

Effect of Digital Optimization Strategy and Communication on Employee Performance

Dadang Munandar^a, Marliana Budhinigtias Winantia^a, Umi Narimawati^b

^a International Women University, Indonesia

^b Universitas Komputer Indonesia, Indonesia

dadangm@iwu.ac.id

Abstract

Digital transformation plays an important role as the organizational strategy, including business sector. Digital transformation strategy is not only about digital technologies and markets transformation, however it impacts to capability of business to adapt for addressing sustainability and business challenges. This research aimed to analyze the effect of digital optimization strategy and communication on the employee performance. The research carried out quantitative approach and survey method involving 100 employees as respondents. The data analysis used Covariance Based Structural Equation Modeling (CBSEM) that was analyzed by Program LISREL ver 8.80. The research showed six results, namely (1) digital optimization strategy was categorized as moderate category, (2) communication was categorized as moderate category, (3) employee performance was categorized as very good category, (4) digital optimization strategy and communication affected significantly employee performance simultaneously, (5) digital optimization strategy affected significantly to employee performance partially, and (6) communication affected significantly to employee performance partially. The results indicated that digital optimization strategy and communication contribute positively on the employee performance which, in a certain time, can increase the company sustainability.

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1. Introduction

Intense competition in the business world requires companies to always perform well if they want to survive and compete with competitors in their industry, and improving the quality and performance of human resources is one of the keys for businesses to be able to compete and survive. The rapid development of the digital era requires the business world to make changes through digital technology to support work to make it easier, faster, more effective and efficient in order to improve employee performance. Additionally, the digital era we live in is changing people's perceptions of life and work at a pace that rivals the influence of the Industrial Revolution. The social phase of the digitalization process is characterized by a level of connectivity never seen before, both on a personal and professional level. Nowadays, data transfer is used to communicate not only between people, but also between everyday objects, such as connecting an entire house to new Wi-Fi technology (Tulungen et al., 2022). This also becomes easier because in the digital era, the development of artificial intelligence makes a significant contribution to economic growth in commercial organizations (Korinek, 2023). In fact, artificial intelligence can be used to predict exactly what should be done to us and for us (Kotlikoff, 2022).

The implementation of digital transformation strategies is increasingly widespread along with the impact of Covid-19. The business world is starting to penetrate the digital realm. Based on information from the Financial Services Authority, digital transactions in 2020 increased by more than 37%. This increase was caused by the increasing public interest in online shopping. The impact of increasing digital transactions has made the business world start to increase its digital transformation. From there the company began implementing strategies and plans to provide solutions to the consumers

Currently, digitalization is a trigger that can construct the economy and society, leading to major transformations, especially in the business sector (Zhang & Jin, 2023). Digital technology is not just about transforming markets and enhancing or challenging new paradigms in the business sector. However, digitalization is integrated to improve business operations, effectiveness and efficiency, consumer engagement, corporate culture, business process optimization, organizational innovation, and even environmental issues (Junita, 2019; Alshammari, 2023; Moghrabi et al., 2023). Digitalization offers significant opportunities to improve organizational performance, innovation, marketing communications, resilience and stability (Hamsani et al., 2022; Zhang et al., 2022; Irmak et al., 2023; Juhari, 2023).

Digital transformation offers opportunities to achieve efficiency, both on the sales and purchasing side. In large organizations, transformation includes business-related communications and management. In terms of transformation, the role of communication is very important, especially in changing employee mindsets and behavior. Communication is one of the most important management levers. Communication and management are complementary disciplines and strong business elements for success (Bucăța & Rizescu, 2017). Digital transformation in communications and management can integrate communications between marketers and consumers anytime, anywhere and across all demographics (Warsiman et al., 2024).



PT. Synergi First Logistics is a goods delivery or courier company that provides logistics services and distribution solutions for other companies, or is a Business to Business (B2B) company. PT. Synergi First Logistics currently operates e-commerce by official operator. Various well-known online stores such as Zalora, Elevenia and Lazada. However, the phenomenon that occurs at PT. Logistics services. Synergi First Logistic includes the use of digital technology and unequal access to digital technology, causing employee performance to be less than optimal. Therefore, a digital transformation optimization strategy is needed to improve employees' performance. In addition, the digital transformation process is not restricted to implementing new modern technologies, investing in equipment, and improving existing systems (Albukithan, 2020). Companies must be able to encourage innovation within the company itself. Most importantly, apart from advanced technology, the role of human resources is also very crucial. Research shows that the lesser the contribution of human resources will reduce employee productivity and performance (Goldin et al., 2024). Finally, the company must be able to evaluate the employees in terms of their performance quality.

