

The Role of Accounting Information Systems in Strengthening Revenue Budget Management and Village Expenditure in Indonesia

Angginun Juwita Sari Harahap¹, Ratu Nur Susan Vonita², Fauzan Romadhian Khairi⁴, Prasasti Nuraeni⁴

¹ Institut Agama Islam Nasional Laa Roiba, Bogor, Indonesia and angginunjuwitas@gmail.com

² Institut Agama Islam Nasional Laa Roiba, Bogor, Indonesia and ratunursusanvonita@gmail.com

³ Institut Agama Islam Nasional Laa Roiba, Bogor, Indonesia and prasastinuraeni@gmail.com

⁴ Institut Agama Islam Nasional Laa Roiba, Bogor, Indonesia and fauzanromadi@gmail.com

ABSTRACT

This study seeks to ascertain and elucidate the implementation of accounting information systems in the management of village revenue and expenditure budgets, as well as to identify the challenges and solutions associated with these systems in Indonesia, specifically through a case study of Karacak Village, Leuwiliang District, Bogor Regency. The utilization of accounting information system (AIS) in the administration of revenue budget management and village expenditure (APBDes) is evaluated according to the AIS components delineated by Romney & Steinbart, AIS efficacy based on TAM theory with measurement elements suggested by James Wetherbe, and internal control components as outlined by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). This study employs a qualitative methodology grounded in an interpretative paradigm utilizing a phenomenological approach. This study included data gathering strategies including interviews with main informants and supporting informants, as well as documentation. The results of the study indicate that the application of internal control using the thirteen components of COSO, the Karacak Village government has 61.53% run well and effectively, and 38.46% has not run effectively. The findings of this investigation suggest that Karacak Village Government has implemented AIS in managing the APBDes in accordance with Permendagri/20/2018 by measuring from the AIS component, AIS performance, and internal control components, in addition to the obstacles faced in the application of AIS in managing APBDes related to the APBDes planning stage and internal control.

Keywords: Accounting Information System, Internal Control, Application, Revenue Budget, Indonesia.

1. INTRODUCTION

Villages have an important role in the Indonesian government system, with the authority to regulate the interests of local government and society in accordance with traditional rights and government systems regulated in Law No. 6 of 2014. The APBDes is implemented in financing the implementation of government, in various aspects related to both social and economic aspects for welfare. The large amount of village funds that come from the APBDes should be able to be optimized to improve community welfare through planned programs. Based on Law No. 6/2014 Article 71 paragraph 1 states that "Village finances are intended for financing programs run by the Village". Permendagri/20/2018 on village financial management states "Village finances include planning, implementation, administration, reporting, accountability and supervision". Effective management of APBDes will influence the welfare and ecology of the community. In the context of managing village revenue and expenditure budgets in Indonesia, the role of accounting information systems (AIS) is crucial. SIA not only functions as a recording tool, but also as a means to increase transparency and accountability in village financial management, with the Village Financial System (SISKEUDES) as a supporting application. SisKeuDes is expected to improve accuracy, effectiveness, and efficiency in village financial management. Accounting information systems (AIS) exist to create benefits for the community and stakeholders in making decisions. However, there are challenges in implementation, such as limited human resources (HR) who understand this technology and a lack

of transparency and community participation in APBDes management. SISKEUDES has proven effective in facilitating the administration of village financial reports.

2. LITERATURE REVIEW

Accounting information system is an activity of collecting, classifying, processing, analyzing, and informing reports that are suitable for determining decisions by external and internal parties, especially management in organizational elements, this was conveyed by Steven A. Moscove in [1]. An information system comprises a nexus of data and methodologies, utilizing hardware and software to disseminate valuable [2]. Furthermore, the previous study [3], that information technology is a general form that describes any technology that helps generate, manipulate, store, communicate and or convey information. Currently, information technology has an impact on auditing in the form of a collection of knowledge, skills, and standards that have reached a high point for conducting contemporary audits that did not exist in 1954 [4]. An accounting information system is a computer-based system that processes financial data associated with transaction data in the accounting cycle, including forms, records, and reports, organized to deliver financial information [5]. An AIS comprises personnel and technology utilized to convert financial and other data into actionable information for decision-makers [6]. High-quality accounting information systems may be achieved by diligent attention to internal controls. The elements of internal control, as defined by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), are Control Environment, Risk Assessment, Information and Communication, Control Activities, and Monitoring and Supervision. i

