



The influences of user capability, internal control, and information technology on the quality of accounting information systems in conventional commercial banks

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ABSTRACT

User capabilities are required to maximize their quality in the operation of information systems. In addition, a quality accounting information system requires reasonable internal control to minimize the risks that will arise from using an accounting information system. The research employed a quantitative survey method by distributing questionnaires to conventional commercial banks in West Java. This research used primary data for the sample of this study, as many as 73 people from 12 banks with details of the Division of Accounting and Finance. For the selection of respondents, this study used convenience sampling. The data analysis technique involved complete structural equation modeling (SEM) analysis using smartPLS. The results revealed the effects of User Capabilities on the Quality of Accounting Information Systems, Internal Control on the Quality of Accounting Information Systems, and the Influence of Information Technology on the Quality of Accounting Information Systems with a moderate effect size. Through the support of information technology, this research will become essential support for the achievement of a quality accounting information system since the banks are required to follow the direction of the times of technology-based.

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INTRODUCTION

With the increasing competition in the business world, good companies operating in various sectors can have a sustainable company mindset. Therefore, a company is expected to maintain its superiority of value. They have to achieve their goals and win the competition. Every company must aim to generate profits, including the banking sector, from the high flow of customer transactions. In order to carry out their business activities effectively and efficiently, one of the efforts is to increase competitiveness by paying attention to information system technology. Its technology is expected to be able to make preparations, anticipation, and adapt to changes, especially in the quality of accounting information systems. Based on research from Murtadho et al. (2018), the value of information depends on the quality of the information presented because the

fundamental role of information systems in organizations is to store and process accounting data to produce quality accounting information so that it can be easily used and valuable for users. This follows the perspective by Susanto & Meiryani (2018), the quality of accounting information systems must be measurable based on accounting information that has accuracy, speed, completeness, and conformity with management needs. If it is defined through the theory of Susanto & Meiryani (2018), the quality of information systems can be interpreted as a collection of integrated sub-systems of accounting information, both physical and non-physical, which are interconnected and work with each other in harmony to process transaction data related to the problems of finance into financial information.

In its application, information has value for decision-making because it reduces the level of uncertainty and increases knowledge for its users indirectly. Such as the problems that occurred in several banks in Indonesia, based on data from the Indonesian Banking Development Institute (LPPi), which stated that the disruption to mobile banking services was due to disruptions to the financial network system. This causes customer transactions to be delayed, resulting in two losses, namely costs and reputation. So, proper IT operations and digitization governance is required to resolve this problem. In addition, the occurrence of other cases, namely the loss of customer deposits caused by unscrupulous employees at the bank, indicates that there is still a need for attention in terms of utilizing digital use in the business sector, including banking, because in the banking world, there will be continuously increasing competitors who have innovation and good bank governance in target to meet customer satisfaction. These both problems reflect a lack of supervision and result in less quality information being produced, one of which is the information produced by the finance and IT departments. Therefore, this reflects that internal controls strongly support the accounting information system.

According to Mardi (2016), internal control is a system that has access to the supervision of the organizational structure along with all mechanisms and measures that are jointly adhered to maintain the overall stability of the organization's assets from various aspects. Nisa and Vina (2020: 908) also stated that internal control can prevent fraud or errors from occurring when using an accounting information system. Suppose the accounting information system needs better internal controls. In that case, the information system will be less valuable because the possibility of fraud occurring is quite large and harms both external and internal parties since internal control aims to produce reliable and trustworthy financial information. According to Caldas (2016), information technology is a technology that consists of all the hardware and software that companies need to achieve their business goals. Nugroho et al. (2021) argue that information technology currently has a role in supporting company activities to more effectively meet long-term targets, namely supporting post-Covid-19 economic recovery from previous years. As computer technology is in the form of hardware and software for processing and information, information technology also functions as communication for disseminating essential and accountable information.

