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Digital Logistics Transformation for Operational and Financial Performance

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Abstract: Digital transformation in the logistics sector is crucial for improving operational performance and financial outcomes, especially amid the rapidly growing demands of Indonesia's economy and the global market. This study examines the impact of digital logistics transformation and related factors, including top management commitment, IT capability, employees' digital mindset and skills, work culture change, human capital capacity, as well as the operational and financial performance of PT Pos Indonesia (Persero). Using a quantitative approach with data collected from 91 senior leaders at PT Pos Indonesia and analyzed through SmartPLS, the study proves that digital transformation significantly enhances both operational and financial performance. The factors that contribute most positively to the success of digital transformation are IT capability, employees' digital mindset, and human capital capacity. In contrast, top management commitment, individual digital skills, and work culture change did not show a direct significant impact at the early stage. Nevertheless, digital transformation was found to be a strong mediating variable in linking internal company factors with performance improvement. This confirms that digital strategies are not merely technological innovations but also concrete mechanisms for creating business value and strengthening the company's competitiveness in the logistics industry.

Keywords: Top Management Commitment, IT Capability, Employee Digital Mindset, Employee Digital Skill, Work Culture Changing, Human Capital Capacities, Digital Transformation LSP, Logistics Operational Perceived Performance, Logistics Financial Perceived Perfromance.

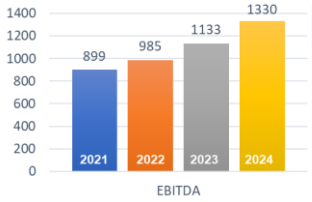
INTRODUCTION

The logistics sector plays a critical role in Indonesia's economic transformation, yet it faces the problem of high logistics costs and uneven service quality that hinder national competitiveness. In pursuit of the Vision 2045 goal of becoming an advanced economy, Indonesia must improve productivity across all sectors, which is contingent upon reducing logistics costs and enhancing nationwide logistics services. This imperative has made digitalization a key strategic solution; consequently, logistics service providers (LSPs) are

under pressure to carry out digital transformation in their business processes to boost efficiency and performance.

For instance, PT Pos Indonesia (Persero), a major state-owned LSP, has been implementing digital logistics transformation to improve its financial performance.

Figure 1. EBITDA Performance PT. Pos Indonesia (Persero)



TAHUN	EBITDA	ACH
2021	899	69,65%
2022	985	71,23%
2023	1133	101,85%
2024	1330	185,73%

Source: Power Bi Data – National Financial Performance Dashboard (Holding)

This effort is reflected in the company's financial trends, where EBITDA has increased by an average of approximately 14% per year, indicating the initial success of its digital initiatives. This supporting evidence underscores the potential of digital transformation to enhance logistics performance and addresses the practical need for innovative solutions in the sector.

Various studies have demonstrated that digital transformation is crucial for enhancing efficiency, innovation, and competitive advantage in the logistics sector (Muhammad Taufani & Anton Wachidin Widjaja, 2023). The adoption of digital technologies, such as blockchain, has been shown to improve operational management and security in port clusters (Gviliya & Kochurova, 2022), while advanced analytics and hyper-connectivity can increase speed, transparency, and service reach in logistics operations (Kuteyi & Winkler, 2022). Digital transformation is also gradually shifting the role of LSPs from simply organizing transport and logistics activities towards providing IT platforms and value-added services (Schramm et al., 2019). Nonetheless, many LSPs encounter challenges in digitalizing their operations, including limited resources, insufficient IT infrastructure, and weak digital culture. Research highlights the importance of internal factors such as top management commitment, an adaptive organizational culture, IT capability, and skilled human capital in determining the success of digital transformation (Muniroh et al., 2022a). Other critical enablers identified include strong leadership support, digital-minded leadership, an innovative culture, investment in technology, and availability of support services (Mandla Mvubu, 2024). Empirical evidence further shows that digital transformation has a positive effect on operational performance and supports business growth(Yu et al., 2022a), as well as improves financial performance through supply chain optimization and cost efficiency (Teng et al., 2022).

However, to date, no study has comprehensively examined how these internal factors collectively influence company performance with digital transformation as an intervening variable, especially in the context of an Indonesian LSP. This research provides a novel contribution by integrating six key internal factors :Top Management Commitment, IT Capability, Employee Digital Mindset, Employee Digital Skill, Work Culture Change, and Human Capital Capacity, as critical determinants for successfully implementing digital transformation in logistics, and by exploring the role of Digital Transformation as a mediating variable that affects operational and financial performance. In addition, this study specifically addresses the challenges faced by PT Pos Indonesia in improving performance in the digital era and in confronting competitive pressures in the logistics service industry.

Accordingly, this study aims to identify the key success factors of digital logistics transformation at PT Pos Indonesia (Persero) and to formulate improvement strategies that

need to be implemented so that digital transformation can have a greater impact on the company's operational and financial performance.