Regional revenue and expenditure budgets commonly referred to as APBDes are annual financial plans for local governments at the district / city level. Permendagri No. 13/2006 explains "APBD is the basis for regional financial management within 1 fiscal year from January 1 to December 31". The APBD preparation process begins with the submission of the APBD general policy (KUA) as the basis for the RAPBD to the DPRD no later than mid-June of the current year. Based on the general policy, the APBD is agreed with the DPRD [7]. In accordance with the mandate of Law No. 6/2014 on Villages, APBDes (Village Revenue and Expenditure Budget) is an annual financial plan prepared by the village government to manage revenues and expenditures in the context of implementing development and empowering the village community. The APBDes is an important instrument in village financial governance, which aims to ensure that village financial resources are used effectively, efficiently, transparently, and accountably. Village finances encompass all rights and duties quantified in terms of land or property pertinent to the execution of village governance. The APBDes consists of three main components:

1. Village Revenue: Covers all monetary revenues to which the village is entitled in a fiscal year, such as village funds, tax revenue sharing, levies, and village own-source revenues (PAD).
2. Village Expenditure: Represents all village expenditures to finance government, development, and community empowerment activities.
3. Village Financing: Includes revenues or expenditures used to cover budget deficits or surpluses.

The APBDes is prepared based on the principles of participatory, transparent, and accountable budgeting [8].

The information technology system for APBDes management employs the Village Financial System (SISKEUDES) application. SisKeuDes is an application developed by the Financial and Development Supervisory Agency (BPKP), which was introduced on July 13, 2015. As of December 31, 2019, the installation of Siskeudes has achieved 95.06% coverage throughout all communities in Indonesia. Siskeudes version 2.0 has been deployed in 71,249 villages in 417 districts/cities out of a total of 74,954 villages in 434 districts/cities. Technical assistance on the Siskeudes Application has been disseminated to 73,751 villages throughout 430 Districts/Cities, representing 98.40% of the total 74,954 villages in 434 Districts/Cities. The Village Financial System (SISKEUDES) is intended to enhance the efficiency and transparency of village financial administration. Research shows that implementing SISKEUDES can improve the quality of village fund financial reports, which is critical in the context of public accountability [9]. However, challenges in implementing SISKEUDES often arise, such as user incompetence and lack of supporting facilities [10]. Development related to the success of this application is then given to the Deputy head of BPKP for supervision of regional financial implementation after passing the *Quality Assurance (QA)* stage by a predetermined team. The overall management of this software has been fully given to the Deputy BPPKD BPKP center in Jakarta since July 13, 2015 [11]. Siskeudes was developed based on Permendagri/20/2018 on Village Financial Management. BPKP (2019) states that "The Siskeudes application is intended for village government officials to facilitate village financial management from the planning stage to the reporting/accountability stage".

When evaluating the efficacy of an information technology system linked to a theory, the theory is referred to as TAM. The Technology Acceptance Model (TAM) is a framework for understanding user acceptance of information technology systems in relation to user satisfaction with information systems [12] (Arifianto, 2018). The Technology adoption Model (TAM) is a significant idea about the use of information technology systems, commonly employed to elucidate an individual's adoption of such systems [13]. The Technology Acceptance Model (TAM) serves as a robust framework for elucidating the elements that affect user behavior and the use of diverse technologies [14]. The Technology Acceptance Model (TAM) is a very prominent theory on the utilization of information technology systems, commonly employed to elucidate individual acceptance of such systems [13]. The implementation of information technology, such as SISKEUDES, can enhance the accountability of village fund management by expediting the reporting process and improving access to information [15]. So that TAM is used as a guideline for determining steps in encouraging the willingness to use technology so that it can determine the usefulness or usefulness of the technology whether it brings convenience to its users or vice versa.

