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The Influence *of Digital Competence* and *Self-Efficacy* on *Employee Performance* through *Employee Engagement* at PT XYZ

Novita Tri Hardiani[1*], Riedel Paulus Jacobis[2]

[1,2]Department of Management, Faculty of Economics and Business, Universitas Negeri Surabaya, Surabaya, Indonesia
Email: novita.22172@mhs.unesa.ac.id[1], riedeljacobis@unesa.ac.id[2]

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ABSTRACT

This study aims to analyze the influence of digital competence and self-efficacy on employee performance through employee engagement at PT XYZ. The research approach used was quantitative, employing a saturated sampling technique with a sample size of 67 respondents. Data analysis was conducted using Structural Equation Modeling (SEM) with the assistance of the SmartPLS 3.2.9 application. The results of the study indicate that: (1) digital competence has a positive and significant effect on employee performance; (2) self-efficacy has a positive and significant effect on employee performance; (3) digital competence has a positive but insignificant influence on employee engagement; and (4) self-efficacy has a positive and significant influence on employee engagement; (5) employee engagement has a positive and significant influence on employee performance; (6) employee engagement does not mediate the influence of digital competence on employee performance; (7) employee engagement mediates the influence of self-efficacy on employee performance.

Keywords: Digital Competence, Self-efficacy, Safety and Employee Engagement, Employee Performance.

1. INTRODUCTION

The development of information and communication technology has taken place very quickly and brought major changes to various aspects of life. Initially, the use of technology focused on computerization and management information systems to improve administrative efficiency. With the development of the internet and *mobile* devices since the 2000s, the way individuals and organizations communicate, obtain information, and carry out activities has become faster and more flexible.

This progress is reflected in the increasing penetration of the internet globally. Based on a report by the International Telecommunication Union, world internet penetration increased from 16.8% in 2005 to more than 66% in 2022 (Unión Internacional de Telecomunicaciones (UIT), 2022). This increase shows that digital technology has become an important part of people, businesses, and government activities, while encouraging the birth of disruptive technologies such as *artificial intelligence (AI*), *big data analytics*, *cloud computing*, and *the Internet of Things (IoT)*. The presence of such technology not only increases operational efficiency, but also changes the processes of value creation, decision-making, and organizational competitiveness in the digital age.

The acceleration of digital transformation can also be seen from the increasing widespread application of *generative AI.* Fineberg et al. (2025) show that global technology companies are leveraging *generative AI* not only for product and service development, but also for operational functions such as customer service, data analysis, and internal information management. This condition confirms that digital technology has become a strategic asset that supports operational effectiveness while spurring organizational innovation.

In addition, *cloud computing* is one of the key pillars in digital transformation because it provides computing resources that are flexible, efficient, and easily adaptable to the needs of the organization. The projected global spending on *public cloud* services of $805 billion by 2024 shows the increasing reliance of organizations on cloud-based infrastructure to support business activities.

The increasing adoption of digital technology reflects the organization's efforts to improve innovation, effectiveness, work efficiency, and data-driven decision-making. Berutu et al. (2024) stated that technologies such as *artificial intelligence (AI), big*

data, and *the Internet of Things (IoT)* are able to drive innovation while increasing operational efficiency. Therefore, digital transformation is seen as a strategic need for organizations to adapt and maintain competitiveness in a changing environment.

Li et al. (2022) also emphasized that digital transformation is not just business modernization, but a strategy to strengthen competitiveness, maintain sustainability, and improve organizational performance. However, the success of its implementation does not only depend on technology, but also on the readiness of human resources (HR) who manage and utilize it. In this case, human resources play a role as the main driver of achieving organizational goals.

The importance of human resources is increasingly visible because technology cannot provide maximum benefits without the ability of individuals to utilize and adapt it effectively. Jacobis et al. (2024) explain that employees need to continue to develop competencies and adaptability to rapid technological developments. With these capabilities, employees can utilize digital technology productively, increase work effectiveness, and support the achievement of organizational goals. Therefore, digital transformation also requires a change in mindset, work culture, and improved ability to deal with the digitalization of business processes. Employees who have digital competence, critical thinking skills, and readiness to face technological changes tend to be better able to maximize the benefits of digital innovation.

The ability of human resources to adapt to technology is ultimately reflected in *employee performance*. Rambet (2022) defines *employee performance* as the result of work that is measured through the quantity and quality of work according to the responsibilities given. Good performance indicates that employees are able to work productively, efficiently, and according to organizational standards.

Aguinis (2019) added that *employee performance* is not only related to the final result, but also includes behaviors that contribute positively to the achievement of organizational goals. Meanwhile, Mathis et al. (2017) view *employee performance* as the result of employee actions related to work effectiveness and their contribution to the organization. Thus, *employee performance* can be understood as the level of employee success in carrying out tasks based on quality, quantity, work behavior, and contribution to organizational goals. Therefore, improving competence and adaptability is an important factor to produce optimal performance.

In the context of digital transformation, one of the competencies that is increasingly needed is *digital competence*. This competency not only includes technical ability to use technology, but also involves cognitive, social, and ethical aspects in its effective and responsible utilization. Ilomäki et al. (2016) emphasized that *mastery of digital competence* plays an important role in helping individuals adapt to technological developments while increasing productivity and competitiveness. Ferrari (2013) defines *digital competence* as a combination of knowledge, skills, and attitudes to use digital technology critically, collaboratively, and creatively, with the main components including *information*, *communication*, *content creation*, *safety*, and *problem-solving*. Thus, *digital competence* is a factor that has the potential to improve *employee performance* because it makes it easier for employees to adapt to the digital work system, work more efficiently, and make a greater contribution to the organization.

