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MANAGEMENT SUPPORT, IT RISK MANAGEMENT, AND
ORGANIZATIONAL CULTURE ON IT GOVERNANCE AND ITS IMPACT
ON COMPANY PERFORMANCE

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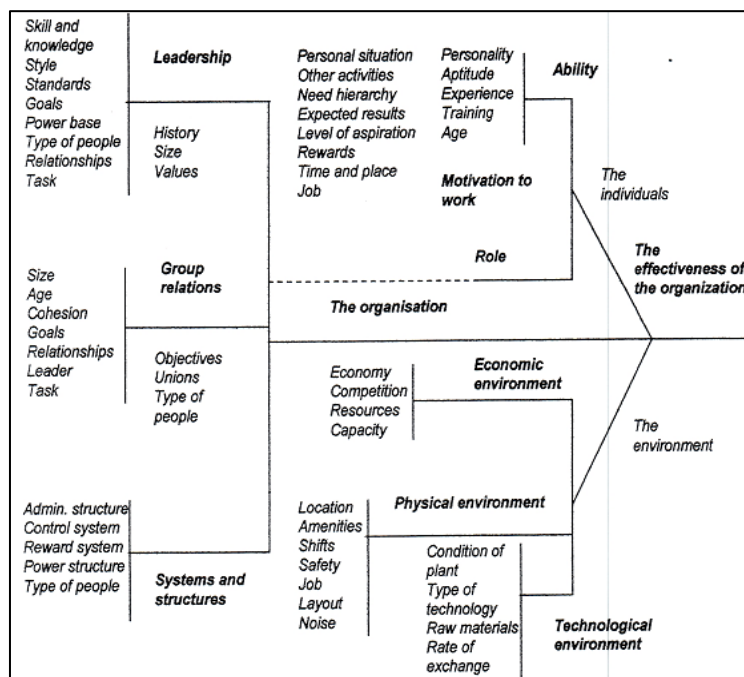
Abstract

This study aims to examine the effect of support of the senior manager, information technology risk management, and organizational culture on the effectiveness of information technology governance and its impact on company performance at PT. Bank Mandiri (persero). With the advance of information technology, its utilization continues to increase over time. The realization that seeps into the IT business environment and its vitality for the survival of the company have put the IT on the agenda of the executive board. It is recognized that the information infrastructure can effectively and efficiently increase shareholder value. The object of this research is PT. Bank Mandiri (Persero) branch of Metro Tanah Abang. The method of analysis used is Structural Equation Modelling (SEM). The results showed that (1) Support of Senior Manager has a positive and significant effect on the effectiveness of IT Governance, (2) IT Risk Management has a positive and significant effect on the effectiveness of IT Governance, (3) Organizational culture has a positive and significant effect on the effectiveness of IT Governance and (4) Effectiveness of IT Governance has a positive and significant effect on the Company Performance.

INTRODUCTION

The realization that seeps into the IT business environment and its vitality for the survival of the company have put the IT on the agenda of the executive board. It is recognized that the information infrastructure can effectively and efficiently increase shareholder value. In fact, IT failure can

affect the image and reputation of the company connected to the economy of the enterprise (Sorongan & Nugroho, 2015). To ensure the appropriate implementation of the IT governance, it is very important for a company to determine the factors influencing the effectiveness of IT governance. The organizations with ineffective IT governance will result in a variety of things such as inaccurate information quality, inefficient operation cost, inefficient IT project cost (larger than the budget and underspecification), loss of competitiveness, and the malfunctioning of the IT department at a company (Ali & Green, 2012; Mullins, 2015).



Source: Mullins (2015).

Figure 1. The Effectiveness of the Organization

Cybercrime is the development of computer crime. Indonesia, as one of the countries with the densest population in the world, is not out of the question either. Indonesia accounts for 2.4% of cybercrime in the world. This figure increases by 1.7% compared to 2014 and where Indonesia was ranked 28. In fact, it is not caused by the increasing number of Internet users in Indonesia (Arifah, 2011). The use of information technology in banking operations face risks. There have been various problems occurred in the application of computer applications in banking. As an example, as reported in Kompas newspaper, there was customer loss due to ATM crime in four banks in Indonesia. The loss is estimated to reach IDR 5 billion. In addition, there is the threat of another risk of the use of information technology in banking, especially crime via the internet. Indonesia ranks second after Ukraine in the activity of a credit card burglary and destruction of computer networks by other parties (Wijaya, 2014).