Top Management Commitment and Digital Transformation LSP

Digital transformation has never transformed an organization on its own. What helps an organization to achieve such a transformation or change is its leader's vision and decision-making that links digitalization to an emerging organizational need (Božić, 2018). In the previous case, the company's top management's commitment to digital transformation can be stated as a leader with a good vision and strong understanding of digital transformation, which will determine the success of digital transformation implementation (Božić, 2018). Their previous study state that strong IT capability in term of the use of technology in determining digital transformation must be distinct from IT investment (Teng et al., 2022). So, in this study, the researcher proposes the hypothesis below.

H1: Top Management Commitment significantly influences Digital Transformation

IT Capability and Digital Transformation LSP

IT Capability refers to technological capabilities and all aspects or components within the company (Nwankpa, 2016a). The company has to build a robust IT infrastructure consistent with IT based-resources, knowledge and skill (Nwankpa, 2016a) . In addition, describe that IT capability, in cooperation with strategic vision, culture of innovation, strategic alignment and technology asset determine the success of the digital transformation (Teng et al., 2022). So, in this study, the researcher proposes the hypothesis below.

H2: IT Capability significantly Influences Digital Transformation

Digital Mindset and Digital Transformation LSP

Digital transformation is about technology and people, and processes. Based on the previous study conducted by (Audia Utami & Jayadi, 2023), the organization must develop its employee mindset to succeed in digital transformation. A digital mindset relates to an interest in new technologies, working models or challenging processes that determine the digital transformation Digital skills must be motivated by a mindset to work together and a mighty assumption that determines digital transformation (Audia Utami & Jayadi, 2023). So, in this study, the researcher proposes the hypothesis below:

H3: Employee Digital Mindset Significantly Influences Digital Transformation

H4: Employee Digital Skills significantly influence Digital Transformation

Work Culture Change and Digital Transformation LSP

The implementation of digital transformation must be kept from changing the team member work culture and the employee culture of work must be changed in order to create a successful digital transformation(Audia Utami & Jayadi, 2023). They also state that organizations with speedy adaptation and development can have a successful digital transformation(Muniroh et al., 2022b). The recommended indicator that Journal of Theoretical and Applied Information Technology 15th June 2023. Vol.101. No 11 © 2023 Little Lion Scientific ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195 determines digital transformation related to employee digital culture based on (Muniroh et al., 2022b) is application available, easy to access, flexible, and fast at work. So, in this study, the researcher proposes the hypothesis below:

H5: Work Culture Changing significantly influence Transformation

Digital Human Capital Capacity and Digital Transformation LSP

Human capital capacity is the ability of a person or individual, an organization (institutional), or a system to carry out its functions or authority to achieve its goals effectively and efficiently. Of course, human capital with qualified digital capacity is needed for digital transformation. In his research, describes the positive relationship between human capital and digital transformation. Based on research conducted by (Ghi et al., 2022a), one of a parameter related to significantly human capital that influences digital transformation is human capital capacity. Top management stated that this parameter when researchers conducted preliminary interviews was human capital capacities. So, in this study, the researcher proposes the hypothesis below :

H6: Human Capital Capacity Significantly Influences Transformation

Digital Transformation LSP and Company Perceived Performance

Improving perceived the performance company's usually becomes a common goal in digital transformation. According to (Yu et al., 2022b) , digital transformation has a positive effect in improving the operational perceived performance of the organization. In addition, influence(Yu et al., 2022b) states that digital transformation will support the company in growth. The positive impact of digital transformation related to perceived financial performance based on (Teng et al., 2022) is the optimization of stock through digital supply chain management, cost reduction by optimum procurement, and also realizing value benefit through quality improvement. So, in this study, the researcher proposes the hypothesis below:

H7: Digital transformation has a positive relation with Company Operational Perceived Performance

H8: Digital transformation has a positive relation with Company Financial Perceived Performance