3. METHODS

The qualitative research method that will be used by researchers is by examining the research object with the informants used, namely the village financial manager (PPKD) consisting of the Village Head, Village Secretary, Head of section, and Head of affairs related to SIA in the management of APBDes case study of Karacak Village, Leuwiliang District, Bogor Regency. As a representative of the application of SISKEUDES for APBDES in Indonesia. With this qualitative method, researchers will get more detailed and clear information. Next, researchers will conduct a reduction stage where researchers reduce the data so that it focuses on the findings that have been obtained in the first stage. Followed by the third stage, namely selection or selection where researchers draw conclusions based on the research studied through data that has been reduced in

the second stage by producing useful information and hypotheses that help overcome problems by improving people's lives.

The paradigm in this research is interpretive. Researchers use the interpretive paradigm with the aim of understanding AIS in managing APBDes through interpreting social reality based on personal and group perspectives. Researchers use a phenomenological approach because researchers want to find answers to the phenomena that occur in this study, namely the application of AIS in managing APBDes which will be related to the obstacles faced. This research is sourced from primary and secondary data, where the source of this primary data is the Village Financial Management Executive (PPKD) informant consisting of the village head, village secretary, head of affairs and section head. Meanwhile, secondary data sources consist of documents containing information in the form of reports contained in the SisKeuDes application.

Data collection techniques through interviews and documentation. An interview is an oral conversation by two people containing the interviewer as the person asking the question and the interviewee as the person who answers the interviewer's questions [16]. Documentation is a data collection technique through the process of reviewing several documents of the subject and other people related to the subject [17]. Meanwhile, the data validity technique is triangulation. Triangulation is a data validity technique used by qualitative research. Triangulation is the activity of checking data through various sources, ways and times used is to combine all triangulation techniques [18]. In this study using a type of source triangulation and time triangulation.

4. RESULTS AND DISCUSSION

The accounting information system utilized by the Karacak Village Government for handling the village's revenue and spending budget is implemented using the Village financial system application, popularly referred to as SiskeuDes. Siskeudes is a village finance management application introduced by BPKP in 2015 and deployed in Indonesian village governments since 2019. The Siskeudes application is designed for village government personnel to facilitate the management of village finances from the planning phase to reporting and accountability. The authorization for utilizing the Siskeudes Application is executed by the provision of a Local Government SML code legally provided by BPKP and the Ministry of Home Affairs. The financial management inside the Siskeudes application adheres to Permendagri/20/2018 about the phases of financial management. Integration in financial management is presented through the siskeudes application. This application is integrated between the district government and the village government in terms of supervision. Based on information obtained from the head of Karacak Village, he stated that the SIA was running well.

"The accounting information system has been carried out well, as the Village financial system application is implemented to become the accountability of financial reports and the effectiveness of reporting carried out"

The benefits felt directly by the Karacak Village administration itself, namely the existence of the Siskeudes application, are felt to facilitate the management of village finances from the planning stage to reporting / accountability because this computerized system makes it easier to make reports that are integrated with one another. This statement is in line with the information submitted by the head of planning affairs. From the information conveyed by Mr. Jamal as the Karacak Village Treasurer as well as the Siskeudes operator, the stages of APBDes management have quite long stages starting from planning, budgeting, administration, and accountability meetings as these stages have been regulated in Permendagri/20/2018. Assistance and supervision in the APBDes management process is provided by the regional government Office of Community and Village Empowerment of Bogor Regency. The subdistrict government also has an important role in the process of supervising APBDes management in order to ensure that the stages of APBDes management are running properly.

