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QUALITY OF ACCOUNTING INFORMATION SYSTEMS AS AN AGENCY THEORY PROBLEM ON STATE-OWNED ENTERPRISES IN INDONESIA

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Abstract
This research aims to prove the effect of information technology implementation and top management support on the quality of accounting information systems as one solution to the problem of agency theory, which is measured through the level of information technology implementation activities and top management support to suppress information asymmetry. Data were analyzed using the Structural Equation Model (SEM) method from a questionnaire given to 106 States Own Enterprises. There are 3 respondents in each enterprise so the total respondents are 318 people. 280 questionnaires were returned and could be processed (response rate of 88%). The results showed that the application of information technology and top management support had a positive effect on the quality of accounting information systems. The better the support of top management, the better the quality of accounting information systems. Furthermore, partially and simultaneously the implementation of information technology and top management support play an important role in improving the quality of accounting information systems, as well as in helping to solve agency problems.
Keywords*: Agency theory; Implementation of information technology; Quality of accounting information systems; Top management support*

Abstrak
Penelitian ini bertujuan untuk membuktikan pengaruh penerapan teknologi informasi dan dukungan manajemen puncak terhadap kualitas sistem informasi akuntansi sebagai salah satu solusi permasalahan teori keagenan, yang diukur melalui tingkat aktivitas implementasi teknologi informasi dan dukungan manajemen puncak untuk menekan asimetri informasi. Data dianalisis menggunakan metode Structural Equation Model (SEM) dari kuesioner yang diberikan kepada 106 BUMN. Pada masing-masing BUMN terdapat 3 orang responden sehingga total responden berjumlah 318 orang. Dari jumlah tersebut, kuesioner kembali dan dapat diolah sebanyak 280 kuesioner (response rate sebesar 88%). Hasil penelitian menunjukkan bahwa penerapan teknologi informasi dan dukungan manajemen puncak berpengaruh positif terhadap kualitas sistem informasi akuntansi. Semakin baik dukungan manajemen puncak, semakin baik kualitas sistem informasi akuntansi. Selanjutnya, secara parsial dan simultan penerapan teknologi informasi dan dukungan manajemen puncak berperan penting dalam peningkatan kualitas sistem informasi akuntansi, serta dalam membantu menyelesaikan masalah keagenan.
Kata Kunci: Dukungan manajemen puncak; Kualitas sistem informasi akuntansi; Penerapan teknologi informasi; Teori agensi

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INTRODUCTION

The main objective of State-Owned Enterprises (SOE) establishment is based on Law No.19, 2003, where BUMN is expected to be able to contribute to the development of the national economy, increase economic growth by positioning themselves as development agents and gain profits to meet state revenue to realize public welfare. But until now there are still many obstacles faced by SOE companies in realizing this goal. Information asymmetry and conflicting goals between the *principal* (Ministry of BUMN) and *agents* (company management) are common conditions. This is a source of inefficiency in many BUMN, reducing performance which in turn results in lower profits compared to capital invested, even in some BUMNs experiencing losses.

High government intervention and political lobbying often occur in determining SOE commissioners and directors (Umah, 2019). This has caused the tendency of SOE commissioners and directors to be chosen not based on professionalism and *track records* but based on emotional relations and compensation. As a result, several commissioners and directors of BUMN prioritize the emotional connection rather than concentrate on the company's performance. This condition encourages a conflict of interest due to the unequal goals between the principal and the agent. Management as an agent ultimately tends to act out of line with the interests of the owner, but tends to take action that is more beneficial to the emotional relationship in various ways such as deliberately hiding some information commonly referred to as earnings management and reinforcing agency theory. Messier & Glover (2008) states that agency problems arise in the form of information asymmetry, where management, in general, has more information about the actual financial position and operating position of the company than the owner.

High government intervention in the management of BUMN raises agency problems and consequently will affect company performance. Wong (2004) states that the majority of BUMN in developing countries have weaknesses in governance, which is caused by government intervention in the management of BUMN which is quite high. While Hunt & Hogler (1990) state that government intervention in work must be minimized and individual contractual arrangements are a superior way to resolve organizational conflicts. Political intervention and lobbying eventually led to opportunism, as did the directors of PT Garuda (Persero) Tbk. in 2018 by engineering financial statements (window dressing). This action forced the Financial Supervisory Agency (BPK-RI) to Garuda's directors for restatement for the presentation of the 2018 financial statements (Indonesia, 2019).

