Can Siskeudes support village governance in Aceh Province of Indonesia?

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Abstract: This study is to investigate whether the village financial system (Siskeudes) can realize governance. This test was carried out using the success model of the DeLone and McLean system. The success model consists of the dimensions of system quality, information quality and service quality, organizational effectiveness and user satisfaction and governance. The analysis was performed using the structural equation model PLS. The test was conducted on 224 village apparatuses using Siskeudes. The results showed that the information quality and system quality have positive effects on organizational effectiveness and user satisfaction. Service quality has a positive effect on organizational effectiveness but it does not influence job satisfaction. Organizational effectiveness is shown to have a positive effect on governance. The results of the study can be used as a reference for researchers in the government sector specifically related to the system and can also be used as a guide in policy making in the world of practice.

Subjects: Business, Management and Accounting; Accounting; Corporate Governance

Keywords: Siskeudes; information quality; system quality; service quality; organizational effectiveness; governance

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PUBLIC INTEREST STATEMENT

This study aims to investigate whether the village financial system (or Sistem Keuangan Desa/Siskeudes) can establish good governance in the selected Indonesian villages. As the theoretical framework, the success model of the DeLone and McLean system was applied. The model consists of the dimensions of system quality, information quality and service quality, organizational effectiveness and user satisfaction and governance. The test was conducted on village apparatuses using Siskeudes. The results showed that the information quality and system quality have a positive effect on organizational effectiveness and user satisfaction. Service quality has a positive effect on organizational effectiveness but it does not influence job satisfaction. Organizational effectiveness is shown to have a positive effect on governance. The results of this study can be used as a reference for researchers in the government sector and can be used as a guide in improving policy making in the world of practice.
1. Introduction
At present, governance in public administration has become a global issue as a result of frequent failures such as fraud, inefficiency, corruption, and poor internal control and financial management. Therefore, transparency and efficiency of public administration is now considered a public right to ensure the realization of good governance (Azizal et al., 2015). According to Mardiasmo (2018) Governance is a way to manage public affairs. The efficient and effective use of resources in services that are aimed at improving the welfare of society are all associated with governance (Athukorala & Reid, 2003; Chaurasia, 2003; Okot-Uma, 2000; The World Bank, 1992).

According to Edwards-Schachter and Wallace (2017) there are three levels of governance in public organizations, namely: macro, meso and micro; with each level having its own focus. At the macro level, the focus of governance is related to society. At the meso level the focus is on the government and the micro level the focuses on the organization. The concept of governance proposed by Edwards-Schachter and Wallace (2017) applies to public organizations which includes villages. In Indonesia, since the enactment of Law No. 6 of 2014 concerning Villages, villages have been given a great opportunity to govern themselves and implement development in order to improve the welfare and quality of life of rural communities. Village governments are expected to be more independent in managing themselves and managing the natural resources they have, as well as managing the villages’ finances and assets. This new responsibility of villages to govern themselves requires the implementation of proven techniques of governance. The terms “accountability” and “governance” co-exist, as it is stated by Collier (2008) who also says that accountability requires governance. In the public sector, O’Dwyer et al. (2007) state that accountability tends to focus upward on funders rather than downward to service recipients. In an effort to improve the self governance of villages the government of Indonesia has designed a village financial system (Siskeudes) which uses technology. Information technology play a crucial role (Park et al., 2015). The use of technology in the public sector aims to improve the delivery of information, encourage public participation in the decision making process and make the government sector more accountable, transparent and effective (Onuigbo & Eme, 2015).

Siskeudes is a form of commitment in real support of good and accountable village governance and it describes the accountability of village finances. It simplifies the complexity of financial transactions and the preparation of financial reports. The functions and benefits that are provided by Siskeudes are the same as those provided by the accounting information system (AIS). Siskeudes and AIS are interchangeable therefore all theories that will be built are based on the concept of AIS. Several studies have proven that AIS is used to improve the efficiency and effectiveness of better service provision (Abernethy & Brownell, 1997; Vaassen, 2002).

The success of the system is implemented in the real world and is measured by the success of the system. The most commonly used model to measure the concept in the success of the system is the McLean and Delone information success (D&M IS) model which is known as the D&M IS Success. This model is tested to see the success of a system. The research that has been conducted with this model include: e-government systems for handling public complaints in India (Rana et al., 2015), tax payment systems in Taiwan and Egypt (Chen, 2010; Floropulos et al., 2010), G2B (government to business) system in Malaysia (Sambasivan et al., 2010), and reliability of information systems in Poland (Tworek, 2018). In Indonesia, the similar research topic have been carried out by Artha et al. (2015) and Wahyuni (2017). Research on the Siskeudes has also been carried out by (Andriyanto et al., 2019; Juardi et al., 2018; Malahika et al., 2018). In their study, the researchers only looked at how Siskeudes was used in certain areas. In this study, we examines the modification of the D&M IS Success Model to evaluate the success of Siskeudes in managing village funds, namely by looking at the information quality, system quality, service quality, and user satisfaction. Likewise with previous research, the D&M IS Success Model is
utilized in this research as it is a more comprehensive model considering its benefits on individuals and organization. The originality of this study is the modification of D&M IS Success by adding governance variables. The study results are expected to develop theories about the success of a system, especially Siskeudes.

