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Exploring the Drivers of Continuance Intention to Use Mobile Government

A Case Study in Indonesia

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Abstract: The sustained use of technology is pivotal for ensuring the enduring impact of innovations and improving the quality of services within organizations. The long-term success of Information System (IS)/Information Technology (IT) initiatives hinges not merely on their initial adoption but on their continued use. Therefore, understanding the factors that motivate users to consistently engage with new technologies is essential for evaluating the success and sustainability of such projects. Despite this importance, most research in this domain has primarily focused on user acceptance rather than continued usage. This study aims to bridge this gap by exploring how citizens' perceptions of usefulness and satisfaction influence their intention to continue using mobile government services. A survey was conducted with 254 Indonesian citizens who had interacted with mobile government platforms. The analysis was performed using Partial Least Squares Structural Equation Modelling (PLS-SEM), with three primary constructs measured: perceived usefulness, satisfaction, and continuance intention to use m-government services. The R^2 value of the structural model indicates that 83.6% of the variation in continuance intention to use m-government services is explained by perceived usefulness and satisfaction. The findings reveal that perceived usefulness exerts a more substantial influence on continuance intention than satisfaction. The theoretical contribution of this study enhances the understanding of the factors influencing continued use within the context of m-government, while the practical contribution provides insights for policymakers to design more effective and engaging m-government services.

Keywords: Mobile Government; Continuance Intention; Perceived Usefulness, Satisfaction.

1. Introduction

The rapid advancement of mobile technology has completely transformed how individuals access and engage with government services (Bretschneider & Mergel, 2015). Mobile government (m-government) platforms have been launched to provide citizens with more convenient and efficient ways to engage with public services (Lawelai & Sadat, 2022). These platforms aim to simplify administrative processes, reduce the need for physical visits to government offices (Sudrajat & Andhika, 2021) and improve the overall quality of services (Sun et al., 2015). Despite the significant potential of m-government to improve service delivery, numerous challenges persist in its implementation, particularly in developing countries, where the maturity level of digital government is still progressing.

In ASEAN, for instance, countries like Singapore and Malaysia have made significant strides in digital government services, with initiatives such as Singapore's "Smart Nation" program and Malaysia's "MyGov" platform showcasing advanced digital solutions. These countries have seen improvements in both citizen engagement and government efficiency through robust mobile platforms. In contrast, other ASEAN nations, including Indonesia, are still grappling with challenges such as low adoption rates and issues around digital literacy, which significantly impact the utilization of m-government services (Althunibat et al., 2010).

In Indonesia, the LAPOR! application, a platform that allows citizens to submit aspirations, reports, and complaints, registered 107 complaints in Bangkalan District in 2024. However, the average response time (RTL) reached five working days, surpassing the mandated threshold of three days. Additionally, the LAPOR! app has been downloaded fewer than 100,000 times from the Google Play Store—an alarmingly low figure given Indonesia's population of approximately 280 million in 2024 (Napitupulu et al., 2024). This limited usage is often linked to low digital literacy and the capacity of users, which hinders their ability to effectively engage with mobile technologies.

One pressing challenge in this context is citizens' readiness. For m-government to thrive, citizen acceptance is essential (Abu Tair & Abu-Shanab, 2014), and its sustainability is crucial over time. While many citizens may be willing to try m-government services, maintaining their interest and ensuring continued use remain substantial hurdles (Subhan & Suciningsih, 2024). Discontinuation often stems from factors such as a lack of perceived usefulness, dissatisfaction with service quality, or insufficient communication about the platform's benefits (Kurnianingsih et al., 2022). Failure to address these issues can undermine public trust and participation, further limiting the adoption of m-government.

