

Evaluation of Jamsostek Mobile Application (JMO) Using the UTAUT2 Model: A Study on BPJS Ketenagakerjaan Users in Jakarta

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Abstract

Purpose – This study explores the adoption of the Jamsostek Mobile (JMO) application in Indonesia, a digital initiative by BPJS Ketenagakerjaan aimed at enhancing access to social security services. The research examines the factors influencing user adoption, including trust in e-government, Performance Expectancy, Effort Expectancy, Habit, and Social Influence, within the framework of the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). The goal is to provide insights into improving user engagement with digital government services and fostering more inclusive governance.

Methodology – Using the Unified Theory of Acceptance and Use of Technology 2 framework, this study explores the key factors affecting user adoption and engagement in Jakarta, identified as a critical area for the expansion of services. Responses were collected from 400 participants through a structured questionnaire.

Findings – The findings reveal that key factors such as Trust in e-Government, Habit, Performance Expectancy, Effort Expectancy, and Social Influence significantly influence the adoption of the JMO app. Trust and Habit emerged as particularly strong predictors of continued usage. However, barriers like digital inequality and low awareness were identified as challenges to broader adoption.

Originality – This research underscores the importance of trust, habit, and ease of use in fostering e-government adoption, particularly in developing countries like Indonesia. The insights and strategies derived from this research offer valuable guidance for optimizing the JMO application and serve as a model for advancing digital government initiatives.

1. Introduction

Digital transformation has become an essential aspect of modern governance, enabling governments to deliver public services with increased efficiency and inclusivity. In Indonesia, a rapidly developing nation, the adoption of e-government has made substantial strides. Initiatives such as digital platforms for social security, licensing, official documentation, and tax payments are transforming traditional public services, aiming to reduce service gaps and enhance citizen participation in governance. This digital shift is pivotal in meeting the demands of a more connected and technology-savvy population. Despite these advancements, challenges such as digital inequality, uneven infrastructure development, and gaps in digital literacy remain critical barriers to universal e-government adoption.

Indonesia's commitment to enhancing e-government is reflected in its improved ranking in the United Nations E-Government Survey. The 2024 report places Indonesia at 64th among 193 countries, marking progress from its previous position of 77th in 2022. This achievement reflects advancements in digital infrastructure, policies, and public engagement. Nonetheless, significant obstacles remain, including digital inequality, uneven infrastructure development, and disparities in digital literacy. For example, Jakarta, Indonesia's center for technology and economic activity, ranks eighth nationally in digital literacy, highlighting the broader issue of unequal access to digital resources.