Linking the effectiveness of operational systems and governance becomes very crucial, because there are conflicting results of previous studies. The prior study results stated that the system had an influence on governance (Feng et al., 2011), but several results showed that the system, especially AIS, could not improve good governance, or had a minimum role in improving good governance (Chalu & Kessy, 2011). This contradiction of results is suspected because the system for which it is built upon has not been tested on a practical (pragmatic) level.

This study was conducted to assess the success of Siskeudes and its influence on village governance. This study is important because it will contribute conceptually to solving practical problems that are faced when helping the government to improve and to fully utilize the potential of the Siskeudes as a useful tool.

2. Village governance and Siskeudes

2.1. Village good governance

Based on data from the Central Bureau of Statistics (or Badan Pusat Statistik/BPS), there were 74,517 village level administrative regions in Indonesia in 2018. These villages are located in 34 provinces in Indonesia. Since 2014, these villages have been recognized by the Village Law number 6 of 2014. Previously villages were regulated by the Republic of Indonesia law number 32 of 2004 concerning Regional Government. Under the law, villages are given a great opportunity to regulate their own government and are given the freedom to carry out development to improve the welfare and quality of life of rural communities. The magnitude of the role of the village government is accompanied by great responsibilities as well, therefore the village government must be able to apply the principles of transparency and accountability as indicators of good village governance.

There are three important components in village governance, namely the village head, village apparatus, and the village consultative body. The village head is directly elected by the villagers and is appointed by the regent/mayor. In carrying out their duties and authority, the village head is assisted by village officials consisting of a) the village secretariat; b) implementing area; and c) technical implementers. Village officials are appointed by the village head after consultation with the District Head on behalf of the Regent/Mayor. In carrying out their duties the village head is supervised by a village consultative body that has the function of: a) discussing and agreeing on village draft regulations with the village head; b) accommodate and channel the aspirations of the village community; and c) supervise the performance of the village head. The Village Law also states that the village head is obliged to implement the principles of village governance that are accountable, transparent, professional, effective and efficient; as well as clean, and free from collusion, corruption, and nepotism.

Governance in the public sector such as villages is everything related to public affairs (Mardiasmo, 2018), and management of the social system (Horrigan, 2010, p. 49). The broader concept of governance illustrates how communities, governments and organizations are managed or led (Edwards et al., 2012). The concept of governance in villages has a focus on accountability aimed at the community (horizontal) and to the government (vertical). Horizontal obligations to the village government are to provide and/or disseminate information on governance to the village community, while the vertical obligation is the obligation of the village head to submit a report of administration to the higher government, namely to the Regent/Mayor. The application of governance principles includes: transparency, accountability, participation, predictability and transparency were tested by (Chalu & Kessy, 2011).
The main focus of governance is village funds as the funds are given by the central government to improve the welfare of the village community through various community development and empowerment programs. Therefore, the village is a public fund that must be managed properly through the fulfillment of governance principles. The application of governance principles in village governance must be considered a necessity and internalized as an inherent culture so as to improve the quality of village management as an organization that provides services to the community.

2.2. Village financial system (Siskeudes)

To support the implementation of the tasks and functions of the village in carrying out governance and village development, the village is given funds derived from the State Budget (APBN) as a source of village income. The disbursement of village funds began in 2015, and the amount of funds disbursed by the central government continues to increase every year. Since the existence of Village Funds sourced from the APBN is allocated to the village, then the accountability that must be carried out by the village is also the same as other institutions which use state finance. In order for the village fund to be in line with the target to be achieved, village funds need monitoring and supervision to identify whether deviations occur as early as possible by involving all stakeholders in managing village funds both at the central and regional levels.

Village fund supervision involves many parties, chiefly the community through the Village Consultative Body (BPD) and the government above it, namely the district/city government. The ministries that oversee the Village Fund are the Ministry of Finance, the Ministry of Home Affairs, and the Minister of Village, Development of Disadvantaged Regions and Transmigration (or Mendes PDTT). Responsible use and management of village funds is supervised by the village head. In accordance with article 48 (Village Law) the village head is required to submit a report on village administration at the end of the fiscal year to the regent/mayor. Since the village head is responsible for the management and use of the village fund, the village head must be able to manage it well. In order to prevent corruption the village finance system, a (Siskeudes) application is formed. Siskeudes became a joint product of BPKP and the Ministry of Home Affairs and was launched in July 2015.

