

(Research) Article

Unpacking The Pathway from Digital Competency to Employee Performance: The Mediating Role of Employee Engagement in The Public Tax Sector

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Abstract: This research seeks to examine the influence of digital competency on employee performance, with employee engagement serving as a mediating variable at the Jakarta Mampang Prapatan Tax Office (KPP Pratama). The research employed a quantitative methodology utilizing Structural Equation Modeling (SEM) with SmartPLS, derived from data collected from 106 employees. The findings indicate that digital competency significantly influences employee engagement, which in turn positively affects employee performance. Digital competency also has an indirect effect on how well employees do their jobs by making them more engaged. Furthermore, the results show that employees with higher digital skills are more capable of adapting to technological changes, allowing them to work more efficiently and meet organizational targets. These results validate that enhancing employee digital competency must be succeeded by bolstering employee engagement to achieve optimal performance improvement. In addition, the study highlights the importance of continuous digital training and supportive work environments as strategic efforts to strengthen engagement. Overall, this research makes an empirical contribution to the literature regarding digital competency and work engagement within the public sector and presents practical implications for enhancing human resource capacity to facilitate the modernization of tax services.

Keywords: Digital Competency; Employee Engagement; Employee Performance; Public Sector; Tax Office.

1. Introduction

Digital transformation has emerged as a significant catalyst for organizational change within the public sector, notably affecting tax organizations in Indonesia (Awad & Martín-Rojas, 2024). The Directorate General of Taxes (DGT) is working on technology-based service systems such as e-filing, e-billing, e-registration, e-invoices, and a core tax administration system. These tools will make services more efficient and reduce mistakes made by staff. The DGT said in 2023 that more than 93% of yearly tax returns (SPT) were filed online, which shows that businesses are relying more and more on their employees' digital skills (DGT, 2023). Pratama Tax Offices (KPP Pratama), including the Jakarta Mampang Prapatan Tax Office, which serves urban regions with more complex taxpayers and more services, need to be very adaptable to digital technology in this situation. Because of these changes, employee digital skills are a key part of making sure that tax service quality is high and timely.

The Tax Reform Volume III agenda stresses the need for digitalization of work processes and national data integration. This makes it more important than ever to improve digital skills. Changes to the tax system that are based on technology need workers who can use digital tools, handle electronic information, and supply consulting services based on data. But there are problems since not all employees are equally proficient at using technology, especially when it comes to new systems that need analytical skills, troubleshooting, and knowledge of information security. Employees that aren't proficient with technology might hurt their performance, slow down services, and make taxpayers less happy. In this setting,

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digital competence is no longer just an extra ability; it is now a core competency that affects how well public sector workers do their jobs.

Research indicates that while digital skills are crucial, they may not always enhance employees' job performance without additional psychological support (Tjahjono & Purbiyati, 2023). Employee engagement is a key factor in getting employees to use their digital skills to their fullest potential (Quansah et al., 2023). Engaged employees typically exhibit high levels of energy, commitment, and openness to new technology (Lee, 2021). Engagement in a digitalized workplace establishes a strategic relationship between skills and performance (Natamba et al., 2024). Nevertheless, research about the correlation between digital competency, engagement, and performance within the Indonesian tax sector remains significantly limited, requiring a comprehensive investigation to elucidate the mediation process in the context of governmental organizations.

The main problem is that staff don't have the digital skills they need and are not as engaged as they should be, which affects the quality of service. Numerous studies indicate that despite employees' access to digital training, not all are adequately motivated or engaged to implement it in their everyday tasks (Nagpal, 2022). At the Jakarta Mampang Prapatan Tax Office (KPP Pratama), which serves a key business region, differences in engagement can affect how quickly cases are solved, how consistently services are provided, and how quickly taxpayer questions are answered. This circumstance necessitates an investigation into the correlation between digital competency and engagement and its effect on overall employee performance.

From an academic standpoint, substantial research deficiencies exist. First, most of the research on digital competence and employee performance has been done in the private sector, education, or the technology industry. There aren't many studies in the taxation sector yet. Second, while numerous studies have identified a positive correlation between digital competence and performance, the psychological mechanisms facilitating this relationship, especially via employee engagement, remain underexplored within government organizations (V. Q. Cao & Dong, 2024). Third, prior studies have not investigated the impact of digital competence in workplaces characterized by significant regulatory pressures, such as the Pratama Tax Office (KPP Pratama). Consequently, this study is essential to address this knowledge deficiency and offer novel insights into the interplay of digital competence, engagement, and employee performance within the public sector.