The relationship between *digital competence* and *employee performance* has been supported by various empirical studies. Moyano-Castolo et al. (2024) found that *digital competence* has a positive and significant effect on *job performance* in the tourism sector in Mexico, especially through the ability to utilize technology and social media to improve work effectiveness and the quality of decision-making. Pacheco and Pacheco & Coello-Montecel (2023) also show that *digital competence* improves problem-solving skills and creativity in the face of complex job demands. Furthermore, He et al. (2023) prove that there is a significant influence of *digital competence* on *work performance*, while Firman et al. (2024) emphasized that the higher *the digital competence* that employees have, the better *the employee performance* produced. On the contrary, low digital competence has the potential to hinder work effectiveness and the achievement of organizational goals.

Although most studies show that *digital competence* has a positive effect on *employee performance*, some studies have found different results. Ulum and Wulansari (2025) reported that *digital competence* does not have a partial significant effect on *the employee performance* of health center employees in Tarakan City, but still has an indirect influence through *job satisfaction*. The results are in line with those stated by Garini and Muafi (2023) who found that *digital competence* does not have a significant effect on *service performance*. These differences in results show that *employee performance* is influenced by various other factors that can strengthen and explain the relationship, one of which is *self-efficacy*.

Self-efficacy is defined as an individual's belief in his or her ability to organize and execute actions necessary to achieve a specific goal (Maddux & Stanley, 1986). Bandura (2006) also explained that *self-efficacy* reflects a person's confidence in organizing and carrying out actions to obtain the expected results. In organizations, *self-efficacy* affects the way individuals think, feel, and act when faced with job demands (Schunk & DiBenedetto, 2020), so it is seen as one of the important psychological factors that affect *employee performance* (Luthans et al., 2021).

Employees with high *self-efficacy* are generally more confident in facing challenges, more persistent in overcoming obstacles, and more optimistic in achieving work targets. This condition encourages more proactive, consistent, and productive work behavior. According to Maddux and Stanley (1986), *self-efficacy* develops through success experiences, learning through observation, verbal persuasion, and individual emotional and physiological conditions. Bandura (2006) added three main dimensions, namely *level*, *generality*, and *strength*, which describe the level, scope, and strength of belief in one's abilities. Thus, *self-efficacy* can be understood as an individual's belief in his or her ability to carry out the necessary actions to achieve goals and produce optimal performance.

A number of studies show that *employee engagement* makes a positive contribution to *employee performance*. Abdullahi et al. (2022) found that a high level of engagement can increase work effectiveness, especially if supported by good talent management practices. Li et al. (2025) stated that *employee engagement*

improves *employee performance* by encouraging employees to exert their best abilities. Mphaluwa et al. (2025) also reported the positive influence of *employee engagement* on performance, where employees who have high *engagement* show greater responsibility, commitment, and initiative. Ahakwa et al. (2021) added that strong *engagement* encourages active participation and maximum contribution to organizational goals. However, Nguyen and Nguyen (2022) and Baharsyah and Nugrohoseno (2021) found that *employee engagement* does not have a significant effect on *employee performance*, so its effectiveness can differ depending on the organizational context.

Observations also show that *employee performance* at PT XYZ is still fluctuating. In some periods, work targets can be achieved well, but at certain times there is a decline in performance which is suspected to be related to the variation in digital capabilities and readiness to face technology-based work systems. In addition, the level of *employee self-efficacy* also varies. Some are still not confident in using digital technology so they tend to avoid certain tasks and rely on colleagues who are considered more capable. This condition can reduce initiative, independence, and courage to face challenges, affecting the consistency of performance.

A similar phenomenon can be seen in *employee engagement* that is not even among employees. Some show high engagement, while others still have low engagement levels so that work often relies on individuals with better digital competencies. The absence of these employees has the potential to hinder the work process and reduce performance in certain periods. This indicates that *employee engagement* is still situational and not entirely based on sustainable commitment. According to the Head of the Administration Section of PT XYZ, improving the digital capabilities of senior employees and strengthening *employee engagement* is the main challenge so that all employees are able to work independently, effectively, and consistently in a digital work environment. Therefore, *digital competence*, *self-efficacy*, and *employee engagement* are important factors to be studied in an effort to improve *employee performance*.

On the other hand, the results of previous research on the relationship *between digital competence*, *self-efficacy*, *employee engagement*, and *employee performance* still show various findings, both significant and insignificant. Research on state-owned shipping companies that are carrying out digital transformation is also still limited, so there is a research gap. The phenomenon at PT XYZ further emphasizes the importance of examining the influence of *digital competence* and *self-efficacy* on *employee performance* through *employee engagement*.

This research was formulated to answer seven main questions, namely whether *digital competence* and *self-efficacy* have a positive effect on *employee performance* and *employee engagement*, whether *employee engagement* affects *employee performance*, and whether *employee engagement* plays a mediating variable in the relationship between *digital competence* and *self-efficacy* with *employee performance* at PT XYZ.

This study aims to analyze the influence of *digital competence* and *self-efficacy* on *employee performance* and *employee engagement*, examine the influence of *employee engagement* on *employee performance*, and evaluate the role of *employee engagement* as a mediating variable in the relationship *between digital competence* and employee engagement.*self-efficacy* on *employee performance*.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Digital Competence

Digital competence or digital competence is a concept that includes various abilities in the use of digital communication technology that is not only limited to technical skills, but also involves the ability to evaluate information, knowledge, and attitudes in the use of digital devices (Bawden, 2008). Ferrari (2013) explained that digital competence is a combination of knowledge, skills, and attitudes that allows individuals to use digital technology critically, creatively, and collaboratively in various situations.

Ilomäki et al. (2016) view digital competence as a set of skills and practices used to meaningfully utilize digital technology in daily life, work, and learning, while also including an understanding of the role of technology in society as well as the encouragement to participate actively and responsibly in the digital world. Meanwhile, Belshaw (2012) emphasized that digital competence is not only a technical aspect, but also includes eight dimensions, namely cultural, cognitive, constructive, communicative, confident, creative, critical, and participatory, so that individuals are not only able to use technology but also understand the social context and digital ethics.

