THE EFFECT OF THE QUALITY OF ACCOUNTING INFORMATION ON THE PERFORMANCE OF CLOUD ACCOUNTING USERS: ANALYSIS OF THE INTEGRATION OF INFORMATION SYSTEMS SUCCESS MODELS (EMPIRICAL CASE OF CORPORATE ACCOUNTANTS IN INDONESIA)

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ABSTRACT

Cloud accounting should have the ability to manage information data. This research is conducted to observe and measure the effect of information quality on improving the performance of cloud accounting users by integrating the Delone McLean Information System Success Model with the Task-Technology Fit Model. It is specifically to measure and observe the impact of information quality on the performance of cloud accounting users. This research uses simple random sampling through the distribution of questionnaires to cloud accounting users in Jakarta, Indonesia. Results from 548 questionnaires are then processed by the Structural Equation Modeling for testing Confirmatory Factor Analysis as a test of construct validity, descriptive testing to assess respondents' responses, and hypotheses testing. The results show that the information system integration model is able to explain the effect and relationship between information qualities on cloud accounting user performance, through task suitability with cloud accounting technology.

Keywords: Cloud Accounting, Information Quality, Task-Technology Fit, Performance

INTRODUCTION

Cloud accounting is a more mobile, flexible, and efficient cloud-based technology in completing accounting tasks (Dimitriu & Matei, 2015). Cloud accounting is capable of processing financial data without being limited to location and time access (Wyslocka & Jelonek, 2015). The ability of cloud accounting in managing this information data is consistent with the opinion (Zhou, Lu & Wang, 2010) that information technology should be capable of handling information input data.

The importance of information is a part of the process carried out by technology in transforming inputs into outputs to meet information needs (Goodhue & Thompson, 1995; Zhou et al., 2010). Technology capabilities in information management, communication delivery, and coordination are also related to information quality (Gebauer, Shaw & Gribbins, 2010). Furthermore, it is also conveyed that the main object in the Delone McLean Information System Success Model (DMIS Success Model) is the measurement of information quality which focuses on the characteristics of information, namely accuracy, relevance, timeliness, completeness, and accessibility, with the assumption that the quality of information affects user performance (Abbugabah & Sanzogni, 2010). The impact of the ability of cloud accounting is to produce accurate and relevant information in a timely manner, as well as the comfort and ease of access.
to information, and the ability of cloud accounting is to produce comprehensible and latest information (Gebauer, Shaw & Gribbins, 2010). Delone & Mclean (2003), states that information quality is one of the dimensions of information system success, where there is integration between dimensions in achieving the success of information systems. Issues in data transaction reliability, completeness of data transaction and technological support in data management are obstacles in improving the performance of cloud accounting users in producing accounting information quality. This becomes the focus of observation, where this research attempts to measure the relationship between technology suitability and task towards improving the performance of cloud accounting users.

Adopting previous research, this research was conducted on the topic of cloud accounting research by developing constructs, objects and units of analysis. One form of the research development is to integrate the DMIS Success Model with the Task-Technology Fit Model (TTF). Tam & Oliveira (2016) has previously carried out the integration of the DMIS Success Model with the TTF Model, noting that the quality of information affects the suitability of technology and tasks, and that information quality plays an important role in providing user satisfaction in enhancing individual performance.

Observations on the integration of DMIS Success Model with the TTF Model are expected to illustrate the effect of information quality on information output as a means of reporting on the effects of the information system process. By integrating the DMIS Success Model with the TTF Model as a factor affecting the suitability of user tasks and cloud accounting technology, we measure the impact of information quality on technology functions according to task requirements and individual abilities. The focus of research in observing the relationship between information quality, task-technology fit and performance, refers to the constraints of construction identified in the analysis. In addition, this research also aims to assess the integration ability of the DMIS Success Model with the TTF Model in measuring the effect between research variables.

