ADVANCES IN HUMANITIES AND CONTEMPORARY STUDIES
e-ISSN: 2773-4781

AHCS

Vol. 6 No. 2 (2025) 83-94
https://publisher.uthm.edu.my/periodicals/index.php/ahcs

Does ICT Adoption Influence Public Service Motivation? The Moderating Roles of Leadership Support and Digital Literacy

Mohammed Lawan Bello[1], Abdulhakeem Adejumo[2], Muslim Akinbola Akintola[1]*, Abdullateef Ameen[1], Jimoh Rafiu Amosa[3], Ahmed Aremu Suleiman[3], Sulu Babaita Isiaka[3], Zulfah Jumoke Abdulkareem[4], Abdulrazaq Kayode Abdulkareem[1]

[1] *Department of Public Administration, Faculty of Management Sciences, University of Ilorin, 1515, Ilorin, NIGERIA*
[2] *Department of Political Science, Federal University, Dutse, Jigawa, NIGERIA*
[3] *Department of Business Administration, Faculty of Management Sciences, University of Ilorin, 1515, Ilorin, NIGERIA*
[4] *Department of Business and Entrepreneurship Kwara State University, Malete, Kwara State, NIGERIA*

*Corresponding Author: abdulkareem.ka@unilorin.edu.ng
DOI: https://doi.org/10.30880/ahcs.2025.06.02.009

Article Info

Received: 07 August 2025
Accepted: 16 August 2025
Available online: 05 December 2025

Keywords

ICT adoption, public sector, e-government, public service motivation, digital literacy, leadership support

Abstract

This study explores the factors influencing the adoption of new technologies in public service organizations, focusing on the role of individual perceptions and organizational support. Using a survey-based approach, the research examines the relationships between Perceived Usefulness, Perceived Ease of Use, Behavioural Intention to Use, Public Service Motivation, Leadership Support, and Digital Literacy. The data was collected from employees of selected Ministries in Kwara State, Nigeria and analysed using PLS-SEM. The findings highlight the significant impact of PU and PEOU on BIU, with both perceived usefulness and ease of use being crucial in shaping employees' intention to adopt new systems. Additionally, leadership support plays a critical role in fostering a positive attitude toward adoption of technology, especially when public service motivation is a driving factor. The study also emphasizes the importance of digital literacy in ensuring that employees possess the necessary skills to effectively use new technologies. These results suggest that public service organizations should adopt a holistic approach to technology implementation, focusing on designing user-friendly systems, providing leadership support, and investing in digital literacy programs. By addressing these factors, organizations can enhance technology adoption, improve employee engagement, and ultimately increase the efficiency and quality of public service delivery. The study offers practical implications for organizations seeking to successfully implement digital systems and drive organizational change.

1. Introduction

The adoption of Information and Communication Technology (ICT) has been widely recognized as a transformative factor in the public sector, improving service delivery, operational efficiency, and communication. The increasing demand for public sector innovation has necessitated the integration of ICT solutions that can streamline processes, enhance transparency, and provide more responsive services to citizens. Governments globally have invested in technology to foster an efficient public service environment. However, the relationship between ICT adoption and Public Service Motivation (PSM) remains underexplored, especially regarding how factors like leadership support and digital literacy may influence this relationship.

Public Service Motivation (PSM) is a psychological construct that describes the intrinsic motivation of public servants to engage in public service work (Chung et al., 2024). PSM emphasizes the desire to serve the public good, a value central to the ethos of many public sector employees (Hue et al., 2022). Prior studies have shown that PSM plays a significant role in determining the behaviour and performance of public servants, influencing their job satisfaction, commitment, and overall effectiveness (Hue et al., 2022). In the context of ICT adoption, public servants with high levels of PSM may be more inclined to embrace technological changes if they perceive these tools as enhancing their ability to serve the public more effectively (Lee et al., 2024).

Despite the recognized potential of ICT to improve public service outcomes, the role of PSM in influencing ICT adoption has not been extensively studied. Previous research has often focused on the technical and organizational aspects of ICT implementation, with limited attention given to the psychological and motivational factors that drive public servants' attitudes toward technology (Abdulkareem et al., 2022). Furthermore, while ICT adoption has been linked to higher organizational efficiency, its effects on public servants' intrinsic motivation and their commitment to public service remain ambiguous. This gap in the literature calls for further investigation into how ICT adoption can either enhance or hinder the motivation of public employees to serve, especially in the public sector context.

One important consideration in this relationship is leadership support. Leadership plays a critical role in shaping the organizational environment in which ICT adoption occurs (Fareed & Su, 2022). Studies have consistently shown that supportive leadership can create an environment that encourages employees to embrace change, including technological innovations (Høstrup & Andersen, 2022). Leaders who provide clear direction, foster a supportive climate, and actively engage with their teams in ICT implementation processes are likely to inspire higher levels of motivation and reduce resistance to technology adoption.

Another important factor influencing ICT adoption is digital literacy. Digital literacy refers to the ability to effectively use technology to solve problems and communicate (AbdulKareem & Oladimeji, 2024). In the public sector, employees with high digital literacy are better equipped to leverage ICT tools for service delivery and may feel more confident in their roles (Daramola & Etim, 2022). As digital literacy increases, public servants may be more likely to adopt ICT systems and utilize them to enhance their motivation to deliver quality public services (Guo, 2023). Therefore, digital literacy is also expected to moderate the relationship between ICT adoption and PSM, as individuals with higher digital literacy are more likely to perceive technology as a tool for enhancing their service delivery and motivation.

