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Analysis for Technology Acceptance of Internal Apps at Regency Level in Indonesia

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ABSTRACT

This study investigates the factors influencing technology acceptance of internal applications within regency-level government institutions in Indonesia, utilizing the Technology Acceptance Model (TAM). The analysis focuses on key variables including perceived usefulness (PU), perceived ease of use (PEOU), attitude toward using (ATU), behavioural intention to use (BITU), and actual system usage (ASU). The results reveal strong correlations across all variables, indicating a high level of acceptance and positive engagement with the apps among government employees. Additionally, reliability testing shows high internal consistency, with Cronbach's Alpha values exceeding 0.9 for most variables, confirming the stability and dependability of the measurements. These findings suggest that government employees generally find the internal apps beneficial and user-friendly, leading to favorable attitudes and continued usage. This research provides valuable insights that can inform the development and implementation of future digital initiatives at the regency level in Indonesia.

1. Introduction

As digital transformation continues to reshape public administration, the adoption of internal applications by government entities has become a key focus area, particularly at the regency level in Indonesia. These internal apps are designed to streamline administrative processes, improve communication, and enhance overall efficiency in delivering public services. However, the successful implementation of these technologies hinges on government employees' acceptance and effective use. Understanding the factors that influence technology acceptance is critical, as it directly impacts the effectiveness of these tools and, consequently, the quality of governance. This analysis aims to explore the determinants of technology acceptance for internal apps within regency-level government institutions in Indonesia, providing insights that could guide the development and implementation of future digital initiatives.

The Technology Acceptance Model (TAM) has been widely used to study technology adoption in various organizational settings, including government institutions. According to Davis [1], TAM posits that perceived usefulness (PU) and perceived ease of use (PEOU) are the primary factors influencing an individual's decision to accept and use new technology. Subsequent studies, such as those by Venkatesh & Davis [2], expanded on this model by introducing additional variables, including social influence and facilitating conditions,

which are particularly relevant in the context of public sector organizations. Research in Indonesian public administration, such as the work by Hermanto et al. [3], has confirmed that these factors play a significant role in the adoption of internal apps, but also highlighted the importance of organizational culture and leadership in driving technology acceptance.

In the context of regency-level governance in Indonesia, Dirgahayani et al. [4] emphasize the unique challenges that these entities face when implementing new technologies. These include varying levels of technological literacy among staff, resistance to change, and limited infrastructure, all of which can hinder the acceptance of internal apps. Their study also pointed out that effective training programs and strong leadership commitment are critical in overcoming these barriers. Additionally, Sanders et al. [5] found that the decentralization of governance in Indonesia has created a diverse landscape where the acceptance of transformations can vary significantly between different regencies, influenced by local political dynamics, budgetary constraints, and the specific needs of each community.

Moreover, studies such as those by Pande & Taeihagh [6] have explored the impact of user involvement in the development process on technology acceptance. Other findings suggest that when government employees are actively involved in designing and customizing internal apps, they are more likely to perceive the technology as useful and easy to use, leading to higher acceptance rates. This aligns with the broader literature on user-centered design, which advocates for the involvement of end-users throughout the technology development process to ensure that the final product meets their needs and expectations. In the Indonesian regency context, this approach could be particularly beneficial in ensuring that internal apps are well-received and effectively utilized.

The literature indicates that while the core principles of TAM apply to the acceptance of internal apps at the regency level in Indonesia, additional factors such as organizational culture, leadership, and user involvement are also crucial [7]-[9]. Addressing these factors through targeted strategies, such as comprehensive training programs and inclusive development processes [10], [11], can significantly enhance technology acceptance and ensure the successful implementation of internal applications within regency-level government institutions.

2. Method

The technology acceptance model (TAM) is an adaptation of the theory of reasoned action (TRA), this model was developed by Fred. D. Davis in 1986. TAM is a theory that describes the behavior of technology users in accepting and using new technology [12]-[16].