McShane & Glinow (2021) define user capabilities as the capabilities needed as one of the elements that system users must fulfill in carrying out the process of doing tasks optimally. Research conducted by Elsharif (2019) states that users' ability in accounting information systems is essential to note because it is a factor supporting the system's success to be applied on an ongoing basis. Internal users of the system can make it easier for companies to obtain information from users outside the organization when desired. Research on the factors that influence the variable quality of accounting information systems has been carried out by various previous researchers. In this case, the researchers wanted to prove that user capabilities, internal controls, and information technology have been evidenced to affect the quality of accounting information systems. According to Mardi (2016), internal control is a system that has access to the supervision of the organizational structure along with all mechanisms and measures that are jointly adhered to maintain the overall stability of the organization's assets from various aspects. According to Nisa & Citra (2020), internal control can prevent fraud or errors from occurring when using an accounting information

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Judging from previous research conducted by Nisa & Citra (2020), Murtadho et al. (2018), Puspitawati (2015), Antika et al. (2020), and Rimayanti & Rahayu (2013) stated that the variable user ability affects the quality of the accounting information system. In contrast to the research conducted by Firman's research (2020), Elsharif (2019) states that the variable ability of local users does not affect the quality of the accounting information system. Based on research conducted by Mulyanti (2017), Rima Rachmawati (2016), Rimayanti & Rahayu (2013), and Anggadini et al. (2017), in their research results, they stated that internal control affects the quality of accounting information systems. This study's results contrast the research conducted by Isrianti (2018), which states that internal control does not affect the quality of accounting information systems. Meanwhile, according to research conducted by Meiryani et al. (2021), Antika et al. (2020), Mulyanti (2017), Setyanusa (2014), Putra *et al.* (2020), Sarokolaei et al. (2012) stated in their research results that information technology affects the quality of information systems accountancy.

RESEARCH METHOD

This study used a quantitative approach of primary data with a survey method by distributing questionnaires to conventional commercial banks in West Java. The sampling used in this study was non-probability sampling for a sample of this study as many as 73 people from 12 conventional commercial banks in West Java Province with details of the Division of Accounting and Finance. For selecting respondents, this study employed convenience sampling, a collection of information from members of the population provided this information (Sugiyono, 2017). Data collection techniques in this study used surveys with data collection tools, namely questionnaires. Data analysis was done using the Partial Least Square (PLS) method through SmartPLS version 3 software. It is a method of solving Structural Equation Modeling (SEM), which in this case was more compared to other SEM techniques. SEM has more flexibility in research links theory and data and can carry out path analysis with latent variables. So, it is often used by researchers who focus on social sciences. Moreover, the validity test was carried out using SPSS, which was used to assess whether a questionnaire was valid. Validity testing was applied to all question items in each variable. Several stages of testing were carried out, namely through testing the validity of content validity, convergent validity, Average Variance Extracted (AVE), discriminant validity, and reliability testing using composite reliability. For technical hypothesis testing, this study used a full model structural equation modeling (SEM) analysis with smartPLS. It also explained whether there

was a relationship between variables or not. In practice, testing the hypothesis was carried out by looking at the calculated value of the Path Coefficient in testing the inner model.

RESULTS AND DISCUSSIONS

Assessment of the validity in each questionnaire statement item used the correlation value of the item score with the total variable score. The validity index was calculated using the product-moment correlation. The validity test results showed that all items in each research variable had an r-count value greater than 0.3. So, the items were valid. The measuring tool in the form of a questionnaire statement showed a good level of validity, which means it could measure the variables studied.

Meanwhile, reliability in this study used Cronbach's alpha formula, calculated using the SPSS program, with the minimum limit provisions declared reliable if Cronbach's Alpha coefficient was more significant than 0.7. The measuring instrument was stated to be precise, stable, and reliable. The results of calculating the reliability value of the questionnaire for the four variables, as presented in Table 5.2, show that Cronbach's Alpha value is greater than the critical value of 0.7. So, it was concluded that the measuring instrument used to measure User Capability variables (X1), Government Internal Control variables (X2), Information Technology (X3), and Accounting Information Systems Quality variables (Y) have given consistent results.

