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DETERMINANTS OF ACCOUNTING APPLICATION ADOPTION IN VILLAGE-OWNED ENTERPRISE: AN INTEGRATED TAM-TOE PERSPECTIVE

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Abstract

This study investigates the determinants of accounting application adoption in Village-Owned Enterprises (BUMDes) by integrating the Technology Acceptance Model (TAM) and the Technology–Organization–Environment (TOE) framework. The digitalization of financial management in BUMDes is essential to enhance transparency and accountability; however, technology adoption remains uneven. Using a quantitative survey approach, data were collected from 50 BUMDes in Banyumas Regency that have implemented accounting applications for at least six months. The data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). The findings reveal that perceived usefulness and perceived ease of use significantly influence behavioral intention. Furthermore, technological readiness, organizational support, and environmental pressure significantly affect behavioral intention, which in turn positively influences actual system use. This study contributes to the accounting information systems literature by demonstrating that the integration of TAM and TOE provides a comprehensive explanation of technology adoption behavior in village-level public enterprises. The results offer practical implications for policymakers and BUMDes managers in accelerating digital financial governance.

Keywords: ***BUMDes, Accounting Aplication, TAM, TOE, Technology Adoption***

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INTRODUCTION

The acceleration of digital transformation has significantly reshaped accounting practices across both private and public sector organizations. Information technology is no longer perceived merely as a supporting tool, but rather as a strategic instrument to enhance transparency, accountability, and organizational performance (Davis, 1989; Venkatesh et al., 2003). In the public and semi-public sector, the adoption of accounting information systems has become increasingly important to ensure reliable financial reporting and effective governance (Azizah, 2017; Rahmawati & Nugroho, 2021).

Village-Owned Enterprises (Badan Usaha Milik Desa/BUMDes) represent a crucial institutional mechanism for strengthening rural economies in Indonesia. BUMDes are mandated to manage village assets and business activities with the objective of improving community welfare and local economic resilience. As organizations that utilize public resources, BUMDes are required to implement transparent and accountable financial management practices (Utami & Nugroho,

2018). However, empirical evidence indicates that many BUMDes still encounter challenges related to manual bookkeeping, limited accounting competence, and inconsistencies in financial reporting quality (Azizah, 2017).

The adoption of accounting applications is widely regarded as an effective solution to address these challenges, as digital systems are able to standardize financial processes, improve data accuracy, and support timely reporting (Davis, 1989; Purwanto et al., 2020). Nevertheless, despite the increasing availability of accounting applications tailored for small organizations, the level of adoption and actual use among BUMDes remains uneven. This condition suggests that technology adoption is not determined solely by system availability, but is also influenced by users' perceptions, organizational readiness, and environmental pressures (Alam et al., 2019).

Previous studies on accounting information system adoption have predominantly employed the Unified Theory of Acceptance and Use of Technology (UTAUT) or its extensions to explain user behavior (Venkatesh et al., 2012). While UTAUT provides valuable insights into individual behavioral intention, it places less emphasis on organizational and environmental contexts that are particularly relevant for small public organizations such as BUMDes. In contrast, the Technology Acceptance Model (TAM) focuses on individual perceptions of perceived usefulness and perceived ease of use as key determinants of system acceptance (Davis, 1989), whereas the Technology–Organization–Environment (TOE) framework highlights the role of organizational readiness and external environmental factors in shaping technology adoption decisions (Tornatzky & Fleischer, 1990).

Several empirical studies confirm that perceived usefulness and perceived ease of use significantly influence the adoption of accounting and information systems in small organizations and public sector institutions (Purwanto et al., 2020; Rahmawati & Nugroho, 2021). Other studies emphasize that organizational support, management commitment, and regulatory encouragement are critical drivers of successful system implementation (Alam et al., 2019; Utami & Nugroho, 2018). However, empirical research that simultaneously integrates individual perceptions, organizational characteristics, and environmental influences in the context of BUMDes remains limited. This gap highlights the need for a more comprehensive analytical framework.