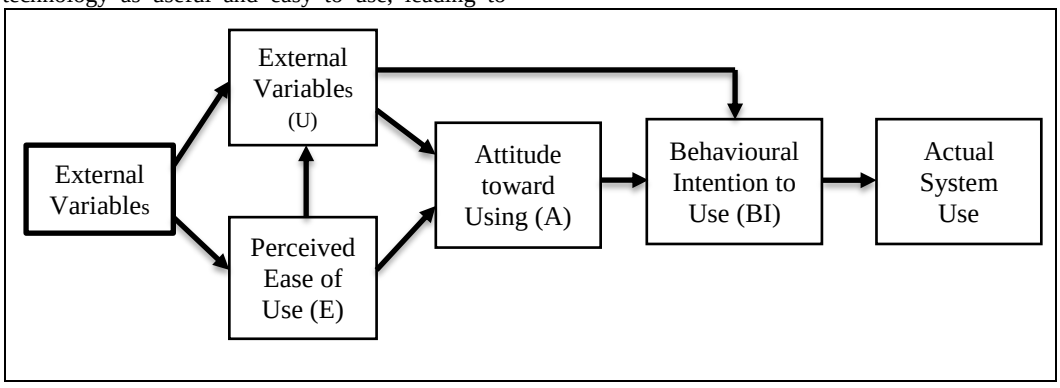

Figure 1 - Technology Acceptance Model (Davis, 1989)

The Technology Acceptance Model (TAM) includes five key variables to predict how users will accept a system: perceived usefulness and perceived ease of use (Figure 1), which influence the user's attitude toward using the system, their intention to use it (behavioural intention to use), and ultimately, the actual use of the system (Actual System Use) (Davis, 1989). In 1996, Venkatesh and Davis revised the TAM to better align with technological advancements by removing one of these variables, specifically the user's attitude toward using the system (Figure 2).

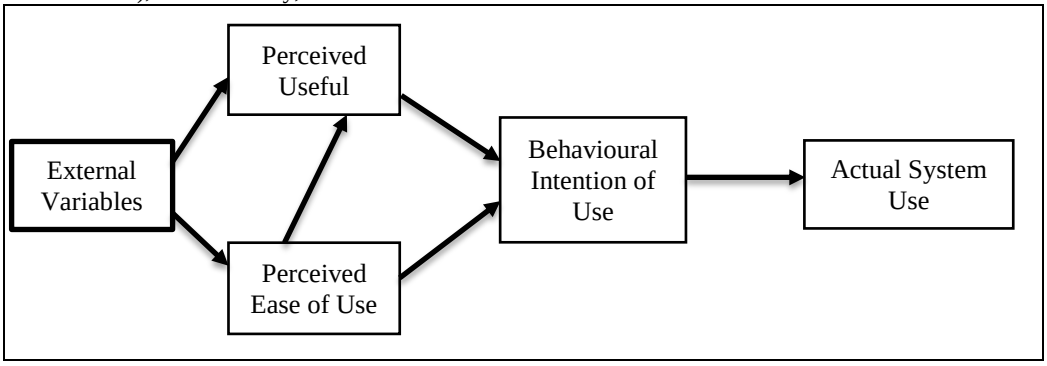

Figure 2 - *Technology Acceptance Model* (Modified) (Venkatesh & Davis, 1996)

3. Result and Discussion

The author conducted a preliminary test or pilot test based on data obtained from some respondents (not 100% yet). Table 1 shows the results of the validity test calculation at this pilot test stage.

Table 1 – Validation test results

Variable	Indicator	Correlation	Valid/No Valid
Perceived Usefullness	PU1	0,909	Valid
	PU2	0,957	Valid
	PU3	0,945	Valid
	PU4	0,836	Valid
	PU5	0,839	Valid
Perceived Ease Of Use	PEOU1	0,790	Valid
	PEOU2	0,888	Valid
	PEOU3	0,896	Valid
	PEOU4	0,874	Valid
	PEOU5	0,925	Valid
Attitude Toward Using	ATU1	0,929	Valid
	ATU2	0,769	Valid
	ATU3	0,892	Valid
	ATU4	0,849	Valid
	ATU5	0,911	Valid
Behavioral Intention To Use	BITU1	0,860	Valid
	BITU2	0,826	Valid
	BITU3	0,870	Valid
	BITU4	0,866	Valid
	BITU5	0,802	Valid
Actual System Usage	ASU1	0,721	Valid
	ASU2	0,844	Valid
	ASU3	0,838	Valid
	ASU4	0,752	Valid
	ASU5	0,870	Valid

