

The role of the internal control system in strengthening the relationship between the use of information technology, accountability, and village government performance

Ratih Purnamasari¹, Agus Ismaya Hasanudin², Rudi Zulfikar³, Dadan Ramdhani⁴

Email: Ratih.purnamasari@untirta.ac.id, ismayaagus@untirta.ac.id, rz-zulfikar72@untirta.ac.id,
ddn_ramdhani@untirta.ac.id

Universitas Sultan Ageng Tirtayasa, Ratih Purnamasari¹, Universitas Sultan Ageng Tirtayasa, Agus Ismaya Hasanudin²

Abstract. This research aims to determine the role of the internal control system (ICS) in moderating the relationship between the use of information technology and accountability for village government performance. For hypothesis testing, this study employs a quantitative approach. This research instrument is a questionnaire, which the respondents fill out. This study's population consisted of all village officials in the District of Serang Regency. Purposive sampling was used in this study, with 174 respondents, and the data were analyzed using a structural equation model (SEM). According to the findings of this study, an internal control system can strengthen the relationship between the use of information technology and accountability for village government performance. The implications of this research can assist policymakers in developing regulations to improve the performance of the Indonesian public sector.

Keywords: Utilization of Information Technology, Accountability, Internal Control System, The Village Government Performance

1 Introduction

Every year, the central government budgets village funds that are relatively large enough to be distributed to all villages in Indonesia. Defining *Village Funds* could be resources from the APBN channeled through the Regency/City APBD and precedence for the establishment and empowerment of village communities. It is hoped that the village funds provided will promote village-level economic development and the autonomy of inhabitants. Due to weak transparency and accountability, the village government's funds must carry a relatively high level of risk [1]. *Accountability* is defined as the obligation of individuals or organizations internally and externally to report for their actions, accept responsibility, and reveal the results transparently. Furthermore, this includes responsibility for money or other deposited property, service delivery, and the social impact of policies [2], [3]. As a public sector organization, the village government must be capable of serving society and organizing village funds effectively. Another critical requirement is that village officials be able to use information technology to facilitate and expedite their work. The rapid advancement of information technology has the potential to improve performance in a variety of activities in a timely, precise, and accurate manner, thereby increasing productivity [4], [5]. The quick development of information technology, the proliferation of computers and other devices, and the usage of these tools in organizations has increased dramatically. Data is distributed to a large number of users through the use of internal networks and systems that are connected to a centralized computer or server. With the support of information technology, businesses can transfer and process a significant amount of information and data. It is possible to incur some hazards if there is insufficient monitoring and management [6], [7].

Financial statements meet the first four relevant criteria and are said to be of high quality. Pertinent information meets the required criteria: first, it provides feedback, and second, it has predictive ability. Furthermore, third, it is timely and reliable. The accounting information are material-free errors and misleading misstatements; all three can be compared. Financial statements are more useful when compared to those from the previous year; the fourth is understandable. Users must recognize financial statements and be presented in an appropriate format and terminology. The quality of financial reports results from information that will assist users in making decisions [8]. The use of workarounds impacts the quality and usefulness of financial and managerial accounting information [9]. The completeness, neutrality, and accuracy of financial information were all impacted [10]. The circumstance of the quality of government financial statements in Indonesia is an intriguing topic that deserves further investigation. With the advancement of public sector accounting in Indonesia, public accountability of government performance has become a common assertion. The reinforcement of assertions for the quality of government financial statement information is a phenomenon that occurs in Indonesia's public sector development [11]. So far, the facts reveal that the village government's

performance is still relatively poor, particularly regarding village funds. It can be seen in the accountability and disclosure of village funds in village administrations in several villages in Indonesia, which are still not following the regulation of Village Law Number 6 of 2014. The Corruption Eradication Commission (KPK) has identified at least 14 potential issues, including regulatory and institutional issues, management, supervision, and human resource issues. In its annual report, the ICW Non-Governmental Organization identified seven types of corruption commonly practiced by village governments: theft, budget misuse, power abuse, unlawful levies, fabricated reports, budget reduction, and seductions [12], [13]. The bigger the organization's managed funds and the lower the ICS applied, the higher the chance for deliberate or accident fraud, as well as fraud perpetrated by people or systems [14], [15]. The ICS is an accounting system designed to provide adequate confidence in the achievement of three groups of goals (effectiveness and efficiency of operations, reputable financial reporting, and compliance with applicable regulations) established by the board of commissioners, management, and other company personnel [16].

One of the major issues confronting the vast majority of private and public sector economic entities is the weakness of their ICS. Each year, these entities, and thus the country's economy, suffer considerable losses and extensive damage as a result of internal control flaws. Meanwhile, as changes in the composition and interrelationships of business units worldwide and within the country are anticipated shortly, The matter's significance and the necessity to stress it are growing [6], [17]. Organizations constantly need an ICS because they are subject to numerous dangers that impede their success from achieving specific goals [18], [19]. Previous organizational lessons and the worldwide financial crisis have shown the importance of ICS and risk management system. As well as events have resulted in official confession of the crucial part of controls, determining the ICS as a critical component of any institution [18], [20], [21].

In controlling village funds or village finances, village authorities play a crucial role in carrying out accountability, both in terms of program accountability and performance accountability, to inform the public of the results of the executed performance. According to research undertaken [22] accountability influences the management of village funds. In contrast, research [23] indicates that accountability has little effect on the performance of village fund administration. Protecting personal rights, groups, and state secrets is a priority for the organization [24]. The findings of a study [25] indicate that transparency influences the administration of village funds. However, a gap in the performed research [22] suggests that transparency has little impact on managing village funds. In the meantime, community involvement is the direct or indirect participation of the community in decision-making through representative institutions that can channel their goals [22]. According to [26], community engagement involves the community in making decisions in every development program and recognizing the community's issues and opportunities. According to research undertaken [22], community involvement influences the management of village revenues. Contrary to research [23] which concludes that community participation has no impact on the performance of village fund management, we find the opposite to be true. Based on the above background, with many cases of misuse of village funds and this research gap, the authors are interested in examining the role of the ICS in improving the performance of the village government, which is supported by accountability and the use of information technology.

2 Literature Review and Hypothesis Development

2.1 Agency Theory

Scott (2015) says that the relationship between the agent and the principal is like a contract. The agent is the person or thing that does what the principal wants. The principal is the person or thing that hires the agent to do things for the principal's benefit. From this explanation, we can see that the relationship between the community and the local government is the correlation between the agent and the principal, where the society is the principal and the local government is the agent. The community, as the principal, gives the agent regulatory and management power and money in the form of taxes and other fees. As the agent, the local government must be accountable, report, show, and reveal all activities and responsibilities that fall under their purview. So, as a way of taking responsibility for the power they have been given, local governments should report to the citizen what they have done. So that the citizen can assess, track, and evaluate how local governments can use sources of information to increase the lives of their people. Based on Agency Theory, financial management in local governments needs to be kept an eye on to ensure that it has been done under all rules and laws.