Figure 2. Research Model

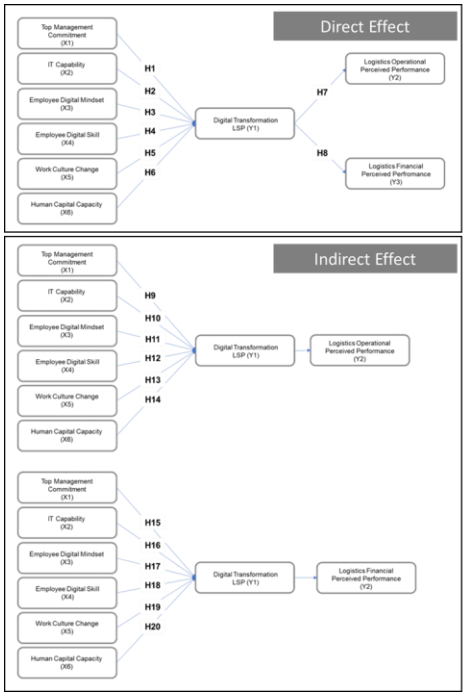


Table 1. Hypothesis

NO	Hypothesis
	Direct Effect
H1	Top Management Commitment -> Digital Transformation Logistics
H2	IT Capability -> Digital Transformation Logistics
H3	Employee Digital Mindset -> Digital Transformation Logistics
H4	Employee Digital Skill -> Digital Transformation Logistics
H5	Work Culture Changing -> Digital Transformation Logistics
H6	Human Capital Capacities -> Digital Transformation Logistics
H7	Digital Transformation Logistics -> Logistics Operational Perceived Performance
H8	Digital Transformation Logistics -> Logistics Financial Perceived Performance
	Indirect Effect
H9	Top Management Commitment -> Digital Transformation Logistics -> Logistics Operational Perceived Performance
H10	IT Capability -> Digital Transformation Logistics -> Logistics Operational Perceived Performance
H11	Employee Digital Mindset -> Digital Transformation Logistics -> Logistics Operational Perceived Performance
H12	Employee Digital Skill -> Digital Transformation Logistics -> Logistics Operational Perceived Performance
H13	Work Culture Changing -> Digital Transformation Logistics -> Logistics Operational Perceived Performance
H14	Human Capital Capacities -> Digital Transformation Logistics -> Logistics Operational Perceived Performance
H15	Top Management Commitment -> Digital Transformation Logistics -> Logistics Financial Perceived Performance
H16	IT Capability -> Digital Transformation Logistics -> Logistics Financial Perceived Performance
H17	Employee Digital Mindset -> Digital Transformation Logistics -> Logistics Financial Perceived Performance
H18	Employee Digital Skill -> Digital Transformation Logistics -> Logistics Financial Perceived Performance
H19	Work Culture Changing -> Digital Transformation Logistics -> Logistics Financial Perceived Performance
H20	Human Capital Capacities -> Digital Transformation Logistics -> Logistics Financial Perceived Performance

METHODS

Based on the existing literature, many studies explain that Top Management Commitment (TMC), IT Capability (ITC), Employee Digital Mindset (EDM), Employee

Digital Skill (EDS), Work Culture Changing (WCC), Human Capital Capacities (HCC), Digital Transformation LSP (DTL), Logistics Operational Perceived Performance (LOPP), and Logistics Financial Perceived Performance (LFPP) have a significant impact on Digital Transformation LSP (DTL), as well as how Digital Transformation LSP (DTL) affects Company Perceived Performance. However, these studies have not yet discussed the relationship between the Independent Variables and Company Perceived Performance, with Digital Transformation LSP as an Intervening Variable. Furthermore, the relationship between these variables within the context of PT Pos Indonesia as a Logistics Service Provider (LSP) undergoing digital transformation in logistics has also not been explored.

The This research is a causal study with a quantitative approach. Collecting data in this study using Google Form media by distributing questionnaires online. This research is a causal study with a quantitative approach. Data collection in this study was conducted using Google Forms by distributing questionnaires online. This research is a case study at PT. Pos Indonesia (Persero) (one of the State-Owned Enterprises in the logistics sector in Indonesia)..

This study uses a purposive sampling technique, where samples are selected based on specific criteria determined by the researcher according to the research objectives. The study was conducted via survey with data collected through the online survey system Google Forms distributed to employees of PT. Pos Indonesia (Persero). In this study, respondents were asked to rate their level of agreement with the statements presented using a 5-point Likert scale ranging from strongly disagree to strongly agree. The questionnaire was distributed to employees at senior leadership levels from BOD-2 to BOD-1 related to business and operations. The population was 115 people with 91 respondents according to the Slovin formula (<5% Margin of error).

The variables used are based on previous studies regarding digital transformation, which show how IT capability, human capital, CEO digital leadership, digital skills, and digital strategy influence digital transformation. This study used Variance-based Partial Least Squares Structural Equation Modeling (PLS-SEM) for analysis. The PLS-SEM model was used to examine the relationship between variables. The measurement model was evaluated using SmartPLS 3.0 to ensure the validity and reliability of the construct variables. Although the data were not normally distributed, this study validated the conceptual model through the application of PLS-SEM (Hair et al., 2021).

RESULTS AND DISCUSSION

Validity Test: The results of the Validity Test are presented in Table 1.

Table 2. Validity Test Results.