The Siskeudes is in fact an electronic-government (e-government) which applies information and communication Technologies (ICTs) to government function and procedure with the objectives of increasing efficiency, transparency and citizen participation (Srivastava & Teo, 2010). E-government should help organizations and citizens in their decision-making process, and therefore improve efficiency and productivity. It is vital in the socio-economic development of society (Qureshi, 2015). The Siskeudes are designed based on applications with the aim of increasing the capacity of village governments in village financial management and accountability. The Siskeudes application was implemented in all villages in Indonesia in stages starting in 2016, to assist villages in implementing financial governance effectively and efficiently. The development of the Siskeudes was motivated by the difficulty of the district/city government in evaluating the Village Budget and Expenditure (APBDes), because the village did not have a standard format in the budget or bookkeeping and financial statements. Many villages use applications purchased from private sector developers. Developers do not renew the application if there are changes in regulations. The use of the Siskeudes can overcome the difficulties encountered because it uses standard data formats and reports.

Siskeudes is an accounting information system that is applied to village accountability. According to Romney and Steinbart (2018) accounting information systems (AIS) are systems that collect, record, store and process data to produce information for decision makers. AIS plays a vital role in promoting environment performance (Huy & Phuc, 2020). AIS elements are found in Siskeudes and these features are in accordance with applicable regulations that reflect instructions and procedures. The ease of use feature from the application illustrates the human and software elements. Human and software elements are in the “user friendly” feature that illustrates the ease of the user in running the system.
The elements of instructions and procedures are contained in the Siskeudes feature “in accordance with applicable regulations”, that is, the preparation of instructions and procedures has taken into account the applicable regulations. AIS elements related to data and information technology infrastructure were not considered in the preparation of the Siskeudes, while internal control elements and security measures were included in the built-in control features. At the Siskeudes, facilitating village financial governance is included as a Siskeudes feature, whereas at AIS the feature is a benefit that can be provided by the system. According to Romney and Steinbart (2018), benefits of AIS are: 1) it can improve quality and reduce service costs, 2) improve efficiency, 3) share knowledge, 4) increase the efficiency and effectiveness of supply chain, 5) improve internal control structure, 6) improve the process of taking the decision.

3. Theoretical framework

3.1. Information system success model

The information success model of McLean and Delone’s is known as The D&M IS Success. The model was first published in 1992. Since its publication, this model has become the basic theory by which researchers empirically test the success of a system in the organization, either to determine information systems, accounting information systems, or management information systems. This model suggested that the organization’s performance of IS is triggered by the positive impact of IS on the organization as a whole, which has its origins in the positive impact of IS on individual workers. According to the authors, the impact of IS on users depends on its actual use during daily work, and this, in turn, is conditioned by the quality of the system itself and the information it contains. After receiving input and criticism from several researchers, 10 years later, in 2003 Delone & Mclean made a revision of the previously proposed model. The revised model is called the “Updated D&M IS Success Model” which can be seen in Figure 1.

This study investigated the success of the information system model proposed by Delone and Mclean (2003) on village governance in the use of Siskeudes. The success factors of Siskeudes can be seen through six dimensions of the system’s success including: information quality, system quality, service quality, intention to use, user satisfaction, and net benefits (net benefits).

4. Empirical literature review and hypotheses development

4.1. Information quality, operational effectiveness and user satisfaction

Information quality focuses on information which is produced by information systems. The criteria that can be used to assess information quality include completeness, accuracy, timeliness, availability, relevance, consistency, and data entry. Operational effectiveness refers to the ability to establish processes based on core capabilities in organizations that encourage them to exceed customer expectations (Evans & Lindsay, 2016). Furthermore, in seeking effectiveness
organizations need to provide value-added products or services with exceptional quality, on time, and at competitive prices. Operational effectiveness includes improving and measuring performance by leading and controlling operations within the company. Better use of resources through these core processes enables organizations to eliminate waste and reduce costs. Several prior studies on IS success have validated support for the argument that greater of information quality lead to greater user satisfaction (Chae & Kim, 2001; Dwivedi et al., 2013; Floropoulos et al., 2010; Livari, 2005; Rana et al., 2013; Tsai et al., 2017; Wang & Liao, 2008) and operational effectiveness (Santa et al., 2019). Therefore, the hypothesis that are proposed in this study is:

H1: Information quality has a positive effect on operational effectiveness

H2: Information quality has a positive effect on user satisfaction

4.2. System quality, operational effectiveness and user satisfaction

System quality is formed through interaction with the system. Delone and Mclean (2003, 1992) suggested that system quality is a desirable characteristic of the information system itself. Delone and Mclean (2003) suggested there are five indicators to determine system quality, namely: adaptability, availability, reliability, response time, and usability. The system quality influences operational effectiveness. The study results supporting this study were conducted by Floropoulos et al. (2010) and explores the effects of information quality on perceived usefulness in the tax system in Greece. System quality has a positive relation with user satisfaction (Rana et al., 2014; Tsai et al., 2017). Therefore, the hypotheses that are put forward in this study are:

H3: System quality has a positive effect on the operational effectiveness of the Siskeudes

H4: System quality has a positive effect on the satisfaction of Siskeudes users

4.3. Service quality, operational effectiveness and user satisfaction

According to Jansen and Ølnes (2016) service system is a sequence of digital interactions between service providers and service recipients which adds some value to the recipient to improve the quality dimension. Service quality describes the overall support which is provided by information systems Delone and Mclean (2003) Some empirical evidence shows that service quality influences usage (Sambasivan et al., 2010; Wang & Liao, 2008) and satisfaction with the system (Iqbal et al., 2018; Tsai et al., 2017). To achieve operational effectiveness, organizations need to provide value-added products or services with exceptional quality, on time, and at competitive prices so that user satisfaction will be achieved (Santa et al., 2019). Therefore the hypotheses that are proposed are:

H5: Information service quality has a positive effect on operational effectiveness in using Siskeudes.

H6: Information quality service has a positive effect on the satisfaction of Siskeudes users.

4.4. Operational effectiveness and user satisfaction

There is a reciprocal relation between usage and satisfaction of use (Delone & Mclean, 2003). The more frequent the system use, the higher the level of learning in using information systems. The high intensity of use reflects that the user has high benefits. The high benefits which are felt by users feel more satisfied. At the same time, user satisfaction will also influence system usage again. Operational effectiveness is also related to how to use resources better through processes that enable organizations to reduce costs, adjust technology innovation more precisely to achieve customer satisfaction (Santa et al., 2019). Therefore, the hypothesis that is proposed in this study is:

H7: Operational effectiveness has a positive effect on Siskeudes satisfaction.
4.5. The effectiveness of siskeudes operational and village governance

The relation between Siskeudes and governance can be explained through legitimacy theory. According to the organizational perspective, legitimacy is defined as a condition or status that exists when the value system of an entity is congruent with the value system of a larger social system because the entity is part of the larger system. If differences occur, the legitimacy of the entity will be threatened (Lindblom, 2010). According to Suchman (1995) legitimacy is a general assumption or perception that an entity’s actions are desirable, appropriate, or in accordance with the construction of social systems, norms, beliefs and applicable provisions. Legitimacy really depends on the expectations of the community of legitimacy to be dynamic, the public will continue to assess the outputs, methods and objectives of an organization (Lindblom, 2010). Legitimacy will be reduced if there is not any change in action as public expectations. Village governance is an act of legitimacy for changes in the value system either in outputs, methods or objectives in accordance with the expectations of stakeholders so that public confidence increases because there is an increase in quality.

Village governance has an important role in supporting village development. The success of the village fund depends significantly on the governance which is implemented by the village administration. The study results Sulina et al. (2017) showed that the application of the village financial system (Siskeudes) had a positive impact on employee performance. From this, the application of the village financial system (Siskeudes) has an important role in the performance of the village government which is felt directly by the village officials in Kaba-kaba Village. This is in accordance with the objectives of implementing the village financial system (Siskeudes), which is to assist the work of village employees. Juardi et al. (2018) also found the same results that Siskeudes greatly brought changes, either in the reporting process, accountability, or activeness of village officials in carrying out their work. This Siskeudes greatly facilitated village officials in carrying out their duties and responsibilities which later was beneficial in realizing accountable village governance. Therefore, the hypothesis that is proposed in this study is:

H8: The effectiveness operational has a positive effect on village governance.

The figure 2 describes the conceptual framework of this study that includes all the tested variables and causal relationship among the variables.
5. Data and methodology

5.1. Sampling and data collection
The data was collected by using questionnaires that were distributed directly to villages in the two districts of Indonesia, Aceh Besar and Pidie. Aceh Besar, which is a district that has 604 villages, and Pidie district which has 730 villages. Both districts are among the regions that have the largest village funds received in the Aceh province. The names of the villages (gampong) of respondents were taken from the Wikipedia directory. To increase response rates, the research team took a personal approach by calling the target respondents directly with contact numbers that were obtained from the sub-district when the research team were in the field. The research team assured the respondents that they would maintain the confidentiality of their names and information. To prevent a biased response as suggested by Oppenheim (2001), the time frame for the survey was conducted over a span of two months, from June to August 2019. In mid-August, 268 questionnaires were returned from the 400 that were distributed, thus the response rate was 67%. Of the 268 returned questionnaires, only 244 of them could be processed whereas the other 9.1% of the returned questionnaires could not be analyzed because the respondents did not complete the questions contained therein. Table 1 provides all relevant information about the respondents’ characteristics.

5.2. Variable measurement
The instrument measure variables in this study in general have been used in previous studies by modifying and adjusting the research subject. The questionnaire consists of two parts; the first part asks the respondent about the demographic information of the respondent such as gender, age, education, employment status, position, use of the Siskeudes and the information media used. The second part presents questions about the variables studied. The variable consists of three endogenous variables and three exogenous variables. Endogenous variables consist of organizational effectiveness (EO), system user satisfaction (Usat), and village governance (VilG). Exogenous variables in this study are information quality (InfQ), system quality (SysQ) and service quality (ServQ).