The hypothesized full model calculation results were obtained with the help of SmartPLS 4. as follows:

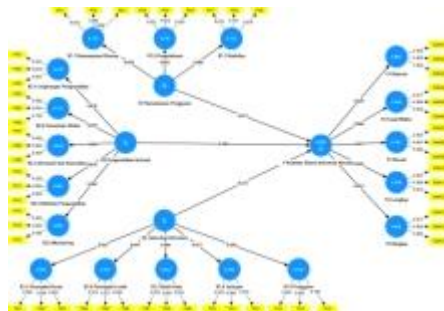


Figure 1. SEM Model Path Diagram Partial Least Square (PLS) Approach

The authors used Structural Equation Modeling (SEM) with the Partial Least Square (PLS) approach to answer research problems in this study. The structural equation model for the influence of User Capability, Internal Control, and Information Technology on the Quality of Accounting Information Systems is as follows:

$$h1 = 0.200x1 + 0.426 x2 + 0.333 x3 + 0.194$$

The calculation results show that the influence of User Capabilities on the Quality of Accounting Information Systems is presented by the path coefficient value of 0.273. The effect of Internal Control on the Quality of Accounting Information Systems is presented by the path coefficient value of 0.426. Then, the effect of Information Technology on the Quality of Accounting Information Systems is presented by the path coefficient value of 0.333.

Measurements can be done using the cross-loading method and the Fornell-Larcker criterion. In order to use cross-loadings, it can be seen that the loading factor values for each indicator from each dimension of the latent variable are the largest compared to the loading values when associated with other dimensions. This shows that each dimension of the latent variable has good discriminant validity, whereas the latent variable does not have a highly correlated gauge with other constructs. The results of the Fornell-Larcker calculation of the criteria obtained using the Smart PLS 4.0 application can be seen in the following table:

Table 1. Correlation Value of Latent Variable and Discriminant Validity (Fornell-Larcker criteria)

	X1 Ability User	X2 Control Internals	X3 echnology Information	Y Accounting Information System Quality
X1 User Ability	0.728			
X2 Internal Control	0.600	0.712		
X3 Information Technology	0.550	0.702	0.715	
Y Quality of Accounting Information Systems	0.712	0.824	0.782	0.707

These results generally indicate that the discriminant validity of latent variables is already high. This shows that all constructs have a good consistency.

Structural Model Testing (Inner Model)

Structural model testing (inner model) was carried out using R-square and affect value size f2. The test results using the R2 value can be seen as follows:

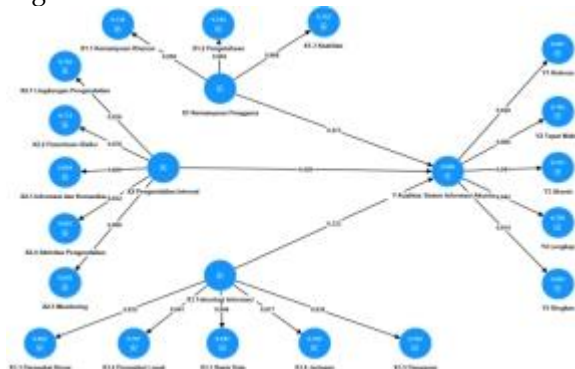


Figure 2. Structural Model

The R2 value indicates the model's prediction accuracy (Hair, 2017). The R2 value is equal to 0.25, which has a weak effect, 0.5 has a moderate effect, and 0.75 has a substantial effect.

Endogen Variable	R Square	R Square Adjusted
Y (Quality of Accounting Information Systems)	0,806	0,798

The table shows the R-square value for the variable Accounting Information System Quality obtained at 0.806. These results indicate that User Capability, Internal Control, and Information Technology variables influenced 75.8% of the variable Quality of Accounting Information Systems. The value of R2 is more than 0.75, indicating that the model's prediction accuracy has a substantial effect.

The effect size f2 shows the contribution of each construct to the Quality of Accounting Information Systems. The value of f2 is equal to 0.02, 0.15, and 0.35. It can be interpreted that the latent variable predictor has a small, medium, and significant influence. The results of calculating the effect size f2 can be displayed as follows:

Table 2. Assessment of the Structural Model Effect Size

No	Endogenous construct	f ² Y (Quality of Accounting Information Systems)
1	X1 User Ability	0,233
2	X2 Internal Control	0,414
3	X3 Information Technology	0,275

The user ability f^2 value is 0.233. The value of f^2 is between 0.15 - 0.35. The effect size for the influence of User Capabilities on the Quality of Accounting Information Systems is moderate. The f^2 value of Internal Control is 0.414. The f^2 value is more than 0.35. The effect size of Internal Control's influence on the Quality of Accounting Information Systems is large. Information Technology f^2 value of 0.275. The value of f^2 is between 0.15 - 0.35. The effect size of Information Technology's influence on the Quality of Accounting Information Systems is moderate.

