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3. Effectiveness Of The Accounting Information System And Enterprise Resource Planning (ERP)

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Abstract:

The use of the Enterprise Resource Planning Systems showed a significant growth. This growth has led to the need to have an empirical evidence about the accounting benefits from using that systems. The existences of accounting research on ERPS has created an opportunity for further research on the Accounting Information Systems (AIS) quality and effectiveness in the decision-making process related to the level of the use of the ERPS. This research is using alternative methods of Partial Least Square (PLS). The result suggests that the manager's perceptions of the AIS quality affect the effectiveness of the decision-making process. The breadth of the use of the ERPS can be a moderating factor in the relationship between manager's perception of the AIS quality and the effectiveness of the decision-making process. Finally, there was no difference between the perceptions of the different department managers regarding the AIS quality and the effectiveness of the decision-making process on the breadth of the use of the ERPS.

So that, our society will get information and try to make the best treatment, for this fatal disease.

Keywords:

ERPS capabilities, AIS quality, Decision Making Process Effectiveness, manager perceptions

Introduction:

According to market research of report buyer for information technology (IT), the use of the ERPS showed a significant growth. There are more than 250 companies that have implemented SAP, and more than 100 companies have implemented Microsoft Dynamics. In the same year Metro data has recorded a market growth of 20-30% per year for the ERPS. This growth has lead to the need to have an empirical evidence about the accounting benefits from using that systems. Besides the large investment, the use of such system has opened a great opportunity for research in the accounting field.

Dehning dan Richardson (2012), suggested that there is an opportunity for accounting researchers to investigate the return on investment on IT investments. The need for ERPS research in also emphasized by Hunton et al. (2013), Suton (2016), Moon (2017), Schlichter and Kraemmergaard (2017),Grabski et al.,2018, and Granlund (2018). They stated that there are only few researches that have explored ERPS in accounting discipline. The existences of accounting research on ERPS has created an opportunity for further research on how the level of the use of ERPS will influence the change in the AIS process. Does the change lead to a better quality in the AIS outputs, which lead to the effectiveness of the decision-making process by the managers in different departments?

Based on previous studies, the studies about the AIS quality or the effectiveness in the decision making process in relation to the use of the ERPS have not been specifically studied. Therefore, it is necessary to explore the accounting point of view about the influence of the use of the ERPS on the AIS quality and effectiveness in the decision making process related to the level of the use of the ERPS. As a result, the following research question is formulated as follows

- Is the manager's perception of the AIS quality affects the effectiveness of the decision-making process in the use of ERPS?
- Is the breadth of the use of ERPS becomes a moderating factor in relation to the manager's perception of the AIS quality with the effectiveness of the decision-making process?
- Are there differences in the managers perceptions of the different departments regarding the AIS quality and the effectiveness of the decision-making process and in the breadth of the use of the ERPS?

Theoretical Background:

2.1 Theory Of Information Systems Success:

This study will apply the information system (IS) success model by Delone and McLean (2012) and the model that is proposed by Doll and Torkzadeh (1988) to measure the end user's satisfaction. The measurement consists of five dimensions, namely 1) content, indicates that the systems has provided the information in accordance with the user requirements; 2) accuracy, indicates that the systems has provided accurate information; 3) format, indicates that the system has provided information in the appropriate display format;4) ease of use, indicate that the system is easy to use; 5) timeliness, indicates that the system has provided information in a timely manner.

2.2 The Extent Of The Use Of The Enterprise Resource Planning System:

The extent of the use of the ERPS will vary between companies. This depends on the urgency or the level of the company needs and the availability of funds for implementation. This research will use the capability concept that is proposed by Karimi (2017). The capability implies the extent of the use of the ERPS in such company. The difference in the breadth of the use is expected to give a different impact to the company. Further, according to Karimi (2017), the extent of the use of the ERPS can be viewed through

1. The number of the functions in the company that is using the ERPS,
2. The number of the divisions or departments that are using the ERPS, and
3. The number of offices that are geographically dispersed in various regions that are using the ERPS.

With the more extensive use of the ERPS the more widely the information is disseminated to all functions of the company. This is important because the information is the key for the decision-making process. The wider the use of the ERPS, the more integrated the data that will help the manager in solving the problem and making decisions. Besides, the integrated system is expected to provide a rapid analysis reporting in a timely manner (Gupta, 2000; Shebab et al., 2004).

2.3 The Effectiveness Of The Accounting Information Systems And The Decision-Making Management:

The effectiveness of an information system can be described through a number of different perspectives (DeLone and McLean, 1992). Evaluation of an effective systems can be shown through the output produced as required, increased productivity, improve performance, and increased control over the decision related to the information that is produced by the AIS. Thus, the information generated expected can make the decision-making process more effective.

The information delivered is easier to interpret and understand, as well as that the dissemination of information to all functional departments could be improved. According to Kim (2017) the assessment of the effectiveness of AIS relies on the use of AIS as perceived by the user regarding the quality of the information produced. The quality of information depends on the reliability, report forms, timeliness and relevance for the decision maker. Nicolao (2016) defined effectiveness of AIS as a decision, the decision maker perceives about the information output generated by the transaction processing system, the management reporting, and the whether the budgeting systems meets their needs in the coordination and the control of tasks. Nicolaou (2016) and Yeunyong (2017) stated that there is a relationship between the use of an integrated system and the effectiveness of AIS. Alzoubi (2018) found that the use of the ERPS has effected the effectiveness of AIS. The effectiveness of AIS can be described through quality of the accounting information output and the firm's internal control. Other studies have been conducted by Spathis and Constant inides (2014), Spathis (2016), and Spathis and Ananiadis (2015). They examine the reasons why companies convert their conventional information system to benefits perceived from adopting ERPS is for the accounting application integration, increasing flexibility in generating information and improving the quality of financial reporting and decisions with respect to timelines and the reliable accounting information produced. Brazel and Dang (2015) examine the ERPS adoption to the relevance of the information and reliability of the information in financial reporting for external users. They found that after the implementation of ERPS, the company will decrease the reporting lag simultaneously. Whereas Poston and Grabski (2018) have shown that the use of ERPS can reduce costs by increasing efficiency through the computerized system, and improved decision making by providing accurate and timely information's. Other research on the relationship between ERPS and decision making process has been done by Carton and Adam (2015), Bahrami and Jordan (2018). Carton and Adam's (2015) study result say that

the previous studies have only examined only the effect of ERPS on the operating level and only few at the managerial level. While Bahrami and Jordan (2017) showed an improvement in the decision-making process both at at the strategic and operational levels.

However, it is not the company's main goal in using the ERPS. Other researcher, Xuet al. (2017) has conducted a case study in an Australian company about the quality of the data related to the implementation of the ERPS. They have found out that the quality of the data is important and the main reason for implementing the system. Sajady et al. (2018) stated that the effectiveness of the AIS depends also on the perception of the decision maker about the usefulness of the information generated by the system. How the information satisfies their needs about the

operational processes, managerial reporting, budgeting, and control of the organization. The results of Sajady et al. (2018) indicated that the implementation of AIS will lead to improvements in the process of decision making by managers, internal control and financial reporting quality, and facilitation of the transaction processing companies.

Therefore in this study, assessment of the effectiveness of the AIS is based on the user perceptions about the usefulness of the information. Measurements were performed by assessing user's satisfaction for the quality of information, including the form, content, and appearance.

2.4 The Perceive Of The AIS Quality And The Decision-Making Management Differences:

The Previous studies on differences in the manager's perspectives from various departments related to ERPS, showed inconclusive results. Chang (2016), Ifinedo and Nahar (2017), Esteves (2018), have found that there is no differences in the perception of the managers of the various departments in terms of the benefits of information system's implementation. However Holsapple et al. (2016) suggested that user satisfaction was higher in the system-level managers than in the non-managers level. Similarly, Longinidis and Gotzamani (2018), have found differences in the user's perception of the network departments within the sales and supporting department. Kanellouand Spathis (2018) have also suggested that there is a difference on perception on system performance between IT professional and accountants, but no differences in perceptions regarding the benefits of accounting of the use of ERPS.

Based On The Theoretical Framework Discussed Above, The Hypotheses Are Formulated As Follows:

H1: AIS quality has positive direct effect on effectiveness of decision-making process

H2: More extensive the use of the ERPS mediates the positive direct effect of Manager's perception of the AIS quality on effectiveness of decision making process

H3: There are no differences on manager of different department perceptions regarding the AIS quality and effectiveness of decision making process in the breadth of the use of the ERPS.

Methodology:

The data was collected by sending questionnaires by mail or e-mail and sent directly to the companies. This research is using alternative methods of Partial Least Square (PLS). The reason underlying the use of PLS is the small sample size. In addition to estimating the complex models with small samples, PLS does not assume the data should be normally distributed. Moreover, the use of PLS is also very appropriate when the conceptual and measurement models are either well undeveloped or it's still in the exploratory stage of the development of the theory (Ghozali, 2011). Similarly, according to Chin (2018), PLS is specifically useful in analyzing and modeling for a minimal measurement scale and small sample size. The program used is Visual PLS. Meanwhile, for the purposes of testing the differences perception the SPSS is used.

Discussion:

From 395 companies as ERPS users, only 268 companies agreed to be surveyed. Data collection was carried out for four months, starting in October 2018 until February 2019.Up to the time limit, the rate of return via mail and e-mail has collected 12 copies, while visits directly collected 38 copies. It is still far from the expected. Therefore, the researchers extended the time of data collection until April 2017.The end result of the process of collecting data is as follows: 18 copies were collected via mail and e-mail and 53 copies from direct visits so that a total of 71 copies representing 71 companies, but only 63 of them can be processed.

Respondent Profile, ERPS users consist of various types of industries, but most were firms in the Miscellaneous Industry. Based on the position of the respondents in the company, the position of the department managers varies. Managers who are in the Non IT/Accounting field are 41% and 30% are in the IT, while in the accounting field 29%. This indicates that the ERPS users do not only exist in one department, but are also in different departments that have already been acquainted with the use of ERPS. Furthermore, most respondents have used ERPS vendors of SAP, as many as 43%. Based on the description of the respondents, it can be concluded that the sample is fairly representative of the kind of industry, the department's managers who have filled the questionnaires, and the type of vendors used.

This research was conducted with three objectives: (1) assess whether the manager perception of the accounting information systems quality affects the effectiveness of the decision making process, (2) assess whether the breadth of the use of ERPS can be a moderating factor in the relationship between manager's perception of the accounting information systems quality and the effectiveness of the decision-making process, (3) assess whether there are

differences in perception between managers of different departments about the accounting information systems quality and the effectiveness of the decision-making process in the breadth of the use of ERPS.

Conclusion:

Based on the above objective hypothesis testing has been performed and obtained the following results;

The manager's perceptions of the accounting information system's quality affect the effectiveness of the decision-making process.

The breadth of the use of the ERPS can be a moderating factor in the relationship between manager's perception of the accounting information system quality and the effectiveness of the decision-making process.

There was no difference between the perceptions of the different department managers regarding the accounting information systems quality and the effectiveness of the decision-making process on the breadth of the use of the ERPS.

As the results of testing the outer model, the breadth of the use of the ERPS, can be measured with the capability concept proposed by Karimi et al. (2007) The level of usage can be seen from the wide range of systems using either functional or geographic systems. Therefore, the concept of information system capabilities can be used in future studies related to information systems.

Measurement of the accounting information system's quality in this study followed the theory of Information Systems (IS) Success. The effectiveness of the accounting information system can be assessed by user satisfaction in processing task, storing, and disseminating information that can be used for decision making. Therefore the theory of Information Systems (IS) Success can be used in the literature related to accounting information systems especially in data processing and the utilization of information due to the information system implementation.

This study has not used the random sampling data because there is no information indicating the number and names of companies that have officially used the ERPS. To overcome the difficulties experienced in the data collection with the company as unit of analysis, further research can be performed with the user ERPS as the unit of analysis. This is done to get an breadth idea of the benefits from the end user to the intended use of the system.

This study has used a survey method, so that more in-depth information about the perceptions of the respondents have not been not obtained. For future research it is necessary to use other methods to explore a more detailed picture of the overall benefits from the level of the use of the ERPS.

Future research will also need to accommodate the differences in the time of assessment of the effectiveness of the implementation of decisions reached due to the implementation of ERPS. In addition, information about the benefits of accounting have also been associated with the firm's performance improvement.

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