The Effect of Digital Work Competency, Employee Agility, and Reward on Work Innovation and Employee Performance at a Manufacturing Company

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ABSTRACT
This study aims to analyze the effect of digital work competency, employee agility, and reward on work innovation and employee performance at manufacturing company. A quantitative explanatory design was applied to test the proposed relationships among variables. The population consisted of 308 employees, and 77 respondents were selected using the Slovin formula. Data were collected through a Likert-scale questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The results show that digital work competency, employee agility, and reward have positive and significant effects on both work innovation and employee performance. Work innovation also has a positive and significant effect on employee performance and represents the strongest path in the model. These findings indicate that employee performance can be strengthened through an integrated human resource strategy that combines digital competency development, agile work behavior, fair reward systems, and an innovation-oriented work climate.

Keywords: Digital Work Competency, Employee Agility, Reward, Work Innovation, Employee Performance.

1. INTRODUCTION

Digital transformation has changed the way organizations manage work processes, including in the manufacturing sector. Companies can no longer rely only on conventional technical skills; they also need employees who are able to use digital technology, adapt to change, and develop new ways of completing work. In the context of human resource management, these demands make digital competency, agility, reward, and work innovation strategic factors for improving employee performance.

The empirical phenomenon at manufacturing company shows that employee performance requires serious managerial attention. Internal HRD data indicate that the proportion of employees categorized as having good and very good performance declined from 67.1% in 2023 to 62.5% in 2024 and 58.8% in 2025. During the same period, employees in the sufficient and low performance categories increased. This condition suggests that performance improvement should not only be viewed from the technical side of work, but also from the readiness of employees to face digital and organizational change.

Digital work competency refers to the combination of knowledge, skills, and attitudes needed to use digital technology effectively in the workplace. Ferrari (2012) emphasizes that digital competence includes information management, communication, content creation, and technology-based problem solving. In a work context, these capabilities allow employees to access information more quickly, collaborate more effectively, and solve operational problems based on digital tools. Van Laar et al. (2017) further argue that digital skills are strongly related to 21st-century work capabilities, including critical thinking and creativity.

Employee agility is also crucial because companies operate in a dynamic business environment. De Meuse (2015) explains agility as an individual capability to learn from experience, respond to feedback, and adapt behavior to changing work conditions. Agile employees tend to be more open to new ideas, more responsive to work challenges, and more capable of converting change into opportunities for improvement.

Reward is another factor that can motivate employees to improve their contribution. Armstrong (2014) and Dessler (2017) explain that reward includes financial and non-financial appreciation given to employees for their work contribution. A fair reward system can strengthen motivation, encourage commitment, and stimulate employees to create better work outcomes. In addition, work innovation is positioned in this study as an intervening variable because innovation explains the process through which digital competency, agility, and reward are transformed into employee performance.

Previous studies have generally examined these variables separately. Research on digital competence often focuses on productivity or individual readiness, while agility studies emphasize adaptability and learning behavior. Reward studies usually examine direct motivation and performance outcomes. However, fewer studies integrate digital work competency, employee agility, and reward in one comprehensive model with work innovation as an intervening mechanism. This gap is important because performance in the digital era is not merely the result of one factor; it is created through the interaction between capability, adaptability, motivation, and innovation behavior.

Recent empirical studies provide additional support for the proposed model. Firdaus and Asyitah (2026) link digital competence with work productivity, Rizky Daniar Syah Putra at al. (2025) mention that digital competence significantly influences both employee performance and work efficiency, while Irdawati and Halik (2023) connect digital competence with employee innovation. In the agility stream, Yusuf et al. (2023), Setiawan et al. (2025), and Wolor et al. (2025) show that workforce agility and learning agility are relevant to employee performance and innovative work behavior. Reward and innovation studies also show similar patterns: Effendi and Radianto (2022) connect reward, innovative behavior, job satisfaction, and job performance, while Thneibat (2025) emphasizes the role of performance-based rewards in innovative work behavior. These studies strengthen the argument that the variables should be examined as a connected system.