Variable	Item Code	Outer Landing	Standard	Decision
Digital Transformation LSP (DTL)	DTL1	0,903	0,700	Valid
	DTL2	0,926	0,700	Valid
	DTL3	0,891	0,700	Valid
	DTL4	0,925	0,700	Valid
Employee Digital Mindset (EDM)	EDM1	0,706	0,700	Valid
	EDM2	0,859	0,700	Valid
	EDM4	0,867	0,700	Valid
	EDM5	0,791	0,700	Valid
Employee Digital Skill (EDS)	EDS1	0,838	0,700	Valid
	EDS2	0,869	0,700	Valid
	EDS3	0,881	0,700	Valid
	EDS4	0,867	0,700	Valid
	EDS5	0,844	0,700	Valid
Human Capital Capacities (HCC)	HCC1	0,840	0,700	Valid
	HCC2	0,951	0,700	Valid
	HCC3	0,883	0,700	Valid
	HCC4	0,939	0,700	Valid
IT Capability (ITC)	ITC1	0,729	0,700	Valid
	ITC2	0,751	0,700	Valid
	ITC3	0,835	0,700	Valid
	ITC4	0,736	0,700	Valid
	ITC5	0,799	0,700	Valid
	ITC6	0,836	0,700	Valid
	ITC7	0,879	0,700	Valid
	ITC8	0,836	0,700	Valid
	ITC9	0,825	0,700	Valid
	ITC10	0,855	0,700	Valid
	ITC11	0,831	0,700	Valid
	ITC12	0,901	0,700	Valid
Logistics Financial Perceived Perfromance (LFPP)	LFPP1	0,935	0,700	Valid
	LFPP2	0,904	0,700	Valid
	LFPP3	0,948	0,700	Valid
	LFPP4	0,928	0,700	Valid
Logistics Operational Perceived Performance (LOPP)	LOPP1	0,927	0,700	Valid
	LOPP2	0,929	0,700	Valid
	LOPP3	0,957	0,700	Valid
	LOPP4	0,959	0,700	Valid
Top Management Commitment (TMC)	TMC1	0,874	0,700	Valid
	TMC2	0,880	0,700	Valid
	TMC3	0,931	0,700	Valid
	TMC4	0,916	0,700	Valid
Work Culture Changing (WCC)	WCC1	0,883	0,700	Valid
	WCC2	0,849	0,700	Valid
	WCC3	0,935	0,700	Valid
	WCC4	0,930	0,700	Valid

Source: Questionnaire (2025)

According to (Hasnita, 2021),an indicator can be categorized as valid if its loading factor value exceeds 0.700. Based on the table presented, all indicators show a loading factor value greater than 0.700. By referring to the loading factor data and (Hasnita, 2021) view, it can be concluded that all indicators in this study meet the validity criteria.

Reliability Test:The results of the Reliability Test are presented in Table 3.

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)	Decision
Digital Transformation Logistics	0,932	0,933	0,951	0,831	Reliable
Employee Digital Mindset	0,824	0,845	0,882	0,654	Reliable
Employee Digital Skill	0,913	0,926	0,934	0,740	Reliable
Human Capital Capacities	0,925	0,929	0,947	0,818	Reliable
IT Capability	0,955	0,959	0,961	0,671	Reliable
Logistics Financial Perceived Performance	0,947	0,948	0,962	0,863	Reliable
Logistics Operational Perceived Performance	0,958	0,963	0,970	0,889	Reliable
Top Management Commitment	0,922	0,924	0,945	0,811	Reliable
Work Culture Changing	0,922	0,940	0,945	0,810	Reliable

Source: Questionnaire (2025)

Table 2 shows that the variables in this study have a Cronbach's Alpha value > 0.700, a Rho A value > 0.700, a Composite Reliability value > 0.700, and an Average Variance Extracted value > 0.500. Based on information from the table and referring to Hasnita's opinion (2021), these variables can be declared reliable.

Discriminant Validity: The results of the Discriminant Validity are presented in Table 4

Table 4. Discriminant Validity Result

Indicator	Cross Loading	Decision	Indicator	Cross Loading	Decision	Indicator	Cross Loading	Decision
DTL1	0,903	Valid	**HCC1**	0,840	Valid	**LFPP1**	0,935	Valid
DTL2	0,926	Valid	**HCC2**	0,951	Valid	**LFPP2**	0,904	Valid
DTL3	0,891	Valid	**HCC3**	0,883	Valid	**LFPP3**	0,948	Valid
DTL4	0,925	Valid	**HCC4**	0,939	Valid	**LFPP4**	0,928	Valid
EDM1	0,706	Valid	**ITC1**	0,729	Valid	**LOPP1**	0,927	Valid
EDM2	0,859	Valid	**ITC2**	0,751	Valid	**LOPP2**	0,929	Valid
EDM4	0,867	Valid	**ITC3**	0,835	Valid	**LOPP3**	0,957	Valid
EDM5	0,791	Valid	**ITC4**	0,736	Valid	**LOPP4**	0,959	Valid
EDS1	0,838	Valid	**ITC5**	0,799	Valid	**TMC1**	0,874	
EDS2	0,869	Valid	**ITC6**	0,836	Valid	**TMC2**	0,880	
EDS3	0,881	Valid	**ITC7**	0,879	Valid	**TMC3**	0,931	
EDS4	0,867	Valid	**ITC8**	0,836	Valid	**TMC4**	0,916	
EDS5	0,844	Valid	**ITC9**	0,825	Valid	**WCC1**	0,883	
			ITC10	0,855	Valid	**WCC2**	0,849	
			ITC11	0,831	Valid	**WCC3**	0,935	
			ITC12	0,901	Valid	**WCC4**	0,930	