The issue of transparency and accountability is also a serious problem in BUMN. Yahya (2017) found that up to 2017 there were 52 State-Owned Enterprises (BUMN) that have yet to implement a disclosure-based website. Even the Minister of State-Owned Enterprises (BUMN), Erik Thohir in 2019 said that accounting engineering or window dressing is a crime. He found that several state-owned companies carrying out such actions. He said this condition occurs because BUMN wants to show positive performance to get bonuses. Some manipulate the finances to issue debt securities. Then, the funds obtained are used for non-credible investments (Setyowati, 2020). This shows that information asymmetry is still ongoing and the role of governance is still low in some BUMN. Weaknesses in terms of governance make the performance of several BUMN uncompetitive, so an effort is needed to improve company performance through the application of good corporate governance (GCG) principles (Kaihatu, 2006).

GCG is a set of rules that establish the relationship between shareholders, management, creditors, government, employees, and other internal and external stakeholders concerning their rights and obligations, or in other words the system that directs and controls the company (Forum for Corporate Governance in Indonesia, 2001). Watts Ross L. (2003) states the principles of GCG namely transparency, accountability, fairness, and responsibility. Whereas Savin (2014) states that corporate governance and accounting normalization have succeeded in becoming an important, complete and consistent tool in controlling the entity's economic activities, as well as measuring the overall performance of the company. Even Qianqian (2014) states the quality of accounting information has a direct impact on corporate governance and the disclosure of accounting information which is a solution to the problem of information asymmetry.

The problem is that some BUMNs have not been able to provide quality accounting information. This is because accounting information systems are not yet integrated and only some are ready to be integrated. In line with that Siregar (2017) states the source of inefficiency in BUMN lies in the use of technology that is not yet optimal, thus encouraging the Ministry of BUMN to instruct all ranks of the Directors of BUMN so that an integrated accounting information system and SAK-based immediately implemented in all BUMN as outlined in the (Indonesia, 2015). On the other hand, one of the key dimensions of a quality accounting information system is integration, this is supported by several previous studies such as Nelson, Todd, & Wixom (2014) stating that a quality accounting information system is an information system that has characteristics, can be accessed, reliable, responded quickly, flexibly and integrated, Bhatt (2000) stated that the integration of information systems significantly contributed to the improvement of the company's overall business processes, while Rom & Rohde (2007) stated that integration seemed to be a key characteristic of information systems.

Factors that can reduce problems in implementing a high-quality accounting information system are the optimal use of information technology and the support of high top management. Saser & Oluis (2013) stated that information technology automatically also influences the quality of accounting information systems through the ease of operation of accounting information systems, as stated by Mulyani S. (2014) so that the information system managed can be better and more beneficial if in its management process can utilize information technology. Likewise, Ragu-Nathan et al. (2004) state that top management support is the level of top management's understanding of the importance of the functioning of the system and the extent of its involvement in information system activities, similarly stated by Xu (2015) states that top management support or commitment is the most important which influences the quality of accounting information system data, even Nwakanma et al. (2013) states that there is a significant impact of top management support on the quality of accounting information systems through the successful implementation of information technology projects. This was supported by Kuraesin, Yadiati, Sueb, & Fitrijanti (2019) top management support influences the quality of accounting information systems and impacts the quality of accounting information.

The real conditions related to the quality of accounting information systems are as follows: 1) Some BUMN in Indonesia have not been able to provide good financial reports under applicable financial reporting standards and reporting systems that have not been integrated, 2) Found several problematic documents in BUMN and the biggest obstacle in the

management of several BUMN in Indonesia today, including due to incorrect administration and posting of books.

These two factors cause the low quality of SOE accounting information systems.