The significance of this research lies in addressing the factors that motivate users to continue using m-government services after their initial adoption (Ahmad & Khalid, 2017). Although most studies on e-government have focused on user acceptance and initial adoption (Saxena, 2017; Talukder et al., 2019), he factors driving long-term use of these systems remain underexplored, particularly in the context of m-government. Long-term use is crucial for the sustained success of m-government initiatives, as it reflects whether users consistently perceive value in the services provided (Abdul Rahim et al., 2023). Understanding these factors is vital for improving service design and enhancing user experience, which can, in turn, encourage greater public participation and trust in m-government services.

This study is novel in several ways. First, the use of the Expectation Confirmation Model (ECM) in the context of m-government in Indonesia remains rare (Abdul Rahim

et al., 2023; AlBar & Hddas, 2018). While ECM has been widely applied in other information system domains, its use for sustained m-government service use in Indonesia remains limited. Second, this study provides a unique comparison between the influence of perceived usefulness (PU) and user satisfaction on the continuance intention to use m-government services. By examining the relative strength of these two factors, this research offers new insights into what drives the long-term engagement of citizens with mobile government services.

The implementation of m-government in Indonesia, through applications such as Qlue, M-Paspor, and Peduli Lindungi, has introduced innovative public services, but significant challenges remain in addressing user satisfaction and perceived usefulness. Qlue, while effective for reporting public complaints, exhibits low usability due to slow system responses (Noprisson et al., 2016). As reported by Indonesia's Ministry of Communication and Information Technology, Qlue's user engagement metrics reveal that a large portion of submitted complaints do not receive timely follow-up, undermining trust in the platform's effectiveness (Ramadhan & Patnistik, 2019).

M-Paspor often encounters technical issues, such as system errors and limited-service quotas, diminishing the user experience (Nurkumalawati & Rofii, 2023). One case involved a system disruption in the Mobile Passport (M-Paspor) application at the Directorate General of Immigration in 2022, which caused dozens of passport applications to be pending across Indonesia (Mpaspor, 2022). Similarly, Peduli Lindungi, despite its critical role during the pandemic, data from the Indonesian Ministry of Health highlights that public skepticism regarding data security remains high (Rusfiana & Kurniasih, 2024).

These issues highlight the need for improvements in system quality, delivery of relevant information, and more responsive service design to enhance user satisfaction, perceived usefulness, and the sustainability of m-government adoption in Indonesia. To address these issues, the Expectation Confirmation Model (ECM) suggests that user satisfaction and continued use depend on the gap between initial expectations and actual service performance (Bhattacherjee, 2001). When users feel a service meets or exceeds their expectations, they are more likely to continue using it, with system usability, response times, and perceived security being key factors. The Technology Acceptance Model (TAM) (Davis, 1989) further explains how perceived usefulness and ease of use influence sustained engagement. Together, these models provide a strong theoretical foundation for enhancing m-government services in Indonesia.

The ECM was proposed by Bhattacherjee (2001) to describe user's conduct in the sustained utilization of the new IS. Bhattacherjee (2001) adapted ECT (Expectation Confirmation Theory) which was developed previously by Oliver (1980) in the domain of consumer behavior and marketing literature. The primary distinction between ECM and ECT is that ECM evaluates just post-consumption of IS, whereas ECT analyses both pre- and post-consumption. The goal of ECM is to assess individual intentions to continue using and loyalty towards information systems. Bhattacherjee (2001) found the phenomenon of why some users of information systems stop using IS after accepting it initially (acceptance-discontinue anomaly).

The well-known theories of technology acceptance, such as the Technology Acceptance Model (TAM) (Davis, 1989), the Theory of Planned Behavior (TPB) (Ajzen, 1991), and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), have been widely used to explain user acceptance and initial adoption of technology. However, these models primarily focus on factors

influencing initial usage and do not adequately address continued usage or discontinuation. Specifically, TAM, TPB, and UTAUT focus on factors that drive acceptance at the point of adoption, such as perceived usefulness, perceived ease of use, and behavioral intentions. In contrast, the Expectation Confirmation Model (ECM) (Bhattacherjee, 2001) goes beyond initial acceptance and offers a more comprehensive framework for understanding the continued use or discontinuation of information systems (IS) over time.