Blyznyuk (2019) added that digital competence is an individual's ability to effectively utilize digital technology in various aspects of life and is often associated with other terms such as digital literacy, information communication technologies (ICT) skills, and information literacy that emphasizes aspects of digital knowledge and skills.

Overall, digital competence can be summed up as an ability that includes knowledge, skills, and understanding in using digital technology effectively, critically, creatively, and responsibly to support adaptation in the era of digital transformation.

2.2 Self-Efficacy

Self-efficacy according to Bandura (2006) is an individual's belief in his or her ability to achieve certain results. Robbins & Judge (2019) explained that self-efficacy is part of social cognitive theory which is related to a person's belief in carrying out tasks.

Maddux (2018) states that self-efficacy is related to an individual's confidence in using his or her ability to achieve goals in a variety of challenging situations. Eccles & Wigfield (2002) also explain that self-efficacy is an individual's belief in completing tasks effectively both now and in the future.

Luthans et al. (2021) added that self-efficacy includes the belief in utilizing motivation, cognitive abilities, and actions to complete tasks, which affects the way individuals think and act in the face of challenges (Schunk & DiBenedetto, 2020).

In general, self-efficacy is an individual's belief in his or her ability to regulate and carry out actions to achieve certain goals.

2.3 Employee Engagement

Employee engagement is a psychological condition that reflects the emotional, cognitive, and behavioral attachment of employees to work and organizations. Mazzetti & Schaufeli (2022) explain

that engagement shows the psychological connection of employees to their work. Harter et al. (2002) added that employee engagement can be seen from the level of involvement, commitment, and motivation of employees at work. Wollard and Shuck (2010) emphasized that engagement is related to cognitive, emotional, and behavioral commitments that have an impact on employee performance.

Bakker & Albrecht (2018) view employee engagement as a stable motivational condition that reflects emotional attachment to work and plays an important role as an important indicator of employee performance. Marin (2021) also states that engagement is a complex attitude that includes cognitive, affective, and motivational aspects, which can be seen from the overall physical, emotional, and mental involvement in work. Employees with high engagement generally understand their role and contribution to the organization so that they have a strong commitment and work ethic.

Thus, employee engagement can be understood as a psychological condition that reflects the involvement of thoughts, feelings, and actions in work, where employees who have a high level of engagement tend to show dedication, responsibility, and high work morale.

In this study, the employee engagement indicators used refer to Mazzetti & Schaufeli (2022), namely vigor, dedication, and absorption because they are considered the most relevant to the research context.

2.4 Employee Performance

Employee performance is the result of employee work measured from the aspects of quality and quantity in completing tasks according to their responsibilities to achieve organizational goals. Rambet (2022) stated that employee performance is influenced by work motivation in carrying out organizational tasks. Griffin (2013) explained performance as an effort to achieve goals with a better level of effectiveness than before. Dessler (2017) views employee performance as the result of work that meets standards and contributes to the achievement of organizational goals.

Mathis et al. (2017) define performance as the result of employee actions related to effectiveness and contribution to the organization, while Robbins & Coulter (2012) state that performance is the result of performing tasks both in terms of quality and quantity. Aguinis (2019) added that employee performance also includes work behaviors and actions that support the achievement of organizational goals.

Thus, employee performance is the level of success of employees in carrying out tasks that is reflected in the results of work, behavior, and contribution to the organization.

Gibson et al. (2012) explained that employee performance is influenced by three main factors, namely individual factors that include abilities, skills, education, and work experience, psychological factors that include attitudes, motivations, and personalities, and organizational factors that include resources, leadership, reward systems, and organizational structures.

3. RESEARCH MEHODOLOGY

This study applies a quantitative research method with a focus on data analysis using numerical calculations and statistical techniques to test the hypotheses that have been established. According to Sugiyono (2023), quantitative research is a method based on the philosophy of positivism and is used to research populations or samples through data collection using research instruments, while the analysis is carried out quantitatively or statistically.

In its implementation, data is collected through instruments such as questionnaires, observations, and interviews with predetermined populations or samples. The data obtained was then analyzed using statistical methods to test the research hypothesis.

The number of samples used was 67 employees, all of whom came from the study population. The sampling technique uses census or total sampling, which is a method that makes all members of the population a research sample (Sugiyono, 2023).

Based on data from PT XYZ, the population consists of 1 leader, 13 employees of the finance division, 10 employees of the HR division, 22 employees of the operations and service division, 10 employees of the fleet division, and 11 land security personnel, so that the total number of employees is 67 employees.

This research was carried out in several locations under the auspices of PT XYZ as a place for population and research samples. The first location is the PT XYZ which is located at Jl. Pahlawan No. 112, Krembangan District, Surabaya City, East Java. The office functions as a branch administrative and operational coordination center. At this location, research permits, work environment observations, interviews, and questionnaires were distributed to 52 employees.

The second location is Tanjung Perak Port which is located at Jl. Tanjung Perak No. 610, Pabean District, Surabaya, East Java. This port is the center of loading and unloading activities, embarkation and debarkation of passengers, as well as logistics distribution. The researcher conducted observations, interviews, and distributed questionnaires to 15 employees on duty at the location.

The implementation of the research took place during the period of December 2025 to February 2026.

Observations are carried out to obtain a clear picture of the conditions of the research through direct observation of the environment that is the object of the research (Sugiyono, 2023). This study uses non-participant observation, i.e. the researcher plays the role of an independent observer without being directly involved in the observed activity.

Interviews are used as a data collection technique at the preliminary stage to identify research problems. The type used is an unstructured interview, so the researcher is only guided by the main questions without using systematic and detailed guidelines (Sugiyono, 2023). Interviews were conducted with the Head of Administration and General Affairs and staff representatives of PT XYZ.

