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THE EFFECT OF SERVICE DIGITALIZATION AND EMPLOYEE COMPETENCE ON EMPLOYEE PERFORMANCE WITH DIGITAL LITERACY AS A MODERATING VARIABLE AT THE BANDAR LAMPUNG MEDIUM TAX SERVICE OFFICE

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Informasi	Abstract

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Digital transformation in tax administration has reshaped service systems, business processes, and employees' work patterns, requiring both effective digital technologies and appropriate employee competencies and digital literacy. This study examines the effects of service digitalization and employee competence on employee performance and the moderating role of digital literacy at the Bandar Lampung Medium Tax Office. A quantitative explanatory approach was applied to 58 employees using a saturated sampling technique. Data were collected through a Likert-scale questionnaire and analyzed using PLS-SEM with SmartPLS 4 and bootstrapping at a 5% significance level. The results show that service digitalization positively and significantly affects employee performance (β = 0.324; p = 0.0055), while employee competence has a stronger positive and significant effect (β = 0.431; p < 0.001). Digital literacy does not significantly moderate the relationship between service digitalization and performance (β = 0.186; p = 0.1048), but significantly strengthens the effect of employee competence on performance (β = 0.380; p = 0.0016). The model explains 65.90% of the variance in employee performance. These findings highlight the importance of effective technology utilization, continuous competency development, and strengthening digital literacy in supporting employee performance in digital tax administration.

Keywords : *service digitalization, employee competence, digital literacy, employee performance.*

Abstrak

Transformasi digital dalam administrasi perpajakan telah membawa perubahan pada sistem pelayanan, proses bisnis, serta pola kerja pegawai. Kondisi tersebut menuntut organisasi tidak hanya menyediakan teknologi yang memadai, tetapi juga memastikan pegawai memiliki kompetensi dan kemampuan literasi digital yang sesuai dengan tuntutan pekerjaan. Penelitian ini bertujuan untuk menganalisis pengaruh digitalisasi layanan dan kompetensi pegawai terhadap kinerja pegawai serta menguji peran literasi digital dalam memoderasi kedua hubungan tersebut pada Kantor Pelayanan Pajak (KPP) Madya Bandar Lampung. Penelitian menggunakan pendekatan kuantitatif dengan desain eksplanatori dan metode survei. Populasi penelitian terdiri atas pegawai KPP Madya Bandar Lampung yang memenuhi kriteria penelitian, dengan sampel sebanyak 58 responden yang ditentukan menggunakan teknik sampel jenuh. Data dikumpulkan melalui kuesioner berskala Likert dan dianalisis menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM) dengan bantuan SmartPLS 4. Pengujian hipotesis dilakukan melalui bootstrapping dengan tingkat signifikansi 5 persen. Hasil penelitian menunjukkan bahwa digitalisasi layanan berpengaruh positif dan signifikan terhadap kinerja pegawai dengan koefisien jalur sebesar 0,324 dan p-value 0,0055. Kompetensi pegawai juga berpengaruh positif dan signifikan terhadap kinerja pegawai dengan koefisien jalur sebesar 0,431 dan p-value < 0,001, serta menjadi prediktor langsung yang paling kuat. Literasi digital tidak terbukti memperkuat pengaruh digitalisasi layanan terhadap kinerja pegawai karena koefisien interaksi sebesar 0,186 dengan p-value 0,1048. Sebaliknya, literasi digital terbukti memperkuat hubungan kompetensi pegawai dengan kinerja pegawai, yang ditunjukkan oleh koefisien interaksi sebesar 0,380 dan p-value 0,0016. Model penelitian mampu menjelaskan sebesar 65,90 persen variasi kinerja pegawai. Temuan ini menunjukkan bahwa peningkatan kinerja dalam lingkungan administrasi perpajakan yang semakin terdigitalisasi perlu didukung oleh pemanfaatan teknologi yang efektif, penguatan kompetensi pegawai, serta peningkatan literasi digital agar kompetensi tersebut dapat diterapkan secara optimal dalam pelaksanaan pekerjaan..

