

THE INFLUENCE OF SERVICE DIGITALIZATION AND TECHNOLOGY COMPETENCY ON EMPLOYEE PERFORMANCE THROUGH EMPLOYEE ADAPTABILITY AT BANK BRI SAMARINDA GAJAH MADA BRANCH

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Abstract

Digital transformation in the banking sector requires employees not only to operate technology-based service systems, but also to adjust their work behavior quickly, flexibly, and productively. This study aims to analyze the influence of service digitalization and technology competence on employee performance and to examine the mediating role of employee adaptability at Bank BRI Samarinda Gajah Mada Branch. This research employed a quantitative explanatory design. The research population consisted of all 149 employees at Bank BRI Samarinda Gajah Mada Branch; therefore, a census or saturated sampling technique was applied. Data were collected using a Likert-scale questionnaire and analyzed through Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings indicate that service digitalization has a positive and significant effect on employee adaptability and employee performance. Technology competence also has a positive and significant effect on employee adaptability and employee performance. Furthermore, employee adaptability positively and significantly affects employee performance and partially mediates the effect of service digitalization and technology competence on employee performance. These findings confirm that successful banking digital transformation depends not only on technological infrastructure, but also on employees' readiness to adapt to changing work processes. This study recommends strengthening technology training, change-management support, and an adaptive work culture to ensure that service digitalization translates into sustainable performance improvement.

Keywords: employee adaptability; employee performance; PLS-SEM; service digitalization; technology competence

INTRODUCTION

The banking sector is among the industries experiencing the most intense pressure from digital transformation. Services that previously relied on manual processes and conventional interactions have now shifted to digital platforms, process automation, data integration, and technology-driven service applications that demand speed and accuracy. At Bank BRI Samarinda Gajah Mada Branch, service digitalization is not merely a customer-service enhancement strategy — it has fundamentally altered how employees complete tasks, coordinate activities, manage information, and meet operational targets. These changes carry direct consequences for employee performance. Performance is no longer assessed solely on the ability to complete routine tasks, but also on the capacity to leverage technology to improve productivity, timeliness, output quality, and team contribution. Service digitalization can accelerate work processes, reduce administrative errors, and enhance organizational efficiency. However, it can also generate new pressures when employees are not yet prepared to cope with rapidly changing systems, procedures, and work standards. Beyond service digitalization, technology competence has emerged as a critical factor in explaining how well employees navigate change. Technology competence reflects employees' ability to use digital devices, understand technology-based work systems, resolve technical problems, and leverage technology to support their work. Employees with strong technology competence tend to be more confident when adopting new systems, quicker at grasping digital workflows, and more capable of producing accurate outputs. Conversely, limited competence can create adaptation barriers and diminish work effectiveness.

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Although service digitalization and technology competence are important, their effects on employee performance are not always automatic. In organizational practice, sophisticated technology does not necessarily produce high performance if employees cannot adapt to changing work processes. Employee adaptability, therefore, becomes a vital mechanism bridging the influence of digitalization and technology competence on performance. Adaptability reflects employees' capacity to adjust their behavior, face unexpected situations, learn independently, and remain effective in conditions of change. Observations at Bank BRI Samarinda Gajah Mada Branch reveal a need to understand these relationships more comprehensively. Digital service transformation is pushing employees to use a variety of banking platforms and systems, while employees' capacity to respond to change does not always keep pace. Differences in readiness and adaptive capacity can cause performance variation even among employees working within the same organizational environment and service systems. Adaptability must therefore be positioned as a mediating variable so that the relationships among service digitalization, technology competence, and employee performance can be explained more fully. Based on the foregoing, this study aims to analyze the influence of service digitalization and technology competence on employee performance, both directly and through employee adaptability as a mediating variable. The study is expected to contribute theoretically to the development of human resource management research in the digital era, and to offer practical implications for banking management in designing strategies to strengthen employee competence and adaptability.

LITERATURE REVIEW

Theoretical Foundation

Service digitalization is understood as the process of harnessing digital technology to transform, simplify, and enhance an organization's service processes. In the banking sector, service digitalization serves as a vehicle for accelerating transactions, strengthening information accuracy, improving customer access, and increasing operational efficiency. From a management information systems perspective, technology, business processes, data, and human resources are interconnected components that generate relevant information to support organizational decisions and performance.

Technology competence draws on competency theory and human capital theory. Competence encompasses not only technical knowledge but also skills, attitudes, personal characteristics, and motives that support work effectiveness. In a digital organizational context, technology competence represents a form of human capital that enables employees to understand systems, operate applications, resolve technical problems, and use technology as a value-creating tool.