Questionnaires are a method of collecting data through providing questions or written statements to respondents to answer (Sugiyono, 2023). In this study, the questionnaire was distributed offline to measure the influence of digital competence and self-efficacy on employee performance through employee engagement at PT XYZ.

Data analysis is carried out after all data is collected through the process of grouping, tabulating, presenting data, and testing

problem formulations and research hypotheses (Sugiyono, 2023). This study uses descriptive statistics to describe the data as it is as well as the Structural Equation Modeling (SEM) method based on Partial Least Square (PLS) with the help of SmartPLS. According to Hair et al. (2021), SEM allows the analysis of relationships between latent variables and their indicators simultaneously and takes into account measurement errors.

The Partial Least Square (PLS) method was chosen because it is flexible to different types of data scales, does not require many assumptions, and is suitable for relatively small sample sizes. This approach is used to evaluate the relationship between latent variables and indicators as well as the relationship between latent variables (Hair et al., 2021).

predetermined branch office. Respondent characteristics were analyzed using frequency distribution to provide an overview of the study sample.

4. RESULTS AND DISCUSSION

4.1 Description of Research Results

This study involved 67 respondents obtained through the distribution of questionnaires directly in each division in a

Table 4. 1 Answers of Research Respondents Related to *Digital Competence*

Indicator	Frequency Alternative Answers					Mean Item	Red Indicator	Variable Mean	Categories
	1	2	3	4	5				
Information								4,26	Height
DC.1	0	0	2	41	24	4,33	4,33		
Communication									
DC.3	0	1	4	32	30	4,36	4,33		
DC.4	0	0	6	34	27	4,31			
Content Creation									
DC.6	0	0	2	35	30	4,42	4,42		
Safety									
DC.7	0	0	14	32	21	4,10	4,22		
DC.8	0	0	6	32	29	4,34			
Problem Solving									
DC.9	0	2	12	29	24	4,12	4,04		
DC.10	0	1	16	34	16	3,97			

Source: SPSS output (processed by researchers, 2026)

The *digital competence variable* consists of five indicators, namely *information, communication, content creation, safety,* and *problem solving*. Based on Table 4.6, the average value of the variable reaches 4.26 so it is in the high category according to Ferdinand's Three Box Method (2014). The highest score was found in item DC.6 (4.42) which showed the respondent's ability to edit files according to job needs. In contrast, the DC.10 item obtained the lowest score (3.97), indicating that the ability to overcome barriers to the use of digital applications can still be improved even though it remains in the high category.

Indicator	Frequency Alternative Answers					Mean Item	Red Indicator	Variable Mean	Categories
	1	2	3	4	5				
Level								3,99	Height
SE.1	0	1	14	33	19	4,04	4,05		
SE.2	0	0	14	33	20	4,09			
SE.3	0	0	12	40	15	4,04			
General									
SE.5	0	0	17	33	17	4,00	4,00		

Table 4.2 Answers of Research Respondents Related to *Self-Efficacy*

SE.6	0	2	11	42	12	3,96			
SE.7	0	0	14	36	17	4,04			
Strength									
SE.9	0	1	19	33	14	3,90	3,94		
SE.10	0	0	16	36	15	3,99			

Source: SPSS output (processed by researchers, 2026)

The results of the analysis in Table 4.2 show that the *self-efficacy* variable, which consists of *level, generality,* and *strength* indicators, obtained an average value of 3.99 and is included in the high category. This reflects the respondent's confidence in his ability to carry out the work. The item with the highest score is SE.2 (4.09), which describes the ability to find solutions when faced with obstacles. Meanwhile, the SE.9 item has the lowest value (3.90), so the ability to generate various alternative problem solving still has room to improve.

Table 4.3 Answers of Research Respondents Related to *Employee Engagement*

Indicator	Frequency Alternative Answers					Mean Item	Red Indicator	Variable Mean	Categories
	1	2	3	4	5				
Vigor								4,04	Height
EE.1	0	0	12	40	15	4,04	4,02		
EE.2	0	1	11	37	18	4,07			
EE.3	0	0	19	31	17	3,97			
Dedication									
EE.4	0	2	14	34	17	3,99	4,06		
EE.5	0	0	21	27	19	3,97			
EE.6	0	1	6	36	24	4,24			
Abduction									
EE.7	0	0	18	27	22	4,06	4,06		

Source: SPSS output (processed by researchers, 2026)

Based on Table 4.8, *the employee engagement* variables, which include *the vigor, dedication,* and *absorption* indicators, obtained an average score of 4.04 and was in the high category. These results show a good level of work attachment at PT XYZ. Item EE.6 obtained the highest score (4.24), indicating a high sense of pride in work. In contrast, the EE.3 item obtained the lowest score (3.97), which indicates that the intrinsic motivation to start work activities in the morning is relatively lower than in other aspects, although it is still in the high category.

Table 4.4 Answers of Research Respondents Related to *Employee Performance*

Indicator	Frequency Alternative Answers					Mean Item	Red Indicator	Variable Mean	Categories
	1	2	3	4	5				
Quality of Work								4,22	Height
EP.1	0	0	12	37	18	4,09	4,12		
EP.2	0	0	12	33	22	4,15			
Working Quantity									
EP.4	0	0	7	40	20	4,19	4,19		
Punctuality									
EP.5	0	0	9	35	23	4,21	4,24		
EP.6	0	0	6	37	24	4,27			
Attendance									
EP.8	0	0	12	28	27	4,22	4,22		
Cooperation									
EP.10	0	0	5	33	29	4,36	4,36		

Source: SPSS output (processed by researchers, 2026)

4.2 Evaluation of Measurement Models (Outer Model)

Convergent validity *testing* was carried out using *outer loading* and *Average Variance Extracted* (AVE) values. According to Hair et al. (2021), the indicator is declared valid if it has *an outer loading* above 0.70, while a value between 0.40–0.70 can still be considered to be maintained or removed based on its effect on *internal consistency reliability* and AVE.

