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IT CAPABILITY, TECHNOLOGY ACCEPTANCE, AND EMPLOYEE PERFORMANCE IN PUBLIC HOSPITALS

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Abstract: This study investigates the influence of information technology (IT) capability on technology acceptance and employee performance in public hospitals. Technology acceptance is measured through perceived usefulness and perceived ease of use as mediating variables. The sample comprises 200 government hospital employees in Aceh, selected using purposive sampling. Data were collected through a structured questionnaire and analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). The results demonstrate that IT capability positively and significantly affects perceived usefulness, perceived ease of use, and employee performance. Furthermore, perceived usefulness and perceived ease of use both have a significant positive impact on employee performance and act as mediators in the relationship between IT capability and performance. These findings imply that strengthening individual IT skills, ensuring user-friendly systems, and fostering a deeper understanding of technology's benefits should be accompanied by continuous training programs, strong managerial support, and comprehensive digital transformation strategies. Such initiatives are crucial for improving service speed, administrative accuracy, and decision-making quality, thereby enhancing the sustainable performance of employees in the public healthcare sector amid an increasingly dynamic digital environment.

Keywords: IT capability, perceived usefulness, perceived ease of use, employee performance, public hospital

1. Introduction

The rapid development of information and communication technology has transformed organizational management systems, particularly in public institutions that rely on technology to improve efficiency, transparency, and accountability. In Indonesia, government agencies have increasingly adopted digital platforms and information systems to support operational processes and enhance employee performance. The integration of information technology (IT) is expected to strengthen decision-making processes, facilitate the management of state resources, and improve service delivery to the public.

IT capability, which refers to the organization's ability to mobilize and utilize technological resources effectively, plays a crucial role in shaping employees' perceptions and behaviors. According to Bharadwaj (2000), IT capability encompasses tangible resources such as hardware and software as well as intangible resources, including managerial skills and organizational culture. Organizations with strong IT capabilities are more likely to create competitive advantages and sustainable performance outcomes.

The Technology Acceptance Model (TAM), introduced by Davis (1989), highlights that perceived usefulness (PU) and perceived ease of use (PEOU) are critical determinants of technology adoption and subsequent performance outcomes. Perceived usefulness refers to the degree to which individuals believe that using a system enhances their job performance, while perceived ease of use reflects the extent to which they believe the system is free of effort. Both constructs have been widely tested in empirical research and consistently found to influence employee attitudes and productivity.

Several studies support the importance of IT capability in shaping perceptions of usefulness and ease of use, which subsequently influence organizational outcomes. For example, Paganin et al. (2021) found that employee intention to adopt new technologies was strongly influenced by perceived usefulness and ease of use. Similarly, Werder et al. (2022) demonstrated that IT capability enhances organizational agility and employee effectiveness by fostering digital adaptability. More recent evidence from Fu et al. (2023) indicates that enterprise digital capability positively contributes to sustainable employee performance through improved learning and knowledge-sharing processes.

Despite these findings, there remains a research gap in the context of public sector organizations in Indonesia, particularly in government-owned hospitals. Previous studies have predominantly examined private firms and multinational corporations, while limited empirical research has focused on how IT capability, perceived usefulness, and perceived ease of use collectively influence employee performance in public hospitals. Addressing this gap is important given the strategic role of provincial government hospitals in providing health services to the community, which requires both technological competence and high employee performance.

Therefore, this study aims to analyze the effect of IT capability on employee performance with perceived usefulness and perceived ease of use as mediating variables in the context of a provincial government hospital in Aceh. This research is expected to contribute to both theoretical and practical insights regarding digital transformation and human resource optimization in the healthcare sector.

2. Literature Review

IT Capability

IT capability is recognized as a strategic resource that enables organizations to integrate, build, and reconfigure technological assets to support competitive advantage (Bharadwaj, 2000). Recent studies emphasize that IT capability in the public sector enhances service efficiency, organizational agility, and decision-making quality (Werder et al., 2022). In addition, digital capability has been shown to foster sustainable employee performance through improved knowledge sharing and innovation (Fu et al., 2023).

Perceived Usefulness

Perceived usefulness (PU) is one of the central constructs of the Technology Acceptance Model (TAM). It refers to the belief that using a particular system improves job performance (Davis, 1989). Empirical evidence indicates that perceived usefulness positively affects technology adoption and user productivity (Paganin et al., 2021). In government institutions, PU significantly drives employees to adopt digital platforms for improving reporting and accountability (Chen et al., 2023).

