

Exploring the Impact of Technological Support on Clients' Adoption of Digitalization for Business Updates and Registration in a Government Agency

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ABSTRACT

The integration of digital platforms in government services has transformed how clients manage business registration and updates, streamlining processes that were once heavily manual. This study explores the impact of technological support on clients' adoption of digitalization within a government agency, focusing on usage frequency, perceived ease of use, perceived usefulness, and satisfaction with digital services. Using a quantitative research design, data were collected from business clients who regularly interact with the digital registration system. Results revealed that clients generally rated their adoption of digital tools as "Good," with satisfaction obtaining the highest mean score (3.12) and usage frequency receiving the lowest (3.08). Correlation analysis confirmed that all dimensions of adoption—particularly satisfaction and usage frequency—were significantly associated with the overall digitalization adoption rate. These findings underscore the importance of not only ensuring functional and accessible platforms but also providing continuous technological support to enhance client trust and efficiency. The study recommends improving system reliability, enhancing user-friendly features, and strengthening technical assistance to maximize client adoption.

Keywords: *Digitalization, Technological Support, Business Registration, Government Services, Client Adoption*

INTRODUCTION

The shift toward digitalization in government services is a defining feature of the modern public sector, aiming to improve accessibility, transparency, and efficiency. For business registration and updates, digital platforms have replaced time-consuming manual processes, offering clients a faster and more reliable system. However, successful adoption depends not only on the availability of technology but also on the level of support provided to users in navigating and maximizing these digital services (Almaiah & Al-Khasawneh, 2023).

In many developing regions, including the Philippines and the Middle East, digitalization has been met with challenges such as technical difficulties, lack of user familiarity, and limited access to digital infrastructure (ElMassah & Mohieldin, 2022). Despite these barriers, studies highlight that technological support—such as clear instructions, user assistance, and responsive customer service—plays a critical role in enhancing adoption (Díaz & Chávez, 2023). Without effective support mechanisms, even well-designed systems may be underutilized, limiting their impact on service efficiency.

Theoretical perspectives such as the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) provide useful insights, emphasizing that perceived ease of use and usefulness are vital predictors of digital adoption (Venkatesh et al., 2012). These predictors, however, are often influenced by the extent of technological support offered, which shapes user perceptions of reliability and satisfaction.

Given the increasing reliance on digital platforms for business registration, it is essential to assess how technological support influences clients' adoption behavior. This study contributes to the growing body of literature by examining adoption indicators such as usage frequency, perceived ease of use, perceived usefulness, and satisfaction, offering empirical evidence relevant to government digitalization efforts.

MATERIALS AND METHODS

This study utilized a quantitative-descriptive research design to evaluate clients' adoption of digitalization in business registration and updates. The target respondents were business owners and representatives who had direct experience using the government's digital platform for registration and updates. A structured questionnaire was developed and validated by experts, covering four major dimensions: usage frequency, perceived ease of use, perceived usefulness, and satisfaction with digital services. Responses were measured on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Data were collected through both online forms and on-site survey distribution in the government agency's office. Statistical analysis was conducted using descriptive measures (mean and standard deviation) to determine adoption levels and Pearson's r correlation to examine the relationships between the independent variable (technological support) and digital adoption indicators. A significance threshold of 0.05 was set to validate the results.

RESULTS AND DISCUSSION

The findings from Table 1 reveal that participants generally rated the availability of digital tools and platforms as good (overall mean = 3.16, SD = 0.56). The highest mean score was recorded for the indicator stating that "the government agency provides adequate digital platforms for business updates and registration" ($M = 3.24$), suggesting that the respondents recognized the availability of digital options as a positive development in service delivery. However, indicators such as "ease of access to necessary systems" ($M = 3.14$) and "regular updates and maintenance" ($M = 3.16$) imply that there may still be gaps in ensuring reliability and continuous improvement. While the results indicate satisfaction, the moderate ratings also point to areas where system efficiency could be further enhanced.