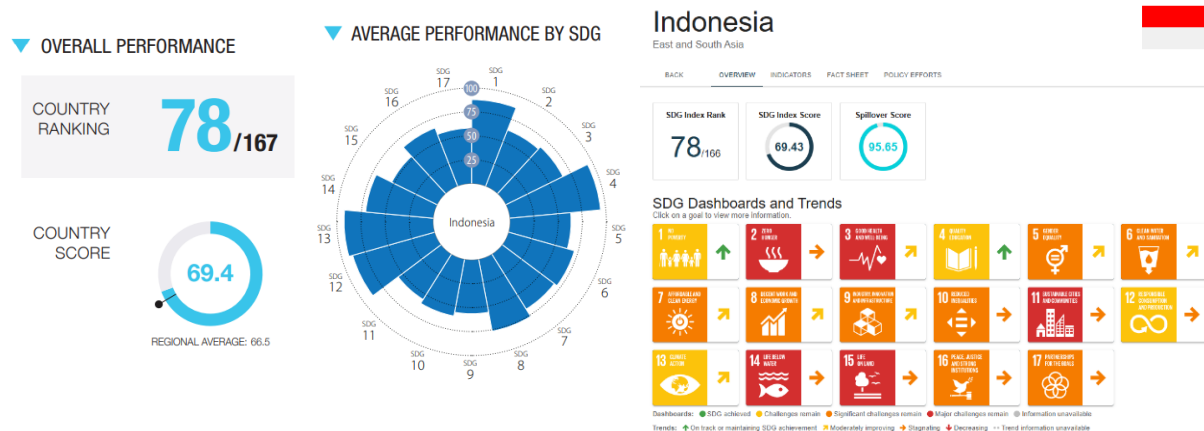


Figure 1. Indonesia SDGs Performance 2024

In the realm of public services, BPJS Ketenagakerjaan plays a pivotal role by offering social security programs aimed at safeguarding workers against socio-economic risks. These initiatives are in line with Indonesia's dedication to achieving the Sustainable Development Goals (SDGs), specifically SDG 8, which emphasizes the promotion of decent work and economic growth. Despite progress, the 2024 SDG report shows that Indonesia's score for SDG 8 remains at 78, categorized as moderately improving, indicating room for further development to meet the "no one left behind" principle.

In this context, BPJS Ketenagakerjaan, Indonesia's social security institution, has embraced digitalization through the launch of the Jamsostek Mobile (JMO) application. This app is designed to streamline access to social security services, making it more convenient for users to engage with essential programs. However, while the app offers significant potential, adoption rates have been lower than expected. This gap between potential and actual adoption underscores the need for a deeper understanding of the factors influencing user behavior.

This study aims to investigate the factors that affect the adoption and use of the JMO app, focusing particularly on the role of trust in e-government and other determinants such as Performance Expectancy, Effort Expectancy, Habit, and Social Influence. The research is grounded in the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), which has been validated in numerous studies as a reliable model for predicting technology adoption. By addressing these gaps, this research seeks to provide valuable insights into how Indonesia can enhance its digital government services and increase user engagement with platforms like JMO, ultimately fostering more inclusive governance.

The literature on e-government adoption has explored numerous models and frameworks to understand the factors influencing the acceptance of digital public services. One of the most widely recognized models is the Unified Theory of Acceptance and Use of Technology (UTAUT), which identifies several factors, including Performance Expectancy, Effort Expectancy, and Social Influence, as key determinants of technology adoption. In its extended form, UTAUT2 incorporates additional variables such as Habit and Trust in e-Government, which are particularly relevant in the context of digital government services.

Despite the robustness of these models, there are notable gaps in the literature. For example, while the UTAUT2 model has been extensively tested in the private sector, its application to public services, especially in developing countries like Indonesia, remains limited. This research seeks to address this gap by applying the UTAUT2 framework specifically to the adoption of the Jamsostek Mobile (JMO) application, a crucial tool in Indonesia's push towards digital governance.

Furthermore, while much of the existing literature emphasizes the role of trust in technology adoption, studies on trust in the context of e-government services in developing nations are scarce. Trust, both in the government and in the technology itself, is a pivotal factor in the adoption of e-government platforms. Studies by Fakhoury & Aubert (2015) and Bélanger & Carter (2008) highlight that trust influences users' decisions to engage with digital government services. However, there remains a lack of research that specifically examines how trust in e-government impacts the adoption of social security services through mobile apps in Indonesia.

In addition to trust, habit has been identified as a crucial factor in the continued use of digital platforms. According to Venkatesh et al. (2012), habit influences both the Behavioral Intention to adopt and the Use Behavior of technology. Yet, the role of habit in the adoption of government services, particularly in the context of JMO, has not been sufficiently explored.

Thus, this study fills a critical gap by not only applying the UTAUT2 model to a public sector context but also addressing the under-explored factors of trust and habit in the adoption of e-government platforms. By focusing on the JMO app, this research provides a more nuanced understanding of the behavioral intentions and usage patterns that drive the success of digital public services in Indonesia. This approach not only contributes to the theoretical understanding of e-government adoption but also offers practical insights for improving user engagement with public digital services.