ECM emphasizes the role of user satisfaction, confirmation of expectations, and perceived usefulness in sustaining continued engagement, making it particularly effective in addressing the acceptance-discontinuation anomaly that other models do not fully explain (Pinem et al., 2018). The survival of business entities will also be determined by how many users repurchase or renew their subscriptions to specific software (Rofi et al., 2021). According to Alalwan (2013), the optimum benefit of IS will be received if the users continue to use the IS.

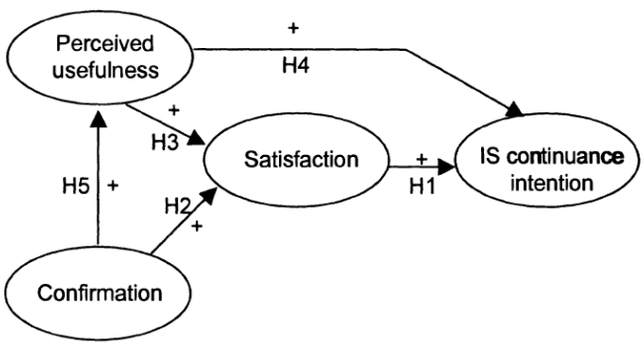

Figure 1. Original ECM

The original ECM, as illustrated in Figure 1, is based on four key constructions. User satisfaction, confirmation, perceived usefulness, and continuance intention to use. Bhattacherjee (2001) stated that the continuance intention to use depends on the user's satisfaction, perceived usefulness and confirmation, with user satisfaction being the most significant factor influencing the continuance usage. ECM has been widely used in many areas of IS, such as online banking (Bhattacherjee, 2001), web-based learning system (Hung et al., 2011), e-learning system usage (Iqbal & Virginia, 2020). There are several studies been carried out in the domain of mobile government. Santhanamery and Ramayah (2014) examined the continuation plan within the framework of the e-Filing system for electronic tax filing. This study was conducted among taxpayers in Malaysia based on ECM. The findings indicated that the continuance intention to use was influenced by perceived usefulness and satisfaction, where both are significant predictors in their study (Pinem et al., 2018). Additionally, it examined the precursors of continuing intention in the context of G2B (Government to Business) online services. Satisfaction and perceived usefulness significantly influence continuing intention. Notably, perceived usefulness exerts a greater influence on continuing intention than satisfaction. The study has validated the efficacy of ECM. This study will use the ECM model to examine the influence of perceived usefulness and satisfaction on the continuance intention to use the mobile government system in Indonesia. Following the research of Pinem et al. (2018), the perceived usefulness is directly able to encourage people to continue using the service. This is because m-government service is useful for their needs, so it does not require a confirmation process. Figure 2 represents the research model of the study.

Davis (1989) articulated perceived usefulness as "the degree to which an individual believes that using IS will increase his/her job performance within an organizational context". The pre-consumption or initial expectation in ECT has been

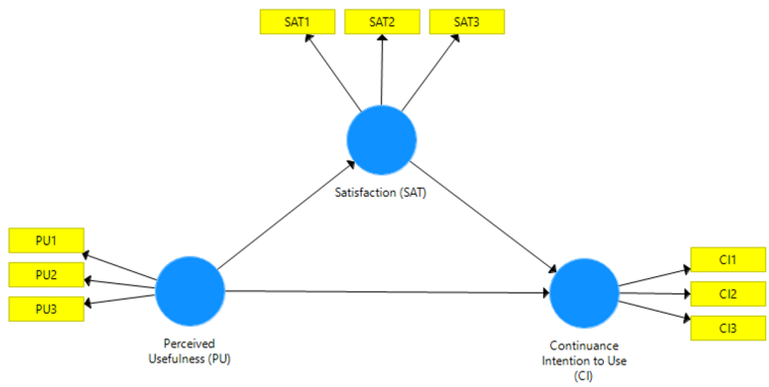

Figure 2. Research Model

supplanted by post-consumption expectations, namely perceived usefulness, when consumers' expectations evolve over time in actuality (Bhattacherjee, 2001). Thus, the value that people really perceive as being beneficial should be considered. How many people think a government mobile app can help them do their jobs better is the measure of perceived usefulness in this research.