Source: Questionnaire (2025)

Based on Table 3, the cross-loading values are above 0.7. This indicates that the latent variables are able to predict their respective indicators better than other latent variables.

Hypothesis Testing: Hypothesis Test Results are presented in Table 5

Table 5. Hypothesis Test Result

NO	Hypothesis	T Statistics	P Values	Result
	Direct Effect			
H1	Top Management Commitment -> Digital Transformation Logistics	0,954	**0,343**	Insignificant
H2	IT Capability -> Digital Transformation Logistics	2,096	**0,030**	Significant
H3	Employee Digital Mindset -> Digital Transformation Logistics	3,133	**0,002**	Significant
H4	Employee Digital Skill -> Digital Transformation Logistics	0,880	**0,381**	Insignificant
H5	Work Culture Changing -> Digital Transformation Logistics	1,758	**0,082**	Insignificant
H6	Human Capital Capacities -> Digital Transformation Logistics	3,870	**0,000**	Significant
H7	Digital Transformation Logistics -> Logistics Operational Perceived Performance	7,530	**0,000**	Significant
H8	Digital Transformation Logistics -> Logistics Financial Perceived Performance	9,241	**0,000**	Significant
	Indirect Effect			
H9	Top Management Commitment -> Digital Transformation Logistics -> Logistics Operational Perceived Performan	0,949	**0,345**	Insignificant
H10	IT Capability -> Digital Transformation Logistics -> Logistics Operational Perceived Performance	2,211	**0,030**	Significant
H11	Employee Digital Mindset -> Digital Transformation Logistics -> Logistics Operational Perceived Performance	2,774	**0,007**	Significant
H12	Employee Digital Skill -> Digital Transformation Logistics -> Logistics Operational Perceived Performance	0,923	**0,358**	Insignificant
H13	Work Culture Changing -> Digital Transformation Logistics -> Logistics Operational Perceived Performance	1,726	**0,088**	Insignificant
H14	Human Capital Capacities -> Digital Transformation Logistics -> Logistics Operational Perceived Performance	3,524	**0,001**	Significant
H15	Top Management Commitment -> Digital Transformation Logistics -> Logistics Financial Perceived Performance	0,923	**0,358**	Insignificant
H16	IT Capability -> Digital Transformation Logistics -> Logistics Financial Perceived Performance	2,187	**0,031**	Significant
H17	Employee Digital Mindset -> Digital Transformation Logistics -> Logistics Financial Perceived Performance	2,920	**0,004**	Significant
H18	Employee Digital Skill -> Digital Transformation Logistics -> Logistics Financial Perceived Performance	0,885	**0,379**	Insignificant
H19	Work Culture Changing -> Digital Transformation Logistics -> Logistics Financial Perceived Performance	1,687	**0,095**	Insignificant
H20	Human Capital Capacities -> Digital Transformation Logistics -> Logistics Financial Perceived Performance	3,366	**0,001**	Significant

Source: Questionnaire (2025)

Table t-value for respondents according to (Waskito, 2023) of 0.676. Taking into account Waskito's opinion (2023), the author tested the hypothesis with the following results:

H1: There is no significant influence of Top Management Commitment on Digital Transformation Logistics because the t-value is 0.954 < 1,987 and the p-value is 0.343 > 0.050.

H2: There is a positive and significant influence of IT Capability on Digital Transformation Logistics because the t-value is 2.096 > 1,987 and the p-value is 0.030 < 0.050.

H3: There is a positive and significant influence of Employee Digital Mindset on Digital Transformation Logistics because the t-value is 3.133 > 1,987 and the p-value is 0.002 < 0.050.

H4: There is no significant influence of Employee Digital Skill on Digital Transformation Logistics because the t-value is 0.880 < 1,987 and the p-value is 0.381 > 0.050.

H5: There is no significant influence of Work Culture Changing on Digital Transformation Logistics because the t-value is 1.758 < 1,987 and the p-value is 0.082 > 0.050.

H6: There is a positive and significant influence of Human Capital Capacities on Digital Transformation Logistics because the t-value is 3.870 > 1,987 and the p-value is 0.000 < 0.050.

H7: There is a positive and significant influence of Digital Transformation Logistics on Logistics Operational Perceived Performance because the t-value is 7.530 > 1,987 and the p-value is 0.000 < 0.050.