After describing the results of testing the measurement model of each variable and the accuracy of the structural model, then a significance test of the partial effect of exogenous variables (independent variables) on endogenous variables (dependent variables) is carried out following the existing hypothesis.



Figure 3. Structural Model Statistical T Value

To test the proposed hypothesis, the t-statistic value can be seen. The limit for rejecting and accepting the proposed hypothesis is if the t-value is more significant than the t-table or the p-value is smaller than 0.05. The hypothesis will be rejected, or accept the null hypothesis (H_0). The t-table value is 1.980.

Table 3. Results of the Significance Test of Direct Effect

No		Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
1	X1 User Capability -> Y Accounting Information System Quality	0.273	0.259	0.116	2.356	0.020
2	X2 Internal Control -> Y Quality of Accounting Information Systems	0.426	0.403	0.124	3.450	0.001
3	X3 Information Technology -> Y Quality of Accounting Information Systems	0.333	0.367	0.143	2.327	0.022

The results of hypothesis testing show that the relationship between the variable User Capability and the Quality of Accounting Information Systems is shown by the path coefficient value of 0.273 with a t-count of 2.356 and a p-value of 0.020. The t-statistic value obtained is greater than the critical (1.980), and the p-value (0.020) is smaller than the alpha value of 0.05. This result means that User Capabilities affect the Quality of Accounting Information Systems. Based on the calculation results, the f^2 value of User Ability (X1) is 0.233. Then, the effect size f^2 shows the construct's contribution to the endogenous variables. The value of f^2 is equal to 0.02, 0.15, and 0.35. It can be interpreted that the latent variable predictor has a small, medium, and significant influence. Because the f^2 value is between 0.15 - 0.35, the effect size for the influence of User Capabilities on the Quality of Accounting Information Systems is moderate.

The results of hypothesis testing show that the relationship between the Internal Control variable and the Quality of Accounting Information Systems is shown by the path coefficient value of 0.426 with a t-count of 3.450 and a p-value of 0.002. The t-statistic value obtained is greater than the critical (1.980), and the p-value (0.001) is smaller than the alpha value of 0.05. This result means

that Internal Control affects the Quality of Accounting Information Systems. Based on the calculation results obtained f^2 Internal Control value of 0.414. The effect size f^2 shows the constructs' contribution to the endogenous variables. The value of f^2 is equal to 0.02, 0.15, and 0.35. It can be interpreted that the latent variable predictor has a small, medium, and significant influence. Because the f^2 value is more than 0.35, the effect size of Internal Control's influence on the Quality of Accounting Information Systems is large.

The results of hypothesis testing show that the relationship between the Information Technology variable and the Quality of Accounting Information Systems is shown by the path coefficient value of 0.333 with a t-count of 2.327 and a p-value of 0.022. The t-statistic value obtained is greater than the critical (1.980), and the p-value (0.000) is smaller than the alpha value of 0.05. This result means that Information Technology affects the Quality of Accounting Information Systems.

Based on the calculation results, the Information Technology f^2 value is 0.275. The effect size f^2 shows the constructs' contribution to the endogenous variables. The value of f^2 is equal to 0.02, 0.15, and 0.35. It can be interpreted that the latent variable predictor has a small, medium, and significant effect because the f^2 value is between 0.15 - 0.35. The effect size of Information Technology's influence on the Quality of Accounting Information Systems is moderate.

CONCLUSION

There is an influence on User Capability with the Quality of Accounting Information Systems due to calculating the path coefficient value of 0.273 with a t-count of 2.356 and a p-value of 0.020. The t-statistic value obtained is greater than the critical (1.980), and the p-value (0.020) is smaller than the alpha value of 0.05 with a moderate effect size. Internal Control influences the Quality of Accounting Information Systems as indicated by the path coefficient value of 0.426 with a t-count of 3.450 and a p-value of 0.002. The t-statistic value obtained is greater than the critical (1.980), and the p-value (0.001) is smaller than the alpha value of 0.05 with a large effect size. Information Technology influences the Quality of Accounting Information Systems as indicated by the path coefficient value of 0.333 with a t-count of 2.327 and a p-value of 0.022. The t-statistic value obtained is greater than the critical (1.980), and the p-value (0.000) is smaller than the alpha value of 0.05 with a moderate effect size.

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