**LITERATURE REVIEW**

**Cloud Accounting**

Cloud accounting is the advancement of information technology where the accounting application is based on cloud technology. Cloud computing base enables the provision of accounting information technology through the internet network, where hardware and software services are carried out centrally. Cloud technology has several advantages compared to traditional technology. This also has an impact on accounting technology, where data processing can be performed easily and without limits of time and place through cloud accounting. Another advantage of cloud technology is that it is a technology that effectively optimizes the functions of information technology at cost and expenditure levels. In a quality financial information function, cloud accounting must be able to manage past information as a basis for developing future cash flow plans (Supriadi & Mulyani et al., 2019).

Cloud based technology is a technology infrastructure that can be accessed without location restrictions by mobile devices via the internet network (Mirashe & Kalyankar, 2010). Cloud accounting technology must have the ability to facilitate and expand user access, as well as the ability to convey financial information online which will increase the accessibility of stakeholders in obtaining the desired information, so as to increase the accuracy and speed of decision making (Novianty, Mulyani, Winarningsih & Farida, 2018). Cloud accounting has superior technology that contributes to enhancing user performance (Tsuma, Osang & Abinwi, 2015), an assessment of the ability of cloud technology to provide easy access to the system, without limitation of time and location, ease of system operation related to technology support
for user task execution, as well as system security reliability and data security in cloud-based software.

The Integration of DMIS Success Model with the TTF Model

User competency factors and reliable information system technology in the development of quality information (Mugiarty, Ritchi & Pratama, 2018). The DMIS Success Model with the TTF Model is a model for measuring the level of success of information systems. This research examines how the effect on the integration of the DMIS Success Model with the TTF Model in measuring the relationship of information quality and its impact on cloud accounting user performance, through the task-technology fit variable.

Figure 1, as a research model that measures the relationship between information quality and performance through the mediation of the TTF variable (Delone & Mclean, 2003), with the suitability of user tasks and technology as a function required to complete user tasks (Goodhue, Klein & March, 2000). The DMIS Success Model explains that the relationship between information quality, system quality and service quality may have a positive effect on use and user satisfaction and subsequently affects positively on net benefits or end results (Delone & Mclean, 2003). This research examines how the effect of information quality on the DMIS Success Model on usage performance, where the TTF Model developed by Goodhue & Thompson (1995), as a model for evaluating the success of information technology by assessing the suitability of technology capabilities in meeting user task needs (Strong, Dishaw & Bandy, 2006). Kositanurit, Ngwenyama & Osei Bryson (2006), reported that performance is affected by the relationship between system utilization and TTF. The success of technology in improving user performance is affected by eight measurement factors, namely data quality, data locatability, authorization to access data, data compatibility, ease of use, production timeliness, system reliability, and relationship with users.

The integration of the DMIS Success Model with the TTF Model observes the effect of information quality, and task-technology fit on the performance of technology use (Zheng, Zhao & Stylianou, 2013). This is aligned with what is also conveyed by Assefa & Prybutok (2006), that the DMIS Success Model with the TTF Model is capable of measuring and explaining the relationship between technology and user satisfaction in the use of technology.

![Diagram of Research Model: Information Quality on the DMIS Success Model with the TTF Model](image-url)
TTF Model demonstrates that information technology has a positive impact on individual performance and can be used if information technology capabilities match the tasks that users must perform. The relationship between information systems and individual performance is affected by three constructs: technological characteristics, task requirements, and individual capabilities (Goodhue & Thompson, 1995).

**Information Quality (INQ)**

The measurement of Information Quality (INQ) which focuses on information characteristics, namely accuracy, relevance, timeliness, completeness, and accessibility, is the key point in the DMIS Success Model, and the quality of information affects user performance (Abugabah & Sanzogni, 2010). The quality of information on input data affects the output of the information system process, and affects satisfaction and trust in the use of information systems (Wixom & Todd, 2005), and is one of the variables of information system success, in addition to the INQ variable which has an impact on user satisfaction which impacts individuals and organizations (Delone & Mclean, 2003).

The relationship between INQ and cloud accounting technology is related to the accuracy, relevance, and timeliness of the management process in producing accounting information. McManus & Wood-Harper (2003), states that quality information is seen from functionality, reliability, efficiency, usability, portability, and maintainability. The quality of information affects user satisfaction (Molla & Licker, 2001). INQ promotes user performance in terms of assessing the accuracy of transaction information, the relationship of information relevance to the identification and documentation of accounting tasks, the timeliness of management, and the availability of information data.