Prior studies have discovered that satisfaction with mobile government services is significantly influenced by perceived efficacy (Afrizal & Wallang, 2021; Pinem et al., 2018; Santhanamery & Ramayah, 2014; Shyu & Huang, 2011). They found that if citizens realized more benefits from the services they received, they would be more satisfied. As a result, they will utilize the system continuously. This is also in line with Hernandez-Ortega et al. (2014) who reported that perceived usefulness possesses significant impact on satisfaction.

Research by Puthur et al. (2020) indicated that the perceived usefulness significantly influences the continued use of e-ticketing systems provided by Indian government railroads. Hossain and Quaddus (2012) in their review have found that the continuance intention to use was most strongly predicted by the perceived usefulness of information system research. Similarly, other previous studies also demonstrated that perceived usefulness directly influences continuing intention (Afrizal & Wallang, 2021; Pinem et al., 2018; Santhanamery & Ramayah, 2014; Shyu & Huang, 2011). Therefore, we propose the subsequent theories as follows:

H1: Perceived usefulness has a significant effect on user satisfaction.

H2: Perceived usefulness has a significant effect on continuance intention to use m-government services.

Bhattacherjee (2001) articulated perceived usefulness as "users' affect with (feelings about) prior information system use". In the consumer behavior literature, satisfaction has been widely used to measure the repurchasing intention of products or services. Satisfaction was seen as the key element to build and maintain customer loyalty in the long term (Oliver, 1980). The ECM posits that a user's desire to continue is influenced by their previous satisfaction with the use of the information system. Furthermore, satisfaction is the key to explaining the IS acceptance-discontinued anomaly, which means users stop using IS after their initial acceptance, a phenomenon frequently encountered in recent IS use research. Bhattacherjee (2001) explained that when users are satisfied with the use of IS, they will continue to employ IS. In contrast, consumers have the option to stop using IS if they are unsatisfied with its performance. Even though perceived usefulness was a more significant factor in determining acceptance in TAM (Davis, 1989), satisfaction was shown as a more significant predictor of continuing intention than perceived

usefulness in the context of IS, such as online banking (Bhattacherjee, 2001) and enterprise resource planning (Chou & Chen, 2009). Similarly, Other studies also confirm the role of satisfaction to explain continuing intention on mobile government services (Afrizal & Wallang, 2021; Pinem et al., 2018; Santhanamery & Ramayah, 2014; Shyu & Huang, 2011). Consequently, we put up the subsequent hypothesis as follows:

H3: User satisfaction has a significant effect on continuance intention to use m-government services.

2. Methods

This research employs the ECM, initially proposed by Bhattacherjee (2001) in the field of IS. Following the study by Afrizal and Wallang (2021), three key factors are tested in this research: attitudes of its usefulness and satisfaction served as independent factors, while continuance intention to use served as the dependent variable. Since the context of this study differs from previous ones, each factor and item in the research tool was adapted specifically for mobile government. The study uses a questionnaire designed with A five-point Likert scale, with responses ranging from 1 = “strongly disagree” to 5 = “strongly agree.” The questionnaire has three primary components and nine questions, as presented in Table 1, with all factors derived from prior research. The perceived usefulness factor was taken from the TAM model (Davis, 1989), the satisfaction factor from Belanche et al. (2014), and the plan to keep going to use factor from Afrizal and Wallang (2021) and Bhattacherjee (2001). Before distributing the questionnaires, we conducted a readability test to make sure all respondents could understand the statements clearly.