2.2 Village Government Performance

Performance in village government is the outcome or consequence of activities or initiatives that will be or has been achieved concerning the use of the village fund budget in quantifiable quantity and quality. Measuring the efficacy of the community's services is a method for determining the village's capacity. Besides, also

measured by its ability to delve and manage the village's financial resources in meeting their requirements to support government operations, community services, and village development without being wholly dependent on the central government and having the flexibility to use funds for the community's benefit a settlement within the boundaries specified by law [12].

2.3 Utilization of Information Technology

[27] define that use is how people work with technology. In this case, the word "technology" means a computer system. Information technology was a valuable resource for data management and automation. At the core of all firm processes, management should have access to data in order to make effective and timely decisions in accordance with the firm's overall efficiency. Likewise, IT is being acknowledged and utilized as a resource to support managerial activities involving decision-making for complex organizational issues [28], [29]. IT plays a significant role in the creation of new knowledge and has become an indispensable, unavoidable carrier of accounting data, particularly in the global knowledge society [30], [31]. It can be stated that there is a strong connection between internal control and IT, which, as the cornerstone of IT Governance and compliance, tries to design secure procedures and business architectures. Organizations must combine their IT with ICS processes in the current business surroundings [18].

IT governance comprises the structures, processes, and associated mechanisms governing information technology that organizations use to ensure that their IT investments help them reach their long-term and short-term goals [32]. IT governance includes deciding who gets to make decisions, setting goals and objectives, building the organization's ability to reach those goals and objectives, and putting in place feedback loops that use different measurements and metrics [33], [34]. IT governance is a part of corporate governance that looks at the role of information technology in an organization [35]. IT governance is mostly about managing IT risks and ensuring that corporate systems align with business goals [36]. IT governance, in a nutshell, ensures that IT management processes work to support present company activities controlled, making it easier to obtain the anticipated advantages, and help the organization succeed in the long run [37]. The use of information technology is the process of processing and disseminating data through the use of computer and telecommunications equipment for activities performed by a person. Indonesian information technology is also evolving in tandem with advancing a more modern human civilization [11], reduces the likelihood of errors occurring [38]. Every organization's human resources must be adept at updating their self-competence through training or independent learning in response to changes in the community [16].

2.4 Internal Control System

Internal control is a multifaceted idea that has been discussed in the management control literature in many different ways [39]. It is not just a set of rules or a procedure that is done at a particular time. It is more or less a system that works at all levels of an organization and is integrated [40]. In business, organizations face many risks every day. These risks include the failure of internal control mechanisms, financial fiascos, catastrophes or environmental disasters, noncompliance, and regulatory violations. These risks are made worse by the growth of technology, the fast pace of business, the complexity of financial markets, and globalization. All of these things have made it harder for companies to deal with risks [2]. ICS is a comprehensive process of actions and activities performed by management (executives) and their staff to provide assurance or adequate confidence in achieving corporate objectives using effective and efficient actions, reliability of financial reports, protection of state resources, and fulfillment with laws [11]. An effective control system should offer instructions on ethics and integrity, commitment to competency, involvement in the board of directors and audit committee, philosophy and administration style, job descriptions, and human resources policy and procedure [41]. On other hand, Internal control is a policy and procedure that ensures every activity minimizes the entity's risk. It includes splitting of tasks, physical and process control, and performance review. Transaction authorization, accounting records, and asset storage should be separated. Cheating must be avoided. Each function's independence can also reduce the manager's cheating [41]. An organization which uses internal control, and risk management, will derive limitless benefits from efficient processes that improve capabilities, management, coordination, and the organization's ability [42]. Internal auditors are instructed to review the correctness and dependability of operational and financial data and the methodologies used to detect, measure, classify and report such information. Information systems offer data for decision-making, regulation compliance, and control. Hence, the internal audit function should analyze information systems to establish whether financial and operational reports and records focus is mainly trustworthy, timely, exhaustive, and essential data and whether controls exist over documentation and reporting [43]. [44] says that it is an integral part of the overall governance structure of an organization. This process is meant to provide adequate confidence that particular aims in accountability, effectiveness and efficiency of operations, financial reporting accuracy, and compliance with applicable laws and regulations are met.

2.5 Accountability

Halim and Iqbal (2012) say that accountability is the duty of a person or organization to explain its performance, actions, or decisions to those who have the right to know about them. Fajri (2015) quote in [45] says that accountability is the duty of a person or group to explain their performance, actions, and decisions to the person or group who is owed accountability. Accountability is the duty of a person or organization, in this case, the government, to report on their actions, performance, and decisions to the people who are entitled to know about them. In this case, that is the community. [46], as quoted in [45], says there are two kinds of accountability: (1) Vertical accountability, which is the responsibility to manage funds at a higher level of authority. For example, the village government is responsible to the regent or mayor for keeping track of how village funds are spent. (2) Horizontal accountability, which is the responsibility to manage money for the whole community. For example, the village government is responsible to the community for keeping track of how village funds are spent [47].

2.6 The Relationship between Utilization of Information Technology and Village Government Performance

The obligation of the government to employ information technology is governed by Government Regulation No. 56 of 2005 about Regional Financial Information Systems. By monitoring the implementation of the development process following the principles of effective governance, the central government and local governments are mandated to create and employ advances in information technology to enhance the quality of regional financial management, according to the regulation. It emphasizes that the government must optimize the use of information technology improvements to build a network of management information systems and work procedures that facilitates integrated government operations by facilitating access between work units [12]. The greater the government's use of information technology, the higher the quality of its financial reports. Such optimal use of computers and software will affect. Additionally, for speedier transaction processing, estimates will be highly accurate, resulting in an refinement in the quality of timely financial reporting as a result of the reduction of material errors [48]. The use of information technology systems will facilitate the village government's ability to obtain financial information and performance data from financial management. According to the findings of [49], the utilization of information technology has a positive impact on the quality of financial reports. According to [50] findings, the use of information technology affected the accountability of village funds. Thus, the hypothesis we propose is as follows:

H1: the use of information technology has a positive effect on the performance of the village government

2.7 The Relationship between Utilization of Information Technology and Accountability

Information technology can aid village governments by controlling information related to village funds and reducing the likelihood of data management errors, allowing the government to manage village funds efficiently and effectively. It is in conformance with the stewardship theory, which describes that the use of information technology can assist village governments in controlling village funds, allowing village governments to carry out their responsibilities as a form of accountability or accountability to the community with greater ease. Utilizing information technology for village government has many benefits, both in terms of operational precision and the machine's reputation for adaptability. As a component of technology, a computer is a tool that can multiply the capabilities of humans, and it can perform tasks that humans [51]. This opinion is supported by research conducted by [52], which indicates that the use of information technology significantly impacts the accountability of village fund management in Bantul Regency. According to [53] research, the use of information technology substantially impacts village fund management accountability in 50 city districts. Therefore, the following is the proposed hypothesis:

H2: the use of information technology has a positive effect on accountability

2.8 The Relationship between Accountability and Village Government Performance

The availability of village funds demonstrates the completion of the village's right to exercise independence to drive growth. Laws, Government Regulations, Ministerial Regulations, and Regional Head Regulations are among the policies that govern the administration of the Village Fund. The presence of good village financial management is anticipated to influence the performance of the village government, where the stricter the rules applied by the village apparatus, the better the quality of its performance [54]. Sugeng's (2014) research demonstrates that regional financial management influences the performance of local governments. If

local financial management can be managed effectively, efficiently, transparently, and responsibly, it can improve the performance of local governments, particularly in the provision of community-required public services. The presence of regional financial management can improve the performance of a government agency by ensuring that its activities are carried out effectively and efficiently following its responsibilities and functions. Similarly, the presence of village financial management can encourage achieving a higher quality village government performance, free of corruption, collusion, and nepotism [12]. Thus, the hypothesis is as follows:

H3: accountability has a positive effect on the performance of the village government

2.9 The relationship between the ICS, the performance of the village government and its moderating role

Internal control consists of policies and regulations for directing, monitoring, and safeguarding organizational resources to prevent misuse. Ensure compliance between operational activities and policies and regulations. Control consists of the policies and procedures used to achieve objectives and provide or ensure the reliability of financial information, as well as to ensure compliance with applicable rules and regulations. One of the systems established by the government to exercise internal control over the public sector is the government's ICS. The objective of the government's ICS is to provide adequate assurances for the achievement of governance, financial reporting, asset protection, and regulatory compliance objectives [1].

The ICS is an essential part of reaching the goals of an organization [55]. A well-implemented ICS can reduce the chance of making mistakes or mistakes when making financial statements. It can also play a critical role in preventing and finding fraud or embezzlement, which is essential for making sound financial reports [56]. Research by [57] and [58] shows that the ICS makes financial reports better. Based on the information above, the hypothesis that we propose is as follows:

H4: ICS has a positive effect on the performance of the village government

H5: ICS has a moderate effect on the use of information technology and the performance of the village government

H6: ICS has a moderate effect on accountability and the performance of the village government

The following conceptual framework model describes the relationship between one variable and another based on the preceding descriptions (see Figure 1):

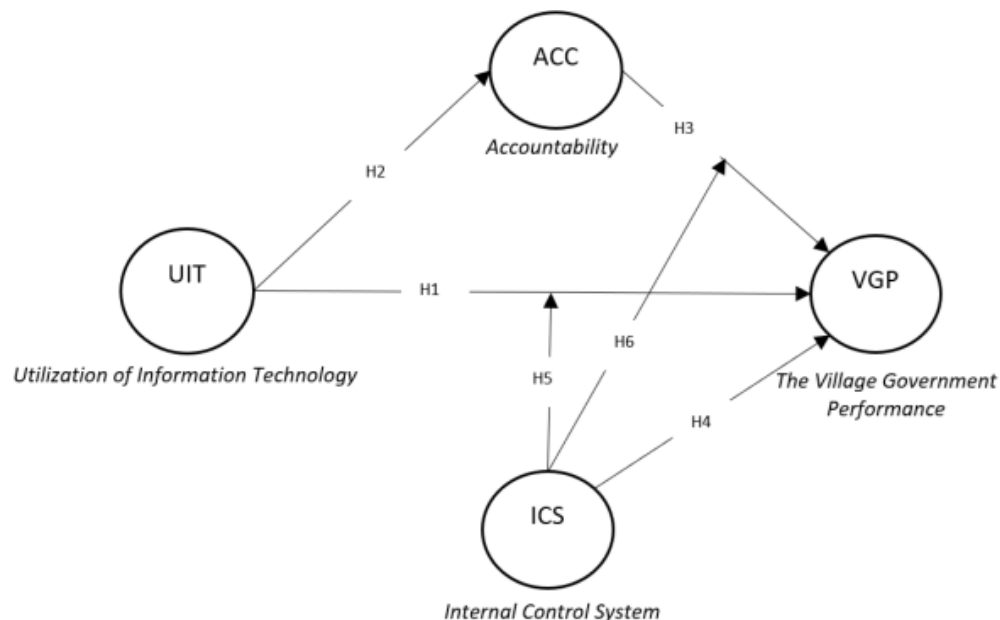


Fig. 1. Conceptual framework

3 Methodology

3.1 Sampling and Data Collection

This research is of the causal-associational type and employs a quantitative descriptive methodology. This study aims to investigate the influence of the ICS on the use of information technology, accountability, and

performance of the village government in Serang Regency, Banten Province. Method Distribution of questionnaires to village officials serves as the research methodology. This study's population consisted solely of village government officials from 326 villages. Fifty-eight villages from Baros Subdistrict (14 Villages), Petir Subdistrict (15 Villages), Kramawat Watu (15 Villages), and Padarincang (14 Villages) comprised the samples for this study. Respondents were sampled using a method known as purposive sampling, which involves the selection of the sample based on specific criteria. In question are the village officials responsible for managing the village's funds: (1) the village head, (2) the village secretary, and (3) the village treasurer. This study included 174 respondents from 58 villages, including the village chief, village secretary, and village treasurer ($54 \times 3 = 174$). In this study, there were four variables: the independent variable, the dependent variable, the intervening variable, and the moderating variable.

This research was gathered via questionnaires and written materials. The researcher created this study's questionnaire after examined theories pertinent to the research variables. Each respondent is asked his opinion on a question using a Likert scale in the measurement (1-5 scale). Statistical software in the SmartPLS program was used to analyze the research data to produce data quality tests, descriptive statistics, and hypothesis testing. Path analysis methods were employed to test hypotheses. Path analysis is a method for analyzing causal relationships that arise in multiple regression when the independent variables influence the dependent variable both directly and indirectly.

3.2 Measurements of Variables

This study's methodology emphasizes the theory of stakeholders that must be addressed for an organization to be considered accountable [59]. Under stakeholder theory, managers should make decisions that consider all stakeholders' interests [60]. This theory may explain how the relationship between the organization and society influences public sector accountability [59], [60]. In line with previous research on the factors that contribute to accountability in the public sector, this study focuses on the impact of integrity, internal control, and leadership on accountability in the Indonesian public sector. The study measured accountability and internal control in the public sector using ten variables each. The accountability measurement items were adapted from [2] and [61] with some modifications. The components of the ICS were modified from [2]. Utilization of Information Technology measurement were adapted using three indicators from [62][63]. Finally, the village government performance adapted using five indicators from [64].

3.3 Data Analysis

This study uses structural equation modeling or known as SEM. When multiple factors are available to identify a single variable in a data set, SEM or route modeling provides a more accurate estimate because it examines the yield and efficiency of each element individually. In addition, when all elements are combined into a single variable, the regression model provides a more accurate method for assessing estimates at the aggregate level. This study uses both approaches to gain a deeper understanding of the differences and more reliable results. This investigation uses partial least squares (PLS). The general nature of the data was analyzed using descriptive statistics, while the magnitude of the influence of each factor was determined by regression and SEM. This work evaluates the significance of the coefficients using a nonparametric bootstrap method. PLS-SEM is advantageous for non-normal data, smaller sample sizes, formative indicators, highly complex models, and other modeling situations that often offer problems for covariance-based approaches. Consider variance-based SEM as a multivariate extension of ordinary least squares regression (OLS). Usually, PLS iterative techniques are built from a series of OLS studies [65].