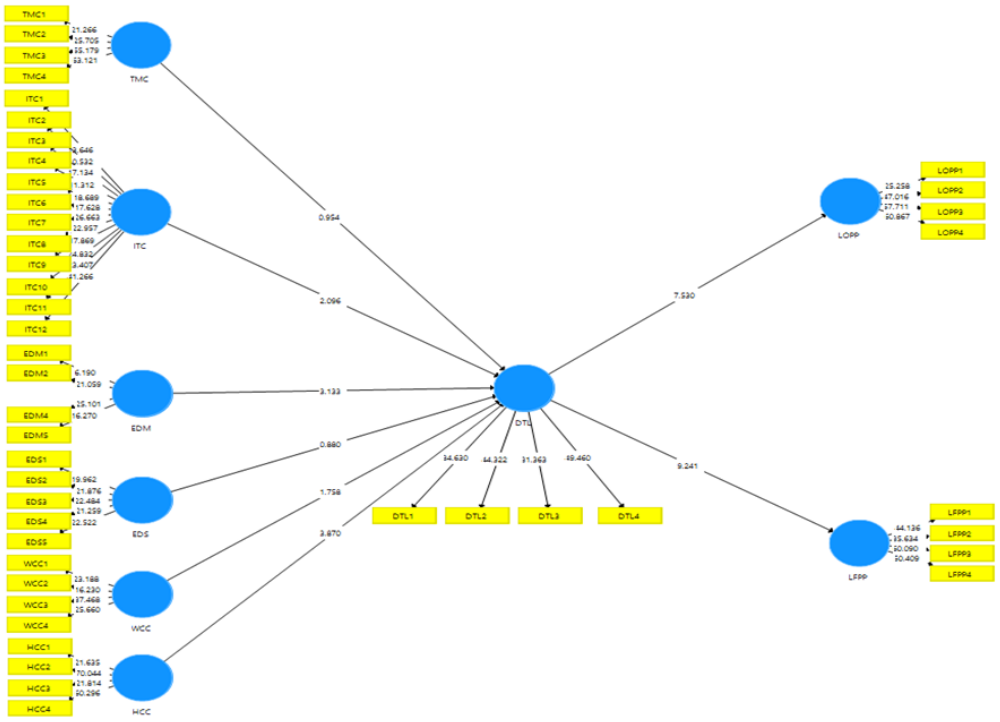
H8: There is a positive and significant influence of Digital Transformation Logistics on Logistics Financial Perceived Performance because the t-value is 9.241 > 1,987 and the p-value is 0.000 < 0.050.

H9: There is no significant influence of Top Management Commitment on Logistics Operational Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 0.949 > 1,987 and the p-value is 0.345 > 0.050.

H10: There is a positive and significant influence of IT Capability on Logistics Operational Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 2.211 > 1,987 and the p-value is 0.030 < 0.050.
H11: There is a positive and significant influence of Employee Digital Mindset on Logistics Operational Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 2.774 > 1,987 and the p-value is 0.007 < 0.050.
H12: There is no significant influence of Employee Digital Skill on Logistics Operational Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 0.923 > 1,987 and the p-value is 0.358 > 0.050.
H13: There is no significant influence of Work Culture Changing on Logistics Operational Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 1.726 > 1,987 and the p-value is 0.088 > 0.050.
H14: There is a positive and significant influence of Human Capital Capacities on Logistics Operational Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 3.524 > 1,987 and the p-value is 0.001 < 0.050.
H15: There is no significant influence of Top Management Commitment on Logistics Financial Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 0.923 > 1,987 and the p-value is 0.358 > 0.050.
H16: There is a positive and significant influence of IT Capability on Logistics Financial Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 2.187 > 1,987 and the p-value is 0.031 < 0.050.
H17: There is a positive and significant influence of Employee Digital Mindset on Logistics Financial Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 2.920 > 1,987 and the p-value is 0.004 < 0.050.
H18: There is no significant influence of Employee Digital Skill on Logistics Financial Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 0.885 > 1,987 and the p-value is 0.379 > 0.050.
H19: There is no significant influence of Work Culture Changing on Logistics Financial Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 1.687 > 1,987 and the p-value is 0.095 > 0.050.
H20: There is a positive and significant influence of Human Capital Capacities on Logistics Financial Perceived Performance through the Digital Transformation Logistics variable as an intervening variable because the t-value is 3.366 > 1,987 and the p-value is 0.001 < 0.050.