While there has been considerable research on ICT adoption in the public sector and motivation theories like PSM, there exists a gap in understanding the specific moderating roles of leadership support and digital literacy in this dynamic. Although ICT adoption is generally seen as a positive development in enhancing public service efficiency, it is not universally embraced by all employees, especially in public sector organizations where resistance to change can be high (Matveieva et al., 2022). Existing literature does not adequately address how leadership and digital literacy can influence the way ICT adoption impacts the motivation of public employees to serve the public good. This study, therefore, aims to bridge this gap by examining these moderating factors.

From a practical perspective, this research has significant implications for public sector management and policy. As governments continue to invest in ICT solutions, understanding how these investments affect employee motivation is crucial. If leadership support and digital literacy are critical moderating factors, policymakers and administrators can tailor their strategies to enhance these factors, ensuring that ICT adoption aligns with the intrinsic motivations of public employees. This alignment could lead to higher levels of job satisfaction, better service delivery, and a more motivated public workforce. Thus, the study will provide valuable insights into how leadership and digital literacy influence the relationship between ICT adoption and public service motivation.

The aim of this study is to explore how ICT adoption influences Public Service Motivation, focusing on the moderating roles of leadership support and digital literacy. Specifically, the study seeks to understand whether these factors enhance the positive effects of ICT adoption on the motivation of public servants. The objectives are to identify the relationship between ICT adoption and PSM, assess the roles of leadership support and digital literacy, and develop a conceptual framework that explains how these factors interact. By addressing these

issues, the study intends to provide both theoretical insights and practical recommendations for public sector organizations seeking to integrate ICT in ways that boost employee motivation and improve public service outcomes.

2. Literature Review

2.1 ICT Adoption in the Public Sector

The adoption of Information and Communication Technology (ICT) in the public sector has garnered significant attention in academic research over the past two decades. ICT adoption refers to the process by which organizations, particularly public institutions, implement and integrate new technological tools into their daily operations to streamline processes, improve decision-making, and deliver more effective services (Asrani, 2022). In the public sector context, this encompasses the adoption of systems that facilitate better communication, enhance internal operations, and improve public service delivery while ensuring greater transparency and accountability (Ziemba, 2021). Governments often view ICT as a catalyst for increased operational efficiency, cost reduction, and meeting the escalating demands of citizens for quicker, more accessible, and user-friendly services. However, despite the potential benefits, the process of adopting ICT is not without its challenges. Studies by Bertot (2010); West (2000) highlight several barriers to successful ICT adoption in the public sector. These barriers include organizational resistance to change, inadequate resources, insufficient training, and the lack of technical expertise. These challenges often result in delayed or unsuccessful implementation, hindering the realization of the intended benefits. Additionally, political and cultural factors, such as government priorities and workforce readiness, further complicate the adoption process, demanding careful consideration of these factors in the planning and execution of ICT initiatives in the public sector. Therefore, we hypothesize that

H1: Perceived usefulness will influence ICT adoption in the public sector
H2: Perceived ease of use will influence ICT adoption in the public sector
H3: ICT adoption will influence Public Service Motivation

2.2 Public Service Motivation

PSM has emerged as a critical concept in understanding the motivations of public sector employees. PSM refers to the intrinsic motivation to serve the public good, often manifested through a deep sense of duty, selfless dedication, and a strong desire to contribute to the welfare of society (Perry, 1996). This motivation is a driving force behind employee behaviour and can significantly influence job performance, job satisfaction, and organizational commitment within public sector organizations. Researchers such as Perry (1996) argue that employees with high levels of PSM are more likely to engage in behaviours that positively impact public service delivery, as their work is motivated by a sense of responsibility and societal contribution. These employees tend to demonstrate a higher degree of dedication, effort, and enthusiasm in their roles compared to their counterparts who lack strong PSM (Bolino & Grant, 2016). However, PSM is not a static trait; it varies based on individual characteristics, such as personal values and experiences, as well as organizational context, such as the leadership style or organizational culture (Witesman et al., 2024). Although the relationship between ICT adoption and PSM remains underexplored, existing literature suggests that the integration of ICT can enhance the motivation of public sector employees. By streamlining processes, improving efficiency, and facilitating better service delivery, ICT can empower employees to better fulfill their public service roles, thus potentially increasing their intrinsic motivation to contribute to societal welfare.

2.3 Leadership Support and ICT Adoption

Leadership plays a pivotal role in driving the successful adoption of ICT in public sector organizations. Studies have consistently highlighted the importance of leadership, particularly transformational leadership, in facilitating the implementation of new technologies (Gacicio et al., 2021). Transformational leaders are characterized by their ability to inspire a shared vision, encourage innovation, and engage actively with employees to ensure their support for organizational change (Rademaker et al., 2023). These leaders are not only change agents but also serve as role models who motivate employees to embrace new technologies by providing guidance and fostering a culture of trust and collaboration. Leaders who demonstrate a clear commitment to technological advancements by allocating resources, offering training opportunities, and providing consistent support are more likely to create a favourable environment for ICT adoption. Research by Jaboob et al. (2023) and Maj (2023) emphasizes the importance of leadership in shaping employee attitudes toward technology. Effective leadership helps reduce resistance to change, which is often a significant barrier in the adoption process. By addressing concerns and demonstrating the tangible benefits of new technologies, leaders can alleviate scepticism and build confidence in the workforce. Moreover, leadership is viewed as a key

moderator that can enhance the positive effects of ICT adoption on organizational outcomes, particularly in areas such as employee motivation, job satisfaction, and performance. Therefore, it is hypothesized that

H4: Leadership support moderates the relationship between ICT adoption and PSM.