The research questionnaire comprises two components. The initial portion collects demographic information from participants, including gender, age, and educational attainment, to provide a clear profile of the participants. The second section focuses on measuring respondents’ perceptions of three key constructs: perceived usefulness, satisfaction, and the continuance intention to use mobile government services. This study employed a convenience sampling technique to collect data from respondents. This approach was chosen because it allows for quick and efficient data collection from participants willing to engage in the study (Almahamid & McAdams, 2011). The criteria of respondents comprised Indonesian citizens who had utilized m-government services. The questionnaire was distributed online using Google Forms, enabling respondents to complete it independently without direct assistance. While convenience sampling facilitates data collection, it may introduce bias and limit the representativeness of the sample to the broader population. To enhance the reliability and validity of results, future research is encouraged to adopt more structured probabilistic sampling methods.

A total of 254 respondents completed the questionnaire, and their responses were analyzed using Structural Equation Modelling using Partial Least Squares (PLS-SEM) in Smart PLS 3.2.8. PLS-SEM was selected for this analysis because of its robustness in handling non-normal data and its suitability for smaller sample sizes, making it an appropriate choice for this study (Santhanamery & Ramayah, 2014). This analytical approach helped the study investigate how perceptions of usefulness, User satisfaction and the continuance intention to use m-government services significantly impact user behavior, offering critical insights into the determinants of uptake and continued engagement with these services.

3. Results and Discussion

3.1. Results

This section presents the initial results of the study, encompassing a comprehensive analysis of respondents' profiles, the assessment of the measurement model through rigorous evaluation of construct validity and reliability, and the examination of the structural model. The structural model analysis is conducted to test the three hypotheses proposed in this study empirically.

The responses from 254 valid replies were analyzed for further examination. The respondents' demographic profiles are detailed in Table 1. In terms of gender, 141 respondents (55.51%) were male, while 113 (44.49%) were female. The age distribution showed that the largest group, Forty percent of respondents were aged 25 to 34 years (40.16%), followed by thirty per cent aged 35 to 49 years (30.71%), 50 to 64 years (17.72%), under 25 (6.69%), and over 64 years (4.72%). The majority of respondents possessed a bachelor's degree (45.28%), followed by high school graduates (29.92%), certificate holders (16.54%), and postgraduate degree holders (8.27%). In the next phase, the data were analyzed using the PLS-SEM approach, which is commonly employed in the domain of information systems. This methodology has two essential phases: initially, the measurement model evaluates the reliability and validity of the constructs, followed by the application of the structural model to test the research hypotheses.

Table 1. Demographic of Respondents

Variables	Frequency	%
Gender		
Male	141	55.51
Female	113	44.49
Age		
Below 25	17	6.69
25-34	102	40.16
35-49	78	30.71
50-64	45	17.72
Above 64	12	4.72
Education		
High School	76	29.92
Diploma	42	16.54
Bachelor	115	45.28
Postgraduate	21	8.27

3.2. Measurement Model

This study's three constructs were evaluated for their reliability and convergent validity during the measurement model phase. Reliability was evaluated using composite reliability (CR), and convergent validity was assessed by examining factor loadings and average variance extracted (AVE). According to Hair et al. (2010), Factor loadings for each article must surpass 0.7, the AVE should be greater than 0.5, and the CR value must be at least 0.7 to satisfy the reliability threshold. Table 2 demonstrates that the factor loadings exceed 0.7, the AVE surpasses 0.5, and the CR is larger than 0.7, confirming that both convergent validity and reliability assessments have satisfied the requisite criteria.

Table 2. The Result of Measurement Model

Construct	Item	Convergent Validity		
		Factor Loading	AVE	Composite Reliability
Perceived Usefulness (PU)	PU1	0.966	0.937	0.978
	PU2	0.969		
	PU3	0.970		
Satisfaction (SAT)	SAT1	0.969	0.897	0.963
	SAT2	0.914		
	SAT3	0.956		
Continuance Intention to Use (CI)	CI1	0.961	0.928	0.975
	CI2	0.960		
	CI3	0.969		

Furthermore, discriminant validity is assessed by the square root of the AVE. Discriminant validity is established when the square root of the AVE for a concept exceeds its correlation with other constructs (Fornell & Larcker, 1981). The results shown in Table 3 demonstrate that the conditions for discriminant validity were satisfied.