Kata Kunci : *Digitalisasi layanan, kompetensi pegawai, literasi digital, kinerja pegawa*

A. INTRODUCTION

Digital transformation has become an essential component of organizational change, reshaping how organizations conduct business processes, deliver services, and create value. The development of digital technologies is no longer limited to the adoption of devices or applications but has increasingly influenced organizational structures, work processes, human resource capabilities, and value-creation mechanisms. Vial (2019) conceptualizes digital transformation as an organizational change process triggered by the use of digital technologies that can reshape the way organizations create value. Similarly, Verhoef et al. (2021) argue that digital transformation extends beyond process digitization because it involves changes in strategy, organizational structure, capabilities, and performance measurement. Therefore, the success of digital transformation depends not only on technological availability but also on an organization's ability to integrate technology with its resources and work processes.

In the public sector, digital transformation is particularly important because it is associated with administrative efficiency, service quality, transparency, and the government's ability to respond to citizens' needs. Tangi et al. (2021) demonstrate that digital government transformation is influenced by a combination of organizational factors, the perceived need for change, managerial support, and collaborative environments. This suggests that public-sector digitalization should not be viewed solely as a technological issue but as an organizational transformation that requires human resource readiness and institutional support. Trenerry et al. (2021) similarly emphasize that successful workplace digital transformation is associated with technology acceptance, skills and training, adaptability, and organizational factors. Consequently, changes toward digital work systems need to be accompanied by employee capability development to ensure that technological investments translate into meaningful improvements in performance.

This transformation is particularly relevant to tax administration. The modernization of tax administration has encouraged the adoption of technology-based services to integrate service delivery, information management, supervision, and tax administration processes. In the present research context, this transformation is reflected in the development of electronic tax services and the implementation of the Core Tax Administration System (Coretax), which is intended to integrate tax business processes and data within a more unified system. The implementation of such a system has altered employees' work patterns because tax employees are increasingly required not only to understand regulations and procedures but also to operate digital systems effectively. This condition makes the quality of digital service utilization an important factor to examine in relation to employee performance.

Conceptually, service digitalization can contribute to employee performance by simplifying processes, accelerating access to information, integrating data, and reducing manual work. Warner and Wäger (2019) explain that digital transformation is an ongoing process that requires organizations to develop dynamic capabilities to integrate new technologies into everyday organizational activities. In the workplace, the quality of digitalization is therefore important because technology can generate organizational value only when it is effectively translated into improved work processes. Accordingly, systems that provide easier access, faster processing, more accurate information, greater integration, and higher efficiency are more likely to support employees in completing their tasks effectively.

Beyond technology itself, human resource quality represents another critical factor in successful digital transformation. Digitalization changes the types of knowledge and skills required from employees. Oberländer et al. (2020) demonstrate that increasingly digitalized workplaces require broader digital competencies to enable employees to cope with changing work demands. Likewise, Ostmeier and Strobel (2022) found that the digital maturity of an organizational environment can encourage employees to proactively develop their skills. These findings indicate that technological implementation needs to be accompanied by employee competence development so that changes in work systems can be translated into effective task performance. Employee competence can therefore be regarded as an important organizational resource that enables organizations to obtain greater value from technological investments.

The relationship between competence and performance becomes even more important when work is conducted in increasingly digital environments. Competence involves not only technical knowledge but also the ability to adapt, solve problems, process information, and apply skills in changing work situations. Ochoa Pacheco and Coello-Montecel (2023) found that digital competencies positively influence job performance and are also associated with psychological empowerment, which subsequently contributes to performance. This evidence reinforces the argument that employees' ability to acquire and apply competencies relevant to technological development can contribute to improved work outcomes. In tax administration, such capabilities are particularly important because employees must combine regulatory knowledge, procedural expertise, analytical skills, and digital capabilities when performing their duties.

At the same time, employees do not necessarily possess the same ability to utilize digital technologies. Digital literacy represents a capability that may determine how effectively employees access, understand, evaluate, and use digital information and technologies in their work. Van Laar et al. (2019) demonstrate that the modern workplace increasingly requires digitally skilled workers and that digital skill levels may vary considerably across individuals. This suggests that the implementation of the same digital system may not generate identical benefits for every employee. Employees with stronger digital literacy may be better able to understand system functions, identify relevant information, evaluate digital content, and use technology to complete work tasks. Digital literacy is therefore relevant not only as an individual capability but also as a potential condition that shapes the strength of the relationship between technology utilization, employee competence, and performance.