Perceived Ease of Use

Perceived ease of use (PEOU) reflects the belief that technology is easy to use and does not require excessive effort (Davis, 1989). Studies show that ease of use strongly influences employees' willingness to embrace new systems (Cosa et al., 2024). Moreover, PEOU has an indirect effect on performance by shaping employees' confidence in their ability to work effectively with digital systems (Jian et al., 2024).

Employee Performance

Employee performance is increasingly linked to the adoption of digital technologies that facilitate task completion, efficiency, and accountability. Recent findings suggest that IT-supported performance improvements are most effective when mediated by employee perceptions of usefulness and ease of use (Fu et al., 2023; Paganin et al., 2021). In the public sector, digital adoption enhances transparency and contributes to more efficient asset management (Rahmawati & Putra, 2024).

3. Method

Research Design

This study adopts a quantitative explanatory research design with the primary objective of testing the causal relationships among IT Capability, Perceived Usefulness, Perceived Ease of Use, and Employee Performance within the context of a provincial government hospital in Aceh Province. The explanatory design is considered appropriate because it not only describes the associations among variables but also tests hypotheses regarding the direction and magnitude of causal effects (Sekaran & Bougie, 2020).

To analyze the proposed model, the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique was employed. PLS-SEM was chosen for several reasons. First, it is particularly suitable for predictive and theory-development research where the relationships among latent constructs are complex. Second, it is robust in handling relatively small to medium sample sizes, which is often the case in organizational and healthcare research. Third, PLS-SEM does not require data to be normally distributed, making it flexible and appropriate for empirical data in real-world settings (Hair et al., 2019; Henseler et al., 2016).

By employing this method, the study is able to test both direct and indirect (mediated) relationships, thereby providing a comprehensive understanding of how IT Capability influences employee performance through the perceptions of usefulness and ease of use. This analytical approach also enhances the predictive validity of the model and ensures that the findings contribute to both theoretical advancement and practical implications in the context of digital transformation in healthcare organizations.).

Population and Sample

The population comprises employees at a provincial government hospital in Aceh, including both medical and non-medical staff who use hospital information systems in their daily activities. A purposive sampling technique was applied, targeting respondents with sufficient experience in using IT-based systems such as electronic medical records, administrative information systems, and digital patient services. Based on Hair et al. (2019), the minimum required sample size was 100–200 respondents, calculated as 5–10 times the number of observed indicators.

Research Instrument and Questionnaire Validation

A structured questionnaire was designed using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The measurement indicators were adapted from validated scales in prior studies:

1. IT Capability: IT infrastructure, IT human capital, IT management (Bharadwaj, 2000; Pavlou & El Sawy, 2006).
2. Perceived Usefulness (PU): belief that hospital information systems improve task performance and service quality (Davis, 1989; Venkatesh & Bala, 2008).

3. Perceived Ease of Use (PEOU): belief that hospital IT systems are easy to use without requiring significant effort (Davis, 1989; Paganin et al., 2021).
4. Employee Performance: quality, timeliness, responsiveness, and effectiveness in hospital services (Campbell & Wiernik, 2015).

Data quality testing procedures included:

1. Validity Test: conducted through convergent validity (loading factor ≥0.70) and discriminant validity using Average Variance Extracted (AVE) and square root of AVE compared to inter-construct correlations.
2. Reliability Test: conducted using Cronbach's Alpha and Composite Reliability with a threshold of ≥0.70 (Hair et al., 2017).

Data Collection Procedures

The survey was administered using both online and offline distribution methods to accommodate the diverse accessibility and preferences of hospital employees. This hybrid approach was intended to maximize response rates and minimize coverage bias, ensuring broader representation across different departments within the hospital.

Prior to full-scale deployment, a pilot test was conducted with 30 respondents to assess the clarity, validity, and reliability of the questionnaire items. Feedback from the pilot study was used to refine question wording, improve response options, and ensure that the instrument accurately captured the constructs under investigation. Reliability and validity checks provided preliminary assurance that the measurement model was robust and suitable for further statistical analysis (Sekaran & Bougie, 2020).

In addition, ethical considerations were strictly observed throughout the research process. Participation in the study was entirely voluntary, and respondents were provided with informed consent detailing the purpose of the research, the anonymity of responses, and their right to withdraw at any stage without penalty. Data confidentiality was maintained by restricting access to the research team and ensuring that all information was reported in aggregate form.

Data Analysis

The collected data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS software. PLS-SEM was selected because it is suitable for predictive modeling, complex structural relationships, and research models with multiple mediating variables, while also being robust with relatively small to medium sample sizes (Hair et al., 2019; Henseler et al., 2016).