Communication is a way for every organization and its elements to synergize and build each other's performance and good working relationships, this is the main focus of every organization that develops for a common goal. In organizations that are heading towards a long-term goal or change process, communication plays a very important role in the change process of an organization (Rifayanti, 2019). Communication is a very crucial and significant element in an organization, and it is necessary for creating collaboration within the work environment (Musheke & Phiri, 2021) that has effects on organization culture. Furthermore, *organization culture impacts to organizational commitment and performances* (Sudarnice, 2020). *Communication deals with information sharing within the members of the organizations, namely among the employees. Information provision, thus, is very crucial in the company from which the economic relating matters can be explained empirically* (Haaland et al., 2023).

A phenomenon that often occurs at PT. Synergi First Logistics, namely the lack of communication between employees, which causes a feeling of discomfort among employees who work because of the lack of communication to increase the feeling of family, which makes the work environment increasingly uncomfortable, which can reduce employee performance. To be able to improve good communication between employees, a good communication strategy is needed in the company. The communication strategy implemented will adapt to the problems faced, if it concerns member performance, training will be carried out whose material is adapted to customer findings, if the problem is about a lack of service to patients and hospital visitors then an approach will be made to the customer and then find out Once the root of the problem is known, the next step, again, is training which will be monitored and the results will be evaluated so that customer complaints can be resolved and do not become protracted problems.

The objectives of research are to know (1) categories of current digital optimization strategies used, (2) communication among the employees, (3) employees' performance, (4) simultaneous effect of digital optimization strategies and communication on the employees' performance, (5) effect of digital optimization strategies on the employees'



performance partially, and (6) effect of communication on employees' performance partially.

Based on the problems and phenomena that occurred above, the author was interested in conducting research entitled Digital Optimization Strategy and Communication on Employee Performance (Survey on PT. Synergy First Logistics Tangerang Selatan). This research can contribute to the PT. Synergy First Logistics for improving and concerning on issues of the digital optimization strategy, communication, and performance of their employees for the company performance.

2. Literature Review

Digital Transformation Optimization Strategy

Strategy is the art of using resource capabilities in an organization to achieve goals through effective relationships in the organizational environment under favorable conditions. According to David (2011) strategy is: "Joint means with long-term goals to be achieved. Then Chandler in Rangkuti (2016) states that strategy is a tool for achieving company goals in relation to long-term goals, follow-up programs and resource allocation priorities.

According to Nurrohman (2017), optimization is an effort to improve performance in a work or personal unit related to the public interest, in order to achieve satisfaction and success from carrying out these activities. While according to Winardi in Hariyawan & Andayani (2017) optimization is a measure that causes goals to be achieved, whereas if viewed from a business perspective, Optimization is an effort to maximize activities so as to realize the desired or desired profits. Optimization is a process, method and steps to explore the best solution to a problem, so as to produce the best according to predetermined standards. Moreover, according to Ali (2014) optimization is achieving the desired results effectively and efficiently. From this description it is known that optimization can only be realized if it is implemented effectively and efficiently. In running an organization, the goal is always directed at achieving optimal results effectively and efficiently.

Digital transformation is a change in digital technology where innovation and changes occur on a large scale and fundamentally change the system, order to new ways, and network connectivity in digital form, replacing human labor at a lower cost, more effectively, efficiently. Digital transformation can be understood as changes in digital technology that change or influence all aspects of human life" (Kaplan et al., 2004). Another interesting definition by Lankshear & Knobel (2008) defines digital transformation as "when digital uses have been developed, enabling innovation and creativity and stimulating significant change in either professional or knowledge domains". So digital transformation is a much more fundamental change in the world where everything depends on digital. Based on the description, it can be concluded that the digital transformation optimization strategy is a means or tool for achieving the desired results effectively and efficiently so that it is optimal for technological changes where everything depends on digital. Moreover, digital transformation strategy will assist



the organization leaders to solve problems relating the what extent the it will be done and how they can get there (Albukithan, 2020).

Communication

According to Sinambela (2016), "Communication is a process of forming, delivering, receiving and processing messages that occur within a person and/or between two or more with a specific purpose". Meanwhile, according to Firmansyah & Syamsudin (2016), "Communication is the process of sending and receiving information or messages between two or more people in an effective way, so that the intended message can be understood." Furthermore, communication also has various uses, apart from being a means of liaison between departments and individuals, namely as a tool to disseminate knowledge (educational tool), a tool to increase better understanding, through providing explanations about what must be done, why it must be done, tools to provide suggestions to all workers, tools for workers to participate, tools to prevent feelings of frustration and misunderstanding, tools to create healthy morale, and so forth.