This issue is particularly relevant to the Bandar Lampung Medium Tax Office. The organizational performance data for 2025 presented in the thesis indicate heterogeneous achievements across the Balanced Scorecard perspectives. From the stakeholder perspective, tax revenue realization reached 80.93% of the target, while gross tax revenue growth reached 87.86%. From the customer perspective, monthly payment supervision reached 85.44%, while strategic taxpayers' payment compliance reached 80.00%. In contrast, several internal process and learning-and-growth indicators exceeded their targets, including examination and assessment effectiveness at 120%, material compliance supervision effectiveness at 120%, and organizational and human resource management quality at 119.67%. These differences should not be interpreted as direct evidence of poor individual employee performance because organizational outcomes are influenced by multiple external factors. Nevertheless, they provide an important organizational context for examining the internal factors associated with employee performance.

Research on digital transformation also suggests that the relationship between technology and performance is not necessarily straightforward. Kraus et al. (2021) describe digital transformation as a multidimensional phenomenon with consequences at organizational, environmental, and institutional levels. Meanwhile, Trenerry et al. (2021) emphasize that individual-level factors, including skills, training, technology acceptance, and adaptability, are important components of successful digital transformation. From this perspective, service digitalization and employee competence can be considered complementary factors in explaining performance. Technology provides the work environment and instruments, whereas employee competence determines the extent to which these resources can be effectively utilized to produce high-quality work outcomes.

Despite the growing literature on digital transformation, competence, and employee performance, an important research gap remains. Previous studies have predominantly examined the direct effects of digital transformation or employee competence on performance, while digital literacy has often been treated as a direct predictor or as part of a mechanism explaining the relationship between technology and work outcomes. For example, Ochoa Pacheco and Coello-Montecel (2023) examined psychological empowerment as a mediating mechanism between digital competencies and job performance. Similarly, workplace digital transformation research has often addressed technology, employee skills, and adaptability as separate dimensions. This leaves an opportunity to examine digital literacy as a boundary condition that changes the strength of the relationship between service digitalization and employee performance as well as between employee competence and performance.

Addressing this research gap, the present study integrates service digitalization and employee competence into a single model to explain employee performance while positioning digital literacy as a moderating variable. This approach differs from studies that focus exclusively on the direct effects of technology or competence on performance. The study also provides a distinctive empirical context because it investigates employees at the Bandar Lampung Medium Tax Office, an organizational unit operating within a tax administration environment undergoing increasingly integrated digital transformation. The research model specifically examines whether employees' digital literacy strengthens the effects of service digitalization and employee competence on employee performance.

Accordingly, this study aims to examine the effects of service digitalization and employee competence on employee performance at the Bandar Lampung Medium Tax Office and to investigate the moderating role of digital literacy in both relationships. Theoretically, this study is expected to contribute to the literature on human resource management and digital transformation in public-sector organizations by positioning digital literacy as a boundary condition that may strengthen or weaken the relationship between organizational resources and employee performance. Practically, the findings are expected to provide a basis for developing employee competencies, strengthening digital literacy, and optimizing digital service utilization to support employee performance within the tax administration environment.

Tax Service Digitalization

Tax service digitalization refers to the utilization of digital technology to support and improve service delivery, administration, supervision, data management, and other taxation-related activities. Digitalization is not merely a transition from manual procedures to electronic systems but also involves transforming work processes so that organizational activities can be performed more rapidly, accurately, efficiently, and in an integrated manner. Vial (2019) explains that digital transformation involves changes resulting from the adoption of digital technologies that may reshape how organizations operate and create value. Verhoef et al. (2021) further explain that digital transformation is a multidimensional process involving technology, business processes, organizational structures, and value creation. In the public sector, Escobar et al. (2023) found that successful digital transformation is influenced by technological, organizational, process-related, and human-resource factors. Therefore, tax service digitalization can be viewed as an organizational effort to utilize digital technologies in an integrated manner to improve service quality and employee work processes.

In this study, tax service digitalization is positioned as a factor that may influence employee performance at the Bandar Lampung Medium Tax Office. The thesis underlying this research measures service digitalization through five dimensions: ease of access, process speed, information accuracy, system integration, and work-process efficiency. Ease of access refers to the extent to which employees can obtain the applications, data, and information required for their work. Process speed concerns the ability of digital systems to accelerate task completion, while information accuracy reflects the reliability and correctness of information generated by the system. System integration refers to the interconnectedness of applications, data, and work processes, whereas work-process efficiency reflects the ability of technology to reduce time, effort, and manual activities. Digitalization that effectively fulfills these five aspects is expected to assist employees in performing their tasks more efficiently and productively. This argument is consistent with Verhoef et al. (2021), who emphasize the importance of integrating technology with business processes, and Escobar et al. (2023), who demonstrate that public-sector digital transformation requires alignment among technology, processes, organizations, and human resources.