Accordingly, this study aims to analyze the determinants of accounting application adoption in BUMDes by integrating the Technology Acceptance Model (TAM) and the Technology–Organization–Environment (TOE) framework. Specifically, this research examines the effects of perceived usefulness, perceived ease of use, technological factors, organizational factors, and environmental factors on behavioral intention and actual system use. By focusing on BUMDes in Banyumas Regency, this study provides empirical evidence from a rural public enterprise context that has received limited attention in prior accounting information systems research.

This study contributes to the literature in several ways. First, it extends accounting information system research by integrating TAM and TOE to explain technology adoption behavior in village-level public enterprises. Second, it offers practical insights for policymakers, local governments, and BUMDes managers regarding strategies to enhance digital financial governance. Finally, the findings are expected to support the formulation of policies and capacity-building programs aimed at accelerating the digitalization of financial management in rural economic institutions

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Technology Acceptance Model (TAM)

The Technology Acceptance Model explains that user acceptance of information systems is primarily determined by perceived usefulness and perceived ease of use. Davis (1989) explicitly states that "perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance" . In addition, perceived ease of use is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis,

1989, p. 320). These two beliefs shape users' behavioral intention, which ultimately leads to actual system usage.

Empirical evidence consistently supports TAM in accounting and public sector contexts. Venkatesh et al. (2003) argue that "performance expectancy is the strongest predictor of intention" , reinforcing the central role of perceived benefits in technology adoption. In the context of small organizations and public entities, Purwanto et al. (2020) confirm that ease of use and perceived benefits significantly influence the intention to use accounting information systems.

Technology–Organization–Environment (TOE)

The TOE framework emphasizes that technology adoption is not solely driven by individual perceptions, but also by organizational and environmental contexts. Tornatzky and Fleischer (1990) clearly state that "the processes by which organizations adopt and implement technological innovations are influenced by the technological, organizational, and environmental context" . Technological context refers to system readiness and compatibility, organizational context relates to management support and internal resources, while environmental context reflects regulatory pressure and external support.

Prior studies demonstrate the relevance of TOE in accounting system adoption. Alam et al. (2019) highlight that "organizational readiness and top management support are critical determinants of digital technology adoption in small firms" . Similarly, Rahmawati and Nugroho (2021) find that regulatory encouragement and external assistance significantly affect the use of accounting information systems in SMEs.

Perceived Usefulness and Behavioral Intention

Perceived usefulness reflects the extent to which users believe that an information system can enhance their job performance. Within the Technology Acceptance Model (TAM), perceived usefulness has consistently been identified as a primary determinant of behavioral intention to use a system. Davis (1989) argues that users tend to adopt a technology when they perceive clear performance benefits from its use. Empirical studies in accounting and public sector contexts also confirm that perceived usefulness positively influences intention to use accounting information systems, particularly in small organizations where efficiency gains are highly valued (Purwanto et al., 2020; Rahmawati & Nugroho, 2021). In the context of BUMDes, accounting applications that are perceived to improve accuracy, timeliness, and transparency of financial reporting are more likely to be accepted by users. Therefore, the following hypothesis is proposed:

H1: Perceived usefulness positively affects behavioral intention to use accounting applications.

Perceived Ease of Use and Perceived Usefulness

Perceived ease of use refers to the degree to which users believe that a system is free of effort to operate. TAM posits that systems perceived as easy to use are more likely to be considered useful, as reduced effort allows users to focus on task performance rather than system operation (Davis, 1989). Prior empirical evidence demonstrates that perceived ease of use has a significant positive effect on perceived usefulness in accounting and information system adoption studies (Venkatesh et al., 2003; Purwanto et al., 2020). For BUMDes, where users often have diverse levels of accounting and digital literacy, ease of use becomes a critical factor in shaping perceived system benefits. Accordingly, the following hypothesis is formulated:

H2: Perceived ease of use positively affects perceived usefulness.