The results of the Partial Effect Hypothesis Test are presented in Figure 3. Below :

Figure 3. Hypothesis Test Result



Simultaneous Effect Hypothesis Test Using R Square Adjust Test in Table 6

Table 6. R Square Adjusted

Simultaneous Effect	Endgen Variable	R Square Adjusted
Top Management Commitment, IT Capability, Employee Digital Mindset, Employee Digital Skill, Work Culture Changing, Human Capital Capacities,	Digital Transformation Logistics	0,820
Digital Transformation Logistics	Logistics Financial Perceived Performance	0,486
Digital Transformation Logistics	Logistics Operational Perceived Performance	0,395

Table 6 above provides an explanation that the Adjusted R Square value obtained in this study for the influence of Top Management Commitment, IT Capability, Employee Digital Mindset, Employee Digital Skill, Work Culture Changing, and Human Capital Capacities on Digital Transformation Logistics is 0.820. This means that the Determination Coefficient of these variables on Digital Transformation Logistics is 0.820 x 100% = 82%. The meaning of the Determination Coefficient of 82% is that Digital Transformation Logistics is largely influenced by internal factors such as leadership commitment, technological capabilities, and employee readiness. While the remaining 100% - 82% = 18% is influenced by variables not studied in this study. Variables not studied in this study could include external factors like industry trends, market competition, and regulatory changes.

Table 6 above also provides an explanation that the Adjusted R Square value obtained in this study for the influence of Digital Transformation Logistics on Logistics Financial Perceived Performance is 0.486. This means that the Determination Coefficient of Digital Transformation Logistics on Logistics Financial Perceived Performance is 0.486 x 100% = 48.60%. The meaning of the Determination Coefficient of 48.60% is that Logistics Financial Perceived Performance is moderately influenced by Digital Transformation Logistics. While the remaining 100% - 48.60% = 51.40% is influenced by variables not studied in this study.

Variables not studied in this study may include pricing strategies, customer satisfaction, and competitive positioning in the logistics sector.

Lastly, Table 6 provides an explanation that the Adjusted R Square value obtained in this study for the influence of Digital Transformation Logistics on Logistics Operational Perceived Performance is 0.395. This means that the Determination Coefficient of Digital Transformation Logistics on Logistics Operational Perceived Performance is 0.395 x 100% = 39.50%. The meaning of the Determination Coefficient of 39.50% is that Logistics Operational Perceived Performance is influenced by Digital Transformation Logistics, though to a lesser extent. The remaining 100% - 39.50% = 60.50% is influenced by variables not studied in this study, such as operational processes, workforce efficiency, and logistics infrastructure.

The following are the main findings of this study, including:

Table 7. Summary of Hypotheses, Empirical Results, and Supporting Studies

Hypothesis	Variable	Summary Result	Supporting Previous Research
H1	Top Management Commitment → Digital Transformation Logistics	Not significant → commitment has not yet been translated into operational action	(Qiao et al., 2024): effect becomes significant only when mediated by digital transformation
H2	IT Capability → Digital Transformation Logistics	Positive significant	(Nwankpa, 2016b): IT capability drives digital transformation and performance
H3	Employee Digital Mindset → Digital Transformation Logistics	Positive significant	(Leonardi, n.d.) : digital mindset is more important than skill alone
H4	Employee Digital Skill → Digital Transformation Logistics	Not significant	(Leonardi, n.d.) : skills are not enough without mindset & digital culture
H5	Work Culture Changing → Digital Transformation Logistics	Not significant	Forbes: 84% of digital transformation failures are caused by organizational culture
H6	Human Capital Capacities → Digital Transformation Logistics	Positive significant	(Ghi et al., 2022b)): human capital drives digitalization success
H7	Digital Transformation Logistics → Operational Performance	Positive significant	(Ghi et al., 2022b) digitalization → efficiency, cost reduction
H8	Digital Transformation Logistics → Financial Performance	Positive significant	Li et al. (2023): digital maturity increases margin & ROI
H9	Top Management Commitment → Operational Performance	Not significant (delayed effect)	Li et al. (2023): early-stage digitalization has not yet produced impact
H10	IT Capability → Operational Performance	Positive significant	(Barba-Sánchez et al., 2024): IT → performance through digital transformation
H11	Employee Digital Mindset → Operational Performance	Positive significant	(Finze et al., n.d.)): mindset → engagement → transformation → performance
H12	Employee Digital Skill → Operational Performance	Not significant	(Leonardi, n.d.) skills are necessary, but not enough without mindset & culture

H13	Work Culture Changing → Operational Performance	Not significant	Leaders21: failures are not caused by technology, but by cultural resistance
H14	Human Capital Capacities → Operational Performance	Positive significant	(Ghi et al., 2022b) human capital → transformation → operational improvement
H15	Top Management Commitment → Financial Performance	Not significant	Li et al. (2023): financial impact appears only when digital transformation reaches maturity
H16	IT Capability → Financial Performance	Positive significant	(Barba-Sánchez et al., 2024) IT → financial benefits via digitalization
H17	Employee Digital Mindset → Financial Performance	Positive significant	(Leonardi, n.d.) : mindset → innovation → long-term financial value
H18	Employee Digital Skill → Financial Performance	Not significant	(Leonardi, n.d.) : skills without strategy do not create ROI
H19	Work Culture Changing → Financial Performance	Not significant	McKinsey/Prosci: 70% of digital projects fail due to cultural issues
H20	Human Capital Capacities → Financial Performance	Positive significant	(Ghi et al., 2022b) : Human capital → digital maturity → revenue & ROI