The impact of INQ on user performance, both directly and through the TTF variable, is observed in the research (Delone & Mclean, 2003). The integration of the DMIS Success Model with the TTF Model shows that the quality of information affects the suitability of technology and tasks, and plays an important role in providing user satisfaction in improving individual company performance (Tam & Oliveira, 2016). Based on the results of observations and previous research, we hypothesize that the role of information quality has a positive effect on task-technology fit and has positive implications for the performance of cloud accounting users.

H1  **Information Quality (INQ) has a positive effect on Task-Technology Fit (TTF)**

**User Performance (PERF)**

The success of information systems has an impact on increasing individual productivity, increasing User Performance (PERF), strengthening problem identification skills and increasing the effectiveness of decision making (Delone & Mclean, 2003). The performance impact is related to the added value or benefits of using information technology. User satisfaction is affected by factors that affect individual performance in using technology systems (Kositanurit, Ngwenyama & Osei-Bryson, 2006), so it can be inferred that high levels of user satisfaction contribute to high levels of user performance (Doll & Torkzadeh, 1991).

End user satisfaction with system use has a significant and positive effect on system use and affects individual performance (Doll et al., 2004; Assefa & Prybutok, 2006; Kositanurit, Ngwenyama & Osei-Bryson, 2006). User satisfaction with the use of the system may improve the performance of using information system technology. User information systems and end-user computing satisfaction as well as the perceived performance impact, in the information systems
literature states that user satisfaction is identical to the success of the system (Igbaria, Parasuraman & Baroudi, 1996; Igbaria & Tan, 1997).

Improving organizational performance in producing financial information requires the support of top management within the organization who provides direction, authority and resources during and after the acquisition of the IT system (Mulyani, Darma & Sukmadilaga, 2016). The TTF Model demonstrates that information technology has a positive impact on individual performance and would be used if information technology capabilities are in accordance with the tasks to be done by users (Goodhue & Thompson, 1995). The use of the TTF model in understanding the relationship between information systems and individual performance is affected by three constructs: technological characteristics, task requirements, and individual capabilities (Goodhue & Thompson, 1995). In the context of research related to the relationship between INQ and PERF, either directly or through TTF, it is carried out by reviewing the relationship between information quality and technology (Abugabah & Sanzogni, 2010; Kositanurit, Osei-Bryson & Ngwenyama, 2011; Hou, 2012), i.e., the dimensions of performance, effectiveness, and creativity. The effective implementation of tasks depends substantially on the quality of information that affects the success of information systems, including the impact on user behavior (Rai, Lang & Welker, 2002). The ability of information systems to generate high-quality information is affected by the characteristics of the information system used (Ali & Younes, 2013). This was also claimed by (Isaac et al., 2017), who investigated the relationship between internet use and user satisfaction, where information quality affects technology-task suitability.

H2 Information Quality (INQ) has a positive effect on User Performance (PERF)
H3 Information Quality (INQ) has a positive effect on user performance (PERF), via Task-Technology Fit (TTF)
H4 Task-Technology Fit (TTF) has a positive effect on User Performance (PERF)

RESEARCH METHODOLOGY

This research used simple random sampling. The distribution of questionnaires was carried out randomly without considering the type of company, operational area, gender, and location of the cloud accounting user, in order to obtain answers from cloud accounting user respondents to questions related to operational variables in the INQ, TTF, and PERF constructs (Appendix 1). The processing of 548 data cloud user samples from the questionnaire results was carried out using the LISREL statistical program with the Structural Equation Modeling (SEM) framework, which aims to analyze, interpret quantitative data, and perform hypothesis testing.