5.3. Organizational effectiveness (OrgE)
The effectiveness of the organization uses three measurements used by Santa et al. (2013) Respondents were asked about the implementation of state administration, accuracy of targets and reduced overlap in organizing organizational functions by selecting (1) which represents very bad, to (5) which represents very good. The validity and reliability values of the measurements are seen through factor loading values and AVE values with recommended values greater than 0.70 and 0.50 (Hair et al., 2017).

5.4. User satisfaction (Usat)
Two items regarding job satisfaction were adopted and modified from Delone and Mclean (2003) for the purpose of exploring employee satisfaction with using the Siskeudes.

5.5. Village governance (VilGov)
Governance is measured using measurements by Chalu and Kessy (2011). Respondents were asked to rate governance by choosing (1) which represents not very good, to (5) which represents very good. The validity and reliability values of the measurements are seen through factor loading values and AVE values with recommended values greater than 0.70 and 0.50 (Hair et al., 2017).

5.6. Information quality (InfQ)
Information quality is measured using 8 measurement indicators which are developed by (Delone & Mclean, 2003). Respondents were asked to rate information quality by choosing (1) which represents not very good, to (5) which represents very good. The validity and reliability values of the measurements are seen through factor loading values and AVE values with recommended values greater than 0.70 and 0.50 (Hair et al., 2017).
| Description                        | Frequency | Percent |
|-----------------------------------|-----------|---------|
| **Gender:**                       |           |         |
| Male                              | 210       | 93.8    |
| Female                            | 14        | 6.3     |
| **Total**                         | 224       | 100.0   |
| **Age of Respondents**            |           |         |
| < 20 Years                        | 3         | 1.3     |
| 21-30 Years                       | 17        | 7.6     |
| 31-40 Years                       | 75        | 33.5    |
| 41-50 Years                       | 74        | 33.0    |
| 51-60 Years                       | 47        | 21.0    |
| 61-70 Years                       | 8         | 3.6     |
| **Total**                         | 224       | 100.0   |
| **Education**                     |           |         |
| Junior High School                | 4         | 1.8     |
| Senior High School                | 138       | 61.6    |
| Diploma                           | 43        | 19.2    |
| S1 (undergraduate)                | 39        | 17.4    |
| **Total**                         | 224       | 100.0   |
| **Job Status**                    |           |         |
| Farmer                            | 14        | 6.3     |
| House wife                        | 6         | 2.7     |
| Student                           | 4         | 1.8     |
| Private Employees                 | 19        | 8.5     |
| Entrepreneur                      | 136       | 60.7    |
| Retired                           | 1         | .4      |
| Civil Servant                     | 32        | 14.3    |
| Operator                          | 8         | 3.6     |
| Village Apparatus                 | 2         | .9      |
| Other                             | 2         | .9      |
| **Total**                         | 224       | 100.0   |
| **Position**                      |           |         |
| Village Head                      | 64        | 28.6    |
| Treasurer                         | 116       | 51.8    |
| Operator                          | 44        | 19.6    |
| **Total**                         | 224       | 100.0   |
| **Use of Siskeudes**              |           |         |
| Every End of the Month            | 6         | 2.7     |
| Every End of the Year             | 218       | 97.3    |
| **Total**                         | 224       | 100.0   |
| **Information Media**             |           |         |
| Bulletin Board                    | 125       | 55.8    |
| Village Meeting                   | 14        | 6.3     |
| Bulletin boards, and Village Meetings | 82   | 36.6    |
| Bulletin boards, and Village Meetings, and Village Web | 3 | 1.3 |
| **Total**                         | 224       | 100.0   |
5.7. **System quality (SysQ)**
System quality is measured using a measuring scale developed by (Delone & Mclean, 2003). Respondents were asked to choose a rate to assess the quality of the system by choosing (1) which represents not very good, to (5) which represents very good. The validity and reliability values of the measurements are seen through factor loading values and AVE values with recommended values greater than 0.70 and 0.50 (Hair et al., 2017).

5.8. **Service quality (ServQ)**
Service quality is measured using measurements developed by (Delone & Mclean, 2003). Respondents were asked to choose a rating to assess service quality by (1) which represents not very good, to (5) which represents very good. The validity and reliability values of the measurements are seen through factor loading values and AVE values with recommended values greater than 0.70 and 0.50 (Hair et al., 2017).

The number of questionnaires that can be processed shows an adequate sample size in the process of generalization in accordance with the rules that are proposed by Cohen. It is known as Cohen (1992) rules, the minimum required sample is 114 (power = 80%, significance level of 1%, R² = 0.25, and minimum number of arrows pointing at a construct B 8). In addition, Hair (2010) states that an adequate sample size is 10 times the highest number of indicators on a variable. In this study, the number of indicators was 9, so the minimum sample size was 90. In this study, the sample size was 244 which is greater than the recommended sample.