Employee Competence

Employee competence refers to the capabilities possessed by individuals to perform their work in accordance with job requirements and organizational standards. Competence is not limited to an individual's level of knowledge but also includes skills, problem-solving abilities, work attitudes, and experience acquired through professional activities. Competence represents an important organizational resource because employees' capabilities determine the extent to which tasks can be performed effectively. Salman et al. (2020) demonstrated that employee competence is associated with organizational performance because individual capabilities can contribute to organizational objectives. Xu et al. (2022) similarly found that human capital constitutes an important element associated with individual performance, including both task performance and contextual performance. Therefore, competence can be regarded as a form of human capital that provides employees with the ability to respond to job demands and produce outcomes consistent with organizational objectives.

In public organizations experiencing technological and business-process changes, employee competence becomes increasingly important. Employees in tax administration require not only knowledge of taxation regulations and procedures but also the ability to use information systems, process information, solve problems, and adapt to changes in work systems. Based on the thesis, employee competence is measured through five dimensions: knowledge, skills, abilities, work attitudes, and experience. Knowledge concerns mastery of tasks, regulations, procedures, and work-related information. Skills refer to technical capabilities in performing tasks, while abilities represent the capacity to analyze problems and develop solutions. Work attitudes include responsibility, commitment, integrity, and discipline, whereas experience reflects knowledge and learning gained through work activities. Stronger competence enables employees to complete tasks more accurately, effectively, and independently. The findings of Salman et al. (2020) and Xu et al. (2022) support the view that employee competence and human capital are associated with employee performance.

Digital Literacy

Digital literacy refers to an individual's ability to access, understand, evaluate, utilize, and communicate information through digital technologies appropriately in order to support specific activities. Digital literacy encompasses more than the ability to operate technological devices. It includes the ability to locate information, understand its content, assess its credibility, use digital technologies to accomplish tasks, and communicate through digital media. Van Laar et al. (2020) explain that digital skills required in contemporary work environments include information management, communication, collaboration, and problem-solving capabilities. They further emphasize that digital skills should be understood in relation to occupational requirements and changes in the work environment. Digital literacy can therefore be understood as an individual capability to use digital technology and information effectively so that technology can generate practical benefits for work activities.

Within increasingly digitalized tax administration, digital literacy represents an important capability for employees. Employees are expected not only to operate applications but also to understand information, evaluate its accuracy, utilize digital technologies to complete tasks, and communicate through digital platforms. Based on the thesis, digital literacy consists of five dimensions: access to digital information, understanding of digital information, evaluation of digital information, utilization of digital technology, and digital **communication**. In this study, digital literacy is positioned as a moderating variable because employees' digital capabilities are expected to determine the strength of the relationship between service digitalization and employee competence on employee performance. Employees with stronger digital capabilities are expected to integrate technology more effectively with their existing competencies, allowing the benefits of digitalization to be translated into improved work outcomes. Abas et al. (2020) found a relationship between digital literacy and employee performance in a technologically changing work environment, while Fahmi et al. (2023) highlighted the importance of digital capabilities and attitudes in organizational digital transformation. Therefore, digital literacy plays a strategic role in helping employees adapt to technology-based work environments.

Employee Performance

Employee performance refers to the level of work achievement demonstrated by individuals in carrying out the duties and responsibilities assigned by an organization. Performance does not merely indicate the amount of work completed but also encompasses the quality of work outcomes, timeliness, effectiveness in utilizing resources, and employees' ability to perform tasks independently. In public organizations, employee performance is particularly important because individual work outcomes contribute to organizational objectives and the quality of services delivered to society. Xu et al. (2022) found that human capital, social capital, and psychological capital can contribute to task performance and contextual performance. This finding indicates that employee performance is influenced by multiple factors originating from both individual capabilities and the organizational environment. In addition, Prasetya et al. (2026), through a systematic literature review, identified employee performance as an important outcome associated with digital literacy, employee engagement, work–life balance, and training and development in modern work environments.