Communication Strategy

The word strategy comes from the Greek root word *strategos* which literally means 'general art', later this term changed to the adjective *strategia* meaning 'military skill' which was recently adapted to the modern business environment. (Liliweri, 2011) The word *Strategos* has the following meaning: a) The decision to carry out an action in the long term with all the consequences; b) Determining the level of vulnerability of our position to the position of competitors (war science and business); c) Relatively limited use of resources and dissemination of information against the possibility of information being intercepted by competitors; d) Use of communication facilities for the profitable dissemination of information based on geographical and topographical analysis; e) Discovery of points of similarity and differences in resource use in information markets. Thus, effective communication strategy is a two-way process containing clear messages, delivered using appropriate platforms, tailored for diverse audiences, and shared by trusted parties (Hyland-Wood et al., 2021).

Communication Process

According to Harold D. Lasswell in Ivony (2018), in general the communication process consists of three main communication components, namely the sender of the message (communicator), the recipient of the message (communicant), and the message itself. In more detail, the communication process in an introduction to management consists of the following components: a. Communicator (message sender). b. Message (idea or idea). c. Communication media (tools used to convey messages). d. Communicant (message recipient). e. Feedback (feedback is a response or signal given by the communicant (message recipient) after understanding the message given).

Performance

According to Rivai, Basri (in Sinambela, 2017): "performance is the result or level of success of a person or the whole during a certain period in carrying out tasks compared to various possibilities, such as standard work results, targets or goals or criteria that have been determined in advance and has been mutually agreed upon." While according to Mangkunegara & Prabu (2016) that: "performance is the result of work in terms of quality and quantity achieved by an employee in carrying out his duties in accordance with the



responsibilities given to him". Moreover, according to Robbins and Judge (2015), performance consists of the following indicators, namely work quality, work quantity, time accuracy, effectivity, and self sufficiency.

Factors that influence Performance

Performance is a multi-dimensional construct that includes many factors that influence it. According to Mangkuprawita (2017), these factors are as follows: a. Personal/individual factors, including elements of knowledge, skills, ability, self-confidence, motivation and commitment. b. Leadership factors include aspects of the quality of managers and team leaders in providing encouragement, enthusiasm, direction and support for employees' work. c. Team factors include the quality of support and enthusiasm provided by colleagues in a team, trust in fellow team members, cohesiveness and closeness of team members. d. System factors include work systems, facilities or infrastructure provided by the organization, organizational processes and organizational performance culture. e. Intellectual factors (situational), including external and internal pressure and environment. The theoretical common ground that underlies the study can be seen below.