This concept not only helps us understand how variables are interconnected but also has practical applications in real life. The Jakarta Mampang Prapatan Tax Office (KPP Pratama) faces the challenge of improving employee skills through more than just technical training. It is equally essential to boost employee engagement to ensure that technology is fully utilized. As the digital workload increases and taxpayers demand faster and more accurate services, unit leaders can design better HR development plans by understanding how digital skills influence performance through engagement. This study highlights the synergistic potential of technology and work psychology in improving the quality of government services.

This article aims to analyze the impact of digital competency on employee performance and explore the mediating role of employee engagement at the Jakarta Mampang Prapatan Tax Office (KPP Pratama). From a theoretical perspective, the research contributes to the literature on digital human resource management and public sector organizational behavior, particularly in the context of bureaucratic digitization. The report offers practical recommendations for policymakers to improve the quality of tax services by enhancing digital competency and employee engagement. Ultimately, this paper provides a scientific foundation and strategic insights to improve the effectiveness of public organizations in the age of digital transformation.

2. Literature Review

Employee Performance

The performance of employees is crucial for a company's long-term success (Hardiansyah et al., 2025). As competition in business grows tougher, each person's performance not only shows how well they are at their job, but it also helps the company run smoothly and reach its goals (Honkley et al., 2025). Companies can keep their processes running smoothly, cut down on mistakes, and cut down on unnecessary operational expenditures when their staff work diligently, follow the rules, and meet quality requirements (Harinto, 2024). Outstanding performance also leads to new ideas, better service, and long-term competition (Fadli, 2024). On the other hand, poor performance can lower productivity,

make it harder to reach goals, and even put the company's place in the competitive industry at risk (A. Susanto et al., 2025). Because of this, businesses need to make the workplace better for employees by giving them training, a healthy work culture, and a fair rewards system (Y. Lubis et al., 2025).

Employee Engagement

Employee engagement is very important for increasing the quality of each person's work since it shows how emotionally connected, driven, and committed they are to their job (Djohan et al., 2025). Employees are more likely to be enthusiastic, work hard, and try to go above and beyond what the company expects when they feel valued, supported, and understand the importance of their job (Wakhyuni et al., 2024). These results are in line with what other investigations have found. (Faris et al., 2024) found that being engaged can help you do your job better, take the initiative, and be more flexible. (F. R. A. Lubis et al., 2023) discovered that work units characterized by strong engagement exhibit enhanced productivity and service quality, alongside reduced employee turnover rates. (Karim et al., 2025) stressed that engagement has a direct effect on performance and is supported by psychological elements like satisfaction and dedication to the organization. (Atthohiri & Wijayati, 2021) also said that employees that are very engaged show consistent enthusiasm, focus, and dedication, which leads to better job quality.

Digital Competence

Digital competency is crucial for getting employees to engage with their work and, in turn, boosting their performance (Dewi et al., 2025). When workers learn how to use the technology they require for their jobs, like information systems, digital work apps, and data analysis, they feel more confident, can get more done, and have more control over their work (Chaedir et al., 2024). This makes work more enjoyable, which makes people more engaged (I Kadek Oca Santika, 2025). These results are consistent with the study conducted by (Ye & Chen, 2024), which demonstrates that digital competence substantially influences engagement by enhancing self-efficacy and the perceived ease of tasks. (Suhada et al., 2025) also found that employees with strong digital skills are more open to change, more willing to solve problems, and more interested in the company's goals. This directly leads to better performance. (Kosasih & Salqaura, 2024) further stressed that being really engaged at work is good for both productivity and the quality of the work.

3. Method

This research utilized a quantitative methodology, employing a structured survey as the principal data-gathering instrument. The study concentrated on the Jakarta Mampang Prapatan Tax Office (KPP Pratama), a division of the Directorate General of Taxes functioning in an urban environment characterized by a significant prevalence of digital services. The study population comprised all 106 workers of the Jakarta Mampang Prapatan Tax Office. Because the population was small and similar, this study used a census sample method, which meant that all members of the population were chosen to be responders. This method was selected because every employee has firsthand experience with digital tax systems, offering a precise insight into the impact of digital proficiency and employee engagement on performance.