In this study, employee performance represents the dependent variable used to assess the work achievements of employees at the Bandar Lampung Medium Tax Office. Based on the thesis, employee performance is measured through five dimensions: work quality, work quantity, timeliness, effectiveness, and independence. Work quality concerns accuracy and conformity with established standards. Work quantity reflects the amount of work completed, while timeliness refers to employees' ability to complete tasks within specified deadlines. Effectiveness concerns the ability to utilize resources to achieve predetermined outcomes, whereas independence refers to employees' ability to complete tasks without excessive dependence on other parties. In an increasingly digitalized work environment, employee performance is also associated with employees' ability to utilize technology and adapt to changing work processes. Therefore, this study positions service digitalization and employee competence as factors that may improve employee performance, while digital literacy is expected to strengthen these relationships

Framework

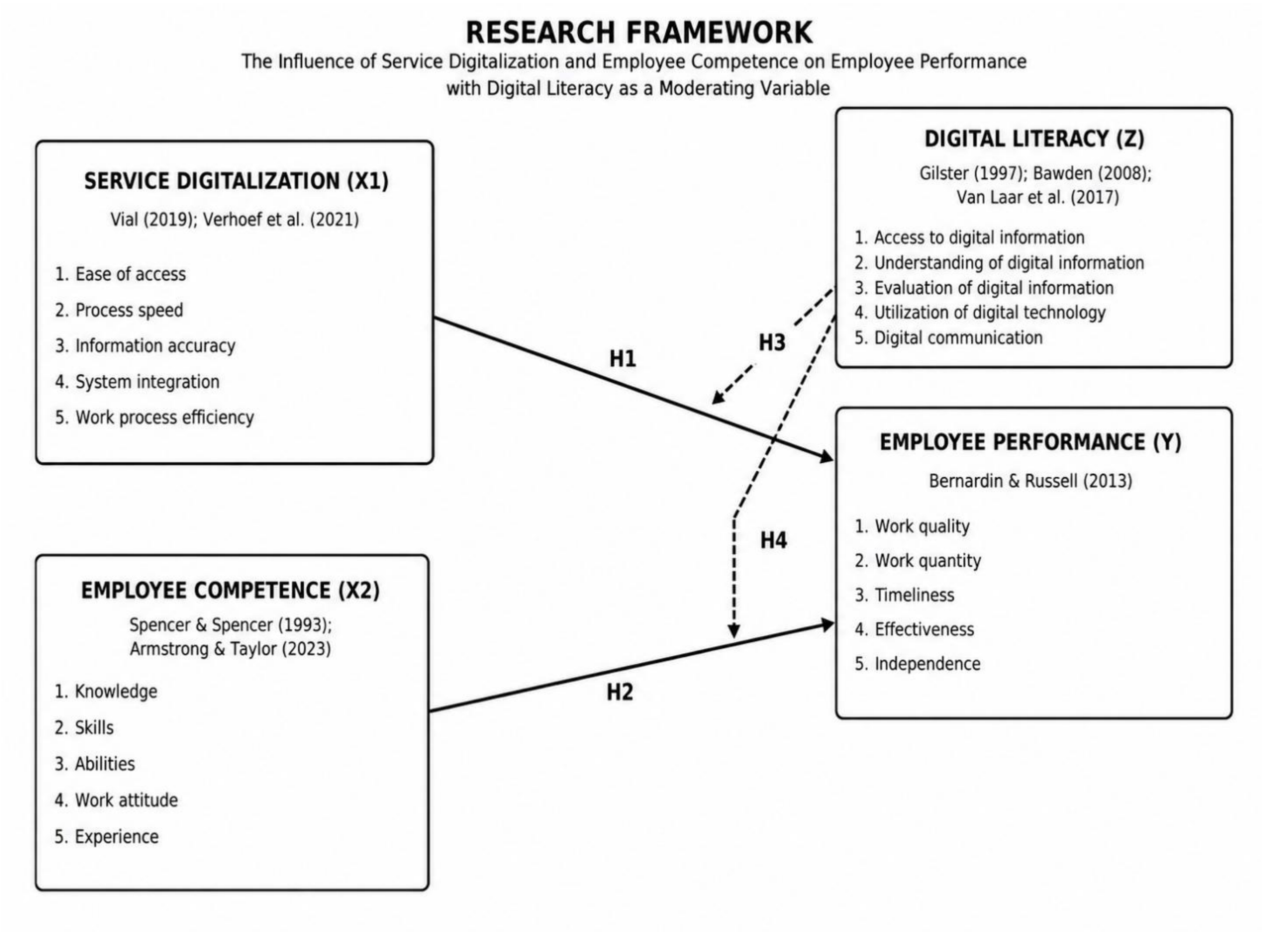

Figure 1. Framework

Hypothesis

H1: Service digitalization has a positive and significant effect on employee performance at the Bandar Lampung Medium Tax Office.