Performance Expectancy (PE), as articulated by Venkatesh et al. (2012), signifies the extent to which consumers anticipate that the use of a particular technology will enhance their effectiveness in accomplishing tasks or activities. Within the framework of the Jamsostek Mobile (JMO) application, Performance Expectancy encapsulates users' beliefs that the application will streamline and enhance their engagement with social security-related tasks. Users who regard the system as beneficial and effective are more inclined to manifest a stronger intention to adopt the

technology. This perspective supports the assertion that perceived usefulness serves as a crucial catalyst for user adoption. In light of this reasoning, we propose the following hypothesis:

H_{1a}: Performance Expectancy has a positive and significant effect on Behavioral Intention to adopt Jamsostek Mobile.

Effort Expectancy (EE) is defined as the degree to which an individual perceives a system to be easy to use and operate (Venkatesh et al., 2003). In the context of technology adoption, Effort Expectancy plays a critical role in shaping user behavior by reducing perceived barriers and enhancing user comfort. When users find a system intuitive and straightforward, they are more likely to perceive it as beneficial and develop a sense of ease in utilizing it. This relationship underscores the importance of usability in fostering Behavioral Intention (BI).

In the context of the Jamsostek Mobile (JMO) application, Effort Expectancy reflects the ease with which users interact with the platform. A simplified interface and user-friendly features enhance the user experience, encouraging broader adoption of the application. As individuals feel more comfortable and confident in using the JMO application, their intention to continue its use increases significantly. Based on this rationale, we propose the following hypothesis:

H_{2a}: Effort Expectancy (EE) exerts a positive and significant influence on Behavioral Intention (BI) regarding the usage of the Jamsostek Mobile (JMO) application.

Social Influence (SI) refers to the effect produced by persuasive communication, as originally defined by Herbert Kelman in 1954. It involves the power of individuals or groups to persuade others to embrace specific behaviors or systems. Venkatesh et al. (2012) assert that Social Influence is evident when individuals utilize a system based on recommendations or pressures from their social environment. This concept is especially significant in the realm of digital technology adoption, where external factors and social norms heavily influence user intentions.

Lu and Yang (2014) emphasize that Social Influence alters patterns of continuance intention, indicating its vital importance in the ongoing adoption of technology. Within the framework of the Jamsostek Mobile (JMO) application, Social Influence significantly shapes Behavioral Intention (BI). The recommendations and encouragement from users' social networks, as well as the perception of enhanced status through technology use, can considerably influence the application's adoption. Building on this perspective, we propose the following hypothesis:

H_{3a}: Social Influence (SI) positively and significantly impacts Behavioral Intention (BI) in the utilization of the Jamsostek Mobile (JMO) application.

Facilitating Conditions (FC), as defined by Venkatesh et al. (2012), refer to an individual's perception of the availability of technical infrastructure that supports the use of an information system. Facilitating Conditions encompass several factors, including the availability of system resources, knowledge of the system, skills required to use it, and support from both internal and external parties. These conditions play a critical role in ensuring users can effectively adopt and utilize innovative systems.

In the context of the Jamsostek Mobile (JMO) application, Facilitating Conditions can significantly influence both Behavioral Intention (BI) and Use Behavior (UB). When users perceive that they have adequate resources, knowledge, and support to use the application, they are more likely to adopt and continue using it in their daily activities. Based on this understanding, we propose the following hypotheses:

H_{4a}: Facilitating Conditions (FC) have a positive and significant influence on Behavioral Intention (BI) regarding the usage of the Jamsostek Mobile (JMO) application.

H_{4b}: Facilitating Conditions (FC) have a positive and significant influence on Use Behavior (UB) regarding the usage of the Jamsostek Mobile (JMO) application.

Habit (HA) is defined as the degree to which individuals engage with technology automatically, influenced by their past experiences (Venkatesh et al., 2012). It plays a crucial role in shaping both Behavioral Intention (BI) and Use Behavior (UB) in the context of technology adoption. As users interact with a system repeatedly, their actions become increasingly automatic and less reliant on conscious thought processes, evolving into established habitual patterns.

In relation to the Jamsostek Mobile (JMO) application, Habit indicates how deeply users have integrated the app into their daily lives, stemming from positive prior experiences. As users grow more familiar with the app's functionalities and advantages, they are more inclined to show heightened Behavioral Intention and maintain consistent Use Behavior. From this perspective, we propose the following hypotheses:

H_{5a}: Habit (HA) positively and significantly affects Behavioral Intention (BI) regarding the Jamsostek Mobile (JMO) application.

H_{5b}: Habit (HA) positively and significantly impacts Use Behavior (UB) concerning the Jamsostek Mobile (JMO) application.

Trust in e-Government (TG) refers to the confidence individuals have in the government as a regulator of activities, which influences their strong intention to use e-Government services. This trust is pivotal in fostering adoption, as it mitigates concerns related to the reliability, security, and transparency of e-Government platforms. Research by Fakhoury & Aubert (2015) highlights that trust in both the internet and government positively impacts Behavioral Intention (BI) to use e-Government services.

In the context of the Jamsostek Mobile (JMO) application, Trust in e-Government plays a critical role in shaping users' Behavioral Intention. As users perceive the JMO application as a trustworthy initiative supported by the government, their confidence in adopting the platform increases significantly. Trust acts as a bridge between perceived risk and Behavioral Intention, ensuring users feel secure and motivated to engage with the application.

Based on this rationale, we propose the following hypothesis:

H_{6a}: Trust in e-Government (TG) has a positive and significant influence on Behavioral Intention (BI) regarding the usage of the Jamsostek Mobile (JMO) application.

Behavioral Intention (BI) refers to the degree to which an individual plans to utilize a particular technology in the future. According to Venkatesh et al. (2003), Behavioral Intention encompasses an individual's attitude towards embracing or dismissing technology, shaped by its perceived effects on their tasks or work efficiency. Moreover, Behavioral Intention acts as a vital predictor that connects a person's mindset with their forthcoming behaviors (J. Paul Peter, 2013).

When applied to the Jamsostek Mobile (JMO) application, Behavioral Intention indicates the extent to which users are inclined and committed to utilizing the platform for their social security management. A robust Behavioral Intention usually reflects in actual Use Behavior (UB), where users regularly engage with the application as an integral part of their daily routines. In light of this understanding, we propose the following hypothesis:

H7: Behavioral Intention (BI) positively and significantly influences Use Behavior (UB) concerning the adoption of the Jamsostek Mobile (JMO) application.

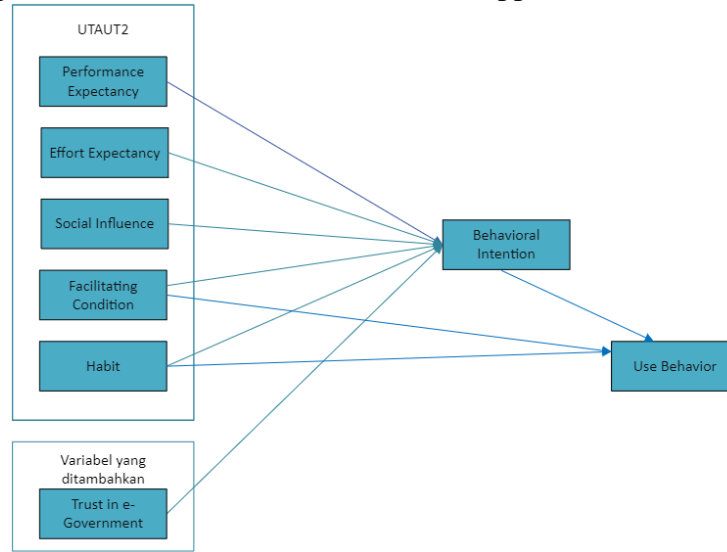


Figure 2: Thinking Framework

2. Research Methods

Quantitative research methodologies are utilized in this study to facilitate the empirical collection, analysis, and presentation of numerical data. The target population for this study consists of users of the Jamsostek Mobile (JMO) application in Jakarta. A sample of 400 respondents was chosen based on specific selection criteria, focusing on potential users of the JMO application who possess prior experience in utilizing the application. This research relies on primary data. Data for this study was gathered through an online questionnaire that was distributed using Google Forms to a total of 400 respondents.