To generate the governance of information technology (IT) optimally, the support of senior managers with good leadership pattern is needed. The role of senior management (top manager), which is the part of the board of directors, is one of the factors which influences the effectiveness of IT governance. The support from top management has to be recognized as an

important factor in achieving a higher level of IT governance. According to the IT Governance Institute (ITGI) (2007), the role of top management would be helpful to understand the regulations and ethics associated with the use of IT for an organization or company. Senior managers can facilitate organizational change and diffusion of information technology by identifying new technologies, value, benefits and the potential for the company. This can be achieved through behavior that leads to change. Famous change management theory focuses on vision, alignment, empowerment and strong leadership. It is important for leaders to follow certain steps when managing change.

In addition to the role of leader or senior manager, the organization's success in achieving its objectives included in the governance of information technology (IT) is also influenced by the culture within the organization. An organizational culture is a phenomenon that is abstract but it is believed to have a considerable influence on the effectiveness of the organization (Chappell, 2010). Culture, in this regard, includes the values namely, a tendency of managerial and leadership patterns, language and symbols, procedures and routines within the organization and the definition of success in the organization. Ali and Green (2012) state that the right company culture will give at least two (2) advantages. First, it increases the awareness to always ask questions when dealing with a problem, so that every action begins with sharing the management. Second, it affects the employees to be willing to report violations to management, so it will contribute to a much better company's decision (Ali & Green, 2012).

Based on the explanation above, the research questions in this study are as follows: 1) Does support of senior managers have an effect on the effectiveness of information technology governance at PT. Bank Mandiri (Persero)?; 2) Does IT risk management have an effect on the effectiveness of information technology governance at PT. Bank Mandiri (Persero)?; 3) Does organizational culture have an effect on the effectiveness of IT governance at PT. Bank Mandiri (Persero)?; 4) Does the effectiveness of IT governance have an effect on the company performance at PT. Bank Mandiri (Persero)?; 5) How much is the contribution of support of senior managers, IT risk management and organizational culture to information technology governance and company performance at PT. Bank Mandiri (Persero)?

LITERATURE REVIEW

Information Technology Governance

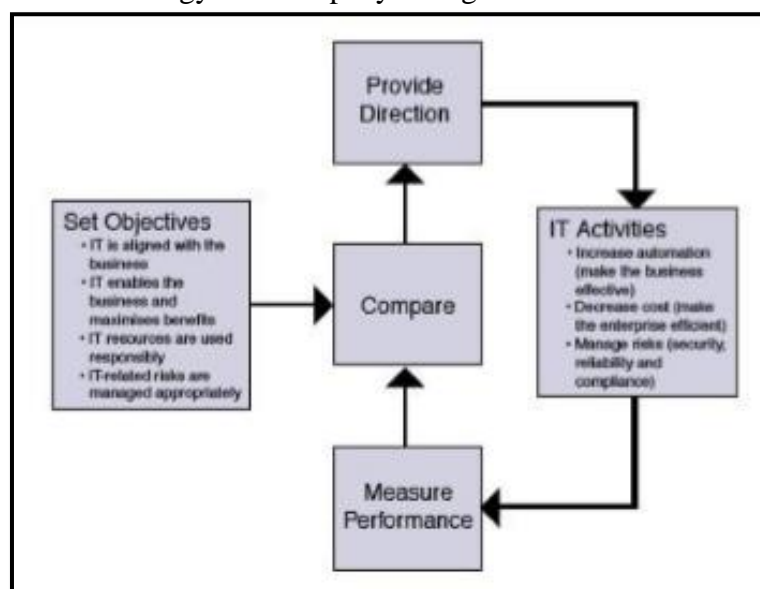
According to Van Grembergen, IT Governance is the capacity of the organization as the responsibility of directors, executive management, and management of information technology to control the formulation and implementation of information technology strategy to ensure the disjointed information technology and business (Grembergen & Haes, 2009). IT Governance is to specify the rights in decision-making and accountability framework to encourage the realization of the things to expect in using IT (Weill & Ross, 2004).

Information Technology governance is an integrated part of enterprise governance success by increasing the effectiveness and efficiency of the processes. Information Technology governance provides the structure that

connects the Information Technology (IT), IT resources and information to the strategy and objectives of the company/institution.