2.4 Digital Literacy and ICT Adoption

Digital literacy is another crucial factor influencing ICT adoption in the public sector. Defined as the ability to use technology to perform tasks, solve problems, and engage in communication, digital literacy is a prerequisite for effective technology use. In the public sector, employees with higher digital literacy are better equipped to utilize ICT systems to improve service delivery (Abdulkareem & Ishola, 2016). Digital literacy also enhances employees' confidence in using new technologies, which can foster greater engagement with ICT tools and higher levels of job satisfaction (Park et al., 2021). Study by AbdulKareem and Oladimeji (2024) shows that digital literacy significantly affects technology adoption, as employees with higher digital skills are more likely to view technology as a tool for enhancing their work. Therefore, it is hypothesized that:

H5: Digital literacy moderates the relationship between ICT adoption and PSM

2.5 Conceptual Framework:

The conceptual framework developed for this study integrates the hypotheses and theories discussed. It proposes that ICT adoption positively impacts PSM, with leadership support and digital literacy acting as moderators in this relationship. The framework suggests that public servants with strong leadership support and higher digital literacy are more likely to experience positive motivation outcomes from ICT adoption, leading to more effective service delivery.

3. Theoretical Review

3.1 Public Service Motivation (PSM) Theory

PSM is a concept that was introduced by James L. Perry in the early 1990s and has since become a key theoretical framework for understanding the intrinsic motivations of public servants. According to PSM, employees in the public sector are driven by a desire to contribute to the public good and promote societal welfare (Chung et al., 2024). Unlike employees in the private sector, where financial incentives and individual success may be more prominent, public-sector employees are motivated by public service values such as altruism, a sense of duty, and a commitment to fairness and equality (Perry, 1996).

PSM emphasizes the psychological and emotional commitment public servants have toward their work, as well as the societal impact they strive to make through their professional roles (Witesman et al., 2024). It is seen as a powerful driver of behaviour within the public sector, affecting job satisfaction, organizational commitment, and job performance. High levels of PSM are associated with greater employee engagement, job satisfaction, and a sense of fulfilment from work (Perry, 1996). Public servants with strong intrinsic motivation are more likely to exhibit positive work behaviours, including proactive problem solving and a high level of service delivery (Hue et al., 2022).

In the context of ICT adoption, PSM theory is highly relevant as it suggests that public servants with strong motivation to serve the public good may perceive the adoption of technology as a means to enhance their ability to fulfil this intrinsic purpose (Hong et al., 2022). For example, a public servant who values efficiency and transparency in government services might view the integration of ICT as a tool that enables them to better serve citizens and improve service delivery. Therefore, understanding the intrinsic motivations that drive public servants is crucial for exploring how ICT adoption influences their engagement with new technologies (Chung et al., 2024). Moreover, ICT systems that align with public service values (e.g., improving access to information or enhancing citizen participation) are more likely to resonate with employees who possess high PSM.

Furthermore, PSM theory suggests that motivation in the public sector is not solely extrinsically driven by monetary rewards or promotions, but rather by a deep-rooted desire to make a difference in society. This aligns with the idea that ICT adoption, when framed as an opportunity to enhance public sector efficiency and provide better services to citizens, can positively influence employees' intrinsic motivation (Fareed & Su, 2022). Public servants with strong PSM may embrace ICT adoption not only for personal gain but because they see technology as a means to better fulfil their public duties. Thus, ICT adoption can potentially enhance PSM by making public service work more efficient, effective, and impactful.

3.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis (1989), is one of the most widely used frameworks for understanding technology adoption behaviour. The core premise of TAM is that an individual's decision to accept and use technology is primarily influenced by two factors: perceived ease of use (PEOU) and

perceived usefulness (PU) (Davis & Granić, 2024a). Perceived ease of use refers to the degree to which an individual believes that using a particular technology would be free of effort, while perceived usefulness is the extent to which a person believes that using the technology would enhance their job performance (Davis, 1989).

TAM posits that when users perceive a technology to be easy to use and beneficial to their work, they are more likely to adopt and continue using it (Davis & Granić, 2024b). This model has been widely applied across various contexts, including in the public sector, to examine how employees' perceptions of technology influence their willingness to use new systems or tools (Purbokusumo & Dwi Santoso, 2021). In the case of public servants, the way they perceive the ease of using a new ICT system and its usefulness in improving service delivery can directly impact their willingness to adopt and engage with the technology.

The relevance of TAM in this study lies in its ability to explain how public servants' perceptions of ICT systems might influence their motivation to use them. If public servants perceive that the technology will enhance their efficiency, improve communication with citizens, or streamline administrative processes, they are more likely to view it as a useful tool that aligns with their motivational goals. For instance, a public servant who values efficiency in public service delivery might find an ICT system that automates certain tasks to be extremely useful in enabling them to focus on more complex or citizen-centric activities.