3. Results and Discussions

3.1 Results

This research investigated users of the Jamsostek Mobile (JMO) application in Jakarta, focusing specifically on individuals with prior experience using the app. The study sample included 400 respondents selected based on defined criteria, and the gender analysis indicated a slightly greater number of female users (223 respondents, representing 55.75%) compared to male users (177 respondents, or 44.25%). These results underscore the significant involvement of women in using the JMO application, implying possible gender-based variations in how the application is adopted and utilized. This demographic data serves as a basis for deeper exploration of user behaviors and preferences, which could ultimately guide the enhancement and refinement of e-government services such as JMO.

Table 1. Description Data

Demographics	Description	Frequency	Percentage
Gender	Men	177	44,25%
	Women	223	55,75%
Age	Ages 15-25	19	4,75%

Occupation	Ages 26-35	236	59,00%
	Ages 36-45	118	29,50%
	Ages 46-55	24	6,00%
	Ages above 55	3	0,75%
	Freelance	18	4,50%
	Others	1	0,25%
	Online Motorcycle Taxi	25	6,25%
	State-Owned/Regional- Owned Enterprise	27	6,75%
	Employee		
	Private Sector Employee	275	68,75%
	Construction Worker	8	2,00%
	Freelancer	6	1,50%
	Factory Worker	13	3,25%

Source: processed data

Data collection was conducted through a questionnaire, with responses gathered from 400 participants. The descriptive analysis aims to provide insights into how the JMO application supports its intended purpose, specifically in the context of enhancing service accessibility and efficiency. A detailed breakdown of the percentage distribution for each variable is presented in the corresponding table, offering a comprehensive view of the application's implementation and user interaction patterns.

Table 2. Descriptive Score Result

Variable	Score
Performance Expectancy	86.88%
Effort Expectancy	86.05%
Social Influence	83.05%
Facilitating Conditions	85.42%
Habit	85.68%
Trust In Government	84.86%
Behavioral Intention	86.16%
Use Behavior	86.05%

Source: The processed data

The questionnaire data were analyzed using SMART-PLS 4, a powerful software tool designed for validating and interpreting data analysis outcomes. SMART-PLS 4 facilitates the evaluation of convergent validity within the Partial Least Squares (PLS) model by utilizing reflective indicators. According to Chin (1995), Abdillah & Jogiyanto (2015), and Tilman (2022), the Loading Factor plays a pivotal role in this validation process, representing the relationship between item component scores and latent construct scores. An outer loading value exceeding 0.70 (>0.70) is generally considered acceptable. Furthermore, the Average Variance Extracted (AVE) provides an additional metric for validity, reflecting the proportion of variance in manifest variables explained by the latent construct. An AVE value above 0.50 (>0.50) ensures the construct meets the minimum validity threshold, thereby confirming the reliability of the latent variable measurement.