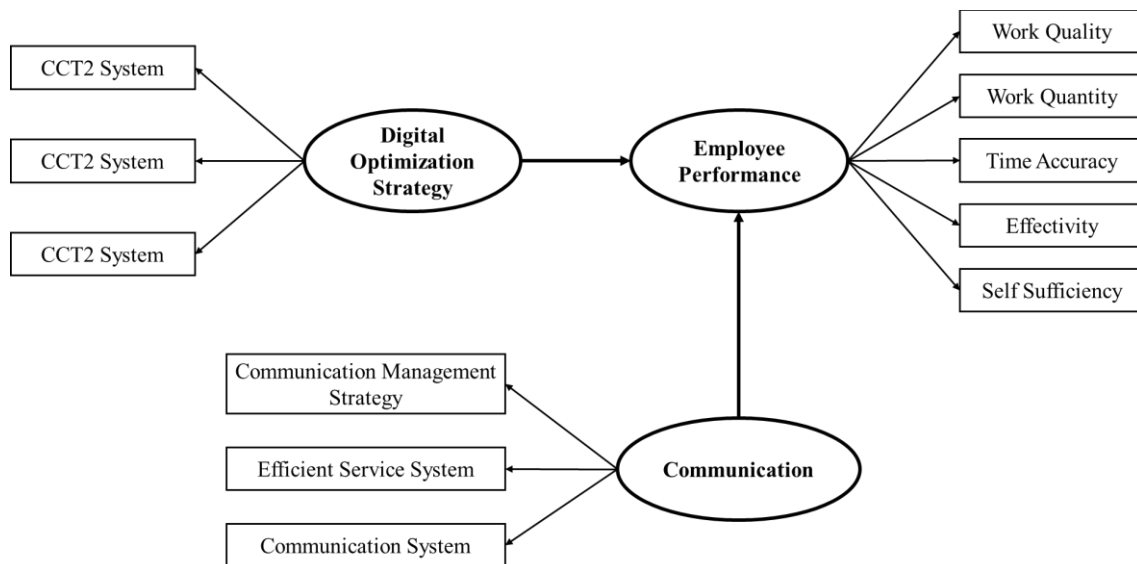


Figure 1. The Theoretical Common Ground that Underlies the Study

The State of the Art

Fauziah & Tricahyono (2024) conducted a study at PT. Indonesia Power UPJP Kamojang showed that digital transformation has a significant effect on customer experience, collaborative capabilities, processes, business models, culture and technology on task performance and contextual performance of PT. UPJP Indonesian Power Kamojang. Suhari et al., (2024) has published 37 journal articles published in 2016 and 2023 discussing positive and significant digital transformation of organization, efficiency, production and organization. Deny (2023) engages in research organizations, digital transformation, and research products which are published online. The results of the review show that organizational culture has a significant and positive influence on employee performance and digital transformation has a significant and positive influence



on employees' performance. Shwedeh et al., (2023) studied in more detail using samples as much as 50 countries from the various sector and UEA organizations. Men have better reputation when it comes to digital organizational transformation, allowing them to focus on production and production. In this research, authors constructed the research hypothesis to analysis the relationship between digital transformation and also communication to employee performance. The first hypothesis: The relationship between Digital Optimization Strategy and Communication with Employee Performance

- H₁ : Digital Optimization Strategy and Communication affect significantly Employee Performance simultaneously
- H₂ : Digital Optimization Strategy affects significantly Employee Performance partially
- H₃ : Communication affects significantly Employee Performance partially

3. Research Methods

The authors used a quantitative approach, descriptive and verified design, and survey method. The study is carried out in September 2023 in PT. Synergy First Logistics Tangerang, Indonesia. The data collection instrument used is questionnaire with 100 employees used as respondents selected using the purposive method. The analysis technique used Covariance Based Structural Equation Modeling (CBSEM) by Program LISREL ver 8.80 and the research model was shown in figure below. The calculation output showed X1 as Digital Optimization Strategy; i1X1: CCT2 System; i2X1: EDS System; i3X1: OSLOG System; X2 as Communication; i1X2: Communication management strategy; i2X2: Efficient service system; i3X2: Communication system; and Y as Employee Performance; i1Y: Work quality; i2Y: Work quantity; i3Y: Time accuracy; i4Y: Effectivity i5Y: Self sufficiency.

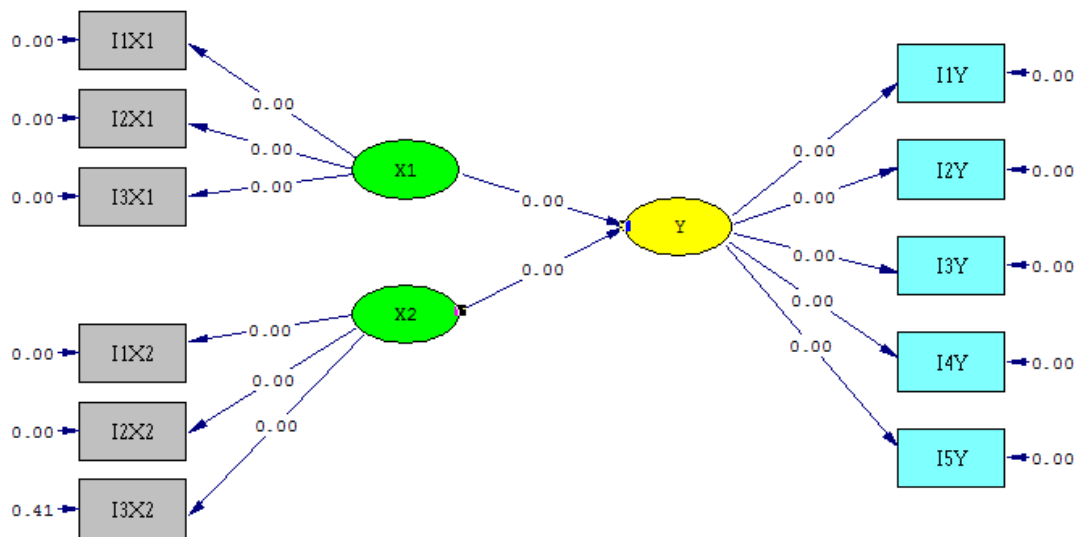


Figure 2. Covariance Based Structural Equation Modeling (CBSEM) by Program LISREL ver 8.80



4. Results

The organizational digital transformation and communication contribute significant effect on workers' performance. Digital technology also contributes significant effect on social change, within the company concerned. Therefore, companies have to adapt a new organizational form and develop the skills needed in order to gain the long-term sustainability in the digital era.