RESULTS AND DISCUSSION

Results

The ability to integrate the DMIS Success Model with the TTF Model in explaining the relationship between INQ, TTF and PERF, is proven in the convergent validity test, to assess the validity of any relationship between indicators and constructs or latent variables. Confirmatory Factor Analysis (CFA) is a construct validity test that measures the ability of indicators to reflect their theoretical latent constructs (Ghozali, 2014). Chart 1 is a description of convergent validity test results (Appendix 2) showing the Loading Factor (LF), Construct Reliability (CR), and
Average Variance Extracted (AVE) values that meet the ideal value requirements. The results of the CFA test show that all indicators in this research have a high contribution to explain the latent variables. This is in line with the statement of Hair, Black, Babin & Anderson (2010) that a factor weight of 0.50 or more is considered to have sufficiently strong validation to explain latent constructs. Each of the variables can be explained by the average SLF value for the INQ (0.75), TTF (0.89), and PERF (0.90) dimensions.

The AVE and the CR values of the analysis also illustrate the fulfillment of convergent validity in the integration of the model in this research. CR in the research data indicates that a measure of the internal consistency of the indicators of a formed variable showing degrees in the formed variables is still acceptable with the results that all variables have met the CR value which is expected to be between 0.6-0.7, with a note that the indicator validity value indicates good results (Hair et al., 2010), with CR values of INF (0.833), TTF (0.85), and PERF (0.91). Furthermore, in order to measure the amount of variance of the indicator extracted by the formed variables, it was proven in the variance extracted (AVE) test, where it was shown that all research variables had an acceptable AVE value, which was at least AVE ≥ 0.5 (Hair et al., 2010). With a CR value of INQ (0.68), TTF (0.73), and PERF (0.77).

Observation of respondents' responses to the observed variables was carried out by descriptive testing, through statistical assessment on the mean and gap in the respondent's
responses. The results of the calculation of the group classification of the score ranges in this research are as follows, mean scores: a) 1-2 (Very poor), b) 2-3 (Poor), c) 3-4 (Not Good), d) 4-5 (Good), e) 5-6 (Better), and f) 6-7 (Very Good). Chart 2 (resume from Appendix 3) shows the descriptive test results on each of the dimensions and research variables, where the INQ variable with 3 dimensions and 7 indicators has an average score of 5.15 ("better" classification), the TTF variable with 4 dimensions and 8 indicators has an average score of 5.09 (the "better" classification) and the PERF variable with 3 dimensions and 9 indicators has an average score of 5.21 (classified as "better"). This descriptive test shows the response of respondents to the ability of information quality to support the suitability of technology and tasks that affect cloud accounting user performance.

**FIGURE 2**

**HYPOTHESIS STATISTICAL TEST RESULTS**

Figure 2, which illustrates the results of the hypothesis test shows that all observed variables have a significant relationship, with the t-value > t-table (1.96) at the significance level (Alpha 5%) (Ghozali, 2016). Path coefficient indicates the correlation of the observed model, with the path test results as follows: a) path coefficient INQ to TTF (15%), INQ to PERF (31%), and TTF to PERF (23%), as well as the indirect path coefficient of INQ to PERF through TTF (4%).

**DISCUSSION**

The ease of access to accounting information, as well as the accuracy of data in the preparation of financial statements, are factors that lead to the quality accounting information output. Delone & Mclean (2003), notes that the impact of the ability of cloud accounting to produce accurate and relevant information in a timely manner, as well as the convenience and ease of accessing information, and the ability of cloud accounting to produce understandable and up-to-date information is the greatest effect in improving user performance (Gebauer, Shaw & Gribbins, 2010). The results of the verification test (Chart 1) show that the average SLF value of the information quality indicator is capable of explaining its relationship with TTF and its impact on PERF (75%), this confirms the opinion Delone & Mclean (2003), that information quality is one of the factors supporting the success of information systems. It has been known from the hypothesis test that INQ has an effect on PERF, either directly or through TTF. The value of Tcount (Figure 2), shows the significance of the direct relationship between INQ and PERF.
(Tcount of 5.72), which may clarify why INQ shows a direct relationship to PERF in the DSIM Success Model factor.

The competence of cloud accounting users is a success factor in implementing information systems, besides that Knowledge management provides recommendations to leaders regarding investment decisions in information systems from the planning stage to the implementation stage (Mulyani, Putra, Sukmadilaga & Rozak, 2017). Information quality has an important role in providing user satisfaction in improving the performance of individual companies (Oliveira, Faria, Thomas & Popović, 2014; Tam & Oliveira, 2016). Accounting information quality supports the performance of cloud accounting users. The data shows that cloud accounting can ideally generate information required in a timely manner to support the user's task activities, by producing information that is easy for users to understand, so that the information can be used easily in decision-making for management. This is also seen from the statistical descriptive results (Chart 2), where respondents state that cloud accounting has a strong ability to process information quality data, supports the suitability of technology and tasks, and enhances user performance. The results of the research show that cloud accounting has the ability to generate renewable information. The difference between the ideal value and the mean value, however shows an indication of a problem where the user's discipline factor to update and verify data during the data input process has the potential to hinder the performance and suitability of technology and tasks.

The success of cloud accounting technology in providing quality information, technology capabilities in terms of integration, flexibility, accessibility, formalization, and media enrichment (Suzan, Mulyani, Sukmadilaga & Farida, 2019). Cloud accounting technology has a huge effect on user satisfaction of the information system, which has an impact on user performance and this is accomplished through by the application of technology that users understand (Zheng, Zhao & Stylianou, 2013). The effect and relationship between the quality of accounting information and the suitability of technology tasks shows the ability of technology to provide easy access to the information/data needed. Including data retrieval and processing, as well as the ability of cloud accounting technology to facilitate the management of financial information which is fulfilled by the availability of facilities to access information that can be used immediately in order to be able to provide frequent and timely information updates.

The capacity of information technology to comply with the task is affected by individual success and the use of technology (Goodhue & Thompson, 1995). The suitability of the task-technology in a cloud accounting system, is indicated by the ability of cloud accounting technology to provide data management authorization, as well as the ability of cloud accounting technology to support users in developing ideas on user performance. The relationship between indirect effect of INQ on PERF (Tcount of 2.74) and the effect of TTF on PERF (Tcount of 4.82) indicates that the information success approach with the TTF Model is not only affected by the quality of information, but also by other considerations, namely the characteristics of technology and task characteristics, as well as the suitability of technology and tasks. This is conveyed by Goodhue & Thompson (1995), that the characteristics of the task and the character of technology are factors that affect task-technology fit, by observing the degree to which the technology operates according to the task needs and individual abilities. Information quality has an impact on technology, and its suitability for the task is illustrated by confirming the opinion of (Goodhue & Thompson, 1995), cloud accounting has the ability to produce updated information, and the ability of cloud accounting to provide easy access to information.
The application of cloud accounting, besides being able to improve user performance, with the advantages of accounting technology must be able to support internal control and improve organizational performance (Mulyani, Kasim, Yadiati & Umar, 2019). The descriptive test of the PERF indicator shows the ability of cloud accounting technology to support user creativity to generate new ideas at work. Constraints on limited digital expertise and user accounting, lack of automated task scheduling and transaction notification functionality, and the lack of development of cloud accounting technology’s ability to present information in a variety of formats that can be tailored to the needs of management and regulators (e.g., for reporting tax formats, capital market supervisors, and so forth), impact on user creativity in further optimizing the functions of cloud accounting technology and information that can enhance user performance. The role of cloud accounting technology providers, paying attention to the need to improve operational efficiency and achieve a competitive advantage, through innovative technology system features that support user performance, in order to provide reliable financial and non-financial information (Bakri & Mulyani, 2019).

CONCLUSION

In summary, the results show that the integration of the DMIS Success Model with the TTF Model is capable of explaining the relationship between the information quality variables as one of the variables in the DSIM model, which affects PERF either directly or through the TTF variable. The drawback of this research is that it does not test the impact of financial execution tasks of user attitudes, such as user prudence and discipline which has the potential to affect the implementation of management tasks. The existence of research ethics limits, limits the observation on cloud accounting providers in connection with the implementation of digital training, as well as the development of technological innovations.

In providing a variety of perspectives on assessing the impact of cloud accounting on user performance, future research is expected to complement this research by using a model related to testing user perceptions. as well as complementing research constructs that can be clarified by incorporating aspects of user attitudes, and their relationship with progress in using cloud accounting technology.

REFERENCES


