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The Impact of Management Information Systems and Internal Communication on Organizational Performance in the Logistics Department at PT. Sinar Gorontalo Berlian Motor

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Abstract

This study aims to analyze the partial and simultaneous effects of management information systems and internal communication on organizational performance in the logistics department at PT. Sinar Gorontalo Berlian Motor. This study employs a quantitative approach. Data were collected through observation and a questionnaire distributed to 45 employees. The results indicate that the management information system has a positive and statistically significant partial effect on organizational performance in the logistics department. Similarly, internal communication has a positive and statistically significant partial effect on organizational performance in the logistics department. Simultaneously, the management information system and internal communication have a significant effect on organizational performance in the logistics department at PT. Sinar Gorontalo Berlian Motor. The presence of a high-quality management information system and effective internal communication channels (both vertical and horizontal) has proven to be a strategic instrument that drives on-time delivery, inventory turnover, and the company's transportation efficiency.

Keywords: Logistics Performance, Internal Communication, Management Information Systems

INTRODUCTION

Management Information Systems (MIS) are not actually a new concept; rather, it is their computerization that continues to evolve. MIS techniques have long existed to provide information that enables managers to plan and control organizational operations.

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The advent of computer technology has added one or two new dimensions such as speed, accuracy, and increased data volume thereby allowing for the consideration of more alternatives in decision-making. From a conceptual perspective, a system is understood as a set of elements or subsystems that are interrelated and interact regularly to achieve specific objectives. Mutiarni et al. (2024) explain that a Management Information System is not merely a technical support tool, but rather a strategic instrument that enables organizations to synchronize planning, coordination, and oversight in a measurable way. The existence of an integrated system ensures that all incoming data can be processed into meaningful information for quick and accurate decision-making, thereby minimizing the risk of operational errors that could harm the company.

Within a company's organizational structure, logistics plays a key role in meeting operational needs. Organizational logistics performance serves as a measure of effectiveness and efficiency in managing the flow of goods, services, and information, from suppliers to end consumers. This performance reflects how well the organization is able to meet customer demand on time, in the right quantities, and at minimal cost (Kurniajati & Susanto, 2024). Logistics management has now evolved into a strategic instrument that determines a company's competitiveness. Logistics is no longer merely a routine activity of shipping goods but rather a complex ecosystem that demands efficiency, data accuracy, and rapid responsiveness to market dynamics. Therefore, optimal logistics performance heavily depends on an organization's ability to integrate information technology to monitor asset movements in real time and minimize the risk of delays (Kresna Nirwaseta et al., 2023).

Information Systems (IS) serve as the backbone of modern logistics operations. Effective IS implementation enables companies to automate administrative processes, conduct precise inventory management, and process data to accelerate distribution. Siti Sahara & Fadly Auliano Romadona (2024) emphasize that logistics information systems play a crucial role in supporting logistics management by providing accurate, integrated information and enabling effective tracking of shipment status. However, the sophistication of the system will not yield maximum impact without the support of human interaction within it. In addition to technological aspects, internal communication is a crucial factor that bridges the gap between management policies and on-the-ground execution. Poor coordination between departments—such as warehousing, administration, and distribution—is often the primary cause of shipping errors or inventory backlogs. Internal communication plays a significant role in improving work quality through clear information sharing and effective coordination (Rahayu et al., 2022). Without good communication, data generated by information systems is often misinterpreted or acted upon too late.

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PT Sinar Gorontalo Berlian Motor is an Authorized Dealer for Mitsubishi Motors and Mitsubishi Fuso Truck & Bus in Indonesia, providing sales, spare parts, and service. The company manages the distribution of vehicles and thousands of spare parts. However, based on internal logistics performance data over the past three years, there have been fluctuations in the on-time delivery rate, which has not yet reached the 100% target. In fact, in 2025, the on-time delivery rate dropped from 86.36% in 2023 to 84.70%. Additionally, high fluctuations in transportation costs present a major challenge to the company's logistics cost efficiency. On the other hand, employee performance evaluation scores at PT Sinar Gorontalo Berlian Motor have not fully met the company's expectations; in 2025, the company experienced a decline in performance while also facing staffing shortages.