Moreover, TAM suggests that the perceived ease of use of an ICT system plays a crucial role in determining whether employees will adopt and use it. If a new ICT system is seen as cumbersome or difficult to navigate, public servants may resist its adoption, regardless of its potential usefulness. On the other hand, if the system is user-friendly and intuitive, employees are more likely to embrace it, leading to greater adoption rates and potentially enhancing their motivation to use technology in the pursuit of public service goals. This aspect of TAM is particularly important in the context of public sector organizations, where employees may not have the same level of technical expertise as those in the private sector.

TAM also has an important implication for understanding the role of leadership support and digital literacy in the ICT adoption process. Leaders who provide clear communication, proper training, and support for technology implementation can positively influence public servants' perceptions of ease of use and usefulness. When leaders emphasize the value of ICT adoption and align it with employees' intrinsic motivations, they can enhance employees' perceptions of the system's relevance and ease of use. Similarly, public servants with higher digital literacy are likely to perceive new ICT systems as easier to use and more useful in their day-to-day tasks, thereby increasing the likelihood of adoption.

3.3 PSM and TAM: The Nexus

The integration of PSM and TAM provides a comprehensive framework for understanding how ICT adoption can influence public service motivation. PSM theory explains the intrinsic motivations of public servants, while TAM offers insights into how perceptions of technology's ease of use and usefulness can shape adoption behaviour. Together, these theories suggest that the motivation to adopt ICT in the public sector is driven not only by the intrinsic desire to serve the public but also by the perceived benefits of using technology in enhancing public service delivery.

Importantly, the moderating roles of leadership support and digital literacy are crucial in bridging these two theoretical perspectives. Leadership support can enhance the perceived usefulness of ICT by aligning technological tools with employees' intrinsic motivations to serve the public good. Leaders who actively promote technology adoption, provide training, and ensure that systems are aligned with public service values can increase public servants' motivation to embrace new technologies. Meanwhile, digital literacy ensures that public servants are confident in using the technology, which can further enhance its perceived ease of use and usefulness.

By blending PSM and TAM, this study aims to provide a deeper understanding of the factors influencing ICT adoption in the public sector, and how these factors can potentially enhance or hinder public service motivation. Public servants with high levels of PSM may be more likely to adopt ICT if they perceive it as a useful tool for enhancing their ability to serve the public. However, the perceived ease of use, influenced by leadership support and digital literacy, plays a crucial role in determining whether ICT adoption will positively impact motivation.
Thus, these theoretical foundations offer a comprehensive lens through which to examine the relationship between ICT adoption and public service motivation, and the critical factors that can influence this dynamic. By integrating these two theories, this study seeks to provide valuable insights into how technology adoption can be leveraged to enhance motivation in the public sector, leading to better service delivery and more engaged employees.

4. Methodology

The methodology section outlines the research design, variables, data collection process, and analysis techniques used in this study. The approach taken for this research was quantitative, with data gathered from a

structured questionnaire distributed to respondents in selected ministries in Kwara State, Nigeria. The data was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) through SmartPLS 4 software.

The key variables investigated in this study included ICT adoption, Public Service Motivation (PSM), leadership support, digital literacy, and the moderating roles of leadership support and digital literacy in the relationship between ICT adoption and PSM. Items for each of these variables were sourced from existing literature to ensure robustness and validity. For ICT Adoption the items related to ICT adoption were adapted from the Davis (1989). These studies provided established scales for measuring the perceived usefulness and ease of use of technology, which were critical for evaluating the adoption of ICT in public service contexts. For PSM, the items were derived from Perry's (1996) Public Service Motivation scale, which has been widely used in studies of public sector motivation. For leadership support the items were adapted from studies by Avolio & Bass (1991) and Nistor et al. (2015). While, the measurement of digital literacy was based on scales developed by Bennett et al. (2013) and Tondeur et al. (2017), which assess employees' ability to use technology effectively and solve problems through ICT tools. Each of these variables was measured using Likert-type scales, with respondents indicating their agreement or disagreement with statements on a 5-point scale, ranging from "Strongly Disagree" to "Strongly Agree."

A structured questionnaire was developed for data collection, incorporating items from the aforementioned sources to measure ICT adoption, PSM, leadership support, and digital literacy. The questionnaire included both close-ended questions and demographic information, with clear instructions on how to complete the survey. The Likert-type scales for each construct were designed to capture respondents' attitudes and perceptions regarding ICT adoption in their work environment. The final version of the questionnaire was pretested on 20 participants to assess clarity and comprehensibility before distribution.

The population for this study consisted of employees in selected ministries within Kwara State, Nigeria. These ministries were chosen due to their involvement in public service delivery and their potential for ICT adoption. The sample size was determined using the G*power software, which is widely used for power analysis in social science research. A sample of 177 respondents was calculated, based on an assumed medium effect size, 95% confidence level, and 80% statistical power. Given potential non-responses and incomplete data, a larger sample of 250 questionnaires was distributed to ensure sufficient responses for meaningful analysis.

Snowball sampling was used to select respondents. This non-probability sampling technique is appropriate when it is difficult to obtain a complete list of the population. In snowball sampling, initial respondents were identified, and they were then asked to refer others within their networks who met the study's inclusion criteria. This approach helped to access a larger group of respondents within the selected ministries, ensuring that a diverse range of perspectives were captured.

The validity of the research instrument was established through face validity and content validity. Face validity was ensured by having experts in public administration review the questionnaire to confirm that it appeared to measure the intended constructs. Content validity was achieved by ensuring that the items selected from the literature comprehensively covered the variables under investigation, ensuring a clear alignment between the theoretical concepts and the items included in the questionnaire.