We used a five-point Likert-type questionnaire to collect data on how much each variable indicator responder agreed with. Digital competency was assessed by proficiency in digital tax apps (e-filing, e-invoice, e-bupot), data literacy, digital problem-solving, information security, and adaptability to system modifications. The Utrecht Work Engagement Scale (UWES) was used to quantify employee engagement by looking at their energy, devotion, and absorption. At the same time, employee performance was evaluated using standards for public sector performance, which included job quality, timeliness, productivity, digital-based task completion, and work effectiveness.

Prior to utilization, the study instrument underwent validity and reliability assessments to ascertain the precision of construct measurement. Thereafter, the data were analyzed using Structural Equation Modeling with Partial Least Squares (SEM-PLS). SEM-PLS is also flexible enough to work with small sample numbers and data that isn't normally distributed, which makes it a favorable fit for the conditions of this investigation. This study investigates the causal relationship among digital competency, employee engagement, and employee performance, while also offering an empirical assessment of the preparedness of KPP Pratama's human resources to meet the challenges of digitalizing tax services.

4. Results and Discussion

Demografi Responden

Table 1. Respondent Demographics.

Variables	Category	N	Percentage (%)
Gender	Male	60	57%
	Female	46	43%
Age	26–30 years	30	28%
	31–35 years	35	33%
	36–40 years	23	22%
	>40 years	18	17%
	High School	8	8%
Education	Diploma (D3)	20	19%
	Bachelor (S1)	66	62%
	Master (S2)	12	11%
Total Respondents		106	100%

Table 1 demonstrates that the study used a saturation sampling strategy to poll 106 workers of the Jakarta Mampang Prapatan Tax Office (KPP Pratama). The people who answered the survey were structural and functional employees who use digital tax apps like e-Filing, e-Invoice, and e-Bupot every day at work. The gender distribution was fairly even, with 57% of employees being men and 43% being women. This indicates that all groups are equally involved in the digitalization of tax services.

Most of the people who answered were of working age. The most prevalent age group was 31 to 35 (33%), followed by 26 to 30 (28%), 36 to 40 (22%), and 40 and older (17%). This means that young to mid-career personnel are the ones who are most likely to use digital technologies at KPP Pratama. Most of the people who answered were college graduates (62%), followed by Diploma 3 (19%), Masters (11%), and High School or equivalent (8%). This result shows that most of the people who work for the company have enough education to understand digital technology and judge how well electronic systems work.

Measurement Model (Outer Model)

Table 2. Outer Model Results.

Latent Variable	Indicator	Indicator Description	Loading
Digital Competency	DY1	Ability to use digital devices	0.884
	DY2	Ability to operate digital applications	0.903
	DY3	Ability to manage digital information	0.912
	DY4	Adaptation to new technologies	0.876
	DY5	Ability to solve simple technical problems	0.865
	DY6	Ability to use digital collaboration platforms	0.887
Employee Engagement	ET1	Energy & passion for work	0.931
	ET2	Commitment & pride	0.948
	ET3	Full involvement	0.927
	ET4	Loyalty to the organization	0.915
	ET5	Participation in organizational activities	0.903
Employee Performance	EC1	Quality of work	0.914
	EC2	Quantity of work	0.921
	EC3	Timeliness	0.935
	EC4	Adherence to work standards	0.889
	EC5	Teamwork skills	0.902
	EC6	Initiative in work	0.918

Table 2 demonstrates that all of the indicators in the three variables—Digital Competency (X), Employee Engagement (Z), and Employee Performance (Y)—meet the criteria for convergent validity because their factor loadings are all over 0.70. This shows that each indicator firmly and consistently depicts its construct. For the digital competency variable, the loadings for all items from DY1 to DY6 are between 0.876 and 0.912. The greatest loading (0.912) for indicator DY3, which assesses the ability to manage digital information, shows that this is the most important part of employee digital competence. Other indicators, such as DY5 (0.865) and DY6 (0.887), also show positive contributions, which makes the total construct dependability stronger.