The methodology based on PLS-SEM permits reflective and formative computations to measure latent variables. When an explanatory combination of indicator variables underlies the latent construct, formative measurement models are employed, which can be used ideally when the items characterize and define the construct, as opposed to when they do not [66], [67]. Indicators in a formative measurement paradigm represent the (possibly independent) causes of the latent construct; hence, they are not always highly correlated. In addition, it is believed that formative indicators are error-free [68]. This research used the formative measurement model when developing the SEM.

4 Result and Findings

4.1 Validity and reability

The validity of the indicator was determined using the convergent method and expressed as the value of the external loading factor. The loading factor value range of 0.50 to 0.60 was still deemed sufficient for exploratory studies, which are the early stages of developing a measurement scale. In this study, the outer

loading value of each indicator ranged between 0.65 and 0.98, satisfying the convergent validity requirement (Table 1). The HTMT ratio for forming the discriminant validity model must be less than 0.90, according to the factors [69]. According to Table 2, every HTMT ratio was less than 0.90.

The next step was to assess a variable's discriminant validity by comparing the extracted square root coefficient of variance (AVE) from each latent factor to the correlation coefficient between the other factors in the model. The suggested AVE value was more significant than 0.5. According to Table 1, the constructs represented by the indicators in this study had discriminant validity greater than 0.50. [70]. The final step employs composite reliability to assess the value of variable indicators. When the composite reliability and Cronbach's alpha were more significant than 0.70, the results were considered reliable [65]. (see Table 3).

Table 1. Outer loading test

Constructs*	Accountability	Internal Control System	The Village Government Performance	Utilization of Information Technology	Moderating Effect 1	Moderating Effect 2
ACC1	0.793					
ACC2	0.794					
ACC3	0.830					
ACC4	0.831					
ACC5	0.863					
ACC6	0.839					
ACC7	0.781					
ACC8	0.734					
ACC9	0.834					
ACC10	0.806					
ICS1		0.830				
ICS2		0.804				
ICS3		0.788				
ICS4		0.909				
ICS5		0.828				
ICS6		0.824				
ICS7		0.866				
ICS8		0.869				
ICS9		0.788				
ICS10		0.853				
UIT1				0.896		
UIT2				0.878		
UIT3				0.899		
VGP1			0.911			
VGP2			0.885			
VGP3			0.864			
VGP4			0.712			
VGP5			0.706			
ICS*UIT					1.274	
ICS * ACC						1.349

Note(s): *ACC = accountability, ICS = internal control system, UIT = utilization of information technology, VPG = the village government performance

Table 2. Heterotrait-Monotrait Ratio (HTMT)

Variable	Accountability	ICS*ACC	ICS*UIT	Internal Control System	The Village Government Performance	Utilization of Information Technology
Accountability						
ICS*ACC	0.768					

ICS*UIT	0.755	0.967			
Internal Control System	0.839	0.738	0.728		
The Village Government Performance	0.401	0.329	0.359	0.349	
Utilization of Information Technology	0.826	0.740	0.749	0.806	0.369

Table 3. Instrument reliability test

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Accountability	0.942	0.945	0.950	0.658
ICS*ACC	1.000	1.000	1.000	1.000
ICS*UIT	1.000	1.000	1.000	1.000
Internal Control System	0.952	0.969	0.958	0.695
The Village Government Performance	0.880	0.940	0.911	0.674
Utilization of Information Technology	0.871	0.872	0.921	0.794

The composite reliability calculation produced a range of 0.911 to 1.000 (>0.70), indicating that the variable's indicators were reliable. Cronbach's alpha values ranged from 0.871 to 1.000 (>0.70), indicating that the indicators were dependable and declared error-free [71].

4.2 Testing research hypothesis

The results of the hypotheses testing are shown in table 4. they exhibited that utilization of information technology had no significant and positive influence on the village government performance ($t=1.206 < 1.96$), but utilization of information technology had a significant and positive effect on accountability ($t=76.839 > 1.96$). However, accountability significantly and positively influenced the village government's performance ($t=2.392 > 1.96$). In contrast, the ICS had no significant and positive influence on the village government's performance. Furthermore, the result of moderating testing shows that ICS moderate the relationship utilization of information technology and the village government performance ($t=2.520 > 1.96$). In addition, the ICS can strengthen the relationship between accountability and village government performance ($t=2.097 > 1.96$). Figure 2 shows the results of the outer model, and figure 3 shows the inner model done with the smart pls software.

Table 4. Path Coefficient

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Result
Utilization of Information Technology -> The Village Government Performance	0.206	0.192	0.171	1.206	0.228	Rejected
Utilization of Information Technology -> Accountability	0.935	0.935	0.012	76.839	0.000	Accepted
Accountability -> The Village Government Performance	0.539	0.504	0.225	2.392	0.017	Accepted
Internal Control System -> The Village Government Performance	0.015	0.052	0.161	0.092	0.926	Rejected
ICS*UIT -> The Village Government Performance	0.474	0.471	0.188	2.520	0.012	Accepted
ICS*ACC -> The Village Government Performance	0.405	0.408	0.193	2.097	0.036	Accepted