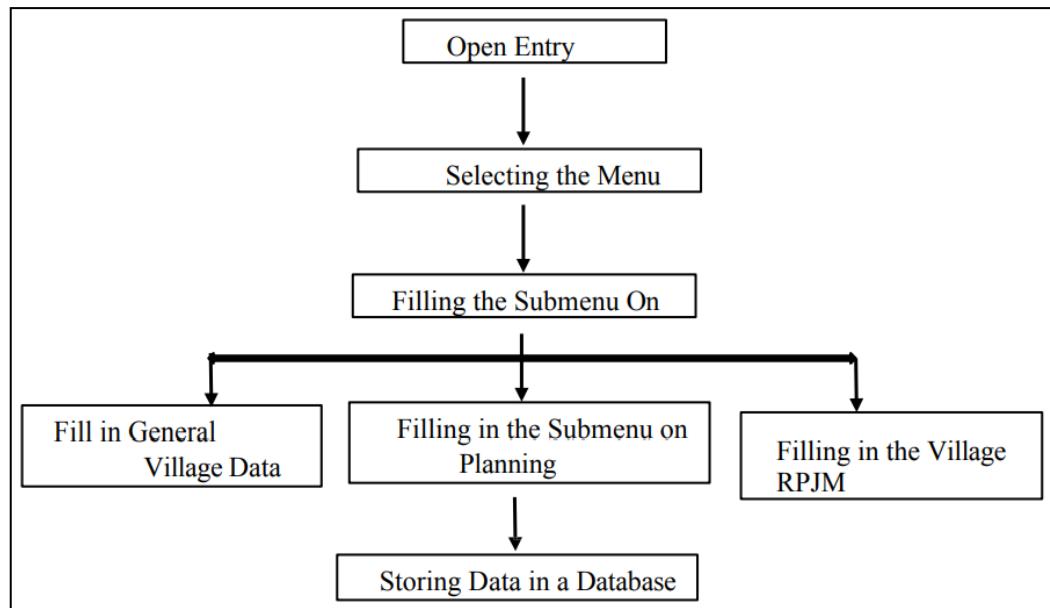


Figure 1. Planning Flow in the SiskeuDes Application

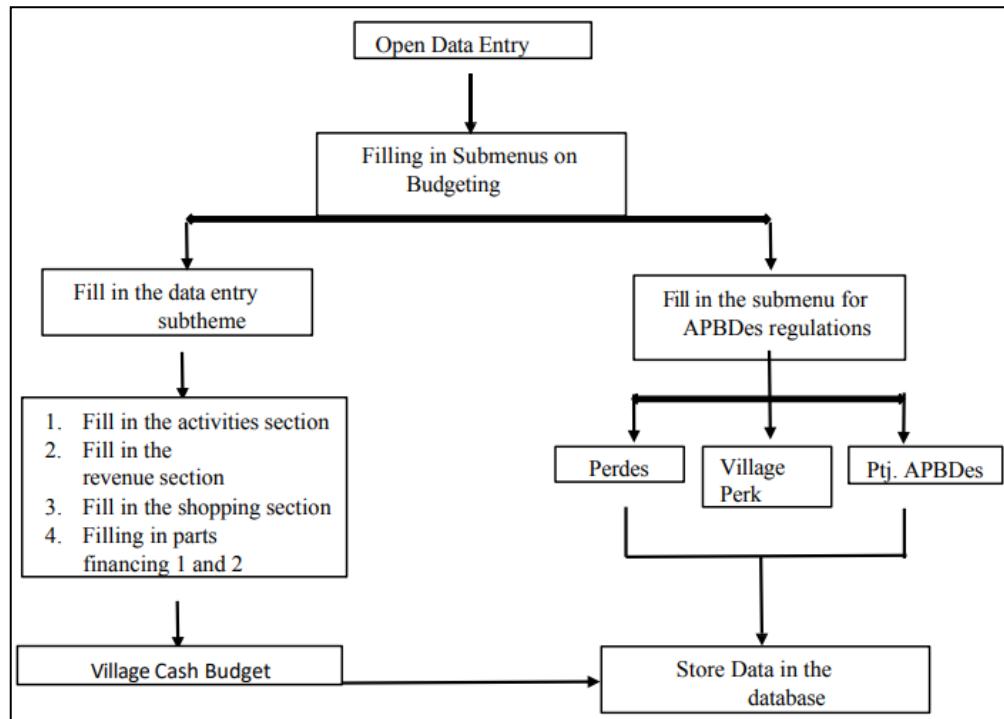


Figure 2. Flow of Budgeting in the SiskeuDes Application

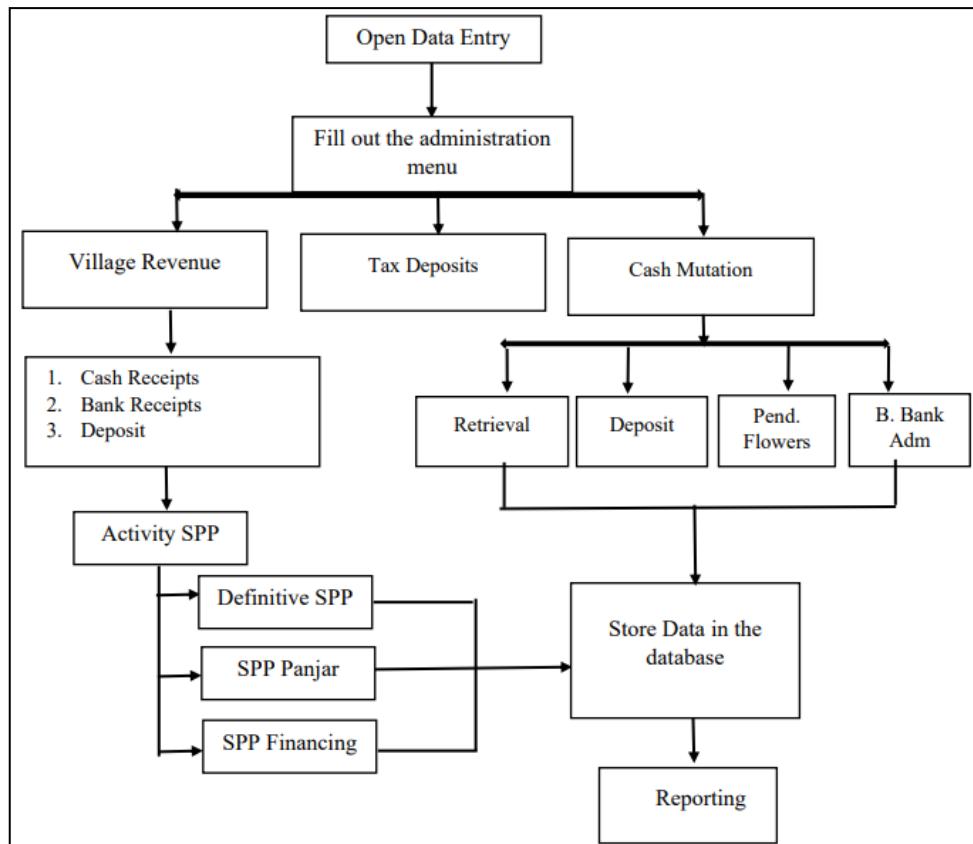


Figure 3. Flow of Administration in the SiskeuDes Application

The management of the APBDes that is carried out requires various elements that influence each other, which in this case the accounting information system has an important influence on the smooth management of the APBDes. The information technology system used in the APBDes management process is through the SiskeuDes application. Every application used must have advantages or disadvantages which of course will also affect the APBDes reporting. The Siskeudes application, developed by BPKP, is presented to village governments to streamline finance management from the planning phase to accountability. The application has advantages in terms of appearance, easy-to-understand implementation instructions and good internal controls to minimize errors and provide the information needed.