This research elaborated digital optimization strategy and communication variable to employee performance variable, measuring by the values of R square and path coefficients, the value of R square (R^2) showing the variability of the independent variables that can be explained by the dependent variables, simultaneous hypothesis testing, partial hypothesis testing, and goodness of fit. The R square value is as much as 8.10. The value of path coefficient resulted from the data calculation from Digital Optimization Strategy variable to Employee performance variable as much as 3.9; while from Communication variable to Employee performance variable is as much as 2.2. The value of the R square is as much as 8.10 meaning that the proportion of variation of the endogenous latent variable of Employee performance with its dimensions can be explained using the exogenous latent variables of Digital Optimization Strategy and Communication. In other words, it can be said that the effect of Digital Optimization Strategy and Communication variables on Employee Performance with the respective indicators is as much as 8.10 which falls into very good category.

Simultaneous Hypothesis Testing

To test the hypothesis namely the relationship between digital optimization strategy and communication to employee performance, used the following criteria when t_o (the observed value of t) $>$ t_α (critical values); H_0 is rejected and H_1 was accepted. Otherwise, when t_o (the observed value of t) $<$ t_α (critical values); H_0 is accepted and H_1 was rejected. The t_o value from the calculation was as much as 2.56. While The t table can be calculated with the following provisions: DF is the number of data (n) minus (2) two or $100 - 2 = 98$; with the confidence level as much as 95%; accordingly, the value of error tolerance (σ) is 0.05. Using such provisions, the value of t table is 1.96. The decision was that t observation (t_o) as much as 2.56 is more than t table (t_α) as much as 1.96 meaning that we must reject H_0 and accept H_1 . Accordingly, digital optimization strategy and communication affected significantly employee performance simultaneously. The hypothesis testing decision can be concluded in the following table.

Table.1 Result of Simultaneous Hypothesis Testing

Structural	Path Coefficient	t_o	t_α	Conclusion
$\gamma \xi_1$	3.9	2.56	1.96	Reject H_0 , Accept H_1
$\gamma \xi_2$	2.2	2.56	1.96	Digital optimization strategy and communication affected significantly employee performance simultaneously

Source: Research Result



Partial Hypothesis Testing

The decision of the hypothesis namely the relationship between digital optimization strategy and employee performance showed that t observation (t_o) as much as 2.37 as is more than t table (t_α) as much as 1.96 meaning that we must reject H_0 and accept H_1 . It means that Digital Optimization Strategy affects significantly Employee Performance partially. The amount of effect was 3.9 meaning that the amount of digital optimization strategy affects significantly employee performance variable together with the respective indicators. When the value of the digital optimization strategy with its indicators changes within one unit increase, then the Employee Performance value with its indicators increases as much as 3.9 which categorized as moderate category. The hypothesis testing decision can be concluded in the following table.

Table 2. Result of Partial Hypothesis Testing

Structural	Path Coefficient	t_o	t_α	Conclusion
$\gamma \xi_1$	3.9	2.37	1.96	Reject H_0 , Accept H_1 meaning that digital optimization strategy affects significantly employee performance
$\gamma \xi_2$	2.2	3.36	1.96	Reject H_0 , Accept H_1 meaning that communication affects significantly employee performance

Source: Research Result

The decision of the hypothesis namely the relationship between communication and employee performance showed that t observation (t_o) as much as 3.36 as was more than t table (t_α) as much as 1.96 meaning that we must reject H_0 and accept H_1 . It means that communication affected significantly employee performance with its indicators partially. The amount of effect was 2.2 meaning that that the amount of effect of the communication variable together with the indicators on the employee performance variable together with the respective indicators. When the value of the communication variable with its indicators changes within one unit increase, then the variable of Employee Performance value with its indicators increases as much as 2.2 which categorized as moderate category.