The analysis of technology acceptance for internal applications at the regency level in Indonesia highlights strong correlations across various indicators for each key variable within the Technology Acceptance Model (TAM). The perceived usefulness (PU) of the apps, as indicated by five distinct measures, shows high correlation values ranging from 0.836 to 0.957, demonstrating that users generally recognize the benefits these internal applications provide. Similarly, perceived ease of use (PEOU) also shows consistently strong correlations, with values between 0.790 and 0.925, indicating that users find the applications user-friendly and straightforward, which contributes to their positive perception of the apps.

Attitude toward using (ATU), behavioral intention to use (BITU), and actual system usage (ASU) also reflect significant correlations. The attitude toward using the apps shows correlation values between 0.769 and 0.929, suggesting that users generally hold favorable attitudes toward adopting these internal systems. The behavioral intention to use, with correlations ranging from 0.802 to 0.870, confirms that users are likely to continue using the applications in the future. Lastly, actual system usage (ASU) demonstrates a strong connection between intended and real use, with correlations ranging from 0.721 to 0.870. These findings collectively underline a high level of acceptance and engagement with internal apps at the regency level, which is critical for the successful implementation and sustained use of these technologies.

The results of the reliability test are shown in Table 2 below:

Table 2 – Reliability test result

Variable	*Cronbach Alpha*	Reliable/Unreliable
Perceived Usefulness	0,933	Reliable
Perceived Ease of Use	0,907	Reliable
Attitude Toward Using	0,928	Reliable
Behavioural Intention to Use	0,906	Reliable
Actual System Usage	0,894	Reliable

The analysis of technology acceptance for internal applications at the regency level in Indonesia demonstrates a high level of reliability across all key variables measured within the Technology Acceptance Model (TAM). The Cronbach's Alpha values for each variable indicate strong internal consistency, with perceived usefulness (PU) scoring 0.933 and perceived ease of use (PEOU) at 0.907. These high reliability scores suggest that the indicators used to measure these variables are consistent and dependable, meaning that users' perceptions of the usefulness and ease of use of the apps are stable and trustworthy.

Similarly, other critical variables, such as attitude toward using (ATU) and behavioral intention to use (BITU), also show high reliability with Cronbach's Alpha values of 0.928 and 0.906, respectively. This indicates that the users' attitudes and intentions regarding the use of these internal applications are reliably measured, reflecting consistent opinions and future use intentions. The actual system usage (ASU) variable, while slightly lower at 0.894, still falls within the reliable range, suggesting that the real-world usage of the system is also measured consistently. Overall, the high reliability scores across all variables confirm that the analysis provides a solid foundation for understanding technology acceptance of internal apps at the regency level in Indonesia, ensuring that the findings are both valid and dependable.

4. Conclusion

the analysis of technology acceptance for internal apps at the regency level in Indonesia demonstrates that these applications are well-received by government employees. The strong correlations across perceived usefulness, perceived ease of use, attitude toward using, behavioral intention to use, and actual system usage indicate a high level of acceptance and positive engagement with these internal systems. Users generally find the apps beneficial and easy to use, which translates into a favorable attitude and intention to continue using them. These findings underscore the importance of ensuring that internal apps meet user expectations in terms of functionality and usability to foster widespread adoption.

Additionally, the reliability of the measurement variables, as evidenced by high Cronbach's Alpha values, confirms that the analysis is robust and trustworthy. The consistency in users' responses across all variables—perceived usefulness, ease of use, attitude, intention, and actual usage—reinforces the validity of the study. This reliability highlights that the factors driving technology acceptance at the regency level are well-understood and can be relied upon to guide future digital initiatives. Overall, the study provides valuable insights into how internal apps are perceived and utilized within Indonesian regency governments, offering a strong foundation for the continued development and refinement of these essential tools.

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