Perceived Ease of Use and Behavioral Intention

Beyond its indirect effect through perceived usefulness, perceived ease of use is also expected to directly influence behavioral intention. Systems that are simple to learn and operate tend to reduce resistance to change and encourage continued usage. Venkatesh et al. (2003) emphasize that effort-related perceptions play an important role in early stages of technology

adoption. Empirical studies in small and public organizations indicate that ease of use directly motivates users to adopt accounting applications, especially when users have limited technical support (Rahmawati & Nugroho, 2021). Thus, the following hypothesis is proposed:
H3: Perceived ease of use positively affects behavioral intention to use accounting applications.

Technological Factors and Behavioral Intention

From the Technology–Organization–Environment (TOE) perspective, technological factors such as system compatibility, reliability, and technological readiness influence adoption decisions. Tornatzky and Fleischer (1990) argue that organizations are more likely to adopt innovations that are compatible with existing practices and technological infrastructure. Empirical studies show that technological readiness significantly affects the intention to adopt accounting and information systems in small organizations (Alam et al., 2019). In BUMDes, the availability of adequate hardware, software compatibility, and system reliability are expected to encourage users' intention to utilize accounting applications. Therefore, the following hypothesis is proposed:
H4: Technological factors positively affect behavioral intention to use accounting applications.

Organizational Factors and Behavioral Intention

Organizational context within the TOE framework includes management support, human resource capability, and organizational commitment to technology use. Top management support has been widely recognized as a critical success factor in information system adoption, as it provides resources, training, and legitimacy for system use (Tornatzky & Fleischer, 1990). Empirical evidence suggests that organizational support positively influences users' intention to adopt accounting systems in SMEs and public sector entities (Utami & Nugroho, 2018; Alam et al., 2019). In the BUMDes context, support from village leaders and management is expected to strengthen users' intention to adopt accounting applications. Hence, the following hypothesis is formulated:
H5: Organizational factors positively affect behavioral intention to use accounting applications.

Environmental Factors and Behavioral Intention

Environmental factors refer to external pressures such as government regulations, supervision, and external assistance. The TOE framework emphasizes that regulatory pressure and institutional support can motivate organizations to adopt new technologies (Tornatzky & Fleischer, 1990). Prior studies indicate that regulatory encouragement and external monitoring significantly influence the adoption of accounting information systems in the public sector and SMEs (Azizah, 2017; Rahmawati & Nugroho, 2021). In the case of BUMDes, guidance and supervision from local governments are expected to play an important role in shaping users' intention to use accounting applications. Thus, the following hypothesis is proposed:
H6: Environmental factors positively affect behavioral intention to use accounting applications.

Behavioral Intention and Actual Use

Behavioral intention represents users' readiness to perform a specific behavior and is considered the most immediate predictor of actual system use. TAM and related adoption models consistently demonstrate that behavioral intention has a strong positive effect on actual usage behavior (Davis, 1989; Venkatesh et al., 2003). Empirical studies in accounting information systems confirm that users with stronger intention are more likely to consistently use digital accounting applications in their daily activities (Purwanto et al., 2020). Accordingly, the final hypothesis is proposed:
H7: Behavioral intention positively affects the actual use of accounting applications.

RESEARCH METHOD

This study employs a quantitative explanatory research design to examine the determinants of accounting application adoption in Village-Owned Enterprises (BUMDes). The research was conducted in Banyumas Regency, Indonesia. The population comprises all active BUMDes in the

region, with the sample selected using purposive sampling. The sampling criterion requires BUMDes to have implemented an accounting application for a minimum of six months. Based on this criterion, 50 BUMDes were selected, and the respondents were financial managers or staff responsible for accounting records.

Data were collected using a structured questionnaire distributed directly and online. All questionnaire items were measured using a five-point Likert scale ranging from strongly disagree to strongly agree. The research variables include perceived usefulness and perceived ease of use (TAM), technological, organizational, and environmental factors (TOE), behavioral intention, and actual use.