H2: Employee competence has a positive and significant effect on employee performance at the Bandar Lampung Medium Tax Office.

H3: Digital literacy moderates and strengthens the effect of service digitalization on employee performance at the Bandar Lampung Medium Tax Office.

H4: Digital literacy moderates and strengthens the effect of employee competence on employee performance at the Bandar Lampung Medium Tax Office**.**

B. RESEARCH METHODOLOGY

This study employed a quantitative explanatory research design to examine the effects of service digitalization and employee competence on employee performance, with digital literacy serving as a moderating variable. The research was conducted at the Bandar Lampung Medium Tax Office (KPP Madya Bandar Lampung), which was selected because the institution has implemented digital-based taxation services that require employees to adapt to technological developments and changes in work processes. The study population consisted of 58 employees who had worked at the institution for more than one year. Because the population was relatively small and accessible in its entirety, a saturated sampling technique was applied, resulting in 58 respondents. Primary data were collected through a structured questionnaire using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

The study examined four constructs, namely service digitalization (X1), employee competence (X2), digital literacy (Z), and employee performance (Y). Service digitalization was measured through accessibility, process speed, information accuracy, system integration, and work-process efficiency. This conceptualization is consistent with Verhoef et al. (2021), who emphasize that digital transformation involves not only technological adoption but also changes in organizational processes and value creation. Employee competence was assessed through knowledge, skills, ability, work attitude, and experience. The importance of employee competencies for organizational outcomes has also been demonstrated by Salman et al. (2020), who found that employee competencies contribute to organizational performance.

Digital literacy was operationalized through digital information access, information understanding, information evaluation, digital technology utilization, and digital communication. These dimensions reflect the broader concept of digital skills, which encompasses the ability to access, process, evaluate, and use digital information effectively in work contexts (van Laar et al., 2017). Employee performance was measured through work quality, work quantity, timeliness, effectiveness, and independence. This conceptualization is supported by Xu et al. (2022), who demonstrate the relevance of employee-related capabilities and job performance in explaining individual work outcomes. Each variable consisted of ten measurement items, resulting in a total of 40 questionnaire statements.

The data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 4. This analytical technique was selected because the proposed model contains latent constructs and moderation relationships. The analysis consisted of descriptive statistics, evaluation of the measurement model (outer model), evaluation of the structural model (inner model), direct-effect hypothesis testing, and moderation analysis. The measurement model was assessed through outer loadings, Average Variance Extracted (AVE), composite reliability, Cronbach's alpha, and discriminant validity using the Heterotrait–Monotrait Ratio (HTMT). The structural model was evaluated using variance inflation factor (VIF), coefficient of determination (R^2), effect size (f^2), path coefficients, PLSpredict, and Cross-Validated Predictive Ability Test (CVPAT).

Hypothesis testing was performed using the bootstrapping procedure in SmartPLS 4. Statistical significance was assessed at the 5% level, with a relationship considered significant when the t-statistic exceeded 1.96 and the p-value was below 0.05. The direct effects tested were the effects of service digitalization and employee competence on employee performance. Moderation analysis was conducted by creating two interaction constructs, namely service digitalization × digital literacy and employee competence × digital literacy. A significant positive interaction coefficient indicates that digital literacy strengthens the relationship between the corresponding independent variable and employee performance, whereas a significant negative coefficient indicates a weakening effect.

C. RESULTS AND DISCUSSION

The Effect of Service Digitalization on Employee Performance

The empirical results demonstrate that service digitalization contributes positively and significantly to employee performance. From the perspective of the Resource-Based View, digital technology and information systems can function as strategic organizational resources when they are effectively utilized to support and improve work processes. In relation to digital transformation, Verhoef et al. (2021) emphasize that the adoption and integration of digital technologies can reshape organizational processes, enhance operational efficiency, and facilitate better coordination in organizational activities.

The findings are also consistent with previous studies conducted by Ferliansyah et al. (2026), Atobishi et al. (2024), and Nuraini et al. (2024), which identified a positive association between digital capabilities or digital transformation and employee or organizational performance. At the Bandar Lampung Medium Tax Office, service digitalization received a high overall assessment and generated a moderate effect size. This suggests that the availability of digital systems contributes to facilitating employees' tasks; nevertheless, the effectiveness of these systems remains influenced by employees' capacity to interpret information and appropriately act upon the outputs generated by the systems.