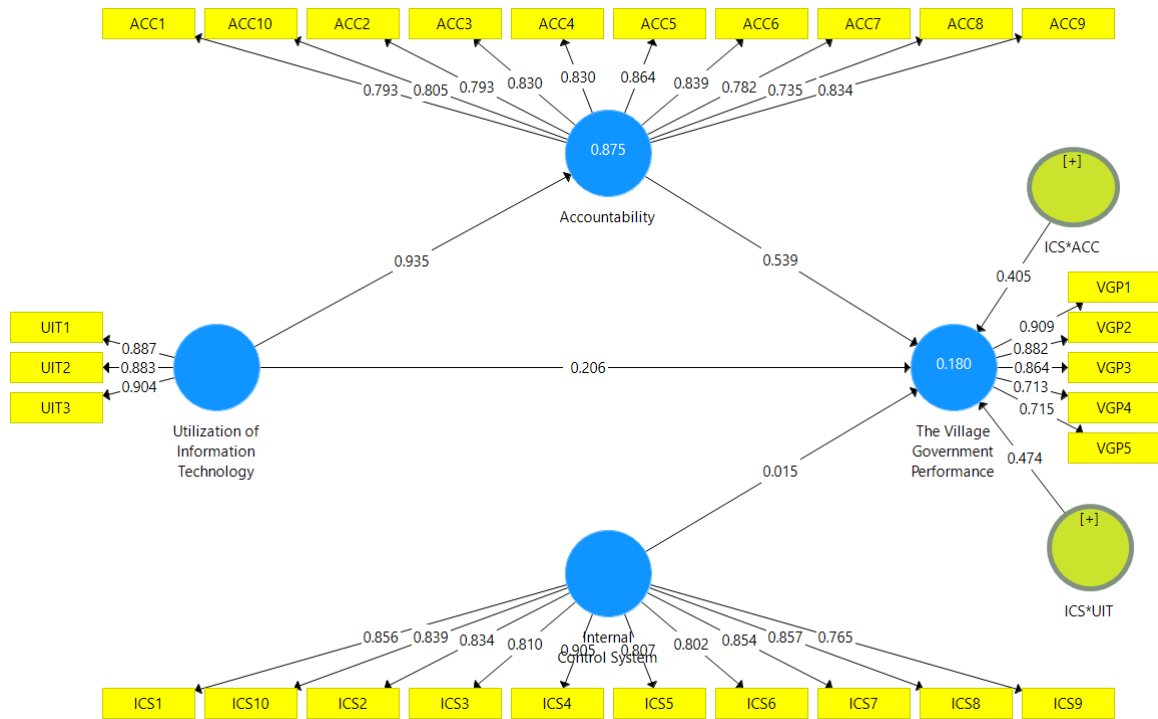


Fig. 2. Outer model result

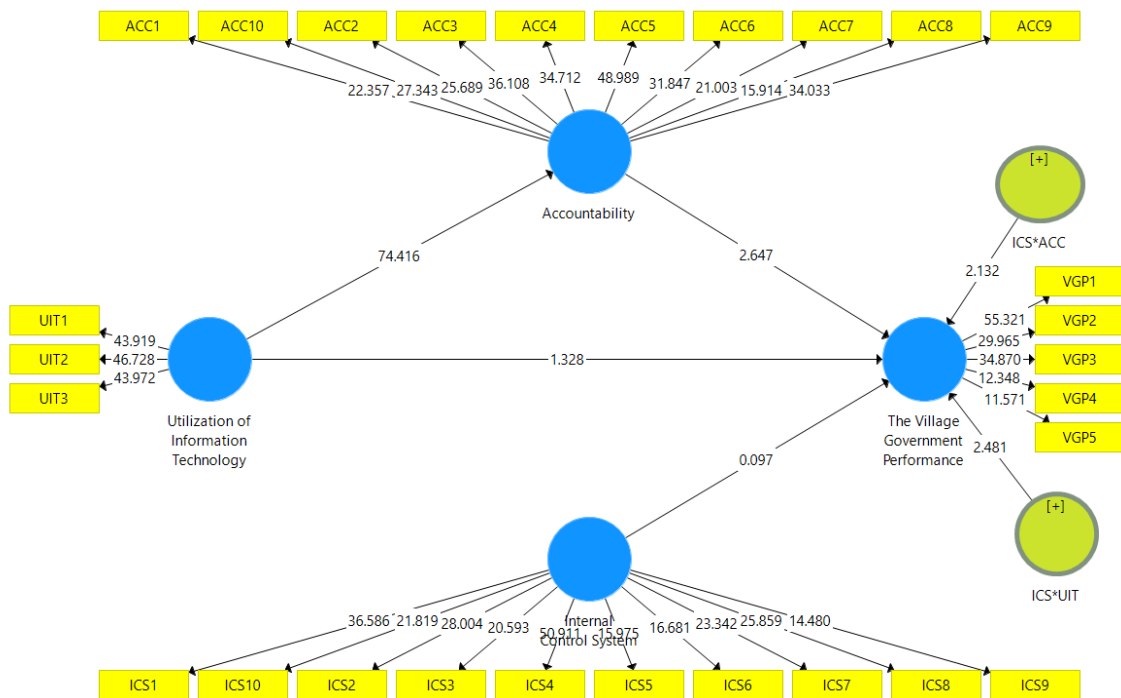


Fig. 3. Inner model result (bootstrapping)

5 Discussion

H1, rejected. This indicates that the use of information technology does not directly affect the performance of the village government because the use of information technology does not have a discernible impact on the performance of the village government, it is safe to assume that an increase in the use of information technology will not necessarily be accompanied by a decline in the quality of the work done by the village government. It is reasonable to suspect that the utilization of information technology applied to the performance of the village government is not functioning at its peak potential, and some evidence supports this suspicion. The low performance of the village government in carrying out technology and information transformation in support of its operational activities can be the cause of the not-yet optimal use of information technology. The findings of

this study are consistent with the results of [16], which state that the implementation of information technology does not significantly impact the government's performance.

H2, accepted. The findings of the tests conducted for this investigation suggest that the implementation of information technology has a constructive and material impact on the accountability of the village government. The accountability quality will be more optimal and precise the better the information technology the apparatus of the Serang Regency village makes of it. The findings of this research are supported by results from earlier studies carried out by [51], which state that the application of information technology to improve the accountability of village governments has a positive effect. Results from earlier studies support the findings of this study. The utilization of technology inspires organizations to produce excellent work and information that is quick, precise, and accurate to facilitate the organization's ability to make decisions quickly.

H3, accepted. According to this finding, accountability has a beneficial and significant impact on the village government's performance. It is consistent with the agency theory, which states that accountability is created due to the relationship between the two principals and agents. As a logical consequence, this must be carried out. The principle of accountability can never be divorced from the interests of the two parties involved; the principal always expects the agent to produce the best possible results from work delegated to them. In the same vein, the agent will do whatever it takes to be evaluated as excellent and successful in carrying out the responsibilities or authorities delegated to them by the principal. Brought the importance of village financial accountability to the attention of the government of Serang Regency and the community at large by the village government. The purpose of demonstrating the government's performance to obtain positive recognition and evaluation is to demonstrate accountability to the Regency Government and the community.

H4, rejected. There is no correlation between the effectiveness of the village government and the presence of an ICS. Because the ICS is not yet perfect, it may result in less than ideal for village government performance. The absence of an internal control team within the purview of the village government may be to blame for the ICS that is not yet functioning at its optimum level. The not yet optimal responsibility of the village apparatus can affect internal control over the financial statements of village funds. According to research carried out by [4], which states that the government's ICS does not significantly affect the performance of village governance, this finding is consistent with what those researchers found. It is a common occurrence because the team responsible for internal control, comprised of village officials and community members, does not yet have sufficient knowledge of financial reports to ensure that they can exercise control over incoming and outgoing funds straightforwardly. However, if there is a solid commitment to the internal governance of village funds and a sense of responsibility for those funds, the accountability of village fund management will improve.

H5, accepted. The study's findings indicate that accountability is a beneficial factor that acts as an intervening variable between the effect of utilizing technology and the performance of village governments. It also suggests that the village government making the most effective use of technology must also pay attention to increasing accountability in its management to ensure that the performance of the village government is growing. As a result, improving performance in village governance requires both the efficient use of technology and the management of funds within an accountable village. It cannot separate these two factors.

H6, accepted. It indicates because the human resources and equipment owned are directed and used optimally so that they can provide full service to the community, these results can be explained by the fact that the ICS is able to moderate the relationship between the use of information technology and the performance of the village government. It is because full service with the help of information technology demonstrates that the village apparatus can improve its performance.

H7, accepted. It suggests that a more effective ICS in managing village finances accountability does not necessarily strengthen or moderate the relationship between the accountability on the performance of the village government; the more effective the system, the less likely it is to have either of these effects. Even the ICS is capable of fostering a culture of monitoring all activities to identify potential violations and reduce the occurrence of behaviors that are potentially harmful to the state, as well as improve village financial management and bring about a government that complies with the law.