Table 3. Test Factor Loading Each Variable

Variable	Items	LF	AVE	Result
Performance Expectancy (PE)	PE1	0.828	0.690	Valid

	PE3	0.82		
	PE4	0.845		
Effort Expectancy (EE)	EE3	0.884	0.763	Valid
	EE5	0.887		
	EE6	0.85		
Social Influence (SI)	SI1	0.844	0.665	Valid
	SI2	0.791		
	SI3	0.81		
Facilitating Condition (FC)	FC1	0.862	0.728	Valid
	FC5	0.838		
	FC6	0.86		
Habit (HA)	HA1	0.868	0.704	Valid
	HA3	0.87		
	HA4	0.776		
Trust in e-Government (TG)	TG1	0.871	0.718	Valid
	TG2	0.836		
	TG3	0.835		
Behavioral Intention (BI)	BI1	0.881	0.739	Valid
	BI2	0.809		
	BI3	0.887		
Use Behavior (UB)	UB1	0.916	0.846	Valid
	UB3	0.924		

Note: LF = Loading Factor, AVE = Average Variance Explained

Source: The processed data

Composite Reliability assesses the true level of reliability of a construct, while Cronbach's Alpha evaluates the reliability of items at their lowest point. Both measures are critical in determining whether the items in a questionnaire are reliable. A construct is deemed reliable when its Composite Reliability score surpasses 0.70 and its Cronbach's Alpha value exceeds 0.60. These thresholds ensure that the variable constructs are consistently measured, providing confidence in the internal consistency of the questionnaire items.

Table 4. CA & CR Test Result

Variable	CA	Result	CR	Result
Behavioral Intention	0.823	reliable	0.827	reliable
Effort Expectancy	0.845	reliable	0.845	reliable
Facilitating Condition	0.814	reliable	0.814	reliable
Habit	0.788	reliable	0.795	reliable
Performance Expectancy	0.776	reliable	0.776	reliable
Social Influence	0.748	reliable	0.751	reliable
Trust In Government	0.804	reliable	0.805	reliable
Use Behavior	0.818	reliable	0.819	reliable

Source: The processed data

Table 5. Path Coefficient & t-value

Hypotheses	Path Coefficient	O Sample	Sample mean	Standard deviation	T statistics	P values	Conclusion
H1a	PE -> BI	0.011	0.01	0.041	0.265	0.791	reject
H2a	EE -> BI	0.222	0.218	0.055	4.055	0	accept
H3a	SI -> BI	0.148	0.152	0.042	3.559	0	accept
H4a	FC -> BI	0.143	0.145	0.058	2.484	0.013	accept
H4b	FC -> UB	0.399	0.399	0.059	6.703	0	accept
H5a	HA -> BI	0.249	0.25	0.057	4.342	0	accept
H5b	HA-> UB	0.377	0.377	0.065	5.783	0	accept
H6a	TG -> BI	0.225	0.223	0.057	3.912	0	accept
H7	BI -> UB	0.151	0.149	0.06	2.502	0.012	accept

Source: The processed data

The analysis of indirect effects is crucial to understanding the mediating relationships within a structural model. These findings help evaluate the significance and strength of indirect pathways, offering a deeper understanding of the structural dynamics within the model. The results are essential for confirming the theoretical framework and validating the hypotheses concerning mediated relationships in the research. The calculation results incorporating the moderation variable are presented below.

Table 6. Indirect Path Coefficients and Significance

Path Coefficient	Original sample	Sample mean	SD	T statistics	P values	Result
PE - BI - UB	0.002	0.002	0.007	0.247	0.805	InSig.
EE - BI - UB	0.033	0.032	0.015	2.176	0.03	Sig.
SI - BI - UB	0.022	0.023	0.011	1.95	0.051	InSig.
FC - BI - UB	0.022	0.021	0.011	1.905	0.057	InSig.
HA - BI - UB	0.038	0.037	0.018	2.123	0.034	Sig.
TG - BI - UB	0.034	0.034	0.018	1.886	0.059	InSig.