PROBLEM STATEMENT

Reliable and consistent logistics performance is a key pillar for PT. Sinar Gorontalo Berlian Motor in maintaining the availability of vehicles and thousands of spare parts to ensure customer satisfaction with after-sales service. However, in its day-to-day operations from 2022 to 2024, the company faced fluctuations in the on-time delivery rate of vehicles. Internal data shows that the percentage of on-time vehicle deliveries has never reached the maximum target of 100%; in 2023, it stood at 86.36%, but actually declined to 84.70% in 2024. This issue was compounded by high fluctuations in transportation costs, which surged to Rp 480,000,000 in the second quarter of 2024, indicating inefficiencies in the company's distribution management.

These inconsistencies in logistics performance were identified as stemming from two main constraints: technical obstacles in the information system and weak internal communication among field staff. On the one hand, the implemented information system has not been fully integrated, often leading to discrepancies in inventory data between the stock recorded in the computer system and the actual physical conditions in the warehouse. On the other hand, there are challenges in the flow of coordination information between key departments—namely, the sales team, the mechanics team, and warehouse staff. These communication barriers result in important information from the system often being acted upon too late, leading to errors in logistics data entry, misinterpretation of work instructions, and the accumulation of excess inventory.

RESEARCH METHODOLOGY

This study employs a quantitative approach with a correlational design to examine the causal relationships and influences among the variables under investigation. The study was conducted at PT. Sinar Gorontalo Berlian Motor, located in Gorontalo, with a focus on the effectiveness of the Management Information System (X1) and Internal

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Communication (X2) as independent variables, and Organizational Performance (Y) as the dependent variable. The population in this study includes all company employees directly involved in the logistics, administration, and distribution operations, including the sales team, the mechanics team, and warehouse staff. Sampling was conducted using census sampling, given the relatively limited and manageable population size; thus, all members of the population served as respondents in the data collection process.

Primary data were collected directly through the distribution of structured questionnaires to respondents. The data analysis techniques used in this study included descriptive statistical analysis and inferential statistical analysis. Descriptive analysis was applied to describe the characteristics of the respondents and the trends in their responses to each variable under study. Meanwhile, hypothesis testing was conducted using multiple linear regression analysis to determine the direction and magnitude of the independent variables' contributions to the dependent variable, both partially and simultaneously.

RESULTS AND DISCUSSION

Overview of Respondents

Based on data collected from 45 respondents at PT. Sinar Gorontalo Berlian Motor, demographic characteristics show that the majority of employees are men, totaling 33 (73.3%), and women, totaling 12 (26.7%), with the age distribution dominated by the mature productive age group in the 31–40 age range, totaling 23 people. In terms of highest level of education, the majority of the workforce consists of high school or vocational school graduates, totaling 30 people, while there are 10 bachelor's degree (S1) holders and 4 diploma holders. In terms of job placement distribution, the Service/Mechanics division accounted for the largest share with 19 people, followed by the Sales division (12 people), the Logistics Administration division (10 people), and the Spare Parts division (3 people). This profile is further supported by tenure data, showing that 27 employees have been with the company for 1–3 years and 18 others for 4–6 years. This indicates that the respondents generally possess sufficient operational experience to understand the dynamics of information system utilization and the daily internal communication and coordination processes within the company.

Results of the Multiple Linear Regression Test

Table 1: Results of the Multiple Linear Regression Coefficient Test

Variable	Regression Coefficient Value
Constant	5.916

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Management Information System	0.449
Internal Communication	0.493

Source: SPSS, 2026

Based on the results in Table 1 above, the multiple linear regression equation in this study can be formulated as follows: Y = 5.916 + 0.449X1 + 0.493X2 The constant of 5.916 implies that if the variables Management Information System and Internal Communication are assumed to be constant or equal to zero, the organizational performance index for the logistics division is already 5.916. The regression coefficient for the Management Information System variable, 0.449, indicates a positive relationship, meaning that every one-unit increase in the quality of the management information system will be followed by a 0.449 increase in logistics performance. Similarly, the positive regression coefficient for Internal Communication, at 0.493, indicates that optimizing internal communication will lead to a 0.493 increase in organizational performance in the logistics sector.