6 Conclusion and recommendation

Indonesia aims to become a developed country by presenting the role of the lowest government, namely the village government. This study measures performance practices in village government and how these practices are influenced by information technology, ICS, and accountability.

While the public sector, particularly the village government, was criticized for being inflexible and bureaucratic, the village government had to implement an ICS. The public sector protects stakeholders' interests by ensuring that everyone is treated fairly and achieving a developed and harmonious region. For efficiency, control system practices must be linked to accountability practices. Simultaneously, control systems should be designed and modified to reduce complexity and protect stakeholders. In addition to implementing accountability and ICS, increasing the use of technology must be a top priority because it affects the

responsibility of village government performance. In addition, we must strengthen government training systems and facilities.

This study will help policymakers improve the accountability of village government performance. The limitation of this study is that it only focuses on Serang District, Banten Province, but its findings will help other similar areas. The current study uses cross-sectional data and survey information. Beyond the scope of the study, transparency, organizational culture, rewards and punishments can also increase accountability. Future research will use longitudinal data, different data types, and different methods to better understand and solve this problem.

Acknowledgements

The authors would like to express their gratitude to the Serang Regency Government and Universitas Sultan Ageng Tirtayasa for allowing us to carry out this research and providing us with opportunities to do so. The author would also like to express their gratitude to each and every respondent who took part in this study. The authors would like to express their gratitude to the reviewers and editors for their insightful comments and support. This study is a component of a thesis that was presented to Universitas Sultan Ageng Tirtayasa in partial fulfillment of the requirements for the degree of Doctor of Accounting.

Reference

- [1] C. Z. Cahyani, Y. M. Basri, and P. Kurnia, "Accountability, Transparency, Competence of Village Apparatus, and Internal Control System in Village Financial Management," *Berk. Akunt. dan Keuang. Indones.*, vol. 7, no. 1, pp. 77–94, 2022, doi: 10.20473/baki.v7i1.30786.
- [2] M. M. Alam, J. Said, and M. A. Abd Aziz, "Role of integrity system, internal control system and leadership practices on the accountability practices in the public sectors of Malaysia," *Soc. Responsib. J.*, vol. 15, no. 7, pp. 955–976, 2019, doi: 10.1108/SRJ-03-2017-0051.
- [3] R. Almquist, G. Grossi, G. J. van Helden, and C. Reichard, "Public sector governance and accountability," *Crit. Perspect. Account.*, vol. 24, no. 7–8, pp. 479–487, 2013, doi: 10.1016/j.cpa.2012.11.005.
- [4] E. W. Pahlawan, A. Wijayanti, and Suhendro, "Pengaruh kompetensi aparatur desa, sistem pengendalian internal, pemanfaatan teknologi informasi dan partisipasi masyarakat terhadap akuntabilitas pengelolaan dana desa," *Indones. Account. J.*, vol. 2, no. 2, pp. 87–91, 2020.
- [5] H. Nuryanto, *Sejarah perkembangan teknologi informasi dan komunikasi*. Jakarta: PT Balai Pustaka (Persero), 2012.
- [6] M. R. Abbaszadeh, M. Salehi, and S. M. Faiz, "Article information : Ferdowsi University of Mashhad ," *Int. J. Law Manag.*, 2017.
- [7] K. Forghandust and R. Salehi, "Expert systems and evaluation of internal control. Accountant, 166: 16- 18, 63-65 and 74," 2005.
- [8] I. G. T. Basudewa and I. G. A. M. A. D. Putri, "The Effect of Leadership Style and Utilization of Information Technology on the Quality of Village Financial Statements," *E-JA e-Jurnal Akunt.*, vol. 30, no. 7, pp. 1658–1669, 2020.
- [9] D. Drum, A. Pernsteiner, and A. Revak, "Workarounds in an SAP Environment: Impacts on Accounting Information Quality.," *J. Account. Organ. Chang.*, vol. 13, no. 1, pp. 44–64, 2017.
- [10] A. Pernsteiner, D. Drum, and A. Revak, "International journal of accounting and information management," *Int. J. Account. Inf. Manag.*, vol. 19, no. 3, pp. 120–124, 2018, doi: 10.1108/ijaim.2011.36619caa.003.
- [11] K. A. Angreini, E. Sutisman, V. Pattiasina, and Sumartono, "Pengaruh Penerapan Standar Akuntansi Pemerintah, Sistem Pengendalian Internal, dan Pemanfaatan Teknologi Informasi Terhadap Kualitas Laporan Keuangan Pemerintah Daerah Kota Jayapura Dengan Komitmen Organisasi Sebagai Variabel Moderasi," no. December, 2021.
- [12] A. Lubis, E. N. Sari, and W. Astuty, "Pengaruh kualitas sumber daya manusia dan pemanfaatan teknologi terhadap sistem pengelolaan dana desa serta dampak terhadap kinerja pemerintah desa di kabupaten deli serdang," *J. Mutiara Akunt.*, vol. 5, no. 2, pp. 92–126, 2020.
- [13] E. . Ash-shidiqq and H. Wibisono, "Akuntabilitas Pengelolaan Dana Desa sebagai Upaya Pencegahan Korupsi Pengelolaan Dana Desa," *Semin. Nas. Huk. Univ. Negeri Semarang*, vol. 4, no. 1, 2018.
- [14] P. R. Saftarini, G. A. Yuniarta, S. . AK, and N. Sinarwati, "Pengaruh Efektivitas Pengendalian Internal, Asimetri Informasi dan Implementasi Good Governance terhadap Kecenderungan Kecurangan (Fraud) Akuntansi (Studi Empiris pada SKPD Kabupaten Bangli)," *JIMAT Mhs. Akuntansi Undiksha*, vol. 3, no. 1, 2015.
- [15] D. R. Kristiana and A. J. Hatta, "Portrait of the Polemic of Fraud In Conventional and Sharia Insurance Company," *E-JA e-Jurnal Akunt.*, vol. 32, no. 6, pp. 1603–1617, 2022.
- [16] N. K. D. Lestari, N. P. A. Kusumawati, and I. P. Nuratama, "Peran Kompetensi Sumber Daya Manusia Dalam Memoderasi Hubungan Pemanfaatan Teknologi Informasi dan Sistem Pengendalian Internal Terhadap Kualitas Laporan Keuangan LPD Se-Kecamatan Penebel," *Hita Akunt. dan Keuang. Univ.*, no. 44, pp. 268–284, 2022.
- [17] P. E. Nemat, "Deficiencies and barriers of internal control establishment (1)," *Accountant*, vol. 151, no. 23–27, 2002.
- [18] R. Michele, F. Vitolla, and A. Garzoni, "The impact of an IT Governance framework on the internal control environment Structured," *Rec. Manag. J.*, vol. 27, no. 1, pp. 1–26, 2017.
- [19] R. Simons, *Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal*. Boston: Harvard Business School Press, 1995.