To assess the reliability of the measurement scales, a pilot test was conducted with 20 respondents. These respondents were selected from a different set of ministries to avoid overlap with the final sample. The pilot test allowed for the identification of any ambiguous or unclear questions and ensured that the scale items were internally consistent. The reliability of the scales was measured using Cronbach's alpha, and acceptable levels were achieved for each construct, confirming the internal consistency of the scales.

A total of 250 questionnaires were distributed among respondents in selected ministries within Kwara State. After the survey was administered, 233 completed responses were returned. Upon reviewing the data for completeness and accuracy, 228 responses were deemed usable for the analysis, representing a response rate of approximately 91%. The data collected was then coded and entered into the analysis software for further processing.

The data collected was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4 software. PLS-SEM is a powerful statistical method for analysing complex relationships between variables and is particularly suited for studies with multiple constructs and large amounts of data. The analysis involved two stages: (1) measurement model assessment, which evaluated the validity and reliability of the measurement scales, and (2) structural model assessment, which tested the hypothesized relationships between ICT adoption, PSM, leadership support, and digital literacy.

To address concerns about common method bias, the study incorporated a marker variable technique. A marker variable is a theoretically unrelated variable included in the questionnaire to check for potential bias due to the use of a single source for data collection. The analysis of the marker variable was conducted to ensure that any common method bias did not significantly distort the results. The absence of significant correlations between the marker variable and the study constructs indicated that common method bias was not a major issue.

4.1 Data Analysis

Table 1: Respondents Profile

Category	Options	Frequency (N = 228)	Percentage (%)
Age	18-29 years	45	19.7
	30-40 years	95	41.7
	41-50 years	60	26.3
	Above 50 years	28	12.3
Educational Qualification	Secondary School Certificate	20	8.8
	Bachelor's Degree	130	57.0
	Post Graduate Certificate	65	28.5
	Others	13	5.7
Gender	Male	150	65.8
	Female	78	34.2
Length of Service	0-5 years	20	8.8
	6-10 years	30	13.2
	11-15 years	50	22.0
	Above 15 years	128	56.1
Leadership Role	Yes	130	57.0
	No	98	43.0

The respondents in the questionnaire were predominantly aged between 30-40 years, with 95 out of 228 individuals (41.7%) falling into this age group. The second largest group was those aged between 41-50 years, accounting for 60 respondents (26.3%). A smaller proportion, 45 respondents (19.7%), were aged between 18-29 years, while the least number of respondents, 28 individuals (12.3%), were aged above 50 years. In terms of educational qualifications, the majority of respondents held a Bachelor's degree, with 130 respondents (57.0%) reporting this level of education. The next largest group had Post Graduate Certificates, totalling 65 respondents (28.5%). There were 20 respondents (8.8%) with only a Secondary School Certificate, while 13 individuals (5.7%) selected "Others" as their qualification. Gender distribution showed that there were more male respondents than female. A total of 150 respondents (65.8%) were male, while 78 respondents (34.2%) were female. Regarding length of service, the largest proportion of respondents had been in their roles for over 15 years, with 128 respondents (56.1%) falling into this category. Another 50 respondents (22.0%) had between 11-15 years of service, while 30 respondents (13.2%) had been in their positions for 6-10 years. The smallest group, 20 respondents (8.8%), had 0-5 years of service. Finally, when it comes to leadership roles, more than half of the respondents, 130 individuals (57.0%), reported having held leadership positions in the past. In contrast, 98 respondents (43.0%) had not held such positions.

Table 2: Measurement Model

Variable	Variable Item Statement	Item Loadings	CA	CR	AVE	Mean	SD
Perceived Usefulness (PU)	PU1: The system enhances my productivity.	0.85	0.90	0.92	0.70	4.25	0.68
	PU2: The system helps me achieve tasks faster.	0.88					
	PU3: Using the system makes my work more effective.	0.84					
	PU4: The system is useful in my daily work.	0.87					
	PU5: I find the system beneficial for my work.	0.86					
Perceived Ease of Use (PEU)	PEOU 1: The system is easy to navigate.	0.81	0.89	0.91	0.72	4.40	0.63
	PEOU 2: Learning to use the	0.83					

	system is easy.						
	PEOU 3: The system is user-friendly.	0.86					
	PEOU 4: I can quickly learn to use the system.	0.85					
	PEOU 5: The system's interface is simple.	0.80					
Behavioural Intention to Use (BI)	BIU 1: I intend to use the system regularly.	0.87	0.84	0.88	0.67	4.35	0.72
	BIU 2: I plan to continue using the system.	0.85					
	BIU 3: I will recommend the system to others.	0.82					
Digital Literacy (DL)	DL 1: I am comfortable using digital tools.	0.79	0.92	0.94	0.75	4.10	0.65
	DL 2: I am skilled at using digital devices.	0.84					
	DL 3: I can learn new digital tools quickly.	0.88					
	DL 4: I frequently use the internet for tasks.	0.86					
	DL 5: I can solve most problems with digital devices.	0.80					
	DL 6: I feel confident with my digital skills.	0.82					
	DL 7: I have advanced digital literacy.	0.85					
Leadership Support (LS)	LS 1: My leaders encourage the use of new technology.	0.88	0.91	0.93	0.78	4.30	0.60
	LS 2: Leaders provide necessary resources for digital tools.	0.85					
	LS 3: Leaders actively support the implementation of digital tools.	0.90					
	LS 4: I receive adequate training from leadership on digital systems.	0.86					
	LS 5: Leadership is committed to digital transformation.	0.89					
	LS 6: Leaders encourage innovation in the use of technology.	0.87					
	LS 7: My leaders value the effective use of digital tools.	0.84					
	LS 8: Leadership frequently communicates the importance of digital tools.	0.83					
Public Service Motivation (PSM)	PSM 1: I am motivated to serve the public.	0.91	0.86	0.89	0.70	4.50	0.59
	PSM 2: I feel responsible for the well-being of society.	0.89					
	PSM 3: I am passionate about making a difference in public service.	0.88					
	PSM 4: I feel a sense of duty to contribute to public good.	0.85					
	PSM 5: I am committed to the values of public service.	0.87					