Goodness of Fit

Goodness of Fit (GOF) used in this study to assess the validity and reliability of the model under study is the absolute index with the following provisions (Narimawati & Sarwono, 2023). The following is the results of the Goodness of Fit (GOF) values: First, P value: 0.900 To test the hypothesis of model, we use the following criteria. If the p value > 0.05 Accept H_0 and reject H_1 ; If the p value < 0.05 Accept H_1 and reject H_0 . The p value from the data calculation is as much as $0.900 > 0.05$; Accordingly, H_0 was accepted. It means that model under study is the same with model under theory. Accordingly, the model was correct. Second, Root Mean Square Error of Approximation (RMSEA) = 0.00 RMSEA shows the fitness between sample and population covariance. The ideal value is 0.00 – 0.05 meaning that the model under study is correct. From the calculation the value obtained is as much as 0.01 which is less than 0.05. Thus, the model under study is correct.



Third, Comparative Fit Index (CFI) = 0.89. The CFI value ranges from 0 – 1. The value approaching to 1 shows the model is correct. The value of CFI from the calculation is 1.00; accordingly, the model under study is correct. Fourth, Normed Fit Index (NFI) = 0.99. The NFI value, showing model derived from the comparison between the hypothesized model and the independent model, ranges from 0 – 1. The value approaching to 1 shows the model is correct. The value of NFI from the calculation is 0.95; accordingly, the model under study is correct. Goodness of Fit Index (GFI) = 0.97. The GFI value, we used to measure the relative variance and covariance, ranges from 0 – 1. The value approaching to 1 shows the model is correct. The value of GFI from the calculation is 1.00; accordingly, the model under study is correct. Based on the absolute index values, it is known that the model under study has met the required criteria.

Based on the results, we elaborate some discussions. First, Digital optimization strategy falls into moderate category. This is important because in the business organization, the digital transformation functions as a driver and a predecessor of sustainability. Accordingly, in order to survive in the digital revolution, companies need to enhance their digital capabilities and balance their economic, environmental, and social impacts (Gomez-Trujillo & Gonzalez-Perez, 2021). Moreover, the digitization process has exceeded conventional productivity improvement ranges from 3 to 5% per year, accompanied with a clear cost improvement more than 25% (Borowski, 2021).

Second, Communication falls into moderate category. Communication in the business organization is very important in order that what has been said by the leader of the organization can be implemented by their subordinates on site. Accordingly, communication, within the company, is considered as an important media for the performances and growth of the business organization. Most business organizations rely on effective communication with both employees and their customers in order to improve sales and to enhance the business growth. The research that has been done in Greece with the 110 respondents show that effective communication in any business entity has significant effect on the employee performance and moreover on the business profitability (Kalogiannidis, 2020).

Third, Employee performance falls into very good category. Result of study in 223 Chinese companies shows that the digital transformation fosters economic performance at an accelerating rate. Furthermore, it delineates an inverse U-shaped relationship with environmental performance (Li, 2021).

Fourth, Digital Optimization Strategy and Communication affect significantly Employee Performance simultaneously. The digitalization has proved to be effective in contribution to the organization performance. This has been proved by Lie & Roh (2023) in their research on 532 firms in South Korea. Their study found that there is significant correlation between digitalization and the organization performance.

Fifth, Digital Optimization Strategy affects significantly Employee Performance partially. This is in line with the research result that has been done in 350 companies that shows the role of the disruptive digital technology that has correlation with the organization performance (Li et al., 2023). The similar study that has been conducted in China also shows there is significant correlation between the digital optimization strategy



and the business organization in terms of long term financial performance (Wang et al., 2020).

Sixth. Communication affects significantly Employee Performance partially. The role of communication in the business organization is very essential in relation to the employee performance. This empirically is true. It has been proved by Prasetyo et al. (2021) in their research in Indonesia using 65 employees. The research finding is that the communication has increased the company performance.

5. Conclusion and Suggestion

Based on the problem formulation and discussion in this article, we found that organizational digital transformation and communication can affect to employee performance. Furthermore the authors concluded that (1) digital optimization strategy falls into moderate category, (2) communication falls into moderate category, (3) employee performance falls into very good category, (4) digital optimization strategy and communication affect significantly employee performance simultaneously, (5) digital optimization strategy affects significantly employee performance partially, and (6) communication affects significantly employee performance partially.

This implies that the digital optimization strategy should be increased and also communication among the leaders and employee also must be enhanced in order to strengthen the employees' performance and the long term sustainability of the company. Furthermore, it has been proved that the employees' performance is usually can be improved by digital transformation and communication skills using constant training, effective change management, and a supportive organizational culture. The leader's commitment to implementing digital transformation and strengthening interpersonal communication is the main aspect to enhance sustainable company development.

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