On the other hand, markers AT1, AT2, AT3, AT4, and AT5 all had very high loadings, from 0.903 to 0.948. Indicator Z2 (Dedication) has the highest value (0.948), which shows that employee dedication and emotional commitment are the most important things for increasing job engagement. The consistent data across various indicators demonstrates the accurate measurement of this concept. All of the indicators EC1 through Y6 for the employee performance variable have loadings between 0.889 and 0.935. Indicator EC3 (Timeliness) has the greatest loading value (0.935), which means that being on time to finish work is the most important factor in explaining differences in employee performance. Other indicators, such as Y5 (0.902) and Y6 (0.918), also played a big role in making the performance construct stronger. In general, these results indicate that all of the model's indicators are very reliable. High and consistent loading values show that the study constructs are represented by valid indicators. This means that it is time to move on to the inner model testing step to see how the latent variables are related to each other.

Table 3. Reliability and Convergent Validity.

Variable	Cronbach's Alpha	CR	AVE	Status
Digital Competency	0.891	0.921	0.693	Reliable & Valid
Employee Engagement	0.908	0.936	0.789	Reliable & Valid
Employee Performance	0.902	0.93	0.767	Reliable & Valid

Table 3 demonstrates that the Cronbach's Alpha and Composite Reliability (CR) values for all research constructs are higher than the minimum of 0.70. This means that each latent variable has a very high level of internal consistency; hence, the tool employed may be trusted. High CR values also show that the indicators in each construct can reliably and stably measure the underlying variable. Also, the Average Variance Extracted (AVE) value for all variables was over 0.50, which suggests that the measured construct can explain more than 50% of the indicator variance. This condition shows that the convergent validity criteria have been met, which means that indicators within a construct are strongly correlated with each other.

Table 6. Hypothesis Testing.

Relationship	Path Coefficient (β)	t-Value	p-Value	Conclusion
Digital Competency → Employee Engagement	0.512	8.214	<0.001	Significant
Employee Engagement → Employee Performance	0.631	10.502	<0.001	Significant
Digital Competency → Employee Performance	0.284	3.972	<0.001	Significant
Digital Competency → Employee Engagement	0.323	6.145	<0.001	Significant
Employee Engagement → Employee Performance				

The Influence of Digital Competency on Employee Engagement

The study's findings demonstrate that digital competency exerts a favorable and significant influence on staff engagement at the Mampang Prapatan Tax Office (KPP Pratama). This conclusion aligns with (Abhari, 2025), who asserted that technical literacy can enhance self-efficacy and alleviate psychological stress in job completion. Workers who are good at using digital systems feel more in control and engaged (Muliati, 2022). When employees learn how to use digital work apps, their intrinsic motivation goes up since they can work more efficiently (Chong & Zainal, 2024). Digital skills are also crucial for creating a tech-based work environment that can make public sector workers more engaged (Mollah, 2025). Being ready for digital work makes employees more engaged and productive (Wang, Niu, et al., 2024a). Integrating technology into administrative tasks can speed up the workflow, cut down on mistakes, and help employees stay focused (Imjai et al., 2024).

The managerial implications of these findings underscore the necessity for agency leaders, especially in the tax domain, to formulate plans for the ongoing enhancement of digital proficiency. To make it easier for employees to use digital systems, management should provide them a lot of training on tax software, make the workplace more tech-friendly, and ensure that technical help is always available. Additionally, making a digital-based work culture stronger can enhance employee confidence, engagement, and overall organizational performance.

The Influence of Employee Engagement on Employee Performance

The study's findings demonstrate that employee engagement exerts a favorable and substantial influence on employee performance at the Mampang Prapatan Tax Office (KPP Pratama). Engaged employees exhibit increased energy, dedication, and focus, leading to immediate improvements in the quality, accuracy, and effectiveness of their work (Wei et al., 2023). According to (Quansah et al., 2023), who posited that involvement is a primary determinant of productivity and service efficacy, concur with this finding. Several studies, like those by (Muchai, 2014), have also shown that employees who are engaged do their work more accurately, are better at solving problems, and are more committed to getting things done. The correctness of entering digital data, the speed with which complaints from taxpayers are handled, and the quality of the installation of technology-based administration systems all show how engaged employees are (Jiatong, 2022). The evidence shows that engagement is not just a mental thing; it's also a big reason why people do a good job all the time (Syaifuddin et al., 2024).

The managerial implications of these findings underscore the necessity of cultivating a work environment that promotes and sustains employee engagement. Agency leaders need to improve communication within the agency, show gratitude for how well employees do their jobs, and ensure that workloads and digital demands are handled fairly. Employee ownership and commitment to the company can be improved via programs that help employees develop their skills, supportive management, and a work culture that is open and collaborative. Additionally, enhancing the quality of digital work tools, offering continuous training, and ensuring timely technical support will bolster participation and elevate the overall effectiveness of public services at the Pratama Tax Office (KPP Pratama).