Results of the Partial Hypothesis Test (t-Test)

Table 2: Results of the Partial Hypothesis Test (t-Test)

No.	Variable	Calculated t-Value	Table t-Value	Significance Level	Alpha Value
1	Management Information System	4.178	2.01808	0.000	0.05
2	Internal Communication	3.696	2.01808	0.001	0.05

Source: SPSS, 2026

The results of the t-test analysis in Table 2 show that the Management Information System (X1) variable has a calculated t-value of 4.178, which is significantly greater than the critical t-value of 2.01808, supported by a significance level of 0.000, which is below the alpha level of 0.05. Thus, it can be concluded that, partially, the Management Information System has a positive and significant effect on Organizational Performance in the Logistics Department at PT. Sinar Gorontalo Berlian Motor. Meanwhile, for the Internal Communication variable (X2), a calculated t-value of 3.696 was obtained, which also exceeds the critical t-value of 2.01808, with a significance value of 0.001—smaller

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than 0.05. These results demonstrate that, partially, Internal Communication has a positive and significant effect on improving the company's logistics performance.

Results of the Simultaneous Hypothesis Test (F-Test)

Table 3: Results of the Simultaneous Hypothesis Test (F-Test)

No	Variable	*Sum of Squares*	df	*Mean Square*	F	Sig.
1	*Regression*	3653.917	2	1826.958	27.232	0.000
2	*Residual*	2817.727	42	67.089		
	Total	6471.644	44			

Source: SPSS, 2026

Based on the data in Table 3, the results of the simultaneous test yielded a calculated F-value of 27.232 with a significance level of 0.000. Since the significance value is far smaller than the alpha level of 0.05, the decision is to reject H0 and accept Ha. This empirically proves that the Management Information System and Internal Communication, taken together (simultaneously), have a positive and significant effect on organizational performance in the Logistics Department at PT. Sinar Gorontalo Berlian Motor.

Results of the Coefficient of Determination (R-squared) Analysis

Table 4: Results of the Coefficient of Determination (R-Square) Analysis

No	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the estimate*
1	0.751	0.565	0.544	8.191

Source: SPSS, 2026

Based on the results of the Coefficient of Determination analysis in Table 4, the R-squared value obtained was 0.565, or 56.5%. This value indicates that 56.5% of the variation in the performance of the Logistics Department at PT. Sinar Gorontalo Berlian Motor can be explained by and is influenced by the quality of the Management Information System and the effectiveness of internal communication. Meanwhile, the remaining 43.5% is explained by other external operational factors or variables that were not included in the scope of this research model.

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CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Overall, the findings of this study provide clear confirmation of the importance of alignment between technological and human capital factors in driving operational effectiveness at PT. Sinar Gorontalo Berlian Motor. Partial testing demonstrates that the Management Information System plays a significant role in boosting performance within the company's logistics division. This indicates that any enhancement to the reliability of operational digital system features will automatically minimize work delays, reduce the potential for errors, and drive superior distribution performance. On the other hand, internal communication was also found to make a positive contribution to the success of logistics operations. A smooth and open two-way flow of information between staff is highly effective in aligning understanding on the ground and minimizing work obstacles. When these two factors were tested together, the analysis confirmed that the combination of a reliable technology system and healthy organizational communication makes a highly significant contribution to variations in dealer logistics performance. Thus, optimal logistics operational efficiency cannot be achieved by relying solely on the sophistication of computerized systems; rather, it must be supported in a balanced manner by the synergy of adaptive coordination patterns within the company.

Recommendations

Based on the conclusions reached, several strategic recommendations can be considered by the management of PT. Sinar Gorontalo Berlian Motor to optimize future business performance. Management is strongly advised to conduct periodic evaluations and updates of the warehouse information system module so that all physical inventory records for spare parts can be automatically synchronized (in real time) with the central database. This digitization step is crucial for eliminating human error caused by manual recording and accelerating the order fulfillment cycle to address fluctuations in the on-time delivery rate. Additionally, to reduce operational bottlenecks, division heads need to foster a more open culture of coordinated communication through regular briefings that bring together the sales team, the mechanics team, and warehouse administrative staff. This responsive pattern of interaction helps align understanding of work instructions and minimizes the risk of inventory buildup due to misinterpretation of information. Finally, investment in human capital must be increased through periodic system literacy training for operational employees—particularly new hires—to ensure that the company's use of information technology is maximized and that transportation costs for the logistics fleet are sustainably minimized.

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