6. **Empirical result and discussion**

6.1. **Data analysis**
After the data is considered sufficient and has passed the initial analysis, the next test is carried out with Partial Least Squares-Structural Equation Modeling (PLS-SEM). The main purpose of the analysis using PLS-SEM is to analyze complex situations in which previous data and information is very limited (Rigdon, 2016; Wold, 1982). PLS-SEM is a model that has free distribution (soft modeling), so some assumptions such as normality can be neglected but the assumptions of the quality from the measurement model and structural model must be fulfilled. With PLS-SEM, researchers are able to test the complexity of variables that are not possible using the covariance-SEM approach or traditional regression (Ghozali & Latan, 2015; Hair et al., 2017).

6.2. **Measurement model**
The measurement model is used to illustrate the validity and reliability of each indicator that forms latent constructs (Ghozali & Latan, 2015). The results of the measurement model can be seen in Tables 2 and 3. Based on Table 2, it can be seen that the loading factor values for the OrgE, Usat and VilG variables have a loading factor value above 0.5 which indicates that the measurement model requirements are met. Likewise for the exogenous variables InfQ, SysQ, and ServQ.

6.3. **Structural model**
The results of hypothesis testing can be seen from the estimated path between latent variables in the structural model through the coefficient standard values. This value is used as the basis of a hypothesis whether it is supported or not, if the p value is less than 0.05 then the hypothesis can be supported. Based on Table 4, it can be seen ServQ, SysQ and ServQ have a coefficient value of 0.19; 0.35; 0.30 which influenced the effectiveness of organization with p values of 0.01 and below 0.01, thus H1, H2 and H3 can be supported. Furthermore, ServQ, SysQ significantly influenced Usat with coefficients of 0.29 and 0.20, so that the H4 and H5 hypotheses were successfully supported in this study, but ServQ could not influence Usat, which coefficient value was 0.02 and p value was equal to 0.43 therefore H6 cannot be supported results on Usat show a coefficient value of 0.29 with a p value <0.01, therefore H7 is supported. OrgE also influences Usat with coefficient values of 0.53 and p < 0.01, so that H8 in this study is also supported.
| Code  | Loading Factor \( \geq 0.50 \) | CR \( \geq 0.50 \) | AVE >50% | \( \sqrt{\text{AVE}} \) | Cronbach's Alpha |
|-------|-------------------------------|-----------------|----------|-----------------|-----------------|
| OrgE1 | 0.816                         | 0.886           | 0.721    | 0.849           | 0.807           |
| OrgE2 | 0.862                         |                 |          |                 |                 |
| OrgE3 | 0.869                         |                 |          |                 |                 |
| Usat1 | 0.864                         | 0.862           | 0.758    | 0.870           | 0.680           |
| Usat2 | 0.877                         |                 |          |                 |                 |
| VilG1 | 0.750                         | 0.891           | 0.538    | 0.734           | 0.858           |
| VilG2 | 0.744                         |                 |          |                 |                 |
| VilG3 | 0.779                         |                 |          |                 |                 |
| VilG4 | 0.709                         |                 |          |                 |                 |
| VilG5 | 0.760                         |                 |          |                 |                 |
| VilG6 | 0.704                         |                 |          |                 |                 |
| VilG7 | 0.683                         |                 |          |                 |                 |

Table 2. Construction indicators and measurement models for OrgE, Usat and VilG variables

Organizational Efficiency (OrgE)

- The implementation of quality and precise state administration implementation with the optimal use of resources
  - OrgE1

- Continuous improvement
  - OrgE2

- Reduced overlap in the organization of work functions/units
  - OrgE3

User Satisfaction (Usat)

- I always use Siskeudes
  - Usat1

- Siskeudes gives satisfaction to me
  - Usat2

Village Governance (VilG)

- Decisions are made based on public opinion
  - VilG1

- Community is always asked for opinions in making decisions about the village program to be carried out
  - VilG2

- Community easily knows the realization report and the accountability report on the implementation of Village APB
  - VilG3