- [20] P. M. Collier, A. J. Berry, and G. T. Burke, *Risk and management accounting: best practice guidelines for enterprise-wide internal control procedures*, ., Burlington, MA: Elsevier, 2007.
- [21] J. Fraser and B. J. Simkins, *Enterprise risk management: Today's leading research and best practices for tomorrow's executive*. Hoboken, NJ: John Wiley & Sons, 2010.
- [22] A. R. L. Putri, "Pengaruh Transparansi, Akuntabilitas, Partisipasi Masyarakat, dan Kompetensi Aparat Desa Terhadap Pengelolaan Dana Desa.," *Fair Value J. Ilm. Akunt. Dan Keuang.*, vol. 5, no. 1, pp. 557–583, 2021.
- [23] E. Yanto and A. Aqfir, "The Effect of Transparency, Participation and Accountability on the Performance of Village Fund Allocation and Village Fund Management (In Bahasa: Pengaruh Transparansi, Partisipasi Dan Akuntabilitas Terhadap Kinerja Pengelolaan Alokasi Dana Desa Dan Dana.," *Econ. Depos. J.*, vol. 2, no. 2, 2021, doi: 10.36090/e-dj.v2i2.916.
- [24] R. Ardiyanti, *The Effect of Transparency, Accountability, Community Participation in Village Fund Management on Community Empowerment in Woro Village, Kragan District, Rembang Regency (In Bahasa: Pengaruh Transparansi, Akuntabilitas, Partisipasi Masyarakat Dalam Pengel.* Universitas Islam Negeri Walisongo Semarang, 2019.
- [25] A. Firdaus, S. Suharno, and S. Sunarti, "Pengaruh Transparansi, Akuntabilitas Dan Partisipasi Masyarakat Terhadap Pengelolaan Alokasi Dana Desa Di Desa Sidoharjo Kecamatan Sidoharjo Kabupaten Sragen.," *J. Akunt. dan Sist. Teknol. Inf.*, vol. 15, no. 3, pp. 291–300, 2020, doi: 10.33061/jasti.v15i3.3692.
- [26] S. Mentari Tumbel, "Community Participation in Village Fund Management in Tumulung One District, Tareran District, South Minahasa Regency (In Bahasa: Partisipasi Masyarakat Dalam Pengelolaan Dana Desa Di DesaTumulung Satu Kecamatan Tareran Kabupaten Minahasa Selatan).," *J. Polit.*, vol. 6, no. 1, pp. 1–21, 2017.
- [27] D. L. Goodhue and R. L. Thompson, "Task-Technology Fit and Individual Performance. *MIS Quarterly*," *MIS Q.*, vol. 19, pp. 213–236, 1995.
- [28] C. S. Chapman, "Not because they are new: Developing the contribution of enterprise resource planning systems to management control research," *Accounting, Organ. Soc.*, vol. 3, no. 7, pp. 685–689, 2005.
- [29] A. Liew, "The use of technology-structured management controls: changes in senior management's decision-making behaviours," *Int. J. Account. Inf. Syst.*, vol. 17, pp. 37–64, 2015.
- [30] M. Granlund, "Extending AIS research to management accounting and control issues: A research note," *Int. J. Account. Inf. Syst.*, vol. 12, no. 1, pp. 3–19, 2011.
- [31] A. R. Peslak, "An analysis of critical information technology issues facing organizations," *Ind. Manag. Data Syst.*, vol. 112, no. 5, pp. 808–827, 2012.
- [32] W. Van Grembergen, S. De Haes, and E. Guldentops, *Structures, processes and relational mechanisms for IT governance*, W. Van Grembergen, *Strategies for Information Technology Governance*, Idea Group Publishing, Hershey. 2004.
- [33] W. Van Grembergen and S. De Haes, *Implementing Information Technology Governance: Models, Practices, and Cases*, IGI Publishing. 2008.
- [34] C. L. Wilkin and R. H. Chenhall, "A review of IT governance: A taxonomy to inform accounting information systems," *J. Inf. Syst.*, vol. 24, no. 2, pp. 107–146, 2010.
- [35] R. S. Debrecey, "Research on IT Governance, Risk, and Value: Challenges and Opportunities," *J. Inf. Syst.*, vol. 27, no. 1, pp. 129–135, 2013.
- [36] D. Ko and D. Fink, "Information technology governance: an evaluation of the theory-practice gap," *Corp. Gov.*, vol. 10, no. 5, pp. 662–674, 2010.
- [37] E. Lomas, "Information governance: information security and access within a UK context," *Rec. Manag. JournalManagement J.*, vol. 20, no. 2, pp. 182–198, 2010.
- [38] A. A. S. I. Pradnya Paramitha and I. B. Dharmadiaksa, "Pengaruh Kompetensi Karyawan dan Teknologi Informasi pada Kualitas Laporan Keuangan LPD Dengan Pendidikan Sebagai Pemoderasi.," *E-Jurnal Akunt.*, vol. 26, p. 682, 2019, doi: 10.24843/eja.2019.v26.i01.p25.
- [39] A. Agbejule and A. Jokipii, "Strategy, control activities, monitoring and effectiveness," *Manag. Audit. J.*, vol. 24, no. 6, pp. 500–522, 2009, doi: 10.1108/02686900910966503.
- [40] H. Haron, D. N. Ibrahim, K. Jeyaraman, and O. Hock Chye, "Determinants of Internal Control Characteristics Influencing Voluntary and Mandatory Disclosures," *Manag. Audit. J.*, vol. 25, no. 2, pp. 139–159, 2010.
- [41] S. Wardiwyono, "Internal control system for Islamic micro financing: An exploratory study of Baitul Maal wat Tamwil in the City of Yogyakarta Indonesia.," *Int. J. Islam. Middle East. Financ. Manag.*, vol. 5, no. 4, pp. 340–352, 2012, doi: 10.1108/17538391211282836.
- [42] N. A. A. Aziz, "Managing corporate risk and achieving internal control through statutory compliance," *J. Financ. Crime*, vol. 20, no. 1, pp. 25–38, 2013, doi: 10.1108/13590791311287328.
- [43] F. H. Fadzil, H. Haron, and M. Jantan, "Internal auditing practices and internal control system," *Manag. Audit. J.*, vol. 20, no. 8, pp. 844–866, 2005, doi: 10.1108/02686900510619683.
- [44] A. R. Bowrin, "Internal control in Trinidad and Tobago religious organizations," *Accounting, Audit. Account. J.*, vol. 17, no. 1, pp. 121–152, 2004, doi: 10.1108/09513570410525238.
- [45] T. T. Nuzula, *Pengaruh Kompetensi Aparat Pengelola Dana Desa dan Partisipasi Masyarakat Terhadap Akuntabilitas Pengelolaan Dana Desa (Studi Kasus pada Kantor Desa di Wilayah Kecamatan Cililin, Kabupaten Bandung Barat)*. Skripsi. Universitas Jenderal Achmad Yani. Cimahi. 2020.
- [46] Mardiasmo, *Perpajakan*. Yogyakarta: Andi, 2018.
- [47] N. E. Indraswari and Y. Rahayu, "Pengaruh Kompetensi Pemerintah Desa , Partisipasi Masyarakat dan Pemanfaatan Teknologi Informasi terhadap Akuntabilitas Pengelolaan Dana Desa.," *J. Ilmu dan Ris. Akunt.*, vol. 10, no. 4, pp. 1–15, 2021.
- [48] Primayana, "Pengaruh Kapasitas Sumber Daya Manusia, Pengendalian Intern Akuntansi, Pemanfaatan Teknologi