Employee adaptability in this study is positioned within the framework of adaptive performance. Adaptability describes an individual's ability to adjust to changes in the work environment through cognitive, emotional, and behavioral adaptation. Adaptive employees can handle unexpected situations, learn new ways of working, modify work habits that are no longer relevant, and maintain performance quality when the organization implements technological changes.

Employee performance refers to the degree to which an individual achieves work results in carrying out tasks in accordance with organizational standards. Performance encompasses work quality, work quantity, timeliness, responsibility, and teamwork. In a digital work environment, employee performance is shaped by the ability to use technology, readiness to cope with change, and organizational support in managing work transitions.

Hypothesis Development

Service digitalization is believed to enhance employee performance because digital systems accelerate work processes, minimize errors, and strengthen service efficiency. However, the effect of digitalization also depends on employees' ability to adapt to changing systems. The better the implementation of digitalization, the greater the opportunity for employees to develop more adaptive and productive work patterns.

Technology competence influences performance because technologically proficient employees are better equipped to complete tasks effectively. Competence also drives adaptability, as technological knowledge and skills help employees understand new systems and respond to digital service updates. Adaptability then becomes the key factor that explains how digitalization and technology competence can be converted into better performance.

H1: Service digitalization has a significant effect on employee adaptability at Bank BRI Samarinda Gajah Mada Branch.

H2: Technology competence has a significant effect on employee adaptability at Bank BRI Samarinda Gajah Mada Branch.

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H3: Service digitalization has a significant effect on employee performance at Bank BRI Samarinda Gajah Mada Branch.

H4: Technology competence has a significant effect on employee performance at Bank BRI Samarinda Gajah Mada Branch.

H5: Employee adaptability has a significant effect on employee performance at Bank BRI Samarinda Gajah Mada Branch.

H6: Employee adaptability mediates the effect of service digitalization on employee performance at Bank BRI Samarinda Gajah Mada Branch.

H7: Employee adaptability mediates the effect of technology competence on employee performance at Bank BRI Samarinda Gajah Mada Branch.

METHOD

This study employed a quantitative approach with an explanatory design. This approach was selected because the study aims to test causal relationships among variables — namely service digitalization, technology competence, employee adaptability, and employee performance. The research object is Bank BRI Samarinda Gajah Mada Branch as a banking organizational unit operating technology-based services. The research population comprised all 149 employees at Bank BRI Samarinda Gajah Mada Branch. Because the entire population could be reached comprehensively, a census or saturated sampling technique was used, making all population members respondents of the study. Primary data were collected through a Likert-scale questionnaire (scale 1–5), while secondary data were obtained from organizational documentation and relevant literature.

The service digitalization variable was measured through indicators of digital system ease-of-use, work efficiency, error minimization, system reliability, and the benefits of digitalization for work quality. Technology competence was measured through the ability to use digital devices, overcome digital system problems, learn new applications, leverage technology for productivity, and understand digital systems in work. Employee adaptability was measured through self-adjustment capacity, learning initiative, ability to handle unexpected situations, work-habit adjustment, and capacity to work under pressure from change. Employee performance was measured through work quality, target achievement, timeliness, responsibility, and teamwork.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM). Model evaluation included outer model testing to assess construct validity and reliability, and inner model testing to evaluate R-square, path coefficients, and significance of inter-variable relationships through bootstrapping procedures. This approach is appropriate because it can simultaneously test direct and indirect relationships in a research model that includes mediating variables.

RESULTS AND DISCUSSION

Respondent Description

Research data were obtained from 149 respondents who are employees of Bank BRI Samarinda Gajah Mada Branch. By gender, respondents were relatively balanced: 78 males (52.3%) and 71 females (47.7%). By age, the 25–35 year group was the largest at 71 people (47.7%), followed by the 36–45 year group at 35 people (23.5%), under 25 years at 25 people (16.8%), 46–50 years at 14 people (9.4%), and over 55 years at 4 people (2.7%).

By tenure, the majority of respondents had served 1–5 years (71 people, 47.7%), followed by 6–10 years (35 people, 23.5%), more than 10 years (25 people, 16.8%), and less than 1 year (18 people, 12.1%). This composition indicates that the research data represent a variety of work functions within the organization.

Measurement Model Evaluation (Outer Model)

Measurement model evaluation was conducted through convergent validity testing, average variance extracted (AVE), discriminant validity, and construct reliability assessment. All indicators had loading factor values above 0.70, satisfying the convergent validity criterion. AVE values for all constructs were above 0.50, while Cronbach's Alpha and Composite Reliability values for all variables exceeded 0.70. The research instruments are therefore declared valid and reliable for use in structural model testing.