- Community knows the accountability of village funds
  - VilG4

- Community knows the activities carried out by the village
  - VilG5

- The program is determined in accordance with established conditions
  - VilG6

- The availability of complaint services with procedures that are easily understood by the public
  - VilG7
Table 3. Construction indicators and measurement models for InfQ, SysQ dan ServQ variables

| Information Quality (InfQ) | Code | Loading Factor ≥0.50 | CR ≥0.50 | AVE >50% | √AVE | Cronbach’s Alpha |
|----------------------------|------|----------------------|----------|----------|------|-----------------|
| Siskeudes is a complete system | InfQ1 | 0.756 | 0.924 | 0.776 | 0.905 | 0.905 |
| Siskeudes can produce accurate information | InfQ2 | 0.740 | | | | |
| Siskeudes are easy to understand | InfQ3 | 0.776 | | | | |
| Siskeudes provides features that suit the needs of organizational units | InfQ4 | 0.753 | | | | |
| Siskeudes is relevant to village needs | InfQ5 | 0.798 | | | | |
| Siskeudes has adequate security | InfQ6 | 0.787 | | | | |
| The information produced by Siskeudes is consistent | InfQ7 | 0.804 | | | | |
| Siskeudes data entry is easy and fast | InfQ8 | 0.790 | | | | |

| System Quality (SysQ) | Code | Loading Factor ≥0.50 | CR ≥0.50 | AVE >50% | √AVE | Cronbach’s Alpha |
|-----------------------|------|----------------------|----------|----------|------|-----------------|
| Siskeudes is able to adapt with transactions that occur | SysQ1 | 0.807 | 0.900 | 0.803 | 0.862 | 0.862 |
| Our village has Siskeudes that can be used | SysQ2 | 0.812 | | | | |
| Siskeudes can be relied upon as a tool of accountability | SysQ3 | 0.819 | | | | |
| Transaction processing is very fast | SysQ4 | 0.800 | | | | |
| Siskeudes can be used at any time | SysQ5 | 0.773 | | | | |

| Service Quality (ServQ) | Code | Loading Factor ≥0.50 | CR ≥0.50 | AVE >50% | √AVE | Cronbach’s Alpha |
|------------------------|------|----------------------|----------|----------|------|-----------------|
| Siskeudes guarantees the information produced | ServQ1 | 0.844 | 0.898 | 0.864 | 0.830 | 0.830 |
| Siskeudes can solve the problem of village financial accountability | ServQ2 | 0.885 | | | | |
| Siskeudes is responsive to special transactions | ServQ4 | 0.863 | | | | |
The variation in the value of OrgE construction can be explained by the exogenous variables InfQ, SysQ and ServQ by 59%, this is shown from $R^2$ value = 0.59, while the variation in Usat construction can be explained by the exogenous variables InfQ, SysQ, ServQ and the endogenous variable OrgE by 53% as indicated by $R^2$ value of 0.53. Variations in the value of governance are influenced by organizational effectiveness by 29% which can be seen from $R^2$ value of 0.29. In the PLS model, $R^2$ value is the value that explains the variation of endogenous latent variables in the structural model. The higher $R^2$ also shows the construction value is able to predict well (Hair et al., 2014).

The results of the match model indicate whether the proposed model has a match. There are several criteria for determining a model whether it is suitable or not. The test results are summarized in Table 3 and Table 5. Based on Table 3 and Table 5, it can be seen that all indicators show that the model is stated good. In addition, the figure 3 exhibits the results of data analysis and the directions of relationships among tested variables.

### Table 4. Hypothesis testing results

| Hypothesis   | Coefficient | p Value | Conclusion |
|--------------|-------------|---------|------------|
| InfQ1-OrgE   | H1          | 0.19    | <0.01      | Accepted   |
| InfQ2-OrgE   | H2          | 0.35    | <0.01      | Accepted   |
| ServQ-OrgE   | H3          | 0.30    | <0.01      | Accepted   |
| InfQ-Usat    | H4          | 0.29    | 0.02       | Accepted   |
| SysQ-Usat    | H5          | 0.20    | 0.03       | Accepted   |
| ServQ-Usat   | H6          | 0.02    | 0.43       | Rejected   |
| OrgE-Usat    | H7          | 0.29    | <0.01      | Accepted   |
| OrgE-VilG    | H8          | 0.53    | <0.01      | Accepted   |

### Table 5. Model compatibility test

| Indicator   | Estimation       | Rule of Thumb                          | Compatibility Level |
|-------------|------------------|----------------------------------------|---------------------|
| APC         | APC = 0.273 P-value ≤ 0.05 | $p$-value ≤ 0.05 | Good Fit            |
| ARS         | 0.468            | $p$-value ≤ 0.05 | Good Fit            |
| AARS        | 0.462            | $p$-value ≤ 0.05 | Good Fit            |
| AVIF        | 3.223            | The ideal $Rule of thumb$ is ≤ 3.3, but the value of ≤ 5 is still acceptable | Good Fit |
| AFVIF       | 2.875            | The ideal $Rule of thumb$ is ≤ 3.3, but the value of ≤ 5 is still acceptable | Good Fit |
| Gof         | 0.559            | $p$-value ≤ 0.05 | Large               |
| SPR         | 1.000            | The ideal SPR is equal to 1, but the value of ≥ 0.7 is still acceptable | Good Fit |
| RSCR        | 1.000            | The ideal RSCR is equal to 1, but the value of ≥ 0.7 is still acceptable | Good Fit |
| SSR         | 1.000            | Rule of thumb for SSR must be ≥ 0.7 | Good Fit |
| NLBCDR      | 1.000            | Rule of thumb for NLBCDR must be ≥ 0.7 | Good Fit |
6.4. Discussion

Siskeudes has developed into a vital aspect of village finance. Siskeudes have been widely implemented by villages in Indonesia. The Siskeudes application is designed in accordance with government regulations regarding village funds. The existence of this application is to facilitate government planning, implementing, administering, reporting and financial accountability. There are two Siskeudes versions implemented in the village, namely version one and version two. The version change was made because there were changes in village financial management rules. Nationally until June 2019, Siskkeudes has been implemented in 61.253 villages of 74.517 villages or 82.22%.