This study offers two contributions. First, it develops an integrative model of employee performance by combining digital competency, agility, reward, and work innovation in a single PLS-SEM framework. Second, it provides empirical evidence from manufacturing company, where performance decline becomes a practical basis for testing whether innovation-oriented human resource factors can explain employee performance.

2. RESEARCH METHODS

This research used a quantitative explanatory approach. The design was selected because the study aimed to test causal relationships among digital work competency, employee agility, reward, work innovation, and employee performance. The research model places digital work competency, employee agility, and reward as independent variables, work innovation as an intervening variable, and employee performance as the dependent variable.

The population consisted of all 308 employees of manufacturing company. The sample was determined using the Slovin formula with a 10% margin of error, resulting in 77 respondents. The respondent profile shows that most employees were in the 20-30 year age group (53.2%), followed by 30-45 years (37.7%) and above 45 years (9.1%). The gender composition was relatively balanced, with 53.2% male and 46.8% female respondents. In terms of tenure, the largest group had worked for three to five years (45.5%), while respondents with less than three years and more than ten years each accounted for 27.3%.

Data were collected using a structured questionnaire with a Likert scale. The indicators of digital work competency included digital information skills, digital critical thinking, digital creativity, and digital problem solving. Employee agility was measured through cognitive perspective, interpersonal understanding, adaptability, result orientation, self-understanding, acceptance of feedback, and focus. Reward was measured through salary, wages, incentives, benefits, and interpersonal appreciation. Work innovation was measured through idea generation, idea promotion, and idea realization, while employee performance was measured through the quality, quantity, timeliness, effectiveness, and independence of work.

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. PLS-SEM was used because the study tested a predictive model with several latent variables and an intervening relationship. The outer model was evaluated through convergent validity, discriminant validity, Average Variance Extracted (AVE), composite reliability, and Cronbach's alpha. The inner model was evaluated using R-square and path coefficients. Hypothesis testing used bootstrapping, with the relationship considered significant when the t-statistic was greater than 1.96 and the p-value was below 0.05.

Table 1. Research Variables and Indicators

Variable	Main Indicators

Digital Work Competency	Digital information skills; digital critical thinking; digital creativity; digital problem solving
Employee Agility	Cognitive perspective; interpersonal understanding; adaptability; result orientation; self-understanding; feedback acceptance; focus
Reward	Salary; wages; incentives; benefits; interpersonal appreciation
Work Innovation	Idea generation; idea promotion; idea realization
Employee Performance	Quality; quantity; timeliness; effectiveness; independence

Note. Indicators were adapted from the operational definitions used in the thesis instrument.

3. RESULTS AND DISCUSSIONS

The descriptive analysis shows that all variables are in the high category. Digital work competency has a mean score of 3.72, employee agility 3.70, reward 3.59, work innovation 4.06, and employee performance 3.85. These results indicate that respondents generally perceive the organization as having relatively strong digital capability, adaptive behavior, reward support, innovation behavior, and performance outcomes.

Table 2. Mean Score of Research Variables

Variable	Mean	Category
Digital Work Competency	3.72	High
Employee Agility	3.70	High
Reward	3.59	High
Work Innovation	4.06	High
Employee Performance	3.85	High

The measurement model meets the required validity and reliability criteria. All indicators are valid. The AVE values for all constructs exceed 0.50, namely 0.760 for digital work competency, 0.768 for employee agility, 0.711 for reward, 0.759 for work innovation, and 0.822 for employee performance. The composite reliability and Cronbach's alpha values of all constructs are also above 0.70, indicating that the instruments have high internal consistency. These results mean that the questionnaire items are able to measure the intended constructs consistently and can be used for structural model testing.