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Table 1. Validity and Reliability Test Results of Constructs

Variable	AVE	Cronbach's Alpha	Composite Reliability	Remarks
Service Digitalization (X1)	0.586	0.823	0.876	Valid & Reliable
Technology Competence (X2)	0.604	0.836	0.884	Valid & Reliable
Employee Adaptability (Z)	0.638	0.857	0.898	Valid & Reliable
Employee Performance (Y)	0.701	0.893	0.921	Valid & Reliable

Source: SmartPLS processed data, 2026

The highest reliability was found for the employee performance variable, with a Composite Reliability of 0.921 and Cronbach's Alpha of 0.893, indicating very strong internal consistency among its indicators. The highest AVE value was also recorded for employee performance at 0.701, meaning the construct adequately explains the proportion of indicator variance.

Structural Model Evaluation (Inner Model)

The inner model evaluation shows that the R-square value for employee adaptability is 0.471 (R-square adjusted = 0.464). This means service digitalization and technology competence explain 47.1% of the variation in employee adaptability, while 52.9% is explained by other variables outside the model. The R-square value for employee performance is 0.582 (R-square adjusted = 0.573), indicating that service digitalization, technology competence, and employee adaptability together explain 58.2% of the variation in employee performance.

Table 2. R-Square Test Results

Variable	R-Square	R-Square Adjusted	Interpretation
Employee Adaptability (Z)	0.471	0.464	Moderate
Employee Performance (Y)	0.582	0.573	Moderate

Source: SmartPLS processed data, 2026

These results indicate that the research model has a reasonably good predictive capacity. Employee performance is not only directly influenced by service digitalization and technology competence, but also by employees' ability to adapt to digital-based work changes.

Hypothesis Testing

Hypothesis testing was conducted through bootstrapping procedures. Inter-variable relationships are declared significant when the T-statistic value is greater than 1.96 and the P-value is less than 0.05. The results of direct effect testing are presented in Table 3.

Table 3. Direct Effect Test Results

Variable Relationship	Coefficient (β)	T-Statistic	P-Value	Remarks
Service Digitalization (X1) → Employee Adaptability (Z)	0.414	8.082	0.000	Significant
Technology Competence (X2) → Employee Adaptability (Z)	0.430	8.026	0.000	Significant
Service Digitalization (X1) → Employee Performance (Y)	0.187	2.810	0.005	Significant
Technology Competence (X2) → Employee Performance (Y)	0.121	2.217	0.027	Significant
Employee Adaptability (Z) → Employee Performance (Y)	0.568	7.986	0.000	Significant

Source: SmartPLS processed data, 2026

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All direct paths show positive and significant effects. The largest coefficient was found in the relationship between employee adaptability and employee performance ($\beta = 0.568$, T-statistic = 7.986), confirming that adaptability is an important predictor of employee performance. Service digitalization and technology competence also significantly influence adaptability, with coefficients of 0.414 and 0.430 respectively, establishing both as drivers of adaptive capacity.

Table 4. Indirect Effect Test Results

Variable Relationship	Coefficient (β)	T-Statistic	P-Value	Remarks
Service Digitalization (X1) → Employee Adaptability (Z) → Employee Performance (Y)	0.235	5.905	0.000	Significant
Technology Competence (X2) → Employee Adaptability (Z) → Employee Performance (Y)	0.244	5.368	0.000	Significant

Source: SmartPLS processed data, 2026

The indirect effect test results show that employee adaptability mediates the effect of service digitalization on employee performance ($\beta = 0.235$, T-statistic = 5.905, P-value = 0.000), and mediates the effect of technology competence on employee performance ($\beta = 0.244$, T-statistic = 5.368, P-value = 0.000). Because the direct effects of service digitalization and technology competence on performance remain significant, the form of mediation is partial mediation.

Effect of Service Digitalization on Employee Adaptability

The findings show that service digitalization has a positive and significant effect on employee adaptability. This confirms that the implementation of digital service systems encourages employees to adjust their work methods, learn new procedures, and increase their flexibility in carrying out tasks. In the banking context, digitalization not only changes work tools but also transforms the pace, standards, and expectations of service delivery. The more intensively digital systems are used, the greater the need for employees to develop adaptive behavior. This finding is consistent with the view that technological change in organizations compels employees to continuously update their skills and behavioral responses.

