≥ 0.70 each, confirming that the model has achieved the required reliability standards.

Table. 1 Validity and Reliability Of Research Variables

Vbl	Idt	FaLo	Crb_α	Cps_Re	AV_E
<i>Manajemen Logistik (X1)</i>			0.944	0.955	0.781
X1.1	Inventory Control	0.894			
X1.2	Transportation Management	0.914			
X1.3	Warehousing Management	0.897			
X1.4	Order Processing	0.907			
X1.5	Information Flow Management	0.859			
X1.6	Customer Service Management	0.884			
<i>Kompetensi SDM (X2)</i>			0.948	0.959	0.795
X2.1	Knowledge	0.897			
X2.2	Skills	0.848			
X2.3	Attitude	0.900			
X2.4	Training and Development	0.906			
X2.5	Performance Evaluation	0.905			
X2.6	Recruitment and Selection	0.891			
<i>Kinerja Logistik (Y)</i>			0.949	0.959	0.797
Y1	Delivery Timeliness	0.900			
Y2	Cost Efficiency	0.824			
Y3	Order Accuracy	0.881			
Y4	Flexibility	0.900			
Y5	Logistics Performance	0.916			
Y6	Inventory Turnover	0.877			

Vbl = Variables, Idt = Indicators; FaLo = Factor Loading; Crb_α = Cronbach's alpha;
Cps_Re = Composite Reliability; AV_E = AVE

Table 2. Fornell-Larcker Criterion (Discriminant Validity)

	Logistics Performance	HR Competency	Logistics Management
Logistics Performance	0.884		
HR Competency	0.959	0.891	
Logistics Management	0.955	0.956	0.893

4.2 Inner Model Result

The evaluation of the inner model is an analysis of the relationships between latent constructs. The inner model testing consists of **R-square** and **Q-square predictive relevance**. Below is a summary of the values used in the structural model:

Table 3. R-Square

	R Square	Strong Relationships
Y	0.937	Strong

Table 4. Q Square Predictive Relevance

Variable	R-Square	1-R Square
Kinerja Logistik (Z)	0.937	0.935
Q² =	$Q^2 = 1 - (1 - R_1^2)$ $Q^2 = 1 - (1 - 0,937) = 0,937$	
Galat =	=100% - 93,7% = 6,3%	

Based on the results of the R Square and Q2 calculations, it can be seen that the model formed is robust, so that hypothesis testing can be carried out.

Hypothesis Testing

Hypothesis testing in this study was conducted using path coefficient, t-value, and p-value. Hypothesis testing is a procedure that will result in a decision (accept/reject the hypothesis). Therefore, the hypothesis must be tested for its truth through statistical tests. Visually, the path diagram for hypothesis testing is depicted in the following figure:

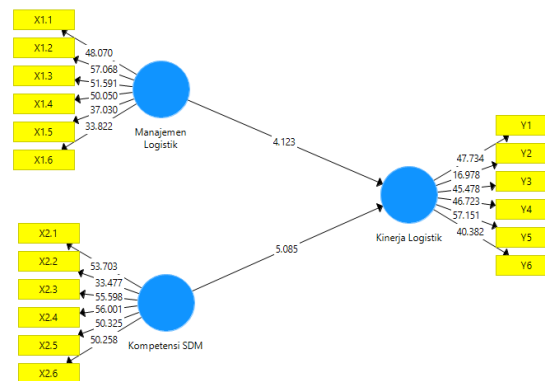


Fig. 3 Hypothesis Testing Path Diagram

After running bootstrapping the value on the path diagram is the value for the t-test related to significance. If the t-value of the structural equation ≥ 1.993 and the significant value < 0.05 then H_0 is rejected or there is a significant influence between the independent variable and its dependent variable. Hypothesis testing is carried out as follows:

a. Partial Effect

Table 5. Hypothesis Testing Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Logistics Management -> Logistics Performance	0.440	0.437	0.107	4.123	0.000
HR Competency -> Logistics Performance	0.539	0.542	0.106	5.085	0.000

b. Simultaneous Effect

Based on the results of the analysis of the influence of the variables Logistics Management and HR Competence on Logistics Performance at PT Pos Indonesia Kendal Branch Office, the R square value was 0.910, so that the next calculation of F count was carried out to assess the influence of Logistics Management and HR Competence on Logistics Performance at PT Pos Indonesia Kendal Branch Office. Based on the calculation above, it can be seen that the F count is 520.55 at the significance level in simultaneous testing using $\alpha = 0.05$ or 5% with degrees of freedom $df_1 = k = 2$, $df_2 = n - k - 1 = 73 - 2 - 1 = 70$, the F table value is 3.13. So it can be concluded, with the acceptance criteria for significance $F_{count} > 3.13$ or $520.55 > 3.13$, it is known that H_0 is rejected, meaning that Logistics Management and HR Competence have a significant effect on Logistics Performance. This finding supports the research of Krauth et al. (2022) which emphasizes the importance of synergy between efficient logistics management and skilled HR to improve logistics performance.

Review

The results of this study indicate that effective Logistics Management plays a crucial role in improving operational efficiency. Factors such as inventory management, transportation systems, order processing, and integrated customer service can minimize logistical barriers that lead to delivery delays and high operational costs. This study supports the findings of Sohail & Alvi (2020), which state that companies with well-structured logistics systems can enhance customer satisfaction and business competitiveness.

Additionally, Human Resource Competence is an equally important factor in influencing logistics performance. Employees with technical skills in logistics management and a deep understanding of operational systems can improve order processing accuracy and on-time delivery. The study by Ali et al. (2021) confirms that investing in human resource development positively impacts productivity and efficiency in logistics companies.

Furthermore, the synergy between Logistics Management and Human Resource Competence creates a more structured and responsive work ecosystem that can adapt to market changes. In the context of PT Pos Indonesia, the implementation of technology-based logistics management strategies and continuous employee training can be key to enhancing operational performance. The company must continuously adapt to industry developments, including utilizing logistics technologies such as real-time tracking systems and warehouse automation to improve service efficiency.

CONCLUSION

Based on the research findings, it can be concluded that Logistics Management and Human Resource Competence have a positive and significant impact on Logistics Performance at PT Pos Indonesia, Kendal Branch Office. Effective Logistics Management enables more efficient distribution, while high Human Resource Competence ensures more accurate operations and responsiveness to the dynamics of the logistics industry.

In facing global challenges and increasing competition, PT Pos Indonesia needs to strengthen its logistics management policies and enhance employee competencies through structured training programs. Additionally, adopting more advanced logistics technology can accelerate the company's digital transformation, ultimately increasing its competitiveness in the logistics industry.

Thus, this study provides insights for PT Pos Indonesia's management in developing more effective strategies to improve Logistics Performance. Further research can be conducted to explore other variables that also influence logistics performance, such as technological innovation, customer satisfaction, and external factors like government regulations.

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