From the information conveyed by Mr. Jamaludin as the head of finance, the Siskeudes application has been able to meet the needs of the village with the various advantages provided by the SikeuDes application if the percentage is 80%. With the SiskeuDes application, APBDes management can run smoothly and supervision can be carried out online. This Siskeudes application can only be opened by people who have access because it is equipped with good internal control. While the other 20% is because this application is still imperfect and often undergoes an updating process so it takes time to readjust.

Discussion

The results of this study are very important in the financial management process regulated in Permendagri/20/2018 concerning Village financial management. Related to the implementation of Village financial management which will also have an impact on the development of community welfare in it, the Village government uses the SiskeuDes application to produce accurate, effective and efficient financial information through various stages in managing the APBDes. In line with previous research, the application of AIS in the village context allows the village head and his apparatus to obtain accurate and timely information about the village's financial condition, which is

very important for better planning and budgeting [19]. Village governments that implement accounting information systems in managing APBDes should be able to carry out village financial management in accordance with Permendagri/20/2018 and be able to run accounting information systems properly in order to minimize existing obstacles and related to internal control.

The analysis results indicate the use of accounting information systems in the management of APBDes through its components, the efficacy of AIS in overseeing APBDes, and the implementation of AIS internal controls in managing APBDes. In the previous study [20] Mastura and Nadirsyah (2018) The efficacy of an accounting information system is demonstrated by user satisfaction and the utilization of the system. James Wetherbe articulated that the evaluation of AIS performance encompasses system performance, information, economy, control, efficiency, and service. The implementation of AIS in the administration of APBDes operates in compliance with Permendagri/20/2018 regarding Village Financial Management, aligning with the six components of AIS: system users, information technology infrastructure, software, procedures, data, and internal control and security protocols.

Moreover, about the efficacy of information technology systems, it demonstrates the effectiveness of accounting information systems as assessed by user satisfaction and the utilization of these systems. The performance of this AIS aligns with the technological acceptance model (TAM) paradigm. The Technology Acceptance Model (TAM) serves as a robust framework for elucidating the elements that affect user behavior and the use of diverse technologies. The APBDes management in Karacak Village uses the SiskeuDes application which must be operated in the APBDes management process. In research conducted at PT NEID, it was found that AIS plays an important role in supporting effective managerial decision making [21].

The application of internal control of the accounting information technology system in managing the APBDes which is a series of policies and methods made to safeguard company assets, check the reliability and accuracy of data, losses and maximize the efficient implementation of agency / organization policies [22]. This study employs the internal control components established by COSO, which encompass five critical elements: the control environment, risk assessment, control actions, information and communication, and monitoring. Numerous studies indicate that effective internal control enhances the accuracy of financial statements, reduces organizational risk, and mitigates mistakes. This study's findings reveal that out of the 13 components of the internal control system, seven are functional, whilst five remain ineffective. The efficacy of the internal control system in controlling the APBDes is 61.53% effective and 38.46% ineffective.

Table 1. Implementation of the Internal Control System over APBDes Management in Karacak Village

No.	SPI Components	Effectiveness of Implementation APBDes Management	SPI on
		Yes	No
1	Components of the Control Environment		
1	Components of the Control Environment		
A	Integrity and ethical values	✓	
B	Commitment to competence		✓
C	Organization Structure	✓	
D	HR Policy and Implementation		✓
2	Risk Assessment		
	Risk of SiskeuDes application management		✓
	Risk of fraud	✓	
3	Control Activities		
A	Information processing control		✓
B	Segregation of duties	✓	
C	Physical control	✓	

D	Work Review	✓	
E	Sufficient documents	✓	
4	Information and Communication	✓	
5	Monitoring		✓
Total	8	5	

In the application of the information technology system for APBDes management, there are several obstacles felt by village government employees in line with the results that show the application of internal control in APBDes management.