Effect of Technology Competence on Employee Adaptability

Technology competence has a positive and significant effect on employee adaptability. Employees with stronger technological capability tend to be more prepared to handle system updates, more capable of resolving technical problems, and quicker to understand changes in work procedures. Technology competence thus functions as an initial capital that accelerates the adaptation process. This finding reinforces the view that technical ability and adaptive readiness are closely related in a digital work environment. Employees who are proficient with technology experience less resistance when new systems are introduced, enabling them to transition more smoothly and maintain performance quality.

Effect of Service Digitalization on Employee Performance

Service digitalization was found to have a positive and significant effect on employee performance. Digital systems support service speed, work accuracy, and process efficiency. However, the direct effect coefficient of digitalization on performance is relatively smaller than the effect of adaptability on performance. This suggests that while digitalization is important, its benefits are most fully realized when employees can use it adaptively in their daily work. Organizations that implement digital transformation without ensuring employee readiness may not fully capture the productivity gains that the technology affords.

Effect of Technology Competence on Employee Performance

Technology competence has a positive and significant effect on employee performance. Employees who understand the use of digital devices and systems can complete tasks more effectively, reduce errors, and increase productivity. Nevertheless, the direct effect coefficient of technology competence on performance is the smallest in the model. This finding indicates that technology competence needs to be combined with adaptability for its impact on performance to become stronger. Competence provides the technical foundation, but adaptability enables employees to translate that competence into measurable performance outcomes.

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Effect of Employee Adaptability on Employee Performance

Employee adaptability has the strongest positive and significant effect on employee performance. This finding demonstrates that the ability to adjust to technological changes, task demands, and organizational dynamics is the primary factor in sustaining performance. Adaptive employees not only keep pace with change but can also convert digital challenges into opportunities for improved work effectiveness. In the context of digital transformation, adaptability serves as the bridge between technical capability and tangible work results. This finding underscores the importance of cultivating adaptive capacity as a strategic human resource priority in digitally transforming organizations.

Mediating Role of Employee Adaptability

Employee adaptability is proven to mediate the effects of service digitalization and technology competence on employee performance. Partial mediation indicates that both exogenous variables retain direct effects on performance, but those effects are amplified through the mechanism of adaptability. Accordingly, organizations cannot rely solely on providing digital systems and technology training. They must also ensure that employees possess the behavioral readiness to accept change, engage in continuous learning, and remain productive in dynamic work conditions. This finding extends the understanding of digital transformation outcomes by showing that human adaptive capacity is a critical moderating force between technological inputs and performance outputs.

CONCLUSION

This study aimed to analyze the influence of service digitalization and technology competence on employee performance, with employee adaptability as a mediating variable, at Bank BRI Samarinda Gajah Mada Branch. Based on PLS-SEM analysis and discussion, the following conclusions are drawn:

- Service digitalization has a positive and significant effect on employee adaptability. The implementation of digital service systems encourages employees to adjust their work methods, learn new systems, and increase flexibility in facing change.
- Technology competence has a positive and significant effect on employee adaptability. Employees with stronger technological ability tend to understand system updates more readily and adapt to digital work demands more effectively.
- Service digitalization has a positive and significant effect on employee performance. The use of digital services helps improve efficiency, accuracy, and speed in task completion.
- Technology competence has a positive and significant effect on employee performance. Mastery of technology enables employees to leverage digital systems to produce higher-quality work.
- Employee adaptability has a positive and significant effect on employee performance. Employees who can adjust to technological change and dynamic work environments demonstrate better performance outcomes.
- Employee adaptability partially mediates the effect of service digitalization on employee performance. Service digitalization improves performance both directly and through enhancing employee adaptability.
- Employee adaptability partially mediates the effect of technology competence on employee performance. Technology competence not only directly impacts performance but also improves it through the mechanism of employee adaptive capacity.

Recommendations

- Management of Bank BRI Samarinda Gajah Mada Branch should strengthen service digitalization in a phased and integrated manner aligned with employee work needs. Every system update should be accompanied by socialization, training, and mentoring to ensure employees not only use technology but also understand its benefits for performance improvement.
- Technology competence development should be conducted on a continuous basis through position-based training, microlearning, system-use simulations, and post-training evaluations, so that all employees achieve a relatively uniform digital capability standard.
- The organization should build a work culture that supports adaptability, developed through coaching, mentoring, recognition of change initiatives, and open internal communication whenever digital system updates occur.
- Future research is recommended to expand the research object to other BRI branches or different financial service sectors in order to broaden the generalizability of findings. Subsequent studies may also incorporate variables such as digital leadership, innovation culture, organizational support, technostress, or job satisfaction to enrich the research model.

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