Optimizing information technology implementation and top management support is believed to solve this problem. Ghasemi, Shafeiepour, Aslani, & Barvayeh (2011) state that information technology influences accounting information systems. Similarly expressed by Klovienė & Gimzauskiene (2015) states a similar and comprehensive view of the role of IT that can make the use of accounting systems effective and simultaneously can be a starting point in an effective decision-making process. Even Fitriati & Mulyani (2015) stated the quality of data and the quality of the implementation of accounting information systems require high top management commitment. While the results of other studies related to top management support conducted by Young & Jordan (2008) found that top management support is an important factor for the quality of an accounting information system. Even Schroeder et al. (2011) argue that top management support is the key to the successful implementation of an information system. This is supported by the results of research Al-Hiyari et al. (2013) state that top management must support the implementation of accounting information systems to get the full benefit of the accounting information system. While Mulyani et al. (2020) stated that top management support had a significant effect on the quality of the system. This research is an important contribution to improve the quality of accounting information systems, the implementation of information technology, and the support of Indonesia's top SOE management as a solution to agency problems in suppressing information asymmetry and conflicts of interest between management and principals to increase the trust of stakeholders and ultimately improve performance.

Based on theoretically and empirically phenomena described previously, it becomes a question for all of us, whether, with the better implementation of information technology and top management support, the quality of the accounting information system will be better, so that agency theory problems will also be suppressed or minimized. To answer this question, it is important to conduct this research to examine the effect of the implementation of information technology and top management support on the quality of accounting information systems as a solution to the agency theory problem.

In conducting a literature review, both from reading some journals and other dissertations, the author has never seen the title and overall model of the research is the same as this research. In addition, this study uses SEM (Structural Equation Modeling) analysis, which so far is the best because it can measure the extent to which variables and indicators make up the variables studied.

This research is important because many BUMN have not implemented the principles of good corporate governance (GCG). One of the reasons is that many BUMN does not yet have and implement an integrated accounting information system (Wonsono, 2014). This is also added by the fact that one of the sources of inefficiency in BUMN lies in the use of technology that is not yet optimal (Siregar, 2017) and the quality of human resources is still homework for BUMN. The scope of HR is arguably uneven, and quality human resources are still in a small number of BUMN (Basith, 2017). Based on these phenomena, it is important to research to encourage every BUMN to be able to produce an integrated accounting information system to achieve GCG.

There are some contributions to this research. First, the results of this study can

be used as consideration for BUMN in implementing accounting information systems in particular and integrated information systems in general. Second, this research can contribute to solving problems related to information asymmetry that arises through the implementation of accounting information systems in BUMN. As well as consideration for managers in controlling the performance of AIS and HR as well as selecting the right information technology to suppress the existing agency theory problem. Third, the results of this study are closely related to the performance of each management related to the implementation of the accounting information system. Fourth, the results of this study can add, expand, and deepen knowledge about the quality of accounting information systems that are influenced by information technology and top management support to suppress agency theory problems.

LITERATURE REVIEW

Agency Theory

Agency Theory originated from the separation of company control which resulted in conflicts between agents and owners (*principals*). An agency relationship is defined as the relationship between one or more owners and agents to take action on behalf of the owner in the form of delegation of decision-making authority to the agent (Jensen & Meckling, 1976). Meanwhile, according to Jensen & Smith (1984), that agency theory is a concept that explains the contractual relationship between principals and agents. Kathleen (1989) agency theory adopts 2 (two) very important assumptions about agency relationships, first is the problem of information asymmetry, where agents have more information than the principle because the information is controlled by agents. The second problem is the goal conflict between principal and agent, which is a situation where the principal and agent have different goals from one another, therefore they have different action preferences.

Watts & Zimmerman (1990), the relationship between principals and agents is often determined by accounting numbers. This triggers agents to think about how accounting can be used as a means to maximize various interests and reduce information asymmetry. Even Namazi (2013) shows the importance of various information and especially accounting information, in building an efficient management control system that is building a management/accounting system that unites the planning and control system. Septriadi, Zarkasyi, Mulyani, & Sukmadilaga (2020) the utilization of management accounting information systems have a positive impact on the quality of information. Thus, Batkunde (2012) states one mechanism that is widely used and is expected to align the principal objectives and agents are through financial reporting mechanisms, similar this, Oliver & Verrecchia Robert (1991) and Ukago Kristianus (2004) state that financial statements submitted on time will reduce information asymmetry.

In addition to the time issue of the integrated financial model (important issues in finance and the use of accounting information) can provide economic significance when formulating financial strategies to reduce agency problems and maximize company value (Arifa, 2017). Mulyani, Kasim, & Sudrajat (2017) also found that a quality accounting information system can have an impact on the quality of financial statements and company performance. This is confirmed by the research Jongjaroenkamol & Laux (2017) state that the quality of accounting information determines financial reporting. Likewise, De Franco, Kothari, & Verdi (2011) states that financial reporting measures are needed to determine and estimate a favorable accounting system that will be used. Even Qianqian (2014) states the quality of accounting information

has a direct impact on corporate governance and the disclosure of accounting information is the solution to the problem of information asymmetry. This research seeks to solve agency problems (information asymmetry) through the implementation of a quality accounting information system.

Information Technology

Thompson & Cats-Baril (2003) defines information technology as a term used to express a broader understanding of computer and communication devices. Ghasemi et al. (2011) state that information technology is a field of technology management that includes processes, computer software, information systems, computer hardware, programming languages, and data construction, in short anything that makes data, information, or knowledge perceived in a visual format through a multimedia distribution mechanism. Similarly, Lim (2013) argues that information technology is the application of computers and telecommunications equipment to store, retrieve, send and manipulate information data, or knowledge in any visual format through the mechanism of multimedia distribution. This study implements several dimensions developed by Blanton, Watson, & Moody (1992); Thompson & Cats-Baril (2003); O'Brien & Marakas (2011). Dimensions are the effectiveness of information technology, efficiency of information technology, and *intelligence*.

Top Management Support

Top management support is management support for information systems refers to the extent to which top management understands the importance of information system functions and the extent to which it is involved in information system activities (Ragu-Nathan et al., 2004). While Kouser, Rana, & Shahzad (2011) state that top management support is top management's understanding of the function of information systems and their involvement in activities related to information systems. This support can take the form of control, involvement, and also the allocation of resources related to the implementation of information systems. Even Boonstra (2013) states that top management support is an important determinant of the success of information systems projects. This study implements several dimensions developed by Weber (1999); Kouser et al. (2011); Pathirage, Jayawardena, & Rajapaksha (2012). This study uses 4 dimensions, namely Planning, Organizing, Directing, and Supervising.

Accounting Information Systems

Petter & Mclean (2009) state that the quality of an information system is the performance of an information system that can be seen from its reliability, convenience, ease of use, function, and other measures. While Pornpandejwittaya (2012) uses the term success to describe the successful application of accounting information systems in areas of concern to the organization, widely used by one or more satisfied users, and improve the quality of their performance. Research by Uskara, Mulyani, Bahrullah, & Sudrajat, (2019) shows that internal control and competence are the main factors in the development of accounting information systems that will ultimately produce quality accounting information. Even Saser & Oluis (2013) the quality of accounting information systems are used to show the integration of various components of accounting information systems, namely: *hardware, software, Brainware, telecommunications networks,* and *database* quality, as well as *the quality of work* and *satisfaction of users*. Similarly, Mulyani, S. (2014) defines accounting information systems as a collection of information technology-based structures and procedures that work together intending to convert financial data into financial information that is useful for

stakeholders. This research implements several dimensions developed by Negash, Ryan, & Igbaria (2003); Nelson et al. (2014); Petter & Mclean (2009); Stair & Reynolds (2010); Delone & Mclean (2014). This study uses 5 dimensions, namely *Flexibility, Ease of use, Response time, Reliability*, and *Integration.*

Research Hypothesis

Innovation diffusion of theory from Rogers (2003) states that technology is a form of innovation that will support the improvement of an organization's performance, including the performance of an information system. In line with the innovation diffusion theory, Laudon and Laudon (2014) also support this statement and argue that information technology is an infrastructure that supports a company's business and information systems strategy, so that the latest information technology has a strong impact on business strategy. Bodnar and Hoopwood (2006) state that information systems cannot be separated from the use of information technology to provide information for users.

Some research results also support the Innovation diffusion of Theory that the influence of information technology on the quality of accounting information systems. According Al-Eqab & Ismail (2011) who researched 260 companies listed on the Amman Stock Exchange (ASE) find that information technology significantly influences the quality of accounting information systems. Even Saser & Oluis (2013) who conducted research from 2008 to 2012 on large and medium-sized companies in Croatia also found that information technology affects the quality of accounting information systems through the operation of accounting information systems, contributing to the preparation, processing, presentation, and delivery of information. accounting and also found that information technology significantly influences the quality of accounting information systems through the accuracy and timeliness of reporting accounting information. The results of Mulyani, Sudrajat, & Kasim (2017), show that quality financial reports are a major factor in the company's ability to survive. This is supported by Klovienė & Gimzauskiene (2015) finding that the role of IT can make the use of accounting systems effective and at the same time can be a starting point for effective decision-making processes. Based on these facts, the following hypothesis is formulated:

H1: Implementation of information technology will be able to improve the quality of accounting information systems.

The leadership theory proposed by Day et al (2004) states that top management support affects performance, including the performance of accounting information systems. In line with this theory, Weber (1999) states that top management must ensure that the information system functions are handled properly. Furthermore, O'Brien (2011) also states that the involvement of top management and users is the main key to a quality information system.

Several research results also support the Leadership theory that top management support affects the quality of accounting information systems. According to Young & Jordan (2008) who researched the Australian national standard-setting body, where a particular working group (IT-30) was established to focus on the management of information technology projects with representatives from 49 industrial organizations consisting of 170 information systems practitioners, representatives industry and academia found that the success of project quality accounting information systems was almost completely determined and influenced by top management support even top management support (TMS) was *criteria for success* the most important (CSF) for accounting information system implementation. Even Nwakanma et al.

(2013) who conducted a study of 120 IT experts in the private and public sectors in Nigeria found that there was a significant influence of support from top management on the successful implementation of information technology projects. The same thing was expressed by Xu (2015) found that the most important thing in the quality of accounting information system data is the commitment and support of top management. Based on these facts, the hypothesis proposed:

H2: Top management support has a positive effect on improving the quality of accounting information systems.

Rahayu (2012) states that the commitment or support of top management and data quality, together have an adequate influence on the accounting information system. In line with this, Hu et al, (2017) state that the success of implementing an accounting information system depends on information technology issues, but the other dimensions must be considered, such as the dimensions of people and organizations. Even Klovienėa and Gimzauskiene (2015) expressed the same and comprehensive view of the role of IT which can make use of accounting systems effectively. Moreover, it can be a starting point for an effective decision-making process. This is reinforced by Fani et al (2015) stating that the Sophistication of Information Technology and Top Management Support simultaneously affect the Performance of Accounting Information Systems. These studies are in line with the Innovation diffusion of Theory from Rogers (2003) which states that technology will support the improvement of information system performance and the Leadership theory proposed by Day et al (2004) that top management support affects information system performance. Based on these facts, there is the third hypothesis.

H3: Simultaneous implementation of information technology and top management support will improve the quality of accounting information systems in BUMN.

RESEARCH METHODOLOGY

Research Object

The object of research in this research is information technology, top management support, human resource competence, quality of accounting information systems, and quality of financial reports.

Research Method

This study uses descriptive and causal-explanatory methods by testing the hypothesis.

Research Variables Operationalization

Operationalization of variables presents measurements to be observed consisting of elements of variables, dimensions, and indicators. Operationalization of variables in this study consisted of 3 variables, 12 dimensions, and 33 indicators with the following details.

Table 1. Variable Operationalization

Variable	Dimension		Indicator	Item
Information	Information	1	*Perceived of effectiveness*	1
Technology	Technology	2	*Utilization of IT support*	2
Implementation	Effectivity	3	*Effectivity*	3
(X1)		4	*Functionality*	4
	Information	1	*Efficiency*	5
	Technology	2	*Economic*	6
	Efficiency	3	*Ease of use*	7
		4	*Compatibility*	8
	Maintainability	1	*Availability of IT Support*	9
		2	*Maintainability*	10
Top	Planning	1	*Management involvement in determining the*	11

Variable	Dimension		Indicator	Item
Management Support (X2)			*vision of an information system*	
		2	*Management involvement in determining information system requirements*	12
		3	*Management involvement in determining information system performance indicators*	13
	Organizing	1	*management involvement in the selection of information technology*	14
		2	*management involvement in the provision of human resources*	15
		3	*management involvement in training and development of staff/employees related to information systems*	16
	Briefing	1	*Management involvement in motivating information systems personnel*	17
		2	*Management involvement in communicating with personnel-related to information systems*	18
		3	*Management involvement in the improvement of information systems*	19
		4	*Management involvement in solving problems related to information systems*	20
	Monitoring	1	*Management involvement in information system control*	21
		2	*Management involvement in information system performance appraisal*	22
Accounting information system Quality (Y)	*Flexibility*	1	*Can be customized according to user requirements*	28
		2	*Can adapt to changing environmental conditions*	29
	Ease of use	1	*Ease of operation of information systems*	30
		2	*Ease of learning information systems*	31
	Response Time	1	*Information systems can respond quickly to the need for information*	32
		2	*Timeliness of information systems in generating information*	33
	Reliability	1	*The stability of the information system in operation*	34
		2	*Information system accuracy in generating information*	35
	Integration	1	*Linkages between sub-systems*	36
		2	*Cooperation between sub-systems*	37
		3	*Centralized information system*	38

Population, Target Population, Frame Sample, and Sample

In this study, the population is 115 state-owned companies. The sample in this study was designed (sample design) using a probability sampling approach, involving a simple random sampling technique. Using this technique, the sample size is calculated from the population and sample table proposed by Krejcie Robert V. and Morgan Daryle W. (1970). The figures displayed by Krejcie & Morgan in the table for determining the number of samples for a certain population use the following formula:

$$s = \frac{\chi^2 NP(1-P)}{d^2(N-1) + \chi^2 P(1-P)}$$

Information: s = required sample size; χ^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841); N = the population size; P = the population proportion (assumed to be .50 since this would provide the maximum sample size); d = the degree of accuracy expressed as a proportion (,05).

The results of the calculation of the formula Krejcie and Morgan (1970) in Sekaran and Bougie (2013) with a significance level of 95%, the minimum sample size with a population of 115 in this study was 88 samples.

Sources and Methods of Data Collection

This research can be regarded as survey research because the measurement process used to collect information uses structured interviews. The measurement scale of the questionnaire used in this study was the semantic differential (Charles Osgood) consisting of 7 questions from strongly agree to strongly agree. This research questionnaire was distributed by going directly to the respondent group (meeting, face to face, interview), through delivery services, and via electronic mail. The questionnaires were distributed by state-owned companies with each receiving 3 sets of questionnaires for 3 respondents.

Data analysis method

The method used in this research uses quantitative concepts. Activities in data analysis consist of: (1) classifying data based on variables and types of respondents, (2) tabulating data based on variables from all respondents, (3) presenting data for each variable studied, and (4) performing calculations to test hypotheses that have been determined. previously submitted. Hypothesis testing used the Structural Equation Model (SEM) and the Linear Structural Relationship (LISREL) approach.

RESULTS

Questionnaires were distributed directly to the respondent (meeting, face-to-face, interviews), through delivery services, and via electronic mail, which took four months from August 2019 to November 2019. One of the reasons is the widespread demographic conditions, where the headquarters of BUMN are spread throughout Indonesia. Another difficulty in gathering data for this study is the existence of a relatively high bureaucratic and busyness path from the respondents as well as the majority of respondents who ask for explanations related to this research, so the researcher must ensure the respondent's understanding is consistent with the research objectives. Of the 318 questionnaires distributed, only 280 questionnaires were collected and processed (88% response rate). Demographics of respondents in this study were distributed based on gender, age, education, and work experience, as seen in Table 2.

Table 2. Respondent Characteristic

Characteristic	Frequency	Percentage
Gender		
Male	227	81
Female	53	19
Study Background		
Accounting	93	33
Econ-Non-	77	28

Accounting Information Technology Others	48	17
	62	22
Educational Stage		
Diploma	11	4
Bachelor	144	51
Master	117	42
Doctoral	8	3
Working Time		
1-5 years	61	22
6-10 years	45	16
11-15 years	42	15
> 15 years	132	47

All indicators used have a standard loading factor (SFL) > 0,50. This value is significant and shows all valid indicators. Reliability is measured using Construct Reliability (CR) with a value of more than 0,70; which means that the indicator is reliable, and the Variance Extracted (VE) score is above 0,5; which shows that the research instrument is valid and reliable. While the results of the *Goodness of Fit Index* (GOFI) testing in research are higher than 0,90 which means that the model to be tested is suitable so that the research model can be accepted and the study can proceed to the hypothesis testing stage. Furthermore, the hypothesis is tested using the *Structural Equation Model,* which is to test the statistical significance of the coefficients based on the standard level of significance (usually α = 0,05). Hypothesis results and path coefficient tests are shown in Figure 1 and summarized in Table 3 (Current significance level).

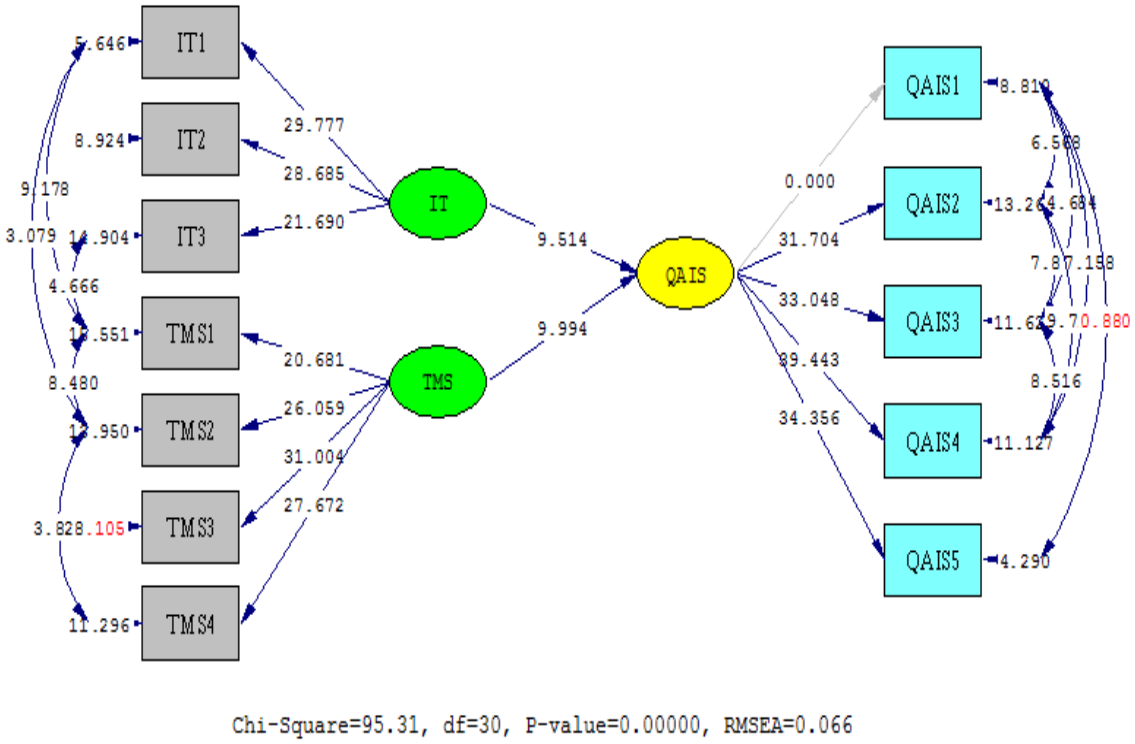

Figure 1. Path Coefficient Test (Full Model)
Source: Processing data using Lisrel (2021)

Table 3. Hypothesis Test Results

Hypothesis	Path Coefficient	T-value	Conclusion
IT ---> QAIS	0,436	9,514 ≥ 1,65	Accepted H1
TMS--->QAIS	0,462	9,994 ≥ 1,65	Accepted H2

Source: Processing data using Lisrel (2021)

The level of implementation of information technology (IT) leads to improving the quality of accounting information systems (QAIS) in BUMN. The test results in table 1 show that the hypothesis (H1) was accepted. The path coefficient value of 0,436 means that IT has a positive effect of 43,6% in increasing KSIA, while the rest is influenced by other factors. Top management support (TMS) has a positive effect on the quality of accounting information systems (QAIS). The test results in table 4 show the hypothesis (H2) is accepted. The coefficient of 0,462 means that TMS affects QAIS by 46,2%, while the remaining 53,8% is influenced by other factors.

To prove the effect of simultaneous implementation of information technology and top management support on the quality of accounting information systems. The following are the results of the simultaneous test (Test F) through the statistical hypothesis as follows:

Simultaneous testing is based on the calculated F value obtained from the calculation of the following formula:

$$F = \frac{(n-k-1)R^2}{k(1-R^2)}$$

In this research model, there are two independent variables namely Information Technology Implementation and Top Management Support, so that k = 2 with a sample size of n = 500 (*Bootstrapping*). Furthermore, the coefficient of determination R^2 was obtained from the calculation process by 0,542 to obtain the F test statistic calculated as follows:

$$F = \frac{(500-2-1)0,717}{2(1-0,717)}$$

$$F = \frac{356,349}{0,566} = 629,592$$

The calculation results obtained calculated F value of = 629,592 > F-table = 3,014 so it can be concluded that the null hypothesis is rejected and H3 is accepted. Then it was concluded that the implementation of information technology and Top Management Support simultaneously had a positive and significant effect on the quality of the accounting information system.

DISCUSSION

The effect of the implementation of information technology on the quality of accounting information systems in BUMN is in line with research by Al-Eqab & Ismail (2011) finding that the sophistication of information technology significantly influences the quality of accounting information systems. This was confirmed by Saser & Oluis (2013) who conducted research from 2008 to 2012 on large and medium-sized companies in Croatia also found that information technology affects the quality of accounting information systems through the operation of accounting information systems. The same opinion of Klovienė & Gimzauskiene (2015) states the same and comprehensive view of the role of IT that can make the use of accounting systems effective, and at the same time can be a starting point for effective decision-making processes. Thus Hu et al. (2017) state the successful application of accounting information systems depends on information technology issues, but other dimensions must be considered, such as the dimensions of people and organizations.

The findings of this study support the agency theory to reduce information asymmetry between agents and *principles* through disclosure of accounting information based on quality accounting information systems. One effort to realize a quality accounting information system through the implementation or optimal use of information technology. Facts on the ground show that there are still many BUMN that have not optimized the use of information technology related to the implementation of a high-quality

accounting information system, instead, some BUMN still use IT. But overall SOE companies have used information technology quite optimally. This proves that the implementation of high information technology will raise the level of quality of accounting information systems because the role of information technology can make the use of accounting systems effective and at the same time can be a starting point for effective decision-making processes (Klovienė & Gimzauskiene, 2015).

Besides the implementation of information technology, empirical facts show that top management support is also able to improve the quality of accounting information systems. Day et al (2004) stated that top management support affects performance, including the performance of accounting information systems. In line with this theory, O'Brien (2011) also states that the involvement of top management and users is the main key to a quality information system. This matter is in line with research Studer M (2005) stated the influence of top management support on the quality of accounting information systems through the effectiveness of information system implementation. Even Nwakanma et al. (2013) who conducted a study of 120 IT experts in the private and public sector in Nigeria found that there was a significant support effect from top management on the successful implementation of information technology projects. The same thing stated Xu (2015) the most important thing in the quality of accounting information system data is the commitment and support of top management.

Other efforts to disclose accounting information based on quality accounting information systems, through the support of top management. Facts on the ground show that there are still some BUMN whose top management support has not been optimal towards the implementation of accounting information systems, this is due to various interests. But overall the support of top management of SOE companies is quite good. This proves that high top management support will raise the level of quality of accounting information systems because top management support is the key to success in implementing an information system (Schroeder et al., 2011).

The results of this study also revealed that the two independent variables, the implementation of information technology and top management support if used together or simultaneously can improve the quality of accounting information systems as a solution to suppress information asymmetry that occurs in BUMN. This is in line with research by Rahayu (2012) the commitment or support of top management and information technology represented by the shared data quality dimension has sufficient influence on the accounting information system.

CONCLUSIONS AND SUGGESTIONS

Conclusion

The results showed that the implementation of information technology had a positive effect on the quality of accounting information systems. The implication of this research is to realize a quality accounting information system, an IT master plan is needed (as a form of IT governance) which is implemented optimally and appropriately, adjusted to the background of the company's vision and mission to ensure the alignment of the accounting information system with business objectives and strategic policies. company.

Top management support has a positive effect on the quality of accounting information systems. The implication of this research is to realize a quality accounting information system, directors and managers are expected to be more sensitive and able to provide solutions related to the problems faced in implementing accounting information

systems, to be actively involved in designing and formulating performance indicators of accounting information systems, ensuring information system requirements. adequate accounting, participate in controlling and supervising the implementation of the accounting information system, to ensure the interrelationships between sub-systems are maintained (integrated) and at the same time assist management in making decisions in a fast, precise, and quality time.

Suggestion

There are some study limitations. First, this research only focuses on state-owned companies in Indonesia. Second, this research has not revealed all the variables that affect the quality of the accounting information system of state-owned companies. For this reason, future research is expected to examine other variables, such as organizational culture, leadership style, and other variables. To fulfill the characteristics of scientific research, the results of testing this hypothesis must be used as a basis by subsequent researchers by using the same research method at different units of analysis and at different times by using a larger sample population.

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