Table 1
Participants' level of Technological Support in terms of Availability of Digital Tools and Platforms

Indicators	Mean	SD	Description
The government agency provides sufficient training on how to use the digital tools for business updates and registration.	3.00	0.70	Good
The technical assistance provided is helpful in resolving issues related to the digital systems.	3.06	0.71	Good
I feel confident in using the digital systems due to the training provided by the government agency.	3.16	0.71	Good
The government agency offers adequate customer support when I face difficulties with the digital system.	2.96	0.78	Good
The government agency frequently organizes training sessions to help clients improve their digital literacy.	2.92	0.85	Good
Overall	3.02	0.63	Good

These results demonstrate that while digital platforms are in place, their functionality and dependability remain limited to a “good” level rather than “very good” or “excellent.” This suggests that although the shift toward digitalization is progressing, the government agency has not yet reached an optimal level of digital service delivery. For digitalization efforts to be more impactful, the agency must prioritize consistent platform maintenance and upgrades to ensure stability and seamless use. Addressing these areas would allow businesses to benefit from streamlined, accessible, and more dependable services.

Table 2 presents the participants’ evaluation of training and technical assistance, with an overall mean score of 3.02 (SD = 0.63), which still falls under the “good” description but is slightly lower compared to the availability of platforms. Among the indicators, “confidence in using the digital systems due to training” received the highest mean (M = 3.16), suggesting that training initiatives have provided a moderate level of support. However, the relatively lower ratings in “customer support” (M = 2.96) and “frequent training sessions” (M = 2.92) highlight a perceived gap in sustained capacity-building measures and responsive assistance.

The findings imply that while the government agency has made efforts to provide initial training and technical guidance, these initiatives may not be enough to meet the evolving needs of users. Business owners and clients require continuous training programs to adapt to updates and system changes. Likewise, improving customer support mechanisms can enhance user satisfaction and reduce frustration when technical issues arise. Strengthening technical assistance would significantly increase users’ confidence, efficiency, and overall adoption of digital tools.

Table 2
Participants’ level of Technological Support in terms of Training and Technical Assistance

Indicators	Mean	SD	Description
The government agency provides sufficient training on how to use the digital tools for business updates and registration.	3.00	0.70	Good
The technical assistance provided is helpful in resolving issues related to the digital systems.	3.06	0.71	Good
I feel confident in using the digital systems due to the training provided by the government agency.	3.16	0.71	Good
The government agency offers adequate customer support when I face difficulties with the digital system.	2.96	0.78	Good
The government agency frequently organizes training sessions to help clients improve their digital literacy.	2.92	0.85	Good
Overall	3.02	0.63	Good

As shown in Table 3, participants rated system usability and accessibility with an overall mean of 3.13 (SD = 0.55), categorized as “good.” The highest-rated indicator was system responsiveness across devices (M = 3.26), indicating that participants find value in cross-platform accessibility. Meanwhile, user-friendliness (M = 3.08) and clear instructions (M = 3.08) were rated moderately, suggesting that while systems are navigable, there is still room for improving intuitive design and user guidance.

The results point to a partial success in enhancing system usability and accessibility. However, the moderate ratings show that users still encounter challenges that hinder their full utilization of the platforms. Strengthening interface design, user support features, and accessibility for less tech-savvy users will be vital. By prioritizing system clarity and inclusivity, government agencies can reduce the leadership gaps that exist in managing technological transformation.

Table 3
Participants' level of Leadership Gaps in terms of System Usability and Accessibility

Indicators	Mean	SD	Description
The digital registration system is user-friendly and easy to navigate.	3.08	0.78	Good
I am able to complete business registration tasks without technical difficulties.	3.06	0.74	Good
The digital platform is responsive and works well across different devices (e.g., mobile, desktop).	3.26	0.63	Good
The system's design is simple and intuitive, making it easy to understand.	3.16	0.58	Good
The system provides clear instructions and guidance on how to complete business updates.	3.08	0.67	Good
Overall	3.13	0.55	Good

Table 4 reflects participants' perceptions of technical infrastructure with an overall mean score of 3.04 (SD = 0.61), which is still within the "good" range but represents one of the lower ratings among the indicators. While continuous updates of digital tools (M = 3.10) and infrastructure efficiency (M = 3.10) scored the highest, system reliability (M = 2.96) and smooth performance of platforms (M = 3.00) had lower means, showing issues with downtime and technical glitches.