No.	Obstacles	Solution
1	Difficulty determining the priority of activity programs	Determining the priority scale for selecting programs or activities that will be budgeted by taking into account the needs of the community and can be based on information on the realization of the previous year's APBDes as a consideration.
2	Obstacles in the control environment	Make policies with specifications of educational criteria and work experience in accordance with the position held so that in carrying out its responsibilities it can run well.
3	Obstacles to risk assessment	Exploring risk assessment related to the SiskeuDes application by paying attention to server constraints which can be overcome by creating two servers so that if one server is constrained it can use the other server, and for input error constraints, an early warning can be made if an error occurs so that it does not affect other reports from the start.
4	Constraints ion information processing control activities	Installing special Wifi with maximum speed and can only be used by SiskeuDes application managers. For the problem of updating the system by adding new features, it can be overcome by providing adequate technical guidance and training by the Bogot Regency DPMD and being able to reduce these changes.
5	Obstacles in monitoring	Increasing the monitoring capability of the sub-district administration of APBDes management from once a year to three times a quarter.

5. CONCLUSION

The purpose of this study was to determine the application of accounting information systems in managing APBDes in Karacak Village with aspects of AIS components according to Romney & Steinbart, AIS performance based on TAM theory and factors according to James Wetherbe, and internal control according to COSO. In addition, to find out the internal control obstacles faced in the application of accounting information systems in the management of APBDes and provide solutions to the obstacles faced in the application of accounting information systems for managing village revenue and expenditure budgets in Indonesia with a case study of Karacak Village, Leuwiliang District, Bogor Regency.

Based on this foundation, the results of the study indicate that the application of internal control using the thirteen components of COSO, the Karacak Village government has 61.53% run well and effectively, and 38.46% has not run effectively. In addition, looking at the application of the AIS component, the Karacak Village government has implemented all AIS components in which the APBDes management procedure is in accordance with Permendagri/20/2018 starting from planning to accountability using the principles of transparency, accountability, participation, order and budget discipline. The management of APBDes is carried out by a SISKEUDES operator through the SiskeuDes 2.0 application system which is equipped with a good internal control system. Siskeudes itself is considered to have 80% fulfilled the needs of the village in managing the APBDes. As for the obstacles to the application of information technology systems in APBDes management, a solution has been found that is in line with and is expected to overcome these obstacles.

ACKNOWLEDGEMENT

The author would like to thank the University of North Sumatra, especially through the Directorate of Research, Technology, and Community Service for providing funding assistance in the scholarship program grant for master's to doctoral education for superior scholars (PMDSU) (number: 91/UN5.4.10.S/PPM/KP-DRTPM/2024).