The results after elimination showed that all indicators had *outer loading* that met the criteria so that they were declared valid and suitable for use in the next analysis.

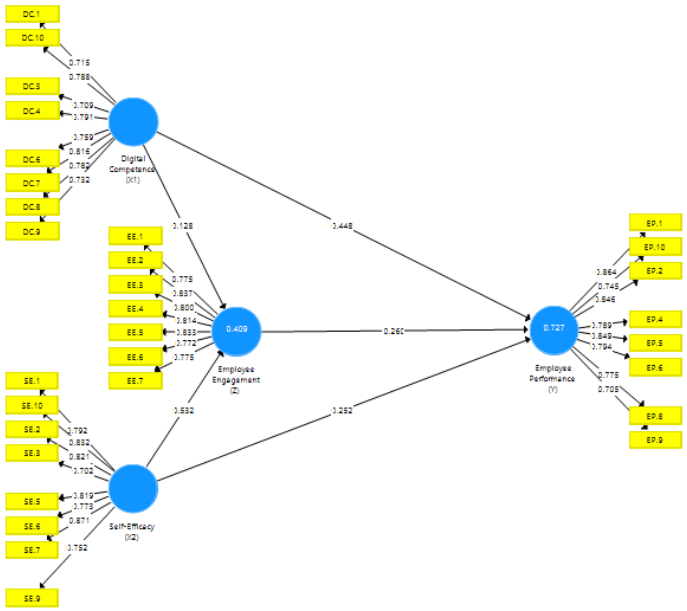


Figure 4.1 Test *Measurement Model*

Source: SmartPLS output version 3.2.9, processed by researchers (2026)

The *discriminant validity* test uses the *Heterotrait Monotrait Ratio* (HTMT) approach, provided that the HTMT value must be less than 0.90 for the construct to be considered valid. Based on the results, all HTMT values were below that threshold. Thus, each construct has met *the criteria of* good discriminant validity.

The *internal consistency reliability* test aims to assess the consistency of research instruments through *composite reliability* and *Cronbach's Alpha* values. Hair et al. (2021) stated that the construct is considered reliable if both values exceed 0.70, although a *composite reliability* of 0.60 is still acceptable, all

variables have *a composite reliability* value and *Cronbach's Alpha* is above 0.70. These results show that the research instrument has a high level of reliability and consistency in measuring each construct studied.

4.3 Evaluation of Structural Models (Inner Model)

Table 4.1 Value *Inner* VIVID

	Digital Competence (X1)	*Employee Engagement* (W)	*Employee Performance* (Y)	*Self-Efficacy* (X2)
Digital Competence (X1)		2, 863	2,891	
Employee Engagement (W)			1,691	
Employee Performance (Y)				
Self-Efficacy (X2)		2,863	3,341	

Source: SmartPLS output version 3.2.9, processed by researchers (2026)

Collinearity assessment is used to test the existence of collinearity, which is a condition when independent variables have a very strong relationship that can interfere with the results of the analysis. The Inner VIF value of all variables was below 5, so it can be concluded that there were no symptoms of multicollinearity in the tested structural model.

Table 4. 2 Test Results *Path Coefficient*

	Digital Competence (X1)	*Employee Engagement* (W)	*Employee Performance* (Y)	*Self-Efficacy* (X2)
Digital Competence (X1)		0,128	0,448	
Employee Engagement (W)			0,260	
Employee Performance (Y)				
Self-Efficacy (X2)		0,532	0,252	

Source: SmartPLS output version 3.2.9, processed by researchers (2026)

Path coefficients are used to determine the direction and strength of relationships between latent constructs. Based on Table 4.16, digital competence has an influence on employee performance of 0.448 (44.8%) and on employee engagement of 0.128 (12.8%). Employee engagement had an effect on employee performance by 0.260 (26%). In addition, self-efficacy had an effect on employee performance of 0.252 (25.2%) and employee engagement of 0.532 (53.2%).

Table 4.3 R- Test Results*Square*

Variable	**R-square**
Employee Engagement (W)	0,409
Employee Performance (Y)	0,727

Source: SmartPLS output version 3.2.9, processed by researchers (2026)

The coefficient of determination (R^2) is used to measure the ability of exogenous variables to explain endogenous variables. Based on Table 4.17, the R^2 value of employee engagement is 0.409 which means that 40.9% of the variation can be explained by the model, while 59.1% is influenced by other variables. Meanwhile, employee performance has an R^2 of 0.727 which indicates that 72.7% of the variation can be explained by the model, and the remaining 27.3% is influenced by other factors.

Table 4.4 F- Test Results*Square*

	Digital Competence (X1)	*Employee Engagement* (W)	*Employee Performance* (Y)	*Self-Efficacy* (X2)
Digital Competence (X1)		0,010	0,254	
Employee Engagement (W)			0,146	

Employee Performance (Y)				
Self-Efficacy (X2)		0,167	0,070	

Source: Output Sm artPLS version 3.2.9, processed by researchers (2026)

Effect size (F^2) is used to assess the magnitude of the influence of each independent variable on the dependent variable. Based on Table 4.18, digital competence for employee performance has a value of 0.254 (medium category), while for employee engagement it is 0.010 (very weak). Employee engagement to employee performance was 0.146 (moderate). Self-efficacy on employee engagement was 0.167 (medium), and on employee performance was 0.070 (small).

Table 4.5 Q- Test Results*Square*

Variable	*Q-square*
Employee Engagement (W)	0,234
Employee Performance (Y)	0,436

Source: SmartPLS output version 3.2.9, processed by researchers (2026)

Cross validated redundancy (Q^2) was used to assess the predictive relevance model. Based on Table 4.19, employee engagement has a value of 0.234 and employee performance of 0.436. This value indicates that the model has good predictive ability against dependent variables.