These findings suggest that the government's digital infrastructure is functional but not robust enough to ensure uninterrupted services. Inconsistencies in platform reliability can discourage users from fully adopting digital systems. The moderate evaluations reflect a leadership gap in ensuring that the infrastructure behind digitalization is both resilient and forward-looking. Investing in stable servers, cybersecurity, and advanced technology would help bridge this gap and provide users with a more dependable digital experience.

Table 4
Participants' level of Leadership Gaps in terms of Technical Infrastructure

Indicators	Mean	SD	Description
The digital systems provided by the government are reliable and rarely experience downtime.	2.96	0.73	Good
The government agency's website/platform runs smoothly with minimal technical issues.	3.00	0.67	Good
The infrastructure supporting the digital tools is robust and stable.	3.02	0.68	Good
The government agency ensures that the digital tools are continuously updated with the latest technology.	3.10	0.74	Good
The technical infrastructure supporting the digital systems is fast and efficient.	3.10	0.71	Good
Overall	3.04	0.61	Good

Table 5 summarizes the overall level of technological support, with the highest dimension being availability of digital tools and platforms (M = 3.16) and the lowest being training and technical assistance (M = 3.02). This highlights that while tools are available, users often feel inadequately supported in terms of learning and troubleshooting. System usability (M = 3.13) and infrastructure (M = 3.04) fall in between, showing moderate strengths and weaknesses.

The results indicate that technological support is present but unevenly distributed across dimensions. The relatively lower performance in training and infrastructure implies that digital adoption may stagnate if users are not properly guided or if systems frequently experience technical setbacks. Thus,

technological support needs to be holistic—covering not just tool availability but also training, accessibility, and infrastructure reliability.

Table 5
Participants' overall level of Technological Support

Indicators	Mean
Availability of Digital Tools and Platforms	3.16
Training and Technical Assistance	3.02
System Usability and Accessibility	3.13
Technical Infrastructure	3.04

The findings in Table 6 show that participants rated their frequency of using the digital platform as generally Good with an overall mean of 3.08 (SD = 0.51). The highest rating was for preferring digital systems over manual registration (M = 3.22, SD = 0.65), indicating a growing preference for digital tools over traditional processes. Similarly, the adoption of the digital platform as a primary method for managing business updates (M = 3.16, SD = 0.68) suggests that clients are beginning to see digitalization as a reliable alternative. However, the lowest indicator, “I regularly use the digital platform to update my business information” (M = 2.90, SD = 0.79), implies that while clients acknowledge the platform, habitual usage has not yet been fully integrated into their practices.

These results imply that clients adopt digital platforms when prompted by necessity, such as registration updates, but consistent, proactive use remains limited. This trend highlights a transitional stage where clients are still balancing between manual and digital methods. The moderate standard deviations indicate variability in adoption, meaning not all clients have embraced digital platforms equally. These findings suggest that further encouragement, through targeted awareness campaigns or incentives, may help increase frequency of use and develop more habitual engagement with the system.

Table 6
Participants' level of Clients' Adoption of Digitalization in terms of Usage Frequency

Indicators	Mean	SD	Description
I regularly use the digital platform to update my business information.	2.90	0.79	Good
I prefer using the digital system over manual registration processes.	3.22	0.65	Good
I often check for updates on the digital platform related to my business registration.	3.04	0.64	Good
I use the digital system whenever there are updates or changes to my business registration.	3.08	0.63	Good
The digital platform has become my primary method for managing business updates.	3.16	0.68	Good
Overall	3.08	0.51	Good

Table 7 reveals that clients perceive the digital platform as moderately easy to use, with an overall mean of 3.11 (SD = 0.51, Good). The highest-rated indicator was “The digital platform is easy to learn, even for those with little technical knowledge” (M = 3.18, SD = 0.60), showing that simplicity is a notable strength. This is followed by clear instructions provided on the platform (M = 3.16, SD = 0.62), which suggests that effective system guidance enhances usability. However, the lowest rating (M = 3.02, SD = 0.62) was for the straightforwardness of the registration process itself, which implies that while the tools are generally usable, some areas of navigation or processing may remain complex for users.