Source: The processed data

3.2 Discussion

The Government of Indonesia (hereafter referred to as GoI) has demonstrated a robust commitment and undertaken significant actions, notably by aligning the majority of the SDG targets and indicators with the National Medium-Term Plan. Furthermore, these targets have been translated into practical Government Work Plans that include corresponding budgets. (Lubis & Ghina, 2020). This strategic alignment underscores the government's dedication to achieving Sustainable Development Goals (SDGs), particularly SDG 8, which emphasizes decent work and economic growth. A fundamental transformation is occurring, moving away from traditional transactional service traits towards an emphasis on value derived from usage. This shift involves transitioning from objective resources to integrated resources that create collaborative variables within a technology-driven ecosystem. (Yuliana et al., 2024). By offering technological resources that serve as a conduit for information and a platform for employees to showcase their creativity, it is anticipated that these technological advantages will enhance employee productivity and overall performance. (Dudija & Miranti, 2024). Aligned with this commitment, the

implementation of the JMO BPJS Ketenagakerjaan application serves as a practical example of how digital innovations can support SDG objectives.

The results of this study indicate that all assessed variables exhibit high to very high levels of acceptance among the application's users. Specifically, Performance Expectancy (86.88%), Effort Expectancy (86.05%), Facilitating Conditions (85.42%), Habit (85.68%), Trust in Government (84.86%), Behavioral Intention (86.16%), and Use Behavior (86.05%) were categorized as "Very High." Meanwhile, Social Influence scored 83.05%, which, though slightly lower, still falls within the "High" category. These results underscore the significant positive perceptions of the application's usefulness, ease of use, supportive conditions, and habitual engagement, as well as users' trust in government institutions. The strong Behavioral Intention and Use Behavior scores indicate that the application has effectively met user expectations, fostering active engagement. These findings highlight the critical role of robust system design and institutional trust in ensuring high user adoption and satisfaction in digital government services.

Interestingly, Performance Expectancy did not have a significant direct effect on Behavioral Intention, suggesting that perceived efficiency improvements may not be the primary driver for users adopting JMO. This finding warrants further investigation to identify context-specific factors that could influence this construct in similar settings.

The mediation analysis revealed that Effort Expectancy and Habit significantly influenced Use Behavior through Behavioral Intention, emphasizing the mediating role of user intent in translating perceptions into actions. However, indirect effects from Performance Expectancy, Social Influence, Facilitating Conditions, and Trust in e-Government on Use Behavior were found to be insignificant, indicating the need for direct interventions to enhance these pathways.

Overall, these findings validate the theoretical framework and offer practical implications for improving user adoption of JMO. Enhancing usability, promoting trust in government services, and leveraging habitual use are key strategies for encouraging broader adoption and sustained engagement with the application. Further research could explore the role of contextual variables and user demographics in moderating these relationships.

4. Conclusions

The findings of this study demonstrate that the Jamsostek Mobile (JMO) application has achieved high acceptance among users, as reflected by strong performance across variables such as Performance Expectancy, Effort Expectancy, Facilitating Conditions, Habit, Trust in e-Government, Behavioral Intention, and Use Behavior. These results highlight the application's effectiveness in delivering value to users through its ease of use, robust infrastructure, and the trust it fosters in government institutions. Social Influence, while slightly lower, still indicated a positive perception, underlining the application's success in promoting user engagement. The JMO application showcases the potential of e-government initiatives to address service gaps and promote digital transformation in public services. It effectively supports user needs and enhances engagement through its intuitive design and strong institutional backing. Despite its achievements, the application faces challenges related to usability barriers and limited public awareness, as evidenced by nearly half of the surveyed respondents being unaware of its existence. These issues underscore the need for targeted interventions to optimize adoption rates and user satisfaction. The insights derived from this study provide actionable strategies to enhance the adoption and sustained

use of the JMO application. These include improving usability, strengthening trust in government services, leveraging habitual use, and increasing the impact of social influence through strategic campaigns. Future research could explore the impact of contextual and demographic variables on user engagement, allowing for the development of tailored strategies that address diverse user needs. By addressing these areas, the JMO application can not only achieve broader adoption but also serve as a benchmark for other digital government initiatives, advancing Indonesia's e-government agenda.

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