The analysis followed a two-stage procedure:

1. Measurement Model (Outer Model) Assessment
   This stage evaluated the quality of the constructs by testing convergent validity, discriminant validity, and construct reliability. Convergent validity was assessed using factor loadings and the Average Variance Extracted (AVE), while discriminant validity was tested using the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratio. Construct reliability was examined through Cronbach's Alpha and Composite Reliability (CR) values to ensure internal consistency.
2. Structural Model (Inner Model) Assessment
   This stage tested the hypothesized causal relationships between variables, specifically the direct and indirect effects of Asset Management Capability and Strategic Orientation on Asset Management Effectiveness through Internal Control Effectiveness. Key indicators included path coefficients, R^2 values to evaluate

explanatory power, and bootstrapping procedures with 5,000 resamples to assess the significance and stability of the estimated parameters.

This systematic analytical approach enabled the study to provide robust evidence regarding both the direct impacts of organizational capabilities and the mediating role of internal control systems in enhancing asset management effectiveness within public sector healthcare institutions.

4. Result and Discussion

Direct Effect Testing

The results of hypothesis testing using SmartPLS 3.0 are presented in Table 1.

Table 1. Path Coefficients

Path Relationship	Original Sample	Std. Dev.	T-statistics	P-values
IT Capability → Perceived Usefulness	0.691	0.045	15.450	0.000
IT Capability → Perceived Ease of Use	0.724	0.046	15.762	0.000
IT Capability → Employee Performance	0.284	0.093	3.054	0.002
Perceived Usefulness → Employee Performance	0.334	0.095	3.499	0.001
Perceived Ease of Use → Employee Performance	0.238	0.095	2.492	0.013

Source: SmartPLS 3.0 Output, 2025

The structural model results (Table 4) demonstrate that IT Capability strongly and significantly influences Perceived Usefulness ($\beta = 0.691$, $t = 15.450$, $p < 0.001$) and Perceived Ease of Use ($\beta = 0.724$, $t = 15.762$, $p < 0.001$). These findings indicate that hospitals with stronger IT infrastructure, skilled human resources, and effective IT management systems are more likely to create positive perceptions among employees regarding the usefulness and ease of hospital information systems.

In addition, IT Capability exerts a significant direct effect on Employee Performance ($\beta = 0.284$, $t = 3.054$, $p = 0.002$). This result suggests that IT resources not only support system adoption but also directly contribute to enhancing the performance of healthcare workers by improving access to patient data, accelerating decision-making, and reducing administrative workload. This is consistent with Pavlou & El Sawy (2006) and Werder et al. (2022), who highlight IT capability as a driver of organizational agility and performance.

Perceived Usefulness significantly affects Employee Performance ($\beta = 0.334$, $t = 3.499$, $p = 0.001$), supporting the Technology Acceptance Model (Davis, 1989). When employees perceive that the hospital system enhances their ability to deliver care and manage administrative tasks, they are more motivated to use it effectively, which ultimately improves performance.

Similarly, Perceived Ease of Use positively impacts Employee Performance ($\beta = 0.238$, $t = 2.492$, $p = 0.013$). Although the effect is weaker compared to Perceived Usefulness, it highlights the importance of system simplicity and usability. As emphasized by Paganin et al. (2021), reducing the complexity of IT systems increases user confidence and encourages consistent utilization in daily hospital operations.

Overall, these findings suggest that IT Capability contributes to Employee Performance both directly and indirectly through Perceived Usefulness and Perceived Ease of Use. In the context of public hospitals, digital transformation initiatives should therefore focus on strengthening IT infrastructure and human capital, while also ensuring that systems are designed to be user-friendly and demonstrably beneficial for healthcare delivery.

Indirect Effect Testing

The mediating role of Internal Control Effectiveness was examined using bootstrapping analysis (Table 2).

Table 2. Mediation Testing Results

Path Relationship	Original Sample	Std. Dev.	T-statistics	P-values
IT Capability → Perceived Usefulness → Employee Performance	0.231	0.067	3.448	0.001
IT Capability → Perceived Ease of Use → Employee Performance	0.172	0.069	2.493	0.013

Source: SmartPLS 3.0 Output, 2025

The bootstrapping analysis indicates the presence of significant indirect effects within the model, particularly highlighting the role of employee perceptions in mediating the relationship between IT Capability and Employee Performance. One of the strongest mediating pathways is through Perceived Usefulness, which demonstrates that reliable IT infrastructure and effective management practices indirectly improve staff performance by shaping employees' beliefs about the benefits of digital systems. When employees perceive hospital technologies such as electronic medical records, administrative platforms, and diagnostic support applications as useful, they are more likely to integrate these tools into their daily tasks, thereby enhancing efficiency and productivity. This finding is consistent with the Technology Acceptance Model (TAM) (Davis, 1989), which emphasizes perceived usefulness as a core determinant of behavioral intention and performance outcomes. Recent studies in healthcare IT adoption also support this, showing that systems perceived as beneficial are more readily accepted and utilized by healthcare professionals (Paganin et al., 2021).