4.4 Hypothesis Testing

Hypothesis testing was carried out through path coefficient analysis using the bootstrapping method to determine the direct and indirect influence between variables. The hypothesis is stated to be significant if the t-statistics ≥ 1.96 and the p-value ≤ 0.05. Based on Table 4.20, the test results show that digital competence has a positive and significant effect on employee performance (H1 accepted), and self-efficacy also has a significant effect on employee performance (H2 accepted).

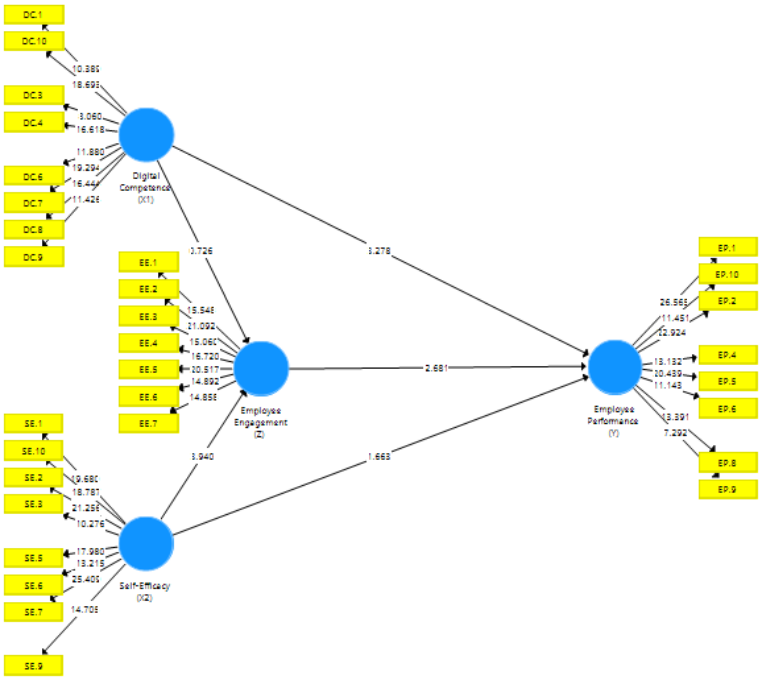


Figure 4.2 Model *Boostrapping Test*

Source: SmartPLS output version 3.2.9, processed by researchers (2026)

However, digital competence does not have a significant effect on employee engagement (H3 rejected). On the other hand, self-efficacy has a positive and significant effect on employee engagement (H4 accepted), and employee engagement has a significant effect on employee performance (H5 accepted).

In indirect influences, employee engagement does not mediate the relationship between digital competence and employee performance (H6 rejected), but mediates the influence of self-

efficacy on employee performance significantly (H7 accepted).

Overall, these results show that most of the relationships between variables have a positive and significant influence according to statistical criteria.

4.5 Discussion

1. The Influence of Digital Competence on Employee Performance

Based on the results of the path analysis, the first hypothesis is accepted which shows that digital competence has a positive and significant influence on employee performance. This indicates that the increase in employees' digital competencies will be followed by improved performance, because these abilities allow employees to make optimal use of technology in completing work, including in accessing information, managing data, communicating, and completing tasks more quickly and accurately.

The results of the descriptive analysis showed that respondents gave a high rating on safety indicators, especially on the statement "I can edit files according to work needs". These findings illustrate that employees have good skills in the use of digital technology, not only limited to system operations, but also able to make document adjustments independently. These conditions contribute to increasing work efficiency, minimizing data processing errors, and accelerating work completion so that it has an impact on improving performance.

The results of interviews with the Human Resources staff of PT XYZ also show that the company has implemented various integrated digital systems such as MyCargoo, CIS XYZ, XYZ Mobile, IBS, and the company's internal portal that supports operations and administration. The system makes work more structured, documented, and facilitates coordination between units. Therefore, digital competence is an important aspect in ensuring that employees are able to utilize available technology effectively.

In addition, the company implements a data security policy through access regulation and information security socialization. This requires employees to use technology safely and responsibly, which is part of digital competence in managing data and minimizing the risk of errors and misuse of information.

If associated with the characteristics of respondents, the majority of whom are over 35 years old and have worked for more than 10 years, it can be seen that employees are still able to adapt to the company's digital transformation. The work experience they have can be more optimal when supported by the use of digital systems so as to produce better performance.

These findings are consistent with the research of Moyano-Castolo et al. (2024), Pacheco and Coello-Montecel (2023), He et al. (2023), and Alainati et al. (2025) which states that digital competence has a positive and significant effect on employee performance. Thus, the better the digital capabilities of employees, the more effective and efficient the implementation of work that has an impact on improving performance at PT XYZ.

2. The Effect of Self-Efficacy on Employee Performance

The results of the path analysis show that the second hypothesis is accepted, which means that self-efficacy has a positive and significant influence on employee performance. This shows that employees' confidence in their abilities plays an important role in improving performance.

The results of the descriptive analysis showed that respondents scored high on the level indicator, especially on the statement "I am able to find a way to solve the problem if something is hindering my goal". These findings illustrate that employees have good self-confidence in completing tasks as long as they are accompanied by optimal effort.

At PT XYZ, employees also show initiative in dealing with work obstacles. In the customer service department, for example when there is a surge in passengers in a certain period, employees are still able to manage work pressure well and provide fast and targeted service to passengers.

The results of interviews with Human Resources staff show that the company supports strengthening self-efficacy through challenging assignments, training, and mentoring to increase employees' confidence in their abilities. In addition, there is a supportive work culture between colleagues that helps employees feel more confident in completing work.