REFERENCES

- [1] Zamzami, Nusa, and Faiz, I. (2021). *Accounting Information System*, Yogyakarta: Gajah Mada University Press.
- [2] Anjelita, P., and Roska, E. (2019) Design of E-Learning Information System at Smk Negeri 3 Batam. *Computer And Science Industrial Engineering (Comasie)*. 1(01), 132–141. <https://ejournal.upbatam.ac.id/index.php/comasiejournal/article/view/1572>
- [3] Williams, B. K., & Sawyer, S. C. (2003). *Using information technology: A practical introduction to computers & communications* (6th ed.). McGraw-Hill.
- [4] Robson, K. (2007). *Transforming audit technologies: Business risk audit methodologies and the audit field*.
- [5] Romney, M., and Steinbart, P. (2016). *Accounting Information Systems*, Jakarta: Salemba Empat.
- [6] Bodnar, G. H., & Hopwood, W. S. (2010). *Accounting information systems* (10th ed.). Prentice Hall.
- [7] Bastian, I. (2010). *Public Sector Accounting*, Jakarta: Salemba Empat.
- [8] Bappenas. (2018). *Guidelines for the Preparation of Village Medium-Term Development Plans (RPJMDes) and Village Government Work Plans (RKPDes)*.
- [9] Syahadat, E. and Idrus, O. (2022). The application of the village financial system (siskeudes) to the quality of village fund financial reports during the covid-19 pandemic (a case study of villages in sorong district). *Journal of Economic Public and Accounting (Jepa)*, 4(2), 106–118. <https://doi.org/10.31605/jepa.v4i2.1264>
- [10] Izzalqurny, T., Hikami, A., Christy, G., & Permatasari, F. (2022). Counseling on the application of the village financial system (siskeudes) to improve the ability of village officials in duwet krajan village. *Graha Pengabdian Journal*, 4(1), 57. <https://doi.org/10.17977/um078v4i1202p57-67>
- [11] Financial and Development Supervisory Agency (2019). <https://www.bpkp.go.id/id/produkLayanan/produk/pY/sistem-keuangan-desa-siskeudes>
- [13] Santi, I. H., & Erdani, B. (2021). *TECHNOLOGY ACCEPTANCE MODEL (TAM)*. NEM Publisher. ISBN: 9786236293850
- [14] Emran, M.A., and Shaalan K. (2021). *Recent Advances in Technology Acceptance Models and Theories*. Germany: Springer International Publishing
- [15] Triyono, T., Achyani, F., & Arfiansyah, M. (2019). The determinant accountability of village funds management (study in the villages in wonogiri district). (Vol 4, No 2 (2019)), 118–135. <https://doi.org/10.23917/reaksi.v4i2.8521>
- [16] Hardani, Auliya, N. H., Andriani, H., Fardani, R. A., Ustiawaty, J., Utami, E. F., Sukmana, D. J., & Istiqomah, R. R. (2020). *Qualitative & quantitative research methods*. Science Library
- [17] A., and Setiawan, J. (2018). *Qualitative Research Methodology*. Sukabumi: CV. Jejak.
- [18] Sugiyono. (2014). *Quantitative, Qualitative, and R&D Research Methods*. Alfabeta CV.
- [19] Pasaribu, S. (2023). Village financial management and village financial accounting system in order to improve the performance of sibito village government. *Scientific Journal of Economic Management & Accounting (Mea)*, 7(3), 95–111. <https://doi.org/10.31955/mea.v7i3.3307>
- [21] Hakim, A. and Sutrisno, S. (2023). The effect of accountant information systems on management decision making at pt. neid. *Trisakti Economic Journal*, 3(1), 2059–2066. <https://doi.org/10.25105/jet.v3i1.16474>
- [22] Mulyadi. (2016). *Accounting Information System*. Jakarta: Salemba Empat. Regulation of the Minister of Home Affairs Number 13 concerning Regional Financial Management Guidelines. (2006). <https://peraturan.bpk.go.id/permendagri-no-13-year2006>
- [23] Abdullah, H.M., and Samad.A. (2019). The Effect of Village Financial Information Systems (SISKEUDES) on Village Head Performance. *International Journal of Information System*, Volume IV, ISSN 2548-6438. <https://doi.org/10.36549/ijis.v4i1.50>
- [24] Astuti, E., Murwani, J., & Sugiharto, S. (2020). Training on government accounting and village fund management at mgmp madiun district. *Dinamisia Journal of Community Service*, 4(2), 214–221. <https://doi.org/10.31849/dinamisia.v4i2.3593>
- [25] Gayatri, G. and Latrini, M. (2018). Effectiveness of Village Financial System Implementation and the quality of Village Financial Reports. *Scientific Journal of Accounting and Business*, 113. <https://doi.org/10.24843/jiab.2018.v13.i02.p05>
- [26] Minister of Home Affairs Regulation No. 20 on village financial management. (2018). <https://peraturan.bpk.go.id/Home/Details/139714/permendagri-no-20-tahun-2018>
- [27] Law Number 6 on Villages. (2014). <https://peraturan.bpk.go.id/Huu-no-6-tahun-2014>
- [27] Widuri, R., Mangoting, Y., Tjondro, E., Toly, A., & Sadjiarto, A. (2021). Improving accounting and financial literacy of village government institutions for sidoarjo accounting high school teachers. *Sharing - Action - Reflection*, 7(1), 46–51. <https://doi.org/10.9744/share.7.1.46-51>
- [28] Wetherbe, J. C. (1984). *Systems Analysis and Design Traditional, Structured, and Advanced Concepts and Techniques*. West Publishing Company.