In addition to usefulness, Perceived Ease of Use emerged as another significant mediating factor in the relationship between IT Capability and Employee Performance. Hospitals with well-designed and user-friendly IT systems allow employees to perform tasks with less cognitive and physical effort, reducing barriers to technology adoption. When systems are intuitive and easy to navigate, employees can focus more on patient care and administrative efficiency rather than struggling with technical complexities. Although the strength of this mediating pathway is somewhat weaker compared to usefulness, it remains statistically significant, underscoring its role in shaping user behavior. This result aligns with Venkatesh and Bala (2008), who found that perceived ease of use is essential in promoting user acceptance and ensuring sustained utilization of information systems. In practice, this means that the design and usability of IT systems are just as critical as their technical capabilities.

The findings also highlight an important interaction between usefulness and ease of use, suggesting that these two perceptions work in tandem to maximize the effectiveness of IT Capability. While usefulness tends to have a stronger direct impact on performance outcomes, ease of use provides the necessary foundation that enables employees to realize and consistently leverage the benefits of IT systems. A system that is perceived as useful but

difficult to operate may encounter resistance, while a system that is easy to use but not perceived as beneficial may fail to deliver meaningful improvements in performance. Therefore, both dimensions must be considered simultaneously when evaluating the effectiveness of digital transformation initiatives in government hospitals. This dual role reflects the evolving understanding of TAM, where usefulness and ease of use are complementary drivers of technology-enabled performance improvements.

Taken together, these mediating pathways underscore the notion that IT Capability enhances performance not only through direct technical advantages but also by shaping employee perceptions of technology. The effectiveness of IT investments in government hospitals is maximized when employees perceive hospital information systems as both beneficial and easy to use. This has significant practical implications for hospital management, suggesting that digital transformation initiatives should prioritize not only the procurement of advanced IT infrastructure but also the creation of user-friendly systems supported by adequate training programs. By aligning technical investments with user perceptions, hospitals can foster higher levels of technology acceptance, improve service delivery, and ultimately strengthen employee performance in the public healthcare sector.

5. Conclusions

This study confirms the critical role of IT Capability in improving employee performance within a government hospital in Aceh Province. The results reveal that IT Capability significantly enhances both Perceived Usefulness and Perceived Ease of Use, which subsequently mediate its effect on Employee Performance. Although IT Capability also exerts a direct influence, its impact becomes more substantial when hospital employees perceive digital systems such as electronic medical records and hospital administration applications as beneficial and easy to operate. These findings highlight that the effectiveness of IT investments lies not only in technical infrastructure but also in users' perceptions and experiences.

From a theoretical perspective, the study extends the Technology Acceptance Model (TAM) by providing empirical evidence that both Perceived Usefulness and Perceived Ease of Use function as crucial mediating variables in the healthcare sector. This reinforces the argument that TAM remains a robust framework for explaining technology adoption and performance outcomes, even in public health institutions where structural constraints and compliance requirements are significant. Furthermore, the integration of TAM with the resource-based view (RBV) suggests that IT Capability can be conceptualized not only as a technological asset but also as a strategic organizational resource that shapes behavioral and performance outcomes.

From a practical perspective, the findings emphasize the need for hospital management to prioritize comprehensive IT strategies that go beyond infrastructure investment. Hospitals should ensure that IT systems are designed to be user-friendly, interoperable, and aligned with the daily workflows of medical and administrative staff. Equally important is the continuous training and capacity building of employees to increase digital literacy, reduce resistance to change, and enhance confidence in using IT systems. By doing so, hospitals can maximize the return on IT investments and foster improvements in service quality, efficiency, and patient satisfaction.

Finally, this study also provides a roadmap for future research. Comparative studies across different hospitals or healthcare settings are recommended to validate the generalizability of these findings. Future research could also explore additional variables such as organizational culture, leadership support, change management practices, and digital literacy levels, which may serve as moderators or mediators in the relationship between IT Capability and employee

performance. Longitudinal studies would be valuable to capture the dynamic effects of digital transformation initiatives on healthcare performance over time.

In conclusion, the study underscores that the success of digital transformation in public hospitals is not solely determined by technological investment, but also by how employees perceive and adopt these technologies in their daily work. A balanced approach that combines technical capacity, user-centered system design, and supportive organizational practices is essential to achieving sustainable improvements in healthcare performance.

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