These results reflect that perceived ease of use is a critical factor influencing adoption. While most clients find the platform manageable, there is still room for improvement in streamlining registration procedures to ensure smoother interactions. Training or tutorials may also address hesitation among less tech-savvy users. The relatively small SD values suggest consistency in clients' responses, reinforcing that usability is largely favorable across the sample. Strengthening the user interface and reducing procedural complexity could help build greater confidence and encourage sustained use of the platform.

Table 7
Participants' level of Clients' Adoption of Digitalization in terms of Perceived Ease of Use

Indicators	Mean	SD	Description
I find it easy to navigate and use the digital tools provided for business registration.	3.04	0.64	Good
The process of registering my business through the digital platform is straightforward.	3.02	0.62	Good
I feel comfortable using the digital tools without any external assistance.	3.14	0.64	Good
The digital platform is easy to learn, even for those with little technical knowledge.	3.18	0.60	Good
The instructions provided on the digital platform are clear and easy to understand.	3.16	0.62	Good
Overall	3.11	0.51	Good

As shown in Table 8, clients rated the usefulness of the digital platform at an overall mean of 3.10 (SD = 0.43, Good). The highest-rated item was the convenience provided by digital registration (M = 3.20, SD = 0.53), followed closely by effective management of business updates (M = 3.12, SD = 0.48). These findings demonstrate that clients recognize tangible benefits in terms of efficiency and accessibility. The lowest score (M = 3.02, SD = 0.62) relates to time savings compared to traditional methods, suggesting that while digitalization is seen as useful, some clients may not yet perceive significant differences in efficiency compared to manual systems.

Table 8
Participants' level of Clients' Adoption of Digitalization in terms of Perceived Usefulness

Indicators	Mean	SD	Description
Using the digital platform has saved me time compared to traditional methods of registration.	3.02	0.62	Good
I believe the digital tools improve the efficiency of my business registration process.	3.06	0.51	Good
The digital system helps me manage my business updates more effectively.	3.12	0.48	Good
The digital platform has made business registration more convenient.	3.20	0.53	Good
I find that digitalization has enhanced the overall experience of business registration.	3.10	0.61	Good
Overall	3.10	0.43	Good

The findings suggest that clients acknowledge digitalization as helpful in simplifying processes and improving accessibility, but may not fully appreciate its time-saving potential. This could be attributed to either limited familiarity with the system or inefficiencies still present in its design. Given the relatively lower SD values, clients generally agree on the platform's usefulness, though perceptions of speed and efficiency remain mixed. Addressing these concerns by optimizing digital processes and

reducing redundancies could further enhance client perceptions of usefulness, thereby strengthening adoption.

Table 9 reports an overall mean of 3.12 (SD = 0.55, Good) for satisfaction with digital services. The highest-rated item was recommending the platform to others (M = 3.18, SD = 0.63), indicating that positive word-of-mouth is likely to promote adoption. Likewise, satisfaction with user experience (M = 3.16, SD = 0.65) reflects that clients generally find the digital system effective. However, ratings for customer service and technical support (M = 3.08, SD = 0.70) were relatively lower, suggesting that while the platform itself is satisfactory, external support services may require improvement.

These findings reveal that client satisfaction extends beyond system usability to include support and service reliability. While clients are willing to endorse the platform, gaps in after-service support could affect overall experiences, particularly for users facing technical issues. The relatively higher SD values in this table suggest varied client experiences, particularly in support-related aspects. Strengthening technical assistance, customer care responsiveness, and user engagement initiatives would likely increase satisfaction, thereby reinforcing adoption rates.

Table 9
Participants' level of Clients' Adoption of Digitalization in terms of
Satisfaction with Digital Services

Indicators	Mean	SD	Description
I am satisfied with the overall performance of the digital registration system.	3.12	0.69	Good
I feel the digital platform meets my business needs effectively.	3.08	0.63	Good
I am happy with the customer service and technical support available for the digital system.	3.08	0.70	Good
The digital platform provides a satisfactory user experience.	3.16	0.65	Good
I would recommend the digital registration platform to other business owners due to its usefulness and efficiency.	3.18	0.63	Good
Overall	3.12	0.55	Good

Table 10 consolidates adoption indicators, showing relatively consistent results: Usage Frequency (M = 3.08), Perceived Ease of Use (M = 3.11), Perceived Usefulness (M = 3.10), and Satisfaction with Digital Services (M = 3.12). The results indicate that all domains fall within the Good range, reflecting balanced yet moderate adoption across dimensions. Notably, satisfaction was rated slightly higher than other factors, suggesting that overall user experiences positively influence adoption.