Table 3. Discriminant Validity

Construct	Continuance Intention to Use	Perceived Usefulness	Satisfaction
Continuance Intention to Use	**0.963***		
Perceived Usefulness	0.906	**0.968***	
Satisfaction	0.879	0.914	**0.947***

The f^2 (effect size) values from the Smart PLS output indicate the strength of the relationships between the constructs. For Perceived Usefulness (PU), the effect size on Continuance Intention (CI) is 0.335, which is considered a medium effect according to conventional guidelines (Cohen, 1994). This suggests that perceived usefulness has a moderate impact on users' intention to continue using the service. The effect size between Satisfaction (SF) and Continuance Intention (CI) is 0.142, indicating a small effect and suggesting that satisfaction has a minimal impact on the intention to continue using the service. Perceived Usefulness (PU) also shows a strong effect on Satisfaction (SF), with an effect size of 0.579, indicating a substantial influence, suggesting that users' perceptions of the service's usefulness significantly drive their satisfaction. Meanwhile, the Q^2 (predictive relevance) values indicate the model's ability to predict endogenous variables. For Continuance Intention (CI), the Q^2 value of 0.354 suggests moderate predictive relevance, meaning the model does a good job predicting users' intention to continue using the service (Selya et al., 2012).

3.3. Structural Model

In the structural model phase, the interrelations among the proposed constructs in the study framework, as shown in Figure 1, were assessed. The coefficient of determination (R^2) and the importance of the pathway analysis were calculated to evaluate how well the data supported the proposed hypotheses (Santhanamery & Ramayah, 2014). The results indicate that the two exogenous factors (perceived usefulness and satisfaction) explained 83.6% of the variation in the endogenous construct (continuance intention to use). Since a good model requires an R^2 value greater than 26%, it appears from these findings that the model meets expectations.

Additionally, three hypotheses are tested within this structural model (Figure 3), where the β-coefficient of the route, the t-statistic, and the p-value must meet the