The Effect of Employee Competence on Employee Performance

The analysis reveals that employee competence has the most substantial direct contribution to employee performance among the variables examined. This finding is compatible with Human Capital Theory, which regards knowledge, skills, experience, and work-related attitudes as important forms of human capital that can enhance individual productivity. It is likewise consistent with the competency framework proposed by Spencer and Spencer, which explains that underlying individual characteristics influence an individual's ability to achieve effective work outcomes.

The empirical evidence is in accordance with the findings of Chaedir et al. (2024), Ismiyati et al. (2025), Pramudito and Wardaningrum (2025), and Sulaiman et al. (2025). Within a tax administration environment, employees require adequate competence to interpret taxation regulations, process and analyze data, handle work-related problems, and formulate decisions within their responsibilities. Accordingly, technological systems should not be viewed as substitutes for employee competence. Instead, technology functions as an instrument that enables employees to apply their knowledge and skills in a more organized, efficient, and timely manner.

The Direct Effect of Digital Literacy on Employee Performance

The results confirm that digital literacy has a positive and statistically significant relationship with employee performance. This finding indicates that employees who are capable of locating, comprehending, assessing, and utilizing digital information are better positioned to perform their responsibilities within an increasingly technology-oriented workplace. The result supports the findings of Indriyani et al. (2025), as well as those of Mujtahidin et al. (2025) and Javed and Nayyar (2025), which demonstrate the relevance of digital literacy and digital competencies to employee work outcomes.

Although the average digital literacy score of 4.000 was categorized as high, it remained lower than the average scores of the other constructs in the study. Within the digital literacy construct, indicator Z.2 obtained the lowest mean score. This indicator reflects employees' ability to utilize multiple digital information sources in performing their duties. The finding suggests that opportunities for further improvement remain, particularly in employees' capacity to identify appropriate digital sources, assess the relevance of available information, and apply the information effectively to their respective work responsibilities.

The Moderating Role of Digital Literacy in the Relationship Between Service Digitalization and Employee Performance

The statistical testing did not provide sufficient evidence to support H3. Thus, digital literacy was not found to significantly modify the relationship between service digitalization and employee performance. However, this result should not be interpreted as evidence that digital literacy has no relevance to employee performance, because its direct relationship with performance was found to be significant. Rather, the results indicate that the contribution of service digitalization to employee performance does not differ sufficiently across varying levels of digital literacy within the observed sample.

This result may be understood in light of several characteristics of the research setting. Digital work systems within government institutions are generally implemented through standardized procedures, meaning that employees are expected to follow relatively similar operational mechanisms. In addition, both service digitalization and digital literacy obtained high average scores, which may have limited the variability required to produce a statistically detectable interaction effect. The statistical power associated with H3 was also 0.411. Nevertheless, these explanations should be viewed as contextual interpretations of the findings rather than as causal determinants because they were not directly examined in the research model.

The simple-slope analysis indicated that the relationship between service digitalization and employee performance was significant among employees with high digital literacy but was not significant among those with low digital literacy. Nevertheless, because the overall interaction coefficient was statistically insignificant, this pattern cannot be used as sufficient evidence to confirm the moderation hypothesis. Instead, the observed pattern may serve as an indication for future research involving larger samples or greater variation in digital literacy.

The Moderating Role of Digital Literacy in the Relationship Between Employee Competence and Employee Performance

The findings support H4, indicating that digital literacy significantly enhances the contribution of employee competence to employee performance. In other words, employees' professional knowledge and skills are more effectively translated into superior work outcomes when they possess adequate abilities to operate digital technologies, process digital information, and communicate through digital work environments.

This finding provides additional support for the Human Capital Theory and Resource-Based View by demonstrating that professional competence and digital capability can complement one another. Employee competence constitutes an important form of human capital, whereas digital literacy provides an enabling capability through which such human capital can be utilized more effectively in technology-supported work processes. Since both the direct effect of digital literacy and the interaction between digital literacy and employee competence were statistically significant, digital literacy can be characterized as a quasi-moderating variable. This finding is in line with Sulaiman et al. (2025), who emphasize the importance of integrating professional competencies with digital capabilities to improve employee work outcomes.