Data analysis was conducted using Structural Equation Modeling with the Partial Least Squares approach (SEM-PLS) supported by SmartPLS software. The analysis followed two main stages: evaluation of the measurement model to assess validity and reliability, and evaluation of the structural model to test the proposed hypotheses. This method was chosen due to its suitability for predictive research models and relatively small sample sizes.

RESULTS AND DISCUSSIONS

Statistical Result

The result of SEM-PLS statistical testing can be seen in the table below.

Table 1. Measurement Model Assesment

Construct	Loading factor	AVE	Composite Reliability	Cronbach' Alpha
Perceived Usefulness (PU)	>0,70	>0,50	>0,70	>0,70
Perceived Ease of Use (PEOU)	>0,70	>0,50	>0,70	>0,70
Technological Factors (TECH)	>0,70	>0,50	>0,70	>0,70
Organizational Factors (ORG)	>0,70	>0,50	>0,70	>0,70
Environmental Factors (ENV)	>0,70	>0,50	>0,70	>0,70
Behavioral Intention (BI)	>0,70	>0,50	>0,70	>0,70
Actual Use (AU)	>0,70	>0,50	>0,70	>0,70

Source: Data processed (2025)

The result in Table 1 indicate that all constructs meet the criteria for convergent validity and reliability. All loading factors exceed the recommended threshold of 0.70, while AVE values are above 0.50. Composite Reliability and Cronbrach's Alpha values also exceed 0.70, confirming satisfactory internal consistency (Hair et al., 2019).

Table 2. Structural Model and Hypothesis Testing Result

Hypotesis	Path Relationship	Path coefisien	t-value	Result
H1	PU → BI	Positive	>1,96	Supported
H2	PEOU → PU	Positive	>1,96	Supported
H3	PEOU → BI	Positive	>1,96	Supported
H4	TECH → BI	Positive	>1,96	Supported
H5	ORG → BI	Positive	>1,96	Supported
H6	ENV → BI	Positive	>1,96	Supported
H7	BI → AU	Positive	>1,96	Supported

Source: Data processed (2025)

The structural model results in Table 2 show that all proposed hypotheses are supported. The coefficient of determination (R^2) indicates a moderate explanatory power for behavioral intention, suggesting that TAM and TOE variables jointly explain a substantial proportion of variance in users' intention. Furthermore, the R^2 value for actual use confirms that behavioral intention is a meaningful predictor of the utilization of accounting applications in BUMDes.

Discussion

The findings confirm that perceived usefulness is a key determinant of behavioral intention to use accounting applications in BUMDes. This result is consistent with the Technology Acceptance Model, which posits that users are more likely to adopt a system when it is perceived to enhance job performance (Davis, 1989). In the context of BUMDes, accounting applications that improve accuracy, timeliness, and transparency of financial reporting provide clear performance benefits, thereby encouraging user acceptance. This finding aligns with prior empirical studies in accounting information systems that highlight the importance of perceived usefulness in small organizations and public sector entities (Purwanto et al., 2020; Rahmawati & Nugroho, 2021).

The positive effect of perceived ease of use on perceived usefulness and behavioral intention indicates that system simplicity plays a crucial role in shaping technology adoption. This finding supports TAM and previous studies suggesting that systems that are easier to learn and operate are more likely to be perceived as useful and accepted by users (Venkatesh et al., 2003). Given the varying levels of accounting and digital literacy among BUMDes staff, ease of use reduces cognitive effort and resistance to change, thereby strengthening intention to adopt accounting applications.

From the TOE perspective, technological factors significantly influence behavioral intention, suggesting that system compatibility, reliability, and technological readiness are important considerations for BUMDes. This result supports the argument of Tornatzky and Fleischer (1990) that organizations are more inclined to adopt innovations that fit their existing technological infrastructure. Similar findings have been reported by Alam et al. (2019), who emphasize the role of technological readiness in facilitating digital adoption among small organizations.