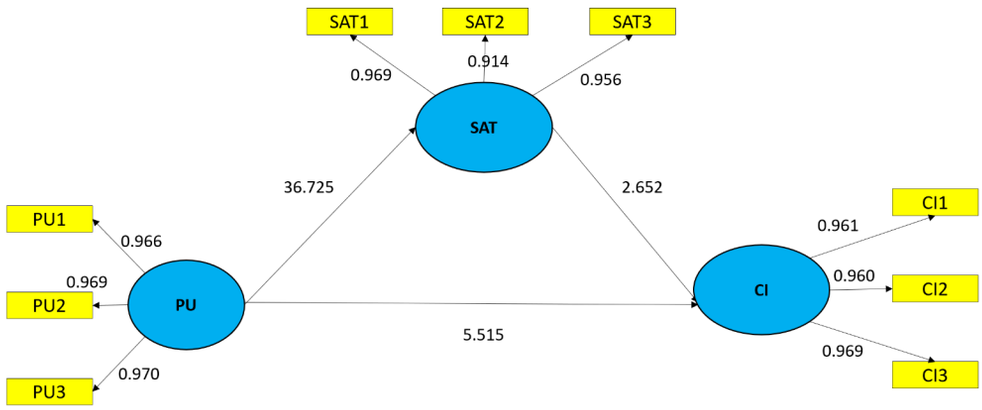

Figure 3. Structural Model Result

necessary criteria to support each hypothesis. As outlined by Hair et al. (2010), the path coefficient indicates the intensity of the link between two entities, and it must exceed 0.1 with a significance level of 0.05 or less. Moreover, the recommended T-Statistic value should be greater than 1.96. In Table 4, it is shown that the constructs both satisfaction (β=0.624, p<0.05, T-statistic=5.515) and continuance intention to use (β=0.914, p<0.05, T-statistic=36.752) are strongly influenced by perceived usefulness, thereby supporting H1 and H2. Additionally, satisfaction also significantly affects the continuance intention to use (β=0.309, p<0.05, T-statistic=2.652), which supports H3. Consequently, all the hypotheses provided are validated by the study data. Further analysis reveals that perceived usefulness is a more robust predictor of the continuance intention to use than satisfaction.

Table 4. Hypotheses Testing

Hypotheses	Path	β	T-Statistic	P-Value	Result
H1	PU -> CI	0.624	5.515	0.000	Supported
H2	PU -> SAT	0.914	36.725	0.000	Supported
H3	SAT -> CI	0.309	2.652	0.008	Supported

3.4. Discussion

The study also highlights that the perceived usefulness significantly influences satisfaction. This finding aligns with previous studies, such as Shyu and Huang (2011), which found a relationship between perceived usefulness and user satisfaction on an e-government learning website in Taiwan, and with Hung et al. (2011), who reported similar results within the framework of online educational platforms in Taiwanese universities. Another relevant study, (Iqbal & Virginia, 2020), showed that perceived usefulness boosts educators' satisfaction with e-learning systems in Indonesia, further supporting this research. These findings suggest that when users perceive greater benefits from using m-government services, they are more satisfied with their experience. This increase in satisfaction further motivates them to continue using the services, illustrating the significance of perceived usefulness in both satisfaction and continuance intention to use. This is consistent with the theory proposed by Bhattacherjee (2001), which states that perceived usefulness influences user satisfaction.

Additionally, this study confirms the relationship between satisfaction and continuance intention to use. This result is in line with prior research, such as Santhanamery and Ramayah (2014), which reported that satisfaction significantly affects the sustained aim of Malaysian taxpayers to utilize computerized tax filing methods, and Pinem et al. (2018), which showed that user satisfaction influences

the continued use of Indonesia's G2B sites. This supports the theory proposed by Bhattacherjee (2001), who found that satisfaction serves as a crucial determinant of the continuance intention to use. The results of this study further substantiate that user satisfaction with mobile government services correlates with increased likelihood of continued usage.

An interesting insight from this study is that satisfaction is not as strong a predictor of continued intention as perceived usefulness, which contrasts with the original ECM theory, which found satisfaction to be more dominant (Bhattacherjee, 2001). In other words, perceived usefulness has a greater impact than user satisfaction in Indonesia. One logical reason for this is that Indonesian users tend to focus more on the practical, tangible benefits of m-government services. In Indonesia, where digital literacy varies widely and where government services have traditionally been perceived as inefficient, users are likely to continue using m-government platforms if they perceive clear, immediate benefits. These benefits might include time savings, easier access to services, or greater efficiency in resolving issues. If users do not find technology useful or see no improvement in their daily lives, they are likely to disengage. Similar findings were observed in studies on e-filing in the case of Malaysia (Santhanamery & Ramayah, 2014) and G2B services in Indonesia (Pinem et al., 2018), where perceived usefulness was a stronger determinant of continuance intention than satisfaction.

According to TAM (Davis, 1989), users prioritize the usefulness of these platforms in improving their interactions with government services. This also reflects the culture and habits of Indonesian users, who tend to value functionality over ease of use when it comes to government services. The efficiency and practical benefits provided by m-government services, such as reducing bureaucratic bottlenecks or providing services that were previously inaccessible, play a more significant role in sustaining user engagement than satisfaction alone.