3.1 Outer Model Measurement

The outer model is used to assess validity through convergent and discriminant validity, as well as model reliability, which is evaluated through composite reliability and Cronbach's alpha for its indicator blocks. Convergent validity is a crucial part of testing a measurement model, aiming to assess the extent to which indicators of a construct are highly correlated with one another. This validity is tested based on the factor loading values of each indicator on the construct it measures. The calculation results show that all indicators achieved the expected value of >0.7, thus confirming that the resulting data aligns with expectations.

Discriminant validity is determined through cross-loading values, which are used to examine the research instrument's ability to explain or reflect latent variables. A model has good discriminant validity if each loading value for a latent variable has the highest loading value compared to the other loading values for other latent variables. The discriminant validity test can be seen in the cross-loading table, which is assessed based on the cross-loadings between the indicators and the construct.

Cross-loading values for the variables Digital Work Competency, Employee Agility, Reward, Work Innovation, and Employee Performance indicate that the correlation between the indicators and their respective constructs is greater than the correlation between the indicators and the other constructs. Convergent validity and discriminant validity tests show consistent values, confirming that all indicators are valid. This demonstrates that the research model has a good ability to accurately differentiate each construct. Therefore, it can be concluded that the instrument used in this study is valid and suitable for use as a research measurement tool.

The AVE value aims to measure the level of variation in a construct component compiled from its indicators by adjusting for the error rate. The AVE value is more critical than composite reliability. The recommended minimum

AVE value is 0.50. An AVE value greater than 0.50 indicates that all indicators meet the established criteria and have the potential for further testing.

Composite Reliability and Cronbach's Alpha tests aim to assess the reliability of the construct variables against the latent variables. If all latent variable values have a Composite Reliability value or Cronbach's Alpha ≥ 0.70, it means the construct has good reliability. The results of the Composite Reliability and Cronbach's Alpha tests show satisfactory values. All latent variables are declared reliable, because they have Composite Reliability and Cronbach's Alpha values ≥ 0.70. This indicates that the instrument used in this study has a high level of internal consistency. Therefore, it can be said that the construct variables used in forming a latent variable can be said to be reliable and reliable, and are suitable for use in further analysis**.**

3.2 Inner Model (Structural Model)

The structural model shows an R-square of 0.690 for employee performance and 0.551 for work innovation. Thus, 69.0% of the variation in employee performance can be explained by digital work competency, employee agility, reward, and work innovation, while 55.1% of the variation in work innovation can be explained by digital work competency, employee agility, and reward. These values indicate that the model has sufficient explanatory power for understanding performance and innovation behavior in the organization.

The estimated path effects in the structural model must be significant. This significance can be obtained using the bootstrapping procedure. To determine the significance of the hypothesis, look at the parameter coefficient values and the significant t-statistics in the bootstrapping algorithm report. To determine whether it is significant, look at the t-table at an alpha of 0.05 (5%) = 1.96. The t-table is then compared with the calculated t-statistic. The results obtained from this path analysis can be seen in Figure 1 and Table 3.

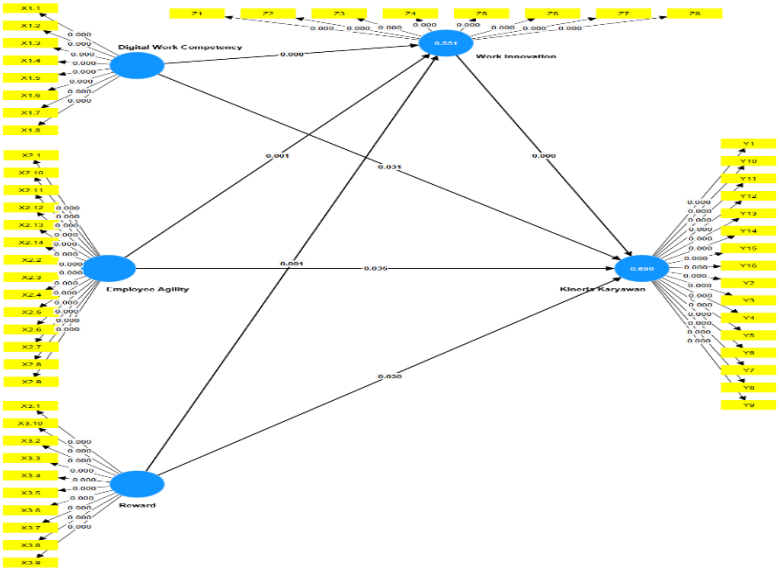

Figure 1. Structural Model

Table 3. Hypothesis Testing Results

Relationship	Coeff.	T-stat.	P-value	Result
DWC -> EP	0.203	2.155	0.031	Supported
DWC -> WI	0.394	3.620	0.000	Supported
EA -> EP	0.158	2.103	0.035	Supported
EA -> WI	0.354	3.231	0.001	Supported
Reward -> EP	0.196	2.167	0.030	Supported
Reward -> WI	0.331	3.317	0.001	Supported
WI -> EP	0.508	3.852	0.000	Supported

Note. DWC = Digital Work Competency; EA = Employee Agility; WI = Work Innovation; EP = Employee Performance.

The hypothesis testing results show that all proposed relationships are positive and significant. Digital work competency has a significant effect on work innovation, with a path coefficient of 0.394 and a p-value of 0.000. This finding indicates that employees who are able to search information, think critically, create digital solutions, and solve problems using technology are more likely to generate and implement new ideas in their work. In the organizational context, digital competency supports faster data processing, more accurate work decisions, and better coordination among units.

Digital work competency also has a significant effect on employee performance, with a coefficient of 0.203 and a p-value of 0.031. This result confirms the research of Ferrari (2012) and Van Laar et al. (2017) that digital capability is not only relevant for innovation, but also directly supports work quality, speed, and effectiveness. Employees who can operate digital systems and use information technology appropriately are better prepared to meet production and administrative demands in a modern work environment. The finding strengthens the argument that digital competency should be treated as an essential part of human resource development rather than as a merely technical skill.

Employee agility has a significant effect on work innovation, with a coefficient of 0.354 and a p-value of 0.001. This means that employees who are adaptive, responsive to feedback, and willing to learn from new situations are more capable of developing innovative work behavior. This finding supports the view that agility allows employees to respond to uncertainty and transform work challenges into ideas for improvement (De Meuse, 2015). In practice, agility encourages employees to move beyond routine work patterns and to explore alternative ways of solving problems.

Employee agility also has a significant effect on employee performance, with a coefficient of 0.158 and a p-value of 0.035. Although this coefficient is lower than other direct effects, the relationship remains meaningful because adaptive employees are generally able to maintain productivity when facing changes in work procedures, technology, or organizational expectations. The relatively smaller coefficient may indicate that agility produces stronger performance outcomes when it is supported by other factors, especially innovation opportunities and organizational reward systems.

Reward has a significant effect on work innovation, with a coefficient of 0.331 and a p-value of 0.001. This result shows that fair financial and non-financial rewards can stimulate employees to contribute ideas and improvements. Reward also has a significant effect on employee performance, with a coefficient of 0.196 and a p-value of 0.030. These findings indicate that employees who feel appreciated are more motivated to improve discipline, responsibility, and work outcomes. Therefore, reward should not be treated only as compensation, but also as a strategic mechanism for shaping innovative and productive behavior.

The strongest relationship in the model is the effect of work innovation on employee performance, with a coefficient of 0.508 and a p-value of 0.000. This finding is important because it indicates that performance improvement is strongly influenced by the ability of employees to generate ideas, promote them, and implement them into real work practices. Work innovation functions as a bridge between employee capability, organizational support, and actual performance. In practical terms, digital skills, agile behavior, and reward systems will have greater impact when the organization provides space for employees to experiment, propose improvements, and apply new solutions.

Theoretically, the results support the view that employee performance in the digital era should be understood as a multidimensional outcome. Performance is not created only by technical competence, nor only by motivation. Instead, it is shaped by the interaction between digital competency, agility, reward, and innovative behavior. The model also confirms the importance of work innovation as a mechanism that explains how individual capability and organizational support become measurable performance.

From a managerial perspective, manufacturing company needs to manage these variables as a connected system. Digital training should be designed not only to improve the ability to use technology, but also to help employees solve practical work problems. Agility can be strengthened through mentoring, feedback culture, job rotation, and team-based problem solving. Reward policies should combine financial incentives with recognition for ideas, initiative, and improvement. Finally, innovation should be institutionalized through idea forums, improvement teams, and simple mechanisms for evaluating and implementing employee suggestions.

Another important implication concerns the role of work innovation as an intervening mechanism. The direct effects of digital competency, employee agility, and reward are significant, yet the largest coefficient belongs to work innovation. This pattern suggests that the company should not stop at improving employee capability or providing rewards. The organization also needs a process that converts capability and motivation into concrete innovation. Without such a process, employees may have adequate digital skills and motivation, but their ideas may not become actual improvements in work methods.

For this reason, work innovation needs to be supported by managerial routines. Supervisors can invite employees to identify repetitive problems, discuss alternative methods, and evaluate whether proposed ideas can reduce time, cost, or errors. Innovation does not always need to be radical. In the manufacturing context, small improvements in reporting, coordination, inventory control, production scheduling, safety procedures, or administrative workflows can have meaningful effects on employee performance. Therefore, the company should define innovation broadly as continuous improvement in daily work.

The result also shows that reward has a lower direct coefficient on performance than work innovation, but reward remains significant. This means that reward is important, but its effectiveness may be higher when it is linked to innovation behavior and measurable work contribution. If rewards are only based on routine presence or seniority, they may not strongly encourage employees to develop new ideas. Conversely, if rewards recognize initiative, problem solving, knowledge sharing, and successful implementation, employees may be more willing to participate in innovation activities.

Digital competency development should also be designed in a practical and contextual way. Training should not only introduce software or digital platforms, but should be connected to actual job tasks. For example, employees can be trained to use digital tools for data reporting, document control, project monitoring, communication, and evaluation of work outcomes. This approach will make digital competency more directly related to performance because employees can immediately apply the skills to solve problems in their own work units.

Finally, agility development requires a supportive organizational climate. Employees will not become agile if they are afraid of making mistakes or if feedback is delivered only as criticism. The company needs to develop a culture where feedback is used for learning and where employees are encouraged to adapt to new procedures. This culture is especially important because the sample is dominated by relatively young employees and employees with three to five years of tenure. Such employees may have enough energy and learning potential, but they still need guidance and organizational support to transform their potential into stable performance.

4. CONCLUSION

This study concludes that digital work competency, employee agility, and reward have positive and significant effects on both work innovation and employee performance at manufacturing company. Work innovation also has a positive and significant effect on employee performance and becomes the strongest relationship in the model. These findings show that employee performance is shaped not only by individual ability, but also by adaptive behavior, reward support, and the opportunity to innovate.

The practical implication of this study is that manufacturing company should strengthen digital competency training, particularly in information processing, digital critical thinking, creativity, and technology-based problem solving. The company also needs to build an adaptive work climate that encourages learning, feedback, and flexibility. In addition, the reward system should be improved so that financial and non-financial appreciation can motivate employees to generate ideas and improve work outcomes.

This study has several limitations. The research was conducted in one company with a sample of 77 respondents, so the findings should be generalized carefully. The study also used a quantitative survey, which explains statistical relationships but does not deeply explore employee experiences in using digital tools or developing innovation. Future researchers are encouraged to add other variables such as organizational culture, leadership, motivation, or digital transformation and to use broader samples or mixed methods for deeper understanding.

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