Advances in Humanities and Contemporary Studies Vol. 6 No. 2 (2025) p. 83-94

The measurement model for the PLS-SEM analysis examines six key constructs: Perceived Usefulness, Perceived Ease of Use, Behavioural Intention to Use, Digital Literacy, Leadership Support, and Public Service Motivation. Each construct is measured with multiple items, and the item loadings range from 0.79 to 0.91, indicating a strong relationship between the items and their respective constructs. Reliability indicators, such as Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE), show excellent internal consistency and convergent validity for all constructs. For instance, Cronbach's Alpha values are generally above 0.85, reflecting good internal consistency. The mean scores for the constructs range from 4.10 to 4.50, demonstrating a general tendency toward agreement with the items. Standard deviations (SD) vary between 0.59 and 0.72, indicating moderate variability in responses. Overall, the measurement model demonstrates robust reliability and validity, supporting its use in further analysis of these constructs.

Table 3: Discriminant Validity (HTMT)

	PU	PEOU	BIU	PSM	LS	DL
PU						
PEOU	0.76					
BIU	0.62	0.68				
PSM	0.52	0.55	0.60			
LS	0.47	0.50	0.53	0.62		
DL	0.53	0.59	0.65	0.61	0.55	

The discriminant validity of the constructs as shown in Table 4 was assessed using the Heterotrait and Monotrait criterion. All HTMT values are below 0.85, indicating good discriminant validity among the constructs. This suggests that the constructs—such as Perceived Usefulness, Perceived Ease of Use, Behavioural Intention to Use, and others—are distinct and not highly correlated.

Table 4: Hypothesis Testing

Path	Beta (β)	t-Value	p-Value	5% CI	95% CI	F^2
PU → BIU	0.32	3.75	0.001	0.25	0.39	0.10
PEOU → BIU	0.45	4.25	0.001	0.38	0.52	0.15
BIU → PSM	0.38	4.10	0.001	0.30	0.45	0.12
BIU*LS → PSM	0.40	3.85	0.001	0.32	0.47	0.14
BIU*DL → PSM	0.42	4.00	0.001	0.34	0.49	0.13

The structural model (Table 4) reveals several significant positive relationships between the variables. The relationship between Perceived Usefulness (PU) and Behavioural Intention to Use (BIU) is significant, with a beta coefficient of 0.32, a t-value of 3.75, and a p-value less than 0.001, indicating a strong positive effect. Similarly, Perceived Ease of Use (PEOU) positively influences Behavioural Intention to Use (BIU) with a beta of 0.45, t-value of 4.25, and p-value less than 0.001, further confirming a significant relationship. Behavioural Intention to Use (BIU) also has a positive and significant effect on Public Service Motivation (PSM), with a beta of 0.38, t-value of 4.10, and a p-value below 0.001. Additionally, the interaction terms BIU*Leadership Support (LS) and BIU*Digital Literacy (DL) both significantly influence PSM, with betas of 0.40 and 0.42, respectively, t-values above 3.85, and p-values less than 0.001. The F^2 values for all paths suggest medium to large effect sizes, ranging from 0.10 to 0.15, reflecting substantial impacts of these relationships

5. Discussion of Findings

The results of the Partial Least Squares Structural Equation Modelling (PLS-SEM) analysis provide insightful findings regarding the relationships between the constructs in the model. The analysis revealed significant and positive relationships between these variables, supporting the hypotheses proposed in the study. For HI, the relationship between Perceived Usefulness (PU) and Behavioural Intention to Use (BIU) is one of the most well-established in the Technology Acceptance Model (TAM). Our findings show a significant positive relationship, which supports the assertion that individuals are more likely to intend to use a system if they perceive it to be useful. This result aligns with prior research that demonstrates the critical role of perceived usefulness in shaping individuals' decisions to adopt new technology or systems (Davis, 1989; Venkatesh & Davis, 2000). The positive beta value suggests that enhancing the perceived usefulness of a system could lead to increased intention to use it, which is particularly relevant in organizational settings where the introduction of new technologies or systems requires user buy-in and commitment.

The study also found a significant positive relationship between Perceived Ease of Use (PEOU) and Behavioural Intention to Use (BIU). This finding confirms the importance of the ease with which users can interact with a system in determining their intention to use it. The result corroborates earlier work by Venkatesh and Davis (2000), who argued that users are more likely to engage with technology that they find easy to use. The strong influence of PEOU on BIU in this study emphasizes the need for user-friendly interfaces and intuitive designs in organizational technologies. Systems that are perceived as difficult to use may lead to reluctance or resistance to their adoption, even if they are useful.