3.5. Theoretical & Managerial Implication

The theoretical implication of this study is that it extends the Expectation Confirmation Model (ECM) by applying it to the m-government context in developing countries, specifically Indonesia, to explore the factors influencing users' continuance intention to use mobile government services. While previous research has largely focused on initial acceptance and adoption of e-government services (Almarashdeh, 2020; AL-Zahrani, 2020; Ameen et al., 2020; Berlilana et al., 2018; Saleh & Alyaseen, 2021), this study fills a significant gap by examining the long-term use of these platforms, which is crucial for ensuring their sustained success. The findings suggest that perceived usefulness plays a more dominant role than satisfaction in the Indonesian context, highlighting the importance of functional benefits in encouraging continued engagement. This contribution extends ECM by emphasizing that continuance usage is not only driven by initial perceptions but by ongoing user recognition of the system's value over time. Therefore, to enhance m-government adoption and sustainability in developing countries, policymakers need to focus on increasing users' awareness of the practical benefits and efficiency gains these services offer, thus fostering greater long-term usage.

Managerial implications of this study are that it provides actionable insights for governments looking to enhance the adoption and sustained usage of m-government services. To ensure long-term engagement, governments should focus on public communication strategies to raise awareness about the practical benefits of these services, making sure citizens understand how m-government can improve their

daily lives. Additionally, gamification could be used to make the experience more engaging and rewarding, encouraging users to interact with the platform regularly. Simplifying the application and improving its user interface (UI) and user experience (UX) are also critical steps to ensure ease of use, especially considering the varying levels of digital literacy among users. Additionally, as digital governance matures, governments should focus on ensuring that these platforms are not only functional but also secure and reliable, building trust in e-services. Digital government maturity plays a key role here—governments need to continuously evolve these platforms to meet citizens' growing expectations, integrate new technologies, and align with international best practices in digital service deliver.

4. Conclusion

This study highlights the critical factors influencing the continuance intention to use m-government services in Indonesia, emphasizing the roles of perceived usefulness and satisfaction. Perceived usefulness is the strongest predictor of continuance intention, suggesting that users are more likely to engage with m-government platforms when they perceive tangible benefits that improve their lives. The government needs to enhance the application's features and usability to ensure continued use of m-government services.

This study contributes to the literature by extending the Expectation Confirmation Model (ECM) within the context of m-government in developing countries, particularly in Indonesia. While much of the existing e-government research has focused on user acceptance and initial adoption, this research emphasizes the long-term engagement of users, filling a critical gap in the understanding of sustained use. By focusing on perceived usefulness and satisfaction, this study provides new insights into how these factors influence the continued use of mobile government services, offering practical implications for policymakers to improve the design and communication of these services.

This research, however, is not without limitations. First, the study was conducted exclusively in Indonesia, which may limit the generalizability of the findings to other nations with different cultural, economic, or technological contexts. Comparative studies involving multiple countries could provide a broader perspective on the applicability of the findings. Second, the results indicate that the developed research model achieved a coefficient of determination (R^2) of 83.6%, suggesting that 83.6% of the variability in continuance intention to use mobile government services can be explained by perceived usefulness and satisfaction. However, 16.4% of the variability remains unexplained, highlighting the potential influence of other factors beyond perceived usefulness and satisfaction that could play a significant role. Third, the study used convenience sampling, which may introduce bias and limit the sample's representativeness. A probabilistic sampling method could enhance the reliability and validity of the results. Finally, the use of a cross-sectional design limits the ability to analyze how user behavior and perceptions evolve, pointing to the need for future longitudinal studies.

To build on this study, future research should explore additional factors that may influence users' intention to continue using mobile government services. These could include trust, privacy concerns, and user education, which may further explain the variance in continuance intention. Moreover, a longitudinal study would be beneficial to track changes in users' perceptions and behaviors over time, providing deeper insights into the evolving nature of m-government adoption. Additionally, studies comparing m-government services across multiple countries or regions with

varying levels of technological infrastructure would provide valuable perspectives on the generalizability of these findings. Addressing these gaps would offer a more comprehensive understanding of the sustained use of mobile government services and their long-term success in developing countries.

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