Relationship Between Research Findings and Organizational Conditions

The proposed research model accounts for 65.90% of the variation in employee performance based on respondents' assessments. Among the predictors, employee competence made the greatest contribution, followed by service digitalization and the interaction between employee competence and digital literacy. The PLSpredict assessment produced positive Q^2_predict values across the employee performance indicators, while the prediction errors generated by the PLS-SEM model were lower than those produced by the linear benchmark. Furthermore, the CVPAT results demonstrated that the proposed model performed significantly better than both the indicator-average and linear-model benchmarks. These results imply that efforts to improve employee performance should extend beyond technological investment and include the systematic development of professional competence and job-relevant digital literacy.

Nevertheless, the findings should not be interpreted as indicating that improvements in service digitalization, competence, or digital literacy will directly and automatically increase tax-revenue achievement. Individual employee performance represents only one component of broader organizational performance. Tax revenue may also be influenced by various external and institutional factors, including economic conditions, taxpayer characteristics, and changes in taxation policies. Accordingly, the practical implications of this research are more appropriately directed toward strengthening employee capabilities and improving internal work processes rather than directly attributing changes in tax revenue to the variables investigated in this study.

D. CONCLUSION

1. Service digitalization has a positive and significant effect on employee performance (β = 0.324; t = 2.775; p = 0.0055). Thus, H1 is accepted, indicating that better utilization of digital services is associated with higher employee performance.
2. Employee competence has a positive and significant effect on employee performance (β = 0.431; t = 4.278; $p < 0.001$). Thus, H2 is accepted, with competence serving as the strongest direct predictor of employee performance.
3. Digital literacy does not significantly moderate the effect of service digitalization on employee performance. Although the interaction coefficient is positive, the statistical evidence is insufficient to confirm that higher digital literacy consistently strengthens this relationship.
4. Digital literacy significantly strengthens the effect of employee competence on performance (β = 0.380; t = 3.153; p = 0.0016). Thus, H4 is accepted, and because its direct effect on performance is also significant, digital literacy functions as a quasi-moderator in the competence–performance relationship.

E. IMPLICATION

1. Theoretical Implications
   The findings support the Resource-Based View (RBV) and Human Capital Theory in the context of tax administration. Employee competence is the strongest predictor of performance, while digital literacy serves as a complementary capability that strengthens the effect of competence on performance. Meanwhile, the non-significant H3 indicates that the moderating role of digital literacy is context-dependent, particularly in standardized digital work environments.
2. Managerial Implications
   The Bandar Lampung Medium Tax Office should prioritize employee competence development through tax knowledge, analytical skills, problem-solving, and work experience. These efforts should be accompanied by digital literacy training covering information management, data analysis, and digital communication. Program effectiveness can be evaluated through training outcomes, work ompletion time, error rates, and internal performance indicators such as RAJA 329.

F. SUGGESTION

1. **Recommendations for KPP Madya Bandar Lampung and the Directorate General of Taxes**
   KPP Madya Bandar Lampung and the Directorate General of Taxes are advised to map competency requirements according to employees' positions and job responsibilities and develop case-based training in tax supervision, taxpayer services, auditing, collection, and data analysis. Digital literacy programs should also be strengthened by covering system utilization, digital information retrieval, data quality assessment, analytical tools, and digital communication. Particular emphasis should be placed on the ability to utilize various digital information sources, as this indicator received the lowest average score. These initiatives can be supported through internal mentoring, application clinics, and knowledge-sharing forums, with their effectiveness evaluated based on reduced work completion time, fewer errors, and improved work quality and performance.
2. **Recommendations for Employees**
   Employees are encouraged to continuously enhance their substantive knowledge and digital skills through self-directed learning and relevant training. Learning activities should focus on utilizing work-related digital features, understanding data sources, maintaining information security, and transforming system-generated outputs into reliable analyses and accountable work decisions.
3. **Recommendations for Future Researchers**
   Future research should involve several Medium Tax Offices, Primary Tax Offices, or Large Taxpayer Offices to capture greater organizational and user diversity. Based on the current statistical power analysis, future studies examining H3 should consider a sample of approximately 179 respondents to achieve 80% statistical power at a 5% significance level with the same effect size. Researchers are also encouraged to combine questionnaires with objective performance data, supervisor assessments, or operational records and to employ longitudinal or mixed-method approaches to examine employee adaptation, system-use challenges, technostress, organizational support, and digital leadership. Predictive validity should also be assessed using independent samples or different work units. In addition, items X2.1, X2.3, X2.4, X2.7, Z.6, Z.9, and Z.10, which have outer VIF values above 5.00, should be reviewed through pilot testing, expert assessment of content validity, and clearer item formulation to educe redundancy without compromising the theoretical coverage of the constructs.

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