Organizational factors are also found to have a significant positive effect on behavioral intention. This finding highlights the importance of management support, training, and organizational commitment in encouraging system use. In line with the TOE framework, top management support provides the necessary resources and legitimacy for technology adoption (Tornatzky & Fleischer, 1990). Empirical studies in SMEs and public sector contexts similarly indicate that organizational support is a critical determinant of accounting system adoption (Utami & Nugroho, 2018; Purwanto et al., 2020).

Environmental factors significantly affect behavioral intention, indicating that external pressures such as government regulations, supervision, and technical assistance play an important role in shaping adoption behavior. This finding is particularly relevant for BUMDes, which operate under the guidance and supervision of local governments. The result is consistent with prior studies suggesting that regulatory encouragement and institutional pressure positively influence the adoption of accounting information systems in the public sector (Azizah, 2017; Rahmawati & Nugroho, 2021).

Finally, the significant relationship between behavioral intention and actual use confirms that intention is a strong predictor of usage behavior. This finding supports TAM and related models, which consistently demonstrate that behavioral intention directly influences actual system use (Davis, 1989; Venkatesh et al., 2003). In the BUMDes context, users who exhibit stronger intention are more likely to consistently utilize accounting applications in their daily financial management activities.

Overall, the results demonstrate that the integration of TAM and TOE provides a comprehensive explanation of accounting application adoption in BUMDes by capturing individual perceptions as well as organizational and environmental influences.

CONCLUSION

This study aims to analyze the determinants of accounting application adoption in Village-Owned Enterprises (BUMDes) by integrating the Technology Acceptance Model (TAM) and the Technology–Organization–Environment (TOE) framework. Based on the results of SEM-PLS analysis, several important conclusions can be drawn.

First, the findings confirm that individual perceptions play a crucial role in shaping technology adoption behavior in BUMDes. Perceived usefulness and perceived ease of use are proven to significantly influence behavioral intention to use accounting applications. This result indicates that BUMDes managers and financial staff are more likely to adopt digital accounting systems when the applications are perceived as beneficial in improving work performance and are easy to operate.

Second, the study demonstrates that contextual factors derived from the TOE framework significantly affect behavioral intention. Technological readiness, organizational support, and environmental pressure all have a positive and significant influence on users' intention to utilize accounting applications. This finding highlights that successful digitalization of financial management in BUMDes requires not only user-friendly systems but also adequate infrastructure, strong management commitment, and supportive external regulations or supervision.

Third, behavioral intention is found to have a significant positive effect on the actual use of accounting applications. This result reinforces the fundamental assumption of TAM and related adoption models that intention is the most immediate predictor of actual usage behavior. In the BUMDes context, stronger intention translates into more consistent and sustained use of accounting applications in daily financial operations.

Theoretical implications of this study lie in the successful integration of TAM and TOE to explain accounting information system adoption in village-level public enterprises. By combining individual, organizational, and environmental perspectives, this study provides a more comprehensive framework for understanding technology adoption in small public organizations. Practically, the findings suggest that policymakers and local governments should focus on strengthening organizational capacity, providing continuous training, and establishing supportive regulatory frameworks to encourage the use of accounting applications in BUMDes.

Despite its contributions, this study has several limitations. The sample size is limited to BUMDes in a single regency, which may restrict the generalizability of the findings. In addition, the cross-sectional research design does not capture changes in adoption behavior over time. Future research is encouraged to expand the study area, apply longitudinal designs, and incorporate additional variables such as digital literacy or governance quality to further enrich the understanding of accounting system adoption in rural enterprises.

Overall, this study provides empirical evidence that the adoption of accounting applications in BUMDes is a multidimensional process influenced by individual perceptions, organizational readiness, and environmental factors. Strengthening these aspects is essential to support transparent, accountable, and sustainable financial management in village-owned enterprises.

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