This study is based on a region in Aceh which is a province of Indonesia where the Siskeudes implementation rate is high. The implementation of the Siskeudes is part of the village financial accountability requirements which are a condition for disbursing village funds. This makes the use of Siskeudes implementation high. In this study, all villages that were observed had also used Siskeudes to hold village responsibility, but the use was only done at the end of the year or at the time of village fund accountability in 214 observed villages or 97.3%.

The structural equation modeling results show a positive and significant relationship between information quality and organization effectiveness. The results elaborate that higher organization effectiveness is associated with information quality. These findings are in accordance with (Evans & Lindsay, 2016). The results also confirm the positive and significant relationship between information quality and satisfaction. These results are consistent with previous empirical studies presenting the positive link between information quality and user satisfaction (Wang & Liao, 2008; Ricardosanta et al., 2019). The results show that a high quality of information leads to higher level user satisfaction. Similar results were obtained for Taxis system analysed by (Floropoulos et al., 2010).

From a structural equation model, it can be observed that system quality is positively and significantly associated with organization effectiveness. This result supports the previous empirical studies presenting the positive link by Floropoulos et al. (2010). The results also confirm the positive and significant relationship that system quality and user satisfaction have similar to the study by Rana et al. (2014).
From the structural model, the results also show that service quality is positively and significantly associated with organization effectiveness. This result is consistent with previous studies by Sambasivan et al. (2010) and Wang & Liao (2008), but in this result, service quality was not positively and significantly linked with user satisfaction and was not consistent with the previous study by Iqbal et al., (2018). On the other hand, this study does support research reported by Rahman et al. (2017) which states service quality has no effect on customer satisfaction.

Finally, organization effectiveness is positively and significantly associated with user satisfaction. The results show that high organization effectiveness leads to higher level user satisfaction. This result is inconsistent with the previous study by Santa et al., (2019). These results also show that organization effectiveness is positively and significantly associated with village governance. The results confirm that better organizational effectiveness will lead to better village governance.

7. Summary and conclusions
Siskeudes developed results which showed that the Siskeudes system can assist village officials in taking responsibility for the village bases that are provided by the central government. Specifically, the study results indicate that information quality has a positive effect on organizational effectiveness and user satisfaction, and system quality has a positive effect on organizational effectiveness and user satisfaction. Service quality has a positive effect on organizational effectiveness but service quality cannot influence job satisfaction. Organizational effectiveness has a positive effect on village governance. Operational effectiveness implies the measurement, control and improvement of process and procedures.

7.1. Implication
The results of this study provide important implications for theoretical and practical usages. The major contributions for theoretical uses from this study are providing the empirical evidence of effect InfQ, SysQ, ServQ on OrgE and Usat. This study also provides empirical evidence on how OrgE has an impact on village governance. In this regard the study adds the literature of theory system success. This study shows that models provide an important role in village governance in accounting research, as well as provides an insight into developing countries like Indonesia which have not been previously investigated.

The results of this study offer important practical and managerial implications. The study results can be used as a basis for making policies, especially regarding Siskeudes. It is also important for the service organizations (BPKP) to make intensive efforts towards understanding the factors that might create more user satisfaction using the Siskeudes. The service organization must take the initiative to push for positive intentions for village aparatus using Siskeudes in conducting village activities especially in financial governance.

The results of this study also provide insights for higher government, to require that the use of Siskeudes not only be used at the end of the year but that it can be used for daily village financial activities so that accountability and transparency in village finances will improve.

7.2. Limitations and future research
This study has certain limitations which may have an effect on results generalizability. The major limitation is concerned with the sample selection. Indonesia has 34 provinces with 74,517 villages. The data for this study was collected from two districts of Indonesia, Aceh Besar and Pidie in Aceh, while user Siskeudes located in other provinces may have different attitudes regarding the use of the system. Despite the system is unanimously used in all provinces in Indonesia yet there is a need to understand the attitude in accepting the system in different parts of Indonesia hence it can be identified whether culture influences the system acceptance as illuminated by (Romney & Steinbart, 2018, p. 39). Another limitation in this study is that it does not look at the effects of mediation or interactions that can influence endogenous variables, nor does it consider other exogenous variables such as age, competence and experience.
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