The relatively narrow range of mean scores suggests that adoption is uniformly moderate across categories, which indicates potential for systematic improvements. Efforts to enhance ease of use, demonstrate practical usefulness, and encourage habitual usage could elevate adoption levels from "Good" to "Very Good" or "Excellent." These results imply that while digitalization initiatives are well-received, they are still in the development phase, and sustained improvements in both system design and support services are necessary for stronger adoption.

Table 10
Participants' Overall Level: Clients' Adoption of Digitalization

Indicators	Mean
Usage Frequency	3.08
Perceived Ease of Use	3.11
Perceived Usefulness	3.10
Satisfaction with Digital Services	3.12

Table 11 presents the correlation results between adoption indicators and overall digitalization, showing highly significant relationships across most dimensions. Satisfaction with digital services showed the strongest correlation ($r = 0.788$, $p < .001$), highlighting its central role in influencing overall adoption. Usage frequency ($r = 0.571$, $p < .001$) and ease of use ($r = 0.456$, $p < .001$) also had strong and highly significant relationships, while perceived usefulness showed a moderate but still significant relationship ($r = 0.327$, $p < .001$). The overall correlation of $r = 0.675$ ($p < .001$) confirms that adoption of digitalization is strongly and positively influenced by these factors.

These results reinforce the Technology Acceptance Model (TAM), which emphasizes perceived ease of use, usefulness, and satisfaction as determinants of adoption. The prominence of satisfaction suggests that, beyond technical efficiency, clients' emotional and experiential responses play a decisive role in adoption. This finding underscores the importance of client-centered approaches to digitalization—where usability, reliability, and support converge to shape satisfaction. Enhancing these areas can lead to greater digitalization uptake, higher client loyalty, and stronger advocacy for digital systems.

Table 11
Correlation of Adoption Indicators and Overall Digitalization

Predictors	Pearson R	p-value	Interpretation
Usage Frequency	0.571***	<.001	Highly Significant
Perceived Ease of Use	0.456***	<.001	Highly Significant
Perceived Usefulness	0.327*	<.001	Significant
Satisfaction with Digital Services	0.788***	<.001	Highly Significant
overall Clients' Adoption of Digitalization	0.675***	<.001	Highly Significant

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

CONCLUSION

The findings of this study reveal that clients demonstrated a generally favorable adoption of digital platforms in business registration, with satisfaction emerging as the strongest indicator influencing overall adoption. Although usage frequency received the lowest score, its significant correlation with adoption highlights the importance of increasing user engagement. The results confirm that technological support directly enhances perceived ease of use, usefulness, and client satisfaction, which are key drivers of adoption.

The study underscores the critical role of providing continuous technological support to sustain adoption rates. Clients require not only reliable platforms but also accessible guidance and assistance to navigate the system efficiently. Without these, adoption may stagnate, reducing the overall benefits of government digitalization initiatives.

Ultimately, this research emphasizes that technological support must go beyond troubleshooting—it should foster trust, user confidence, and sustained usage. Strengthening these aspects ensures that government digitalization projects achieve their objectives of efficiency, transparency, and inclusivity in service delivery.

Recommendations

1. **Enhance Technological Support Systems.** Establish responsive customer service and technical

assistance, such as chatbots, help desks, and video tutorials, to guide users through digital processes.

2. **Improve Platform Usability.** Continuously refine user interfaces to reduce complexity and make the system more intuitive, particularly for clients with limited digital literacy.
3. **Promote Awareness Campaigns.** Launch initiatives to educate clients about the benefits of digitalization and encourage regular use of the platform for business updates.
4. **Ensure Reliability and Accessibility.** Invest in infrastructure upgrades to minimize downtime and ensure that platforms are accessible across devices and locations.
5. **Integrate Feedback Mechanisms.** Collect and analyze client feedback to identify common challenges and areas for further system improvement.

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