- Informasi, dan Pengawasan Keuangan Daerah Terhadap Keterandalan Pelaporan Keuangan Pemerintah Daerah (Studi Pada Pemerintah Daerah Kabupaten Buleleng)”. *Jurnal Ju*,” vol. 1, no. 2, 2014.
- [49] Firdaus, Nadirsyah, and H. Fahlevi, “Pengaruh Kualitas Sumber Daya Manusia, Pemanfaatan Teknologi Informasi dan Penerapan Kebijakan Akuntansi terhadap Kualitas Lapiran Keuangan Pemerintah Kota Banda Aceh,” *J. Magister Akuntansi, Pascasarj. Univ. Syiah Kuala*, vol. 4, no. 1, 2015.
- [50] M. . Aziiz and S. D. Prastiti, “Faktor-Faktor yang Mempengaruhi Akuntabilitas Dana Desa,” *J. Akunt. Aktual*, vol. 6, no. 2, 2019.
- [51] I. G. T. Basudewa and I. G. A. M. A. D. Putri, “Pengaruh Gaya Kepemimpinan dan Pemanfaatan Teknologi Informasi pada Kualitas Laporan Keuangan Desa,” *E-JA e-Jurnal Akunt.*, vol. 30, no. 7, pp. 1658–1669, 2021.
- [52] K. W. Perdana, “Pengaruh Kompetensi Aparat Pengelola Dana Desa, Komitmen Organisasi Pemerintah Desa, Partisipasi Masyarakat, dan Pemanfaatan Teknologi Informasi Terhadap Akuntabilitas Pengelolaan Dana Desa di Kabupaten Bantul.,” *J. Akuntansi. Univ. Muhammadiyah Yogyakarta*, 2018.
- [53] P. Aulia, “Pengaruh Kompetensi Aparat Pengelola Dana Desa, Komitmen Organisasi Pemerintah Desa, Pemanfaatan Teknologi Informasi, dan Partisipasi Masyarakat Terhadap Akuntabilitas Pengelolaan Dana Desa di Kabupaten 50 Kota (Studi Empiris pada Kecamatan Harau, Kecamat,” *J. Online Mhs. Fak. Ekon. dan Bisnis. Univ. Riau*, vol. 1, pp. 1–15, 2018.
- [54] D. Rulyanti, R. . Sularso, and Y. Sayekti, “Faktor-Faktor yang Mempengaruhi Kinerja Pemerintah Desa Melalui Pengelolaan Keuangan Desa Sebagai Variabel Intervening,” *Bisma J. Bisnis dan Manaj.*, vol. 11, no. 3, 2017.
- [55] K. K. Ningrum, *Pengaruh Kompetensi Sumber Daya Manusia, Pemanfaatan Teknologi Informasi, dan Sistem Pengendalian Intern terhadap Kualitas Laporan Keuangan.*, Skripsi Un. 2018.
- [56] T. M. Agung and Gayatri, “Analisis Faktor-Faktor yang Mempengaruhi Kualitas Laporan Keuangan Pemerintah Daerah Kabupaten Karangasem,” *E-Jurnal Akunt.*, vol. 23, p. 1253, 2018, doi: 10.24843/eja.2018.v23.i02.p17.
- [57] N. P. L. Mahayani, N. L. G. E. Sulindawati, and P. E. D. Marvilianti Dewi, “Pengaruh Kualitas Sumber Daya Manusia Bidang Akuntansi, Sistem Pengendalian Internal Dan Pemanfaatan Teknologi Informasi Terhadap Kualitas Laporan Keuangan (Studi Pada Koperasi Simpan Pinjam Di Kabupaten Jembrana).,” *e-Journal SI Ak Univ. Pendidik. Ganesha*, vol. 8, no. 2, pp. 1–11, 2017.
- [58] I. G. N. Siwambudi, G. W. Yasa, and I. D. N. Badera, “Komitmen Organisasi Sebagai Pemoderasi Pengaruh Kompetensi SDM Dan Sistem Pengendalian Intern Pada Kualitas Laporan Keuangan,” *E-Jurnal Ekon. dan Bisnis Univ. Udayana*, vol. 6, no. 1, pp. 385–416, 2017.
- [59] A. Dhanani and C. Connolly, “Discharging not-for-profit accountability: UK charities and public discourse,” *Accounting, Audit. Account. J.*, vol. 25, pp. 1140–1169, 2012.
- [60] P. M. Collier, “Stakeholder accountability: a field study of the implementation of a governance improvement plan,” *Accounting, Audit. Account. J.*, vol. 21, no. 7, pp. 933–954, 2008.
- [61] J. Shaoul, A. Stafford, and P. Stapleton, “Accountability and corporate governance of public private partnerships,” *Crit. Perspect. Account.*, vol. 23, no. 3, pp. 213–229, 2012.
- [62] R. L. Thompson, C. A. Higgins, and J. M. Howell, “Towards a Conceptual Model of Utilization,” *MIS Q.*, vol. 15:1, no. March 1991, pp. 125–143, 1991.
- [63] R. L. Thompson, C. A. Higgins, and J. M. Howell, “Influence of Experience on Personal Computer Utilization: Testing a Conceptual Model,” *J. Manag. Inf. Syst.*, vol. 11, no. 1, pp. 167–187, 1994.
- [64] R. Akbar, R. Pilcher, and B. Perrin, *Performance measurement in Indonesia: the case of local government*, vol. 24, no. 3, 2012.
- [65] W. W. Chin, “How to write up and report PLS analyses,” in *Handbook of Partial Least Squares*, 2010, pp. 188–194.
- [66] S. Petter, D. Straub, and A. Rai, “Specifying formative constructs in information systems research,” *MIS Q.*, vol. 31, no. 4, pp. 623–656, 2007.
- [67] A. Diamantopoulos, “The error term in formative measurement models: interpretation and modeling implications,” *J. Model. Manag.*, vol. 1, no. 1, pp. 7–17, 2006.
- [68] J. R. Edwards and R. P. Bagozzi, “On the nature and direction of relationships between constructs and measures,” *Psychol. Methods*, vol. 5, no. 2, pp. 155–174, 2000.
- [69] J. F. J. Hair, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, “A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Sage Publications,” *Eur. J. Tour. Res.*, vol. 6, no. 2, pp. 211–213, 2014.
- [70] C. Fornell and D. F. Larcker, “Evaluating structural equation models with unobservable variables and measurement error,” *J. Mark. Res.*, vol. 18, no. 1, pp. 39–50, 1981.
- [71] S. B. MacKenzie, P. M. Podsakoff, and N. . Podsakoff, “Construct measurement and validation procedures in MIS and behavioral research: integrating new and existing techniques,” *MIS Q.*, vol. 35, no. 2, pp. 293–334, 2011.