These findings are in line with the research of Downes et al. (2020), Lim et al. (2022), Bernales-Turpo et al. (2022), and Meyvanali et al. (2025) which states that self-efficacy has a positive and significant effect on employee performance. Thus, the higher the employee's self-efficacy, the higher the performance produced because employees are more diligent, brave to face challenges, and do not give up easily in completing work.

In conclusion, self-efficacy is an important psychological factor that contributes to improving employee performance at PT XYZ, so the company needs to continue to strengthen it through training, competency development, providing feedback, and creating a supportive work environment.

3. The Influence of Digital Competence on Employee Engagement

Based on the results of the *path analysis*, the third hypothesis was rejected, which means that *digital competence* does not have a significant influence on *employee engagement*. This shows that employees' ability to use digital technology has not been able to directly increase *employee engagement* with their work.

The results of the descriptive analysis showed that the majority of respondents gave a high rating on *the problem solving* indicator, especially on the statement "I am able to solve obstacles in the use of digital applications". These findings indicate that employees already have a good enough ability to overcome obstacles to the use of digital technology so that work can run more smoothly and technical obstacles can be minimized. However, these abilities play a greater role in supporting work effectiveness than in building emotional attachment to work. In other words, *digital competence* helps smooth tasks, but it does not necessarily increase employees' enthusiasm, dedication, or sense of attachment to work.

The insignificance of this influence can be explained because *digital competence* is a technical ability that functions as a tool to support work. In the context of PT XYZ, the use of applications such as MyCargoo, CIS XYZ, XYZ Mobile, IBS, and the company's internal portal has become part of the work routine. Therefore, digital skills are more seen as a job demand that employees must have in order to work according to company standards. This condition makes *digital competence* play a greater role in work effectiveness than the formation of *employee*

engagement.

In addition, differences in work unit characteristics also affect the results of the research. As many as 16.4% of respondents came from land security units that have different work patterns compared to other units such as administration, finance, and operations. In this unit, the work focuses more on field supervision so that the use of digital technology is only limited to communication, service, and simple reporting. This shows that the level of dependence on digital technology is not the same in every job, so that increasing *digital competence* is not always followed by increasing *employee engagement*, because work attachment is more influenced by direct work experience.

Based on the results of interviews with the Human Resources staff of PT XYZ, the factors that have more influence on *employee engagement* are a conducive work environment, good relationships between colleagues, support from superiors, and effective organizational communication. These factors provide a hands-on work experience that is able to create a sense of comfort, togetherness, and belonging to the organization. Therefore, although *digital competence* is important, this factor is not yet the main determinant of *employee engagement*.

These findings are in line with the research of Nguyen and Nguyen (2022) which states that *digital competence* does not have a significant effect on *employee engagement*. This shows that improving digital competencies alone is not enough to increase employee attachment to work, because *employee engagement* is also influenced by social and organizational factors that meet employees' emotional needs. Thus, it can be concluded that *digital competence* has not been able to directly increase *employee engagement* in employees of PT XYZ.

4. The Influence of Self-Efficacy on Employee Engagement

Based on the results of the *path analysis*, the fourth hypothesis is accepted, which means that *self-efficacy* has a positive and significant effect on *employee engagement*. These findings show that employee confidence in their abilities has an important role in increasing *employee engagement*.

The results of the descriptive analysis showed that the majority of respondents gave a high answer to the *generality* indicator, especially to the statement "whatever happens, I will be able to handle it well". This shows that employees have strong confidence in dealing with various work situations and challenges, both routine and unexpected, thus encouraging them to work optimally in completing tasks.

At PT XYZ, employees with a high level of *self-efficacy* tend to be more active in carrying out their work. For example, when there is a sudden change in the ship's operational schedule, employees are still able to adapt quickly without experiencing a decrease in morale. They are also actively seeking information, coordinating with the team, and ensuring that services to customers continue to run well.

In addition, the interview results show that employees feel more confident in completing the job because they have experience and understanding of the tasks being carried out. *Self-efficacy* also makes employees more motivated to produce good performance and increases a sense of responsibility for work results.

These findings are in line with the research of Lu et al. (2025), Xie & Wang (2025), Mayuran & Kailasapathy (2022), and Zeeshan et al. (2021) which stated that *self-efficacy* has a positive and significant effect on *employee engagement*. This means that the higher the employee*'s self-efficacy*, the higher the *employee engagement rate*.

Thus, it can be concluded that *self-efficacy* has an important role in increasing *employee engagement*. Employees who have high confidence in their abilities tend to be more confident, more enthusiastic about work, and do not give up easily when faced with obstacles. Therefore, companies need to increase *self-efficacy* through *problem-solving* and *decision-making training*, *coaching* and *mentoring*, and continuous work appreciation.

5. The Effect of Employee Engagement on Employee PerformanceBased on the results of the path analysis, the fifth hypothesis is accepted, so it can be concluded that *employee engagement* has a positive and significant effect on *employee performance*. These findings show that *employee engagement* has an important role in improving employee performance.

The descriptive results of respondents on the dedication indicator with the statement "I am proud of the work I do" were in the high category. This indicates that pride in work encourages the formation of a strong sense of belonging and commitment to the company.

The results of the interview with the Head of Administration also showed that *employee engagement* plays a very important role in supporting smooth operations. Employees who do not have attachment tend to be less actively involved so that it can hinder work and reduce the achievement of organizational targets. Thus, *employee engagement* is an important factor in maintaining work effectiveness, especially in a work environment that is interdependent.

In addition, *employee engagement* is reflected in the existence of collective responsibility in completing work. Employees not only focus on individual tasks, but also contribute to the success of the team and the organization as a whole. At PT XYZ, engaged employees show positive work behaviors such as working responsibly, being more proactive in helping colleagues, and taking the initiative to complete work faster so that targets are achieved.