Effectiveness of Information Technology Governance

According to Manik (2013), the effectiveness of the relationship exists between the output destinations. The greater the output contribution to the achievement of the goal is, the more effective the organization's programs and activities become. Based on the above definition of effectiveness, connecting it with the information technology governance, the definition of the effectiveness of information technology governance can be interpreted as a measure of achievement of the goals of an organization or company to take added value and competitiveness as advantage through the management of information technology. To achieve an effective governance of Information Technology, IT Governance Institute (ITGI) has developed a theory to achieve the effectiveness of the management of information technology in a company or organization as follows:



Source: ITGI (2007)

Figure 2. Effectiveness of IT Governance

Based on Figure 2, it is known that the effectiveness of information technology governance serves to provide assurance that the processes of managing IT value benefits, performance, risk levels, and configuration of assets are in accordance with the demands of the IT strategy of the organization.

Senior Managers and Support for Information Technology Governance

According to Manuliang (2008), a manager is a person who completes the works through other people because the manager cannot fully rely on his own ability to do the job. In addition, Griffin (2004) defines a manager as a person who makes planning, directing, organizing, delegating, controlling, evaluating and budgeting in order to achieve results. Thus, it can be interpreted that a manager is a person in charge to manage every activity of the company and ensure that the company's goals can be achieved.

The functions and duties related to the IT Governance are considered by senior managers as a determinant throughout the company's strategic policy, indicating that a successful implementation of IT requires senior managers to be visionary. Senior managers must support and articulate all the needs of IT within the context of the strategy, structure, and systems. Lee and Setiawan (2013) describe the roles of senior managers in the creation of the effectiveness of IT governance as follows: 1) Ensuring the availability of IT resources that can always support and guide the information system function; 2) Committing to help to integrate IT with the business of the company; 3) Ensuring continuity of IT investment over time to develop IT resources.

IT Risk Management Definition

Bank Indonesia (BI) defines risk management as a set of procedures and methodologies used to identify, measure, monitor and control risks arising from business activities of the bank (Bank Indonesia, 2003). Additionally, Tampubolon (2004) argues that risk management as a whole system of management and control of the risks faced by banks consists of a set of tools, techniques, and process management (including authority, systems, and operating procedures). Risk management is intended to maintain the level of profitability and the level of the health of banks established in the corporate plan or strategic plans which are in accordance with the applicable bank soundness.

In general, a developed enterprise risk management which is systematic and structured will ensure that there is no disruption in the activities of the organization for achieving vision, mission, and purpose. Not many organizations or companies address this issue seriously due to the lack of awareness and the overwhelming information. One of the characteristics of business is that it always deals with risks as well as information technologies.

Culture Organization Definition

Culture derives from the Sanskrit word *budhayah*, namely the form of "honor" or "reasonableness". Many people interpret culture in a limited or narrow sense, i.e. the mind and the work of humans which satisfy the desire for beauty, with only a limited art. However, culture could also be interpreted as an overall knowledge of humans as social beings used to understand the environment and experience and guide behavior.

Organizational culture can be defined as grade and work habit of all organization's members which are standardized and accepted as a standard of behavior in the context of the achievement of goals and results (Simamora, Jerry, & Hartono, 2016). These must be planned in advance. Organizational culture is the most important element in a company, essentially leading to behaviors that are considered proper, binding, and motivating individuals in it (Widyaningrum, 2011).

Research Framework

Starting from the identification of problems, we then tried to study the causal relationships of Support of Senior Manager, IT Risk Management, Organizational Culture, Effectiveness of IT Governance, and the Firm

Performance. The causal relationship between the independent variables and dependent variables can be described as follows:

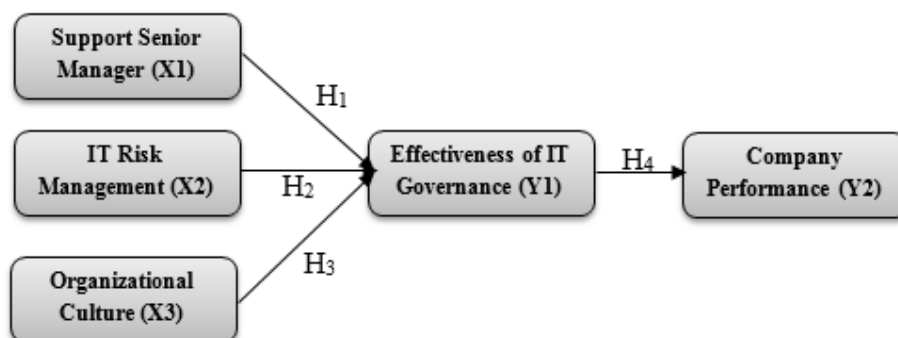


Figure 3. Research Framework

Hypothