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Stakeholder Driven Adoption of E-Catalog Mobile in Indonesian Local Government

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Abstract

Purpose: This research investigates the determinants affecting the intention to adopt mobile e-catalogs within local government institutions, highlighting how stakeholder-driven forces construct user viewpoints.

Research Methodology: A quantitative research design was applied utilizing questionnaire responses from 337 procurement officers in the Indonesian local government. Analysis was conducted through PLS-SEM to evaluate an Integrated Technology Organization Environment (TOE) Framework and Technology Acceptance Model (TAM).

Results: The findings show that perceived usefulness and perceived ease of use strongly affect the Intention to Adopt. Organizational Readiness indirectly contributes to the Intention to Adopt through the mediation of the system's perceived ease of use. Stakeholder Demand appears as the primary driver influencing both perceptions, showing that external pressure heavily shapes how users access technology.

Conclusions: The study concludes that in established public digital systems, the adoption of complementary technologies is primarily perception-driven rather than readiness-driven.

Limitations: This study focuses only on procurement officials in local governments and predominantly covers respondents from Western Indonesia. It also examines the intention to adopt rather than actual usage behavior.

Contributions: This research adds to the academic discussion by showing that stakeholder demand influences the intention to adopt technology through the formation of user perceptions, broadening TOE–TAM integration within local government digital transformation.

Keywords: *Government Procurement, PLS-SEM, Public Sector Digital Transformation, Stakeholder Demand, TAM-TOE*

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1. Introduction

A country's economic growth is inextricably linked to the role of government spending as one of the main components of Gross Domestic Product (GDP), which reflects the total value of goods and services produced over a specific period. Government spending, including the procurement of goods and services, increases aggregate demand, stimulates production, and expands employment opportunities (Anwar, 2018; Iqbal, 2020). In this setting, procurement management effectiveness is essential, especially for local governments directly involved in budget execution and public service

delivery. To enhance efficiency, transparency, and accountability, the Indonesian government established an integrated e-procurement platform that covers all procurement stages, from planning to payment. Within this system, the E-Catalog serves as the primary instrument for direct purchasing, as provided for in Presidential Regulation No. 16 of 2018. This platform enables ministries, agencies, and local governments to make direct purchases using a standardized digital system.

The strategic role of the E-Catalog is becoming increasingly evident, given the dominance of e-procurement methods in government procurement, with transaction values reaching IDR 329.9 trillion in 2024, indicating that this system has become the backbone of public procurement governance. For local governments, the use of the E-Catalog is not only about compliance with regulations but also about efforts to improve procurement performance, making it more responsive and efficient than before. The E-Catalog Mobile is a mobile app expansion of the web E-Catalog, designed to increase accessibility and flexibility in government procurement. This application enables procurement officers to conveniently access product information, conduct searches and comparisons, and monitor the procurement process via mobile devices. The E-Catalog Mobile, currently in the planning and development stage, will be built and managed by the National Public Procurement Agency (NPPA) for use by ministries, agencies, and local governments. In Indonesia integrated e-procurement environment, the E-Catalog Mobile does not aim to substitute existing systems but instead enhances digital services that enable mobility, responsiveness, and efficiency in procurement work flows. A major feature is pushing notifications, which provide real-time procurement status updates that may accelerate decision-making.

Although it offers various advantages, the availability of mobile-based procurement technology does not guarantee its adoption. In practice, government procurement systems operate within a highly institutionalized environment in which users have become accustomed to existing digital routines (Janssen et al., 2021; Venkatesh & Thong, 2016). Although the E-Catalog Mobile offers added convenience, its role as a complementary system raises important questions about how users view this technology as a necessity. This situation creates a paradox, such as technological advancements are clearly evident, yet user adoption rates do not necessarily keep pace (Rogers and Williams, 1983).

Previous research on government technology adoption highlights the importance of Technological Readiness, Organizational Readiness, and external environmental coercion in shaping implementation choices (Baker, 2011; Tornatzky & Fleischer, 1990). However, these structural factors do not fully account for adoption behavior in established systems. Conversely, user perceptions, particularly regarding benefits and ease of use, exerted a stronger influence on the intention to adopt. This perspective aligns with the Technology Acceptance Model (TAM), which asserts that perceived usefulness and perceived ease of use are the primary determinants of technology adoption (Venkatesh & Davis 2000; Venkatesh & Thong 2016).

Research on technology adoption in public procurement has shown significant conceptual development; however, several important gaps remain in the literature. A systematic review by Changalima et al. (2026) indicates that public procurement literature is still largely dominated by direct-effect models with limited theoretical integration, underscoring the need for more comprehensive approaches that capture the complexity of adoption determinants. This study proposes that these structural conditions indirectly influence adoption through user perceptions. In other words, institutional readiness does not directly drive adoption but is first translated into perceptions of benefits and ease of use, which then shape the intention to adopt (Mercuri et al., 2025; Ofem et al., 2025).

Furthermore, prior studies generally focus on procurement systems that have already been launched and are either substitutive or mandatory. Ofori et al. (2023) examined adoption intention at the implementation stage of a new system in Ghana, Chomistriana et al. (2024) analyzed behavioral intention and actual use within an ongoing digital transformation context, and Pentrakan et al. (2024) investigated willingness to use a procurement platform that has been implemented as the primary system. Consequently, the existing literature remains dominated by studies on the adoption or

post-adoption stages involving replacement systems, whereas research specifically examining pre-adoption intention toward complementary procurement technologies within established e-procurement ecosystems remains relatively limited.

This study examines the determinants of the intention to adopt the E-Catalog Mobile among government organizations in Indonesia, especially local governments, by integrating the TOE framework and TAM, as shown in Figure 1. This study aims to provide empirical evidence to advance public-sector digital adoption scholarship and deliver applied insights to policymakers and procurement managers to craft more efficient implementation approaches for the E-Catalog Mobile. This study specifically addresses the following questions:

RQ1: Do the variables in the Technology Acceptance Model, including Perceived Ease of Use and Perceived Usefulness, influence the Intention to Adopt the E-Catalog Mobile?

RQ2: Do the variables in the Technology Organization Environment Framework influence the Perceived Ease of Use and Perceived Usefulness of the E-Catalog Mobile?

2. Literature Review and Hypotheses Development

2.1 The Technology Organization Environment Framework (TOE Framework)

The TOE framework represents a conceptual lens for interpreting how organizations adopt technological innovations on an institutional scale. TOE was initially proposed by Tornatzky and Fleischer (1990). Figure 1 this framework stresses that technology adoption decisions are shaped not only by intrinsic technological attributes but also by internal organizational conditions and external environmental pressures or support (Chittipaka et al., 2023; Swani, 2021).

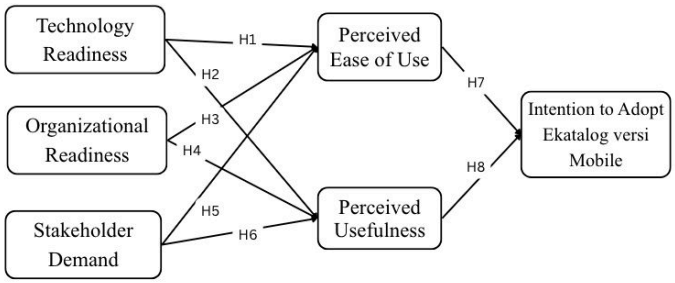

Figure 1. Research model

2.1.1 Technological Readiness

Technology Readiness is defined as the degree of preparedness of an institution to receive and implement new technological systems, indicating the presence of infrastructure and technical competence (Jais & Ngah, 2024). Previous studies have shown that Technology Readiness positively influences the intention to adopt new technology in the public sector (Chomistriana et al., 2024; Jais & Ngah, 2024; Pujani et al., 2021). Ofem et al. (2025) further found that Technology Readiness positively affects perceived usefulness, although its effect on perceived ease of use remains insignificant, indicating the need for further investigation.

Nevertheless, prior studies also suggest that technologically prepared users are better able to integrate digital tools into their activities and tend to perceive these technologies as easier to use (Inan & Lowther, 2010; Zhang & Li, 2021). In the context of local government, infrastructure readiness and technological capabilities are expected to influence how procurement staff perceive the usefulness and ease of use of E-Katalog Mobile. The higher the level of technological readiness, the greater the likelihood that the system can be utilized effectively to support the government procurement activities. Based on this reasoning, the following hypotheses are proposed:

H_1: Technology readiness has a positive effect on perceived ease of use

H_2: Technology readiness has a positive effect on perceived usefulness

2.1.2 Organizational Readiness

Organizational Readiness refers to the extent of preparedness within a governmental institution to implement the E-Catalog Mobile, indicated by resource availability, fiscal support, and capability to embed innovation into operational workflows (Hashim et al., 2021; Jöhnk et al., 2021). Additionally, Organizational Readiness reflects an organization's absorptive capacity to leverage new knowledge and technology (Toufaily et al., 2021). Within the domain of technology adoption, organizational readiness shapes users' perceptions of the system.

Organizations with adequate infrastructure support, training, and policies tend to make it easier for users to understand and operate systems, thereby enhancing the perceived ease of use (Wang et al., 2022). Singh and Mansotra (2019) also reported that when organizations possess greater resources to support the adoption of new technologies, users tend to perceive these technologies as easier to use because they have been well prepared by the organization. Furthermore, organizational readiness enables effective technology use to support work, ultimately increasing its perceived usefulness (Chatterjee et al., 2021). Based on the above discussion, the proposed hypotheses are as follows:

H_3: Organizational readiness has a positive effect on perceived ease of use

H_4: Organizational readiness has a positive effect on perceived usefulness

2.1.3 Stakeholder Demand

Stakeholder demand is defined as the level of need and expectation that stakeholders have regarding the use of a particular technology (Adade & de Vries, 2025). In this study, the stakeholders are citizens, auditors, and service providers who encourage government agencies to improve the quality of their services through digital tools. In government settings, stakeholder demand for quicker, clearer, and more efficient services is a major driver of technology adoption (Mikalef et al., 2022). This pressure also shapes users' evaluations of technology (Rahmawati & Antoni, 2021).

Previous research indicates that stakeholder demand positively influences perceived usefulness, as technology is viewed as a tool for meeting external expectations (Mercuri et al., 2025). Adnan et al. (2021) reported that the government's motivation to innovate public services is influenced by stakeholder demands for online services that are easy to use. In this context, stakeholder needs and expectations encourage government agencies to develop digital technologies that are simpler and easier to operate. The greater the stakeholder demand for practical and responsive services, the stronger the users' perception that technology is easy to use in supporting government activities. Based on this argument, the proposed hypotheses are as follows:

H_5: Stakeholder demand has a positive effect on perceived ease of use

H_6: Stakeholder demand has a positive effect on perceived usefulness

2.2 The Technology Acceptance Model (TAM)

The TAM is one of the most frequently applied theoretical models for explaining how information technology is accepted and utilized (Davis, 1989). The model highlights that a person's intention to use technology is driven by two core factors, such as Perceived Usefulness (PU) and Perceived Ease of Use (PEoU), which form attitudes toward the system.

2.2.1 Perceived Ease of Use

Perceived Ease of Use describes a person's evaluation of how simple a system is to operate with minimal effort (Nuryyev et al., 2020). In this study, the construct relates to procurement managers' views on the usability of the mobile e-catalog. Prior studies consistently indicate that the PEoU positively affects the intention to adopt and apply new technology in public organizations (Limanto & Wuisan, 2025; Ofori et al., 2023; Wang et al., 2022) and the private sector (Chia & Agustin, 2026; Haripin & Fatmawati, 2026). These findings confirm that the perceived ease of use is a primary determinant of technology adoption. Thus, the proposed hypothesis is as follows:

H_7: Perceived ease of use has a positive influence on the intention to adopt

2.2.2 Perceived Usefulness

Perceived Usefulness describes the degree to which an individual believes that using a technology can enhance their effectiveness and performance outcomes (Esfahbodi et al., 2022). In this study, Perceived Usefulness is defined as procurement managers' perceptions of the extent to which implementing the E-Catalog Mobile can improve their performance in conducting e-purchasing. Individuals who perceive a technology as highly beneficial tend to demonstrate a greater intention to adopt it (Hidayati et al., 2025; Sohaib et al., 2019). Consistent with this, various studies have demonstrated that Perceived Usefulness positively influences usage behavior and the intention to adopt new technologies in the public sector (Kumar et al., 2025; Legesse et al., 2024; Limanto & Wuisan, 2025). Based on this explanation, the proposed hypothesis is as follows:

H_8: Perceived usefulness has a positive influence on the intention to adopt

3. Research Methodology

This study uses measurement items adapted and developed from previous research as follows: Technology Readiness and Stakeholder Demand, Organizational Readiness, Perceived Usefulness and Perceived Ease of Use, and Intention to Adopt (Ofori et al., 2023 ;Zhou, Liu, Chen, & Pancho, 2025; Jais, & Ngah, 2024; Legesse, Beshah, Berhan, & Tesfaye, 2024). Each indicator was evaluated using a 7-point Likert scale ranging from strongly disagree to strongly agree. To assist respondents in understanding the context of the questions, the measurement items were translated into Indonesian and reviewed by an expert. Before the main data collection, a wording test and pretest were conducted to ensure the clarity, relevance, and comprehensibility of the questionnaire items.

The wording test involved several respondents with procurement backgrounds to evaluate the questionnaire's readability and appropriateness. Subsequently, a small-scale pretest was conducted with 30 procurement employees to assess the consistency and overall suitability of the research instrument. Based on the feedback obtained, several questionnaire items were refined before the final questionnaire was distributed. Data were collected through an online questionnaire distributed to procurement staff in local governments using snowball sampling in October 2025. This technique was employed because it is effective for reaching respondents who are relatively difficult to access within public-sector organizations. Respondents were also encouraged to share the questionnaire with their professional networks to obtain a broader and more diverse sample.

To ensure that the respondents represented the system's primary users and had relevant experience in the research context, several selection criteria were applied. Respondents were required to be at least 18 years old, work in the local government procurement department, and have experience using the E-Katalog system for procurement activities within the last two years. These criteria ensured that the respondents had sufficient familiarity and practical experience with government e-procurement systems. A total of 337 participants who fulfilled the requirements were included in the study. The valid response set reached 337 entries, surpassing the advised sample benchmark of 10 times the item count (Hair, Hult, Ringle, Sarstedt, Danks, & Ray, 2021). With 28 questionnaire items, the respondent count exceeded the recommended lower bound of 280 participants. The profiles of the respondents in this study are presented in Table 1.

Table 1. Respondent's profile

Variables	Categories	Frequency	Percentage (%)
Region	Western Indonesia	193	57.27
	Central Indonesia	104	30.86
	Eastern Indonesia	40	11.87
Age	45-60	133	39.46
	29-44	187	55.49

Variables	Categories	Frequency	Percentage (%)
Age	18-28	17	5.05
Gender	Male	225	66,77
	Female	112	33,23
Employment Period	0 - 10 years	93	27.6
	11 - 20 years	172	51.04
	> 20 years	72	21.36
Level of Education	Diploma	6	1.78
	Bachelor Degree	230	68.25
	Master Degree	101	29.97

4. Results and Discussions

4.1 Measurement and Structure Model

This study applies Partial Least Squares (PLS) modeling using SmartPLS 4 as a statistical tool to evaluate the measurement and structural models. PLS-SEM was selected because it is suitable for analyzing complex research models with multiple constructs and mediating relationships and does not require the assumption of data normality (Hair, Hult, Ringle, & Sarstedt, 2022).

The evaluation followed a two-phase procedure for the proposed model. Initially, the measurement model was examined to determine instrument validity and reliability, following the guidelines of (Hair, Hult, Ringle, Sarstedt, Danks, & Ray, 2021). Next, a structural model was examined through hypothesis testing. The measurement stage evaluates outer loadings, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach Alpha (CA). All criteria followed predefined benchmarks, including Outer Loading greater than 0.708, AVE greater than 0.5, CR greater than 0.708, and CA greater than 0.7. As shown in Table 2 , all the metrics met the required standards.

Table 2. PLS measurement model results

Variables	Indicator	Outer Loading	AVE	CR	CA
Technology Readiness (TR)	TR1	0.852	0.725	0.888	0.811
	TR2	0.814	0.725	0.888	0.811
	TR3	0.887	0.725	0.888	0.811
Organizational Readiness (OR)	OR1	0.847	0.717	0.927	0.901
	OR2	0.829	0.717	0.927	0.901
	OR3	0.785	0.717	0.927	0.901
	OR4	0.906	0.717	0.927	0.901
	OR5	0.864	0.717	0.927	0.901
Stakeholder Demand (SD)	SD1	0.923	0.843	0.964	0.953
	SD2	0.934	0.843	0.964	0.953
	SD3	0.892	0.843	0.964	0.953
	SD4	0.926	0.843	0.964	0.953
	SD5	0.915	0.843	0.964	0.953
Perceived Usefulness (PU)	PU1	0.918	0.884	0.974	0.967
	PU2	0.953	0.884	0.974	0.967
	PU3	0.922	0.884	0.974	0.967
	PU4	0.944	0.884	0.974	0.967
	PU5	0.963	0.884	0.974	0.967
Perceived Ease of Use (PEoU)	PEoU1	0.928	0.860	0.968	0.959
	PEoU2	0.925	0.860	0.968	0.959
	PEoU3	0.943	0.860	0.968	0.959
	PEoU4	0.918	0.860	0.968	0.959
	PEoU5	0.921	0.860	0.968	0.959

Variables	Indicator	Outer Loading	AVE	CR	CA
Intention to Adopt (IA)	IA1	0.941	0.866	0.970	0.961
	IA2	0.928	0.866	0.970	0.961
	IA3	0.927	0.866	0.970	0.961
	IA4	0.937	0.866	0.970	0.961
	IA5	0.919	0.866	0.970	0.961

In the second stage, discriminant validity was assessed using the Heterotrait–Monotrait (HTMT) ratio, as recommended by Franke and Sarstedt (2019), with a threshold of 0.85, which was applied as a conservative criterion. As presented in Table 3 , all HTMT values fell below this threshold, suggesting that the six constructs were empirically distinct. Therefore, the results confirm that the measurement model demonstrates adequate validity and reliability.

Table 3. HTMT Ratio

		1	2	3	4	5	6
1	Intention to Adopt						
2	Organizational Readiness	0.657					
3	Perceived Ease of Use	0.887	0.663				
4	Perceived Usefulness	0.892	0.619	0.846			
5	Stakeholder Demand	0.806	0.771	0.781	0.791		
6	Technology Readiness	0.665	0.837	0.645	0.583	0.689	

Path coefficient estimation was performed using bootstrapping with 1,000 resampled datasets and a 95% confidence level. The structural model was free of multicollinearity issues because all VIF values remained below the threshold (Hair et al., 2022). A hypothesis is considered supported if the beta coefficient is significant, indicated by a t-statistic value greater than 1.645, a p-value less than 0.05, and a confidence interval (LL and UL) that does not cross zero.

Based on the results in Table 4 the analysis shows that Technological Readiness (TR) has no meaningful impact on Perceived Ease of Use (PEoU) (β = 0.111; p = 0.051) or Perceived Usefulness (PU) (β = 0.039; p = 0.286), leading to the rejection of H_1 and H_2. In addition, Organizational Readiness (OR) shows an insignificant relationship with PU (β = 0.114; p = 0.076), thereby confirming H_4. However, OR had a positive and significant effect on PEoU (β = 0.158; p = 0.021), thus supporting H_3.

Table 4. Hypothesis Result

Hypotheses		Beta	SE	t-values	p-values	LL	UL	f2	VIF	Decision
H_1	TR → PEoU	0.111	0.068	1.637	0.051	-0.003	0.222	0.014	2.182	Rejected
H_2	TR → PU	0.039	0.069	0.565	0.286	-0.073	0.153	0.002	2.182	Rejected
H_3	OR → PEoU	0.158	0.077	2.041	0.021	0.041	0.297	0.025	2.428	Accepted
H_4	OR → PU	0.114	0.080	1.431	0.076	-0.010	0.252	0.013	2.428	Rejected
H_5	SD → PEoU	0.575	0.069	8.280	0.000	0.447	0.674	0.425	1.905	Accepted
H_6	SD → PU	0.662	0.069	9.604	0.000	0.538	0.764	0.561	1.905	Accepted
H_7	PEoU → IA	0.448	0.076	5.899	0.000	0.318	0.568	0.351	2.981	Accepted
H_8	PU → IA	0.495	0.077	6.403	0.000	0.373	0.627	0.429	2.981	Accepted

Furthermore, stakeholder demand had a positive and significant effect on PEU (β = 0.575; p = 0.000) and PU (β = 0.662; p = 0.000), thus supporting H_5 and H_6, respectively. Furthermore, PEU (β = 0.448; p = 0.000) and PU (β = 0.495; p = 0.000) had positive and significant effects on intention to adopt (IA), indicating that H_7 and H_8 were supported.

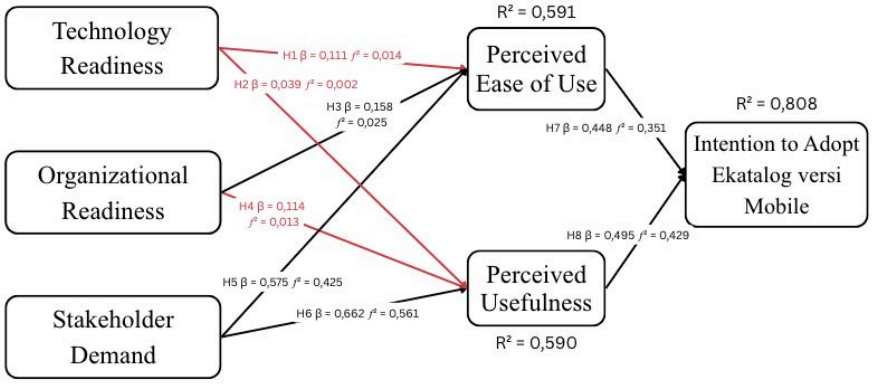

Figure 2. Estimated model

According to Sarstedt, Ringle, and Hair (2020), the criteria for evaluating the effect size (f^2) are classified based on the magnitude of a construct's impact on the model. An f^2 value smaller than 0.02 was considered negligible because it did not indicate a meaningful effect. Furthermore, f^2 values ranging from 0.02 to 0.15 indicate a small effect, values between 0.15 and 0.35 indicate a medium effect, and f^2 values above 0.35 are categorized as having a large effect. In general, the study outcomes demonstrate that Stakeholder Demand is the most influential determinant in shaping perceptions of ease of use and Perceived Usefulness, which, in turn, encourage the intention to adopt the E-Catalog Mobile. The results are shown in Figure 2.

4.2 Explanatory Power

Overall, the R^2 and Adjusted R^2 values for the three constructs, Intention to Adopt, Perceived Ease of Use, and Perceived Usefulness, were classified as high and moderate, as they were above 0.5 (Hair et al., 2021). As shown in Table 5, the Intention to Adopt construct was classified as high because its R^2 exceeded 0.75. The Perceived Ease of Use and Perceived Usefulness constructs were classified as moderate because they had R^2 values greater than 0.5. This indicates that the research model has a good ability to explain most of the variance in each of the dependent variables. In other words, the independent variables used in the model significantly influenced the dependent variables.

Table 5. R^2 and R^2 adjusted

Construct	R^2	R^2 adjusted
IP	0.808	0.807
PEU	0.591	0.588
PU	0.590	0.587

4.3 Discussion

The results reveal that the adoption of the E-Catalog Mobile within local government institutions is mainly influenced by user perceptions, especially Perceived Usefulness and Perceived Ease of Use, both of which significantly affect the intention to adopt. These findings are consistent with TAM, which states that these two variables are core determinants of technology acceptance (Davis, 1989; Venkatesh, & Davis, 2000). Nevertheless, the principal finding shows that the development of these perceptions is not independent but is strongly shaped by Stakeholder Demand.

More specifically, Stakeholder Demand significantly affects Perceived Usefulness and Perceived Ease of Use, showing that procurement officers' views of technology are formed not only by personal experience but also by external expectations from regulators, auditors, and society. Within public organizations, stakeholder pressure is recognized as a major catalyst for innovation adoption, especially to enhance transparency, accountability, and service quality (Adade, & de Vries, 2025; Adnan, Hidayanto, & Kurnia, 2021). These results are aligned with prior studies, indicating that Stakeholder Demand can strengthen perceptions of technological benefits in public sector institutions (Mercuri, Quaglieri, Ramírez-Hurtado, & Quattrociocchi, 2025).

Furthermore, this study indicates that stakeholder demand significantly influences perceived ease of use, as perceptions of how easy it is to use new technology are shaped not only by system characteristics but also by the drive to meet stakeholders' expectations. In this context, when stakeholders such as auditors assess that using the E-Catalog Mobile can improve accountability and service quality, these assessments help shape procurement officials' belief that the system is easy to use, thereby encouraging the intention to adopt it.

Beyond external determinants, the study results show that Organizational Readiness has a strong impact on Perceived Ease of Use but shows no influence on Perceived Usefulness. These outcomes are consistent with those of (Mercuri et al., 2025). This suggests that organizational readiness, such as internal support, training, and resource availability, plays a crucial role in helping users understand and use the system. Thus, a supportive organizational environment can reduce barriers to use and enhance perceived ease of use. However, organizational readiness does not directly shape perceptions of the technology's benefits, which are more likely to be influenced by job demands and stakeholder expectations. Previous research by Deng, Hong, Ren, Zhang, and Xiang (2018), Modisane and Jokonya (2021), and Villalba-Mora, Casas, Lupiañez-Villanueva, and Maghiros (2015) indicates that when a technological innovation is simple, easily accessible, and does not require significant organizational resources, organizational readiness is not crucial in shaping adoption intentions.

Conversely, technology readiness did not significantly influence perceived ease-of-use or perceived usefulness. These findings indicate that, in the context of a nationally standardized procurement system, technology readiness is no longer a key differentiating factor in shaping users' perceptions. The widespread availability of infrastructure and systems means that users place little emphasis on technology readiness; rather, they focus on how technology is used in their daily work practices (Janssen, Rana, Slade, & Dwivedi, 2021). These results align with those of Alkhaldi, Malik, and Lytras (2025), who showed that technology readiness does not influence the intention to adopt m-government, as Kuwait's high smartphone penetration and familiarity with smartphones render this factor less relevant. A similar situation is observed in the Indonesian context, where the e-procurement system has been in place since 2012, meaning that users have become accustomed to digital technology, and technology investments are relatively well established and no longer require significant changes.

Overall, the findings of this study suggest that when adopting complementary technologies such as the E-Catalog Mobile, the development of user perceptions is driven more by external pressure and organizational support than by technological readiness alone. Stakeholder demand is the main driver shaping perceptions of benefits and ease of use, while Organizational Readiness serves as an enabler, facilitating user interaction with the system. These findings indicate that the implementation strategy for the E-Catalog Mobile should focus not only on improving technological and organizational readiness but also on managing stakeholder expectations and increasing the user engagement. An approach that emphasizes communicating the technology's benefits, reinforcing usage requirements from procurement stakeholders, and integrating the system into daily work has proven more effective at driving adoption. Thus, implementation efforts that focus solely on infrastructure may be suboptimal without accompanying strategies that directly shape users' perceptions and experiences.