One of the more unique findings of this study is the significant positive relationship between Behavioural Intention to Use (BIU) and Public Service Motivation (PSM). Public service motivation is defined as the intrinsic drive to contribute to society and the public good. The results suggest that individuals who are more motivated by public service values are more likely to intend to use systems that can enhance their performance in fulfilling those values. This finding aligns with prior research that links public service motivation with technology acceptance, indicating that employees who are driven by a sense of duty may be more likely to adopt systems that align with their professional goals and societal contributions (Perry & Wise, 1990). This highlights the importance of aligning technology systems with the values and missions of public service organizations, as this alignment can foster greater engagement and acceptance.

The interaction term Behavioural Intention to Use (BIU) * Leadership Support (LS) showed a significant positive relationship with Public Service Motivation (PSM). This suggests that leadership support strengthens the relationship between individuals' intention to use technology and their motivation to serve the public. Leadership support plays a critical role in encouraging the adoption of new technologies in organizations. When leaders actively promote and support the use of technology, it enhances employees' belief in the system's relevance to their work, thereby increasing their motivation to use it. This finding is consistent with previous research that highlights the pivotal role of leadership in fostering an environment conducive to the adoption of new systems (Avolio et al., 2009). In the context of public service, leaders who encourage and support technology adoption contribute to both increased BIU and heightened public service motivation.

Another important interaction found in this study was between Behavioural Intention to Use (BIU) and Digital Literacy (DL). Digital literacy, or the ability to effectively use digital tools, significantly impacts an individual's intention to use technology. This finding supports the idea that individuals with higher levels of digital literacy are more confident and capable of using new systems, which in turn increases their intention to adopt them. The result resonates with earlier studies that suggest digital literacy is a critical determinant of technology adoption (Abdulkareem & Ramli, 2021a; van Dijk, 2015). In the workplace, ensuring that employees possess the necessary digital skills to operate new technologies is crucial for successful implementation. Organizations should invest in training programs that enhance digital literacy to maximize the effectiveness of technological tools and systems

5.1 Implication of Findings

The findings of this study have several key implications for practice, especially for public service organizations implementing new technology systems. The significant roles of perceived usefulness, ease of use, leadership support, and digital literacy underline the importance of taking a holistic approach to technology adoption. Public service organizations should prioritize designing systems that are both functional and user-friendly, ensuring that the technology addresses employees' needs while being intuitive to use (Abdulkareem & Ramli, 2021). Furthermore, leadership plays a critical role in driving the adoption process. Leaders must actively champion new technologies, provide clear communication, and offer necessary resources and training to reduce resistance and foster acceptance. When public service motivation is a key driver, leadership support becomes even more crucial, as it can enhance employee engagement and commitment to the system (Owen, 2024). Lastly, investing in digital literacy programs is essential to ensure all employees have the skills necessary to leverage new technologies effectively, helping them succeed in an increasingly digital work environment.

5.2 Conclusions

This study underscores the critical role of both individual perceptions and organizational support factors in shaping the intention to use new technologies in public service settings. The findings emphasize that perceived usefulness, ease of use, leadership support, and digital literacy are essential in fostering a positive environment for technology adoption and enhancing public service motivation. Public sector organizations must recognize the importance of these factors in promoting technology acceptance among employees. By focusing on making systems useful, user-friendly, and well-supported through strong leadership and adequate training, organizations can create an effective adoption process. These results offer valuable insights for organizations aiming to enhance the successful integration of digital systems, ultimately improving overall performance, employee engagement, and service delivery to the public. This approach will contribute to more efficient, transparent, and accessible public service.

While the study provides valuable insights, there are a few limitations that should be acknowledged. First, the study's cross-sectional design limits the ability to draw causal conclusions. Future research could use a longitudinal design to track changes over time and provide a more robust understanding of the causal relationships between the constructs. Additionally, the study focused on public service employees, which may limit the generalizability of the findings to other sectors. Future research could explore these relationships in different organizational contexts to further validate the findings

Acknowledgment

The researcher expressed his gratitude for the opportunity to submit and publish to the Universiti Tun Hussein Onn Malaysia, and the UTHM Publishers, especially for actively participating parties such as editors, proofreaders, reviewers, etc., who could not be mentioned individually.

Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

References

Abdulkareem, A. K., Abdulkareem, Z. J., Ishola, A. A., Bello, M. L., & Oladimeji, K. A. (2022). The influence of openness of public organizations and social media use on e-participation: the mediating effect of trust in e-government. International Review of Public Administration, 1-16.

Abdulkareem, A. K., & Ishola, A. A. (2016). E-government in Nigeria: Progress and Prospects. Ilorin Journal of Administration and Development, 2(1), 59-67.

AbdulKareem, A. K., & Oladimeji, K. A. (2024). Cultivating the digital citizen: trust, digital literacy and e-government adoption. Transforming Government: People, Process and Policy.

Abdulkareem, A. K., & Ramli, R. M. (2021a). Does digital literacy predict e-government performance? An extension of Delone and Mclean information system success model. Electronic Government, an International Journal, 17(4), 466-493.

Abdulkareem, A. K., & Ramli, R. M. (2021b). Evaluating the Performance of E-government: Does Citizens' Access to ICT Matter? Pertanika Journal of Tropical Agricultural Science, 29(3), 1507-1534.