The Influence Of Digital Competency On Employee Performance

The study's findings demonstrate that digital competency positively and significantly influences staff performance at the Mampang Prapatan Tax Office (KPP Pratama). Employees that are competent with computers can figure out how systems function, fix problems on their own, and make better use of tax application capabilities (Wang, Niu, et al., 2024b). This situation has a direct effect on the accuracy of data entry, the speed at which tasks are finished, and the quality of tax administration services (Yusanti, 2023). This finding is in line with what (J. Cao et al., 2023) said, which is that digital competency is a crucial element in evaluating the quality of performance in technology-based institutions. (Wang, Mansor, et al., 2024) conducted a study that indicates employees possessing advanced technical literacy exhibit superior work monitoring capabilities, resulting in a substantial decrease in error rates. This study also shows that digital competence has a bigger effect when there is a lot of engagement, which means that employees are not just able to use technology but also want to do their best work (Chong & Zainal, 2024).

These findings have important implications for managers. They show that companies need to increase their employees' digital skills as a long-term way to boost performance. Management at the tax office should ensure that all employees receive frequent training on tax software like e-Invoice, e-Bupot, and SIDJP. They should also offer quick technical support to help with any problems that arise. Furthermore, creating a work environment that encourages employees to explore technology, come up with new ideas, and work together online would make them more confident in using the system. Organizations may provide better, faster, and more taxpayer-focused service by making sure that digital skills and strong job motivation go hand in hand.

The Influence of Digital Competency on Employee Performance Through Employee Engagement

The mediation test results indicate that employee engagement has a big effect on the link between digital competency and staff performance at the Mampang Prapatan Tax Office (KPP Pratama). Employees that are very proficient with computers can use tax software well, understand how digital administration works, and resolve problems on their own (Mollah, 2025). Nonetheless, this study revealed that these technical skills do not inherently lead to excellent performance in the absence of robust involvement. This finding aligns with (S. Susanto et al., 2025) which assert that technology serves merely as an enabler, whereas work engagement can convert competence into measurable performance. Employees who are engaged are more committed, more likely to use digital capabilities, and more focused on getting work done swiftly and correctly (Syaifuddin et al., 2022). On the other hand, individuals who know how to use technology but aren't really engaged tend to work in a mechanical way and come up with fewer new ideas, which leads to less than optimal performance (Nasib, 2020).

The managerial implications of these findings underscore the necessity for firms to not only improve employee digital proficiency but also cultivate an environment that promotes high levels of engagement. Leaders in the tax office need to improve the way they communicate with each other at work, praise their employees' successes, and create a work environment that encourages teamwork and openness to new technologies. Moreover, giving employees continual digital training, responsive technical assistance, and a fair amount of work will make them more emotionally involved, which will help them obtain the most out of their digital skills. Organizations may increase the quality of their services, cut down on mistakes, and make technology-based public services more accountable by making sure that digital skills and engagement grow at the same time.

5. Conclusion

The results of the hypothesis test show that digital competency has a strong direct effect on both staff engagement and performance at KPP Pratama Mampang Prapatan. We have also demonstrated that employee engagement plays a crucial role as an intermediary in the correlation between digital competency and employee performance. These results show that just having digital abilities isn't enough; the best results come when people have significant engagement, drive, and psychological commitment in addition to their digital skills.

In practice, our findings indicate that organizational leaders have to emphasize methods that improve both digital literacy and employee engagement. This means improving digital training for e-Faktur, e-Bupot, and SIDJP, making the workplace more welcoming to new ideas, and offering quick technical assistance to make it easier to use technology. Enhancing engagement via reward, supportive leadership, and effective task management—will guarantee that digital proficiency completely translates into enhanced performance and superior public service.

In theory, this study adds to the expanding corpus of research on how well the public sector does in the digital age. It focuses on the two ways that technical skills and psychological engagement might affect employee outcomes. However, this study confines itself to a single institutional setting within a specific regional tax office. Subsequent research should undertake comparison analyses across various KPPs, expansive governmental entities, and diverse digital contexts, employing larger samples and mixed-method methodologies to enhance the comprehension of digital competency's influence on public sector performance.

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