5. Conclusions

5.1 Conclusions

This study aims to examine the factors influencing the intention to adopt the E-Catalog Mobile application among local governments in Indonesia by integrating the TOE and TAM frameworks. The findings reveal that Perceived Usefulness and Perceived Ease of Use are the main determinants driving adoption intention, highlighting the importance of user evaluation in the technology adoption process. Moreover, Stakeholder Demand emerged as the dominant factor shaping these two perceptions, indicating that stakeholder pressure and expectations play a key role in driving technology adoption in the public sector. Meanwhile, Organizational Readiness influences only the Perceived Ease of Use, and technology readiness shows no significant effect, suggesting that in

established systems, such as e-procurement in Indonesia, institutional readiness is no longer a primary factor.

This study makes a theoretical contribution by demonstrating that, in the context of an established digital system, factors within the TOE framework do not always directly influence adoption intentions but rather operate through user perceptions, namely, perceived usefulness and perceived ease of use. These findings reinforce TAM's role of TAM as a mediating mechanism in explaining how institutional conditions translate into adoption behavior. Furthermore, the dominant influence of stakeholder demand indicates that environmental factors affect organizations at the macro level and shape individuals' evaluations of technology, thereby broadening the TOE perspective in the public sector context.

From a managerial perspective, the findings of this study suggest that implementing E-Catalog Mobile should focus more on shaping user perceptions and managing stakeholder expectations rather than relying solely on technological readiness and infrastructure. Since stakeholder demand was found to be the most dominant factor, the National Public Procurement Agency (NPPA) can strengthen adoption by involving key actors within the procurement ecosystem, such as auditors, government officials, and law enforcement agencies in promotional campaigns, policy communication, and system socialization programs. Support and recommendations from these stakeholders may enhance the perceived legitimacy and urgency of the system.

Furthermore, as the system developer, the National Public Procurement Agency (NPPA) should prioritize user-oriented application development to ensure that the features provided are easy to use and enhance the productivity of the user. A co-creation approach may also be implemented by involving procurement staff in usability testing, feature evaluation, and interface design discussions to ensure that the application is practical and aligned with users' operational requirements. Conversely, auditors and supervisory institutions can encourage adoption by promoting the use of E-Catalog Mobile as a tool to improve transparency, responsiveness, and monitoring efficiency in procurement processes. Local governments are also encouraged to support adoption by integrating e-Catalog Mobile into daily procurement workflows and encouraging procurement staff to actively utilize mobile-based features, particularly real-time notifications and monitoring functions. Training programs, user assistance, and continuous technical support should also be provided to enhance the perceived ease of use and improve the overall user experience.

From a social perspective, this study confirms that the adoption of the EC-M is not only related to organizational efficiency but also to the creation of public value, such as transparency, accountability, and service quality. The significant role of stakeholder demand indicates that public and other stakeholders' expectations can serve as key drivers of digital transformation in the public sector. Consequently, stakeholder engagement is crucial for enhancing the legitimacy of technology use and strengthening public trust in the government procurement systems.

5.2 Research Limitations

This study had several limitations. First, the analysis was limited to the perspectives of procurement employees, the primary users of E-Katalog Mobile, which may not fully capture the views of other stakeholders in the government procurement ecosystem. Second, the study employed snowball sampling may introduce selection bias and limit the representativeness of the sample. In addition, most respondents were from Western Indonesia, potentially limiting the generalizability of the findings across regional contexts. Third, this study focused only on the intention to adopt and did not examine post-adoption outcomes or actual system usage.

5.3 Suggestions and Future Research Directions

Future studies should include suppliers and other stakeholders to obtain a more comprehensive understanding of E-Katalog Mobile adoption. Broader sample coverage, particularly from the eastern regions of Indonesia and central government institutions, is also recommended to improve the representativeness and generalizability of the findings. Furthermore, future research may incorporate

additional dependent variables, such as procurement performance, continuance intention to use e-procurement, user satisfaction, and ambidextrous innovation, to provide deeper insights into the broader impact of digital procurement technology implementation on organizations.

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Author Contributions
ME was responsible for the conceptualization and design of the study, coordination of data collection, data management, and preparation of the initial manuscript draft. IS contributed to research supervision, methodological guidance, validation of the research process, and critical review and refinement of the manuscript. Both authors contributed to the interpretation of findings, revision of the manuscript, and approved the final version for publication.

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