Asrani, C. (2022). Spanning the digital divide in India: Barriers to ICT adoption and usage. Journal of Public Affairs, 22(4), e2598.

Bertot, J. C. (2010). Community-based e-Government: libraries as e-Government partners and providers. In M. A. Wimmer, J.-L. Chappelet, M. Janssen, & H. J. Scholl (Eds.), Electronic Government: Proceedings of the 9th IFIP WG 8.5 International Conference, EGOV 2010 (Vol. 6228, pp. 121-131). Lausanne, Switzerland.

Bolino, M. C., & Grant, A. M. (2016). The bright side of being prosocial at work, and the dark side, too: A review and agenda for research on other-oriented motives, behaviour, and impact in organizations. Academy of management annals, 10(1), 599-670.

Chung, K. H., Rhee, I., & Liu, C. (2024). A systematic review of experimental research on public service motivation. Public Performance & Management Review, 47(3), 627-653.

Daramola, O., & Etim, E. (2022). Affordances of digital platforms in Sub‐Saharan Africa: An analytical review. Electronic Journal of Information Systems in Developing Countries, 88(4), 1-21. https://doi.org/10.1002/isd2.12213

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319-340.

Davis, F. D., & Granić, A. (2024a). Epilogue: What Will the Future of TAM Be Like? In The Technology Acceptance Model: 30 Years of TAM (pp. 103-108). Springer.

Davis, F. D., & Granić, A. (2024b). Evolution of TAM. In The Technology Acceptance Model: 30 Years of TAM (pp. 19-57). Springer.

Fareed, M. Z., & Su, Q. (2022). Transformational leadership and project success: A mediating role of public service motivation. Administration & Society, 54(4), 690-713.

Gacicio, E., Gakuu, C., & Kidombo, H. J. (2021). The mediating role of school environment on the relationship between transformational leadership style and ICT Integration in teaching and learning. International Journal of Education and Research, 9(3), 1-16.
Guo, Y. (2023). Long-term-oriented cultural value: Fundamental for sustainable development of digital government. International Journal of Information Systems in the Service Sector, 14(2), [1-15]. https://doi.org/10.4018/IJISSS.313380

Hong, S., Kim, S. H., & Kwon, M. (2022). Determinants of digital innovation in the public sector. Government information quarterly, 39(4), [1-10]. https://doi.org/10.1016/j.giq.2022.101723

Høstrup, M., & Andersen, L. B. (2022). Leading to make a difference for whom? How vision content moderates the relationship between transformational leadership and public service motivation. International Public Management Journal, 25(4), 585-599.

Hue, T. H. H., Vo Thai, H.-C., & Tran, M.-L. (2022). A link between public service motivation, employee outcomes, and person–organization fit: Evidence from Vietnam. International Journal of Public Administration, 45(5), 379-398.

Jaboob, M., Awain, A. M. S. B., & Al-Ansi, A. M. (2023). Sustaining employees' creativity through the organizational justice: The mediating role of leadership styles. Social Sciences & Humanities Open, 8(1), 100693.

Lee, E., Lewis-Liu, T., Khurana, S., & Lu, M. (2024). A systematic review of the link between public service motivation and ethical outcomes. Asia Pacific Journal of Public Administration, 46(3), 236-263.

Maj, J. (2023). Organizational culture and leadership as facilitators of creativity and innovation: Insights from the ICT sector in Poland in a post-COVID-19 reality. Journal of Economics and Management, 45(1), 182-215.

Matveieva, O., Navumau, V., & Gustafsson, M. (2022, September 6-8). Adoption of public e-services versus civic tech services: On the issue of trust and citizen participation in Ukraine and Belarus. 21st IFIP WG 8.5 International Conference on Electronic Government (EGOV 2022), Linköping, Sweden.

Owen, J. (2024). The leadership skills handbook: 100 essential skills you need to be a leader. Kogan Page Publishers.

Park, H., Kim, H. S., & Park, H. W. (2021). A scientometric study of digital literacy, ICT literacy, information literacy, and media literacy. Journal of Data and Information Science, 6(2), 116-138.

Perry, J. L. (1996). Measuring public service motivation: An assessment of construct reliability and validity. Journal of Public Administration Research and Theory, 6(1), 5-22.

Purbokusumo, Y., & Dwi Santoso, A. (2021). Predictor for local government social media use in Indonesia. Digital Policy Regulation and Governance, 23(6), 533-552. https://doi.org/10.1108/DPRG-12-2018-0082

Rademaker, T., Klingenberg, I., & Süß, S. (2023). Leadership and technostress: a systematic literature review. Management Review Quarterly, 1-66.

van Dijk, J. A. G. M. (2015). Internet skill levels increase, but gaps widen: a longitudinal cross-sectional analysis (2010-2013) among the Dutch population. Information, Communication & Society, 18(7), 782-797.

West, D. M. (2000). State and Federal E-Government in the United States, 2000. www.InsidePolitics.org/egovt01us.html

Advances in Humanities and Contemporary Studies Vol. 6 No. 2 (2025) p. 83-94

Witesman, E. M., Walters, L., & Christensen, R. K. (2024). Creating a public service topology: Mapping public service motivation, public service ethos, and public service values. Public Administration, 102(2), 540-579.

Ziemba, E. (2021). The contribution of ICT adoption by local governments to sustainability—Empirical evidence from Poland. Information Systems Management, 38(2), 116-134.