Based on the research results, there are several strategic recommendations that can be implemented by PT Pos Indonesia to improve the company's competitiveness and performance:

1. **Optimize and Leverage Existing IT Capabilities:** PT Pos Indonesia needs to optimize its existing IT infrastructure by conducting an audit of current logistics systems to identify bottlenecks and underutilized features. Improvements should be made efficiently through cloud-based solutions or simple digital tools, such as digital input applications to replace manual processes. Utilizing cloud-based logistics platforms can provide modern features like real-time tracking and automated notifications without requiring large capital investments. Additionally, ensuring stable internet connectivity and providing essential equipment such as computers or scanners in a targeted and measured manner is also a key part of this strategy.
2. **Implement Quick-Win Automation Projects:** PT Pos Indonesia needs to identify bottlenecks or manual processes in the logistics chain that can be automated in the near term, such as parcel sorting and tracking, which have already begun using RFID technology. This initiative should be expanded to regional sorting centers by deploying automated RFID or barcode systems, as well as using portable scanners and tracking tags to digitize shipment handling. Automating routine tasks like sorting, data logging, and route planning can directly increase operational speed, reduce errors, and lower costs. Even simple technologies such as conveyor systems with scanners or delivery scheduling software can deliver immediate efficiency gains and help build confidence in the digital transformation program.
3. **Cultivate a Digital Mindset and Upskill Employees:** Given that employees' digital mindset is a key enabler, PT Pos Indonesia should prioritize training and change management programs that build digital literacy and enthusiasm, particularly among staff unfamiliar with modern tools. This can be done through practical, hands-on methods such as workshops, peer mentoring, and internal communication campaigns that showcase the benefits of technology. Corporate training on new systems, like mobile apps or handheld scanners, should be emphasized to reduce technophobia and build user confidence.

Collaborating with local training providers or using online resources can help keep costs low. Involving employees in pilot projects and sharing success stories will foster a sense of ownership and support a positive attitude toward digital transformation.

4. **Strengthen Leadership Communication and Change Management:** Although top management commitment didn't show a direct impact in the initial study, it remains vital to actively engage leadership in driving the transformation. In the short term, PT Pos's leaders and managers must communicate a clear message that digital transformation is a top priority and is fully supported at the highest levels. Management should lead by example in using new digital tools (for instance, regional managers using data dashboards to monitor logistics performance) and in following new processes. They should also regularly update the workforce on transformation progress and acknowledge teams that adopt changes. This visible commitment can convert abstract support into tangible influence on the ground. Furthermore, implement basic change management practices: form a cross-functional "Digital Transformation Task Force" or a small dedicated team that coordinates initiatives, gathers feedback, and troubleshoots issues during rollout. This task force can include tech-savvy employees and change champions from various departments to help peers adapt. Early resistance can be mitigated by involving employees in planning and addressing their concerns empathetically. Even if broad work culture change will take time, building trust and transparency now will lay the groundwork for deeper cultural shifts. (Notably, studies underscore that a combination of strong top-down direction and employee engagement is the most effective way to drive digital change – hence, in these early steps, leadership must be both directive and inclusive).

CONCLUSION

This study aims to analyze the influence of internal organizational factors on digital transformation in logistics and its impact on operational and financial performance at PT Pos Indonesia (Persero). The variables examined include top management commitment, IT capability, employee digital mindset, digital skills, work culture change, and human capital capacities. Based on the results, the objectives have been well achieved. The main findings indicate that IT capability, employee digital mindset, and human capital capacity have a positive and significant effect on digital transformation in logistics, which in turn positively affects both logistics operational and financial performance. This affirms the role of digital readiness and employee mindset as key enablers in improving the competitiveness and service efficiency of PT Pos Indonesia.

Scientifically, this study contributes to the development of digital transformation theory in the logistics sector, particularly by positioning human and technological factors as core components of performance improvement. The findings offer practical implications for PT Pos Indonesia, highlighting the need to focus on enhancing IT systems, cultivating digital mindsets, and investing in long-term human capital development. Although top management commitment and work culture change were not found to have direct significant effects, these elements remain critical for long-term organizational alignment and sustainability. The limitation of this study lies in its focus on internal factors, while external influences such as market trends, policy changes, or customer behavior were not included. Future research can broaden the framework by incorporating external variables and benchmarking against global best practices to strengthen the strategic direction of logistics transformation.

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