These findings are in line with Li J. et al. (2025), Mphaluwa et al. (2025), Abdullahi et al. (2022), and Ahakwa et al. (2021) who stated that *employee engagement* has a positive and significant effect on *employee performance*. This means that the higher *employee engagement*, the more employee performance will increase.

Thus, it can be affirmed that *employee engagement* has a positive and significant effect on *employee performance*. This condition shows that employees with a high level of engagement tend to be more passionate, dedicated, and have a strong commitment to getting work done. Therefore, companies need to increase *employee engagement* through a supportive work environment, effective communication between superiors and employees, and rewarding the performance achieved.

6. The Influence of Digital Competence on Employee Performance Through Employee EngagementBased on the results of the path analysis, the sixth hypothesis was rejected, so that *digital competence* did not have a significant effect on *employee performance* through *employee engagement*. This shows that even though employees have adequate *digital competence*, it is not enough to increase *employee engagement* as

a mediating variable in improving *employee performance*.

The results of the interview with the Head of Administration showed that the majority of employees of PT XYZ were senior employees who still needed to adapt to the digital system, while only a small number had better digital skills. This condition makes employees who are more digitally competent often help other colleagues to keep operations running smoothly.

However, the use of *digital competence* is more directed to meet job demands than as an intrinsic motivation driver. As a result, *digital competence* has not been able to increase *employee engagement* evenly. In practice, employees continue to work based on ship departure targets, strict operational schedules, and established company procedures. Technology is used primarily to get work done on time, not to increase emotional attachment to work.

The results of the study also show that *digital competence* plays a more direct role in improving *employee performance*. Employees with good digital skills tend to be faster, more accurate, and more efficient in running a digital work system, so that they are able to increase productivity, reduce errors, and achieve work targets.

Thus, it can be concluded that *digital competence* does not have a significant effect on *employee performance* through *employee engagement*, because the digital competencies possessed have not been able to increase work attachment optimally. *Employee engagement* is more influenced by other factors such as job demands, responsibilities, and organizational conditions, so the role of mediation in the relationship becomes insignificant.

7. The Effect of Self-Efficacy on Employee Performance through Employee Engagement

Based on the results of the path analysis, the seventh hypothesis is accepted, which shows that self-efficacy has a positive and significant influence on employee performance through employee engagement. These findings indicate that employee engagement plays a mediating variable that links an individual's belief in his or her abilities to increased performance. Employees with high self-efficacy not only believe in their ability to get the job done, but also show a stronger emotional and motivational attachment to their work, resulting in more consistent and optimal performance improvements.

Based on the results of the interview with the Head of the Administration Section, self-efficacy is seen as an important factor in the implementation of work. However, there are still employees who are not fully aware of their potential so that the level of confidence in their ability to work is not maximized. To overcome this, the management made various efforts such as providing motivation, assignments with a certain level of challenge, as well as training and mentoring.

In addition, organizational support through training, mentoring, and the assignment of more challenging tasks has been proven to increase employee self-efficacy. For example, senior employees who previously had difficulties in using digital systems were able to adapt gradually after getting more intensive learning. This shows that increasing self-efficacy can strengthen employee engagement which ultimately has an impact on improving employee performance.

The results of interviews with HR and General staff also strengthen these findings, where employee engagement is reflected in the attitude of mutual help between colleagues and the commitment to maintain the smooth operation of the company. The informant also said that they continue to provide assistance to other colleagues when needed as a form of contribution to the sustainability of work.

In general, the results of the study show that employees with high self-efficacy tend to be more active in completing work, especially in the use of digital systems implemented by companies. They look more independent, quickly adapt, and dare to take the initiative when facing work obstacles. This condition indicates that confidence in one's abilities encourages increased involvement in work activities.

In contrast, employees with lower self-efficacy tend to wait for direction or help from colleagues, especially in the use of digital technology. However, this condition still creates intense work interactions, because more competent employees help other colleagues. This reflects the form of employee engagement in the aspect of teamwork to maintain the continuity of work.

Thus, it can be concluded that increasing self-efficacy is able to encourage increased employee engagement, which in turn has a positive impact on employee performance. The higher the employee's self-confidence, the greater their involvement in the work, so that the resulting performance becomes more optimal.

5.1 Recommendations

Based on the results of the discussion, it can be concluded that *digital competence* has a positive and significant influence on *employee performance* of PT XYZ, and *self-efficacy* also has a positive and significant effect on *employee performance* in the same company. In addition, *digital competence* has a positive but insignificant effect on *employee engagement*, while *self-efficacy* has a positive and significant effect on *employee engagement*. Furthermore, *employee engagement* has been proven to have a positive and significant influence on *employee performance*. In the mediation role, *employee engagement* is not able to mediate the influence of *digital competence* on *employee performance*, but is able to mediate the influence of *self-efficacy* on *employee performance* at PT XYZ.

For companies, it is recommended to continue to improve *employees' digital competence* through continuous training and mentoring so that the use of technology can be more optimal in supporting work effectiveness and efficiency. In addition, increasing *self-efficacy* can be done by providing opportunities for skill development, appropriate work challenges, and constructive feedback so that employees' confidence in work is stronger. Companies also need to strengthen *employee engagement* through improving working relationships between superiors and subordinates, effective communication, a conducive work environment, and adequate organizational support. Giving appreciation and recognition consistently, both financial and non-financial, is also important to increase employee motivation, belonging, and *employee engagement*.

For the next researcher, it is recommended to focus on the study on the use of one particular digital system in the organization so that the influence of *digital competence* on *employee engagement* and *employee performance* can be analyzed more deeply. Research can also be developed by adding variables such as *perceived organizational support*, *job satisfaction*, and

transformational leadership to produce a more comprehensive model. In addition, the use of a larger number of respondents and the expansion of research objects in different organizations or industry sectors are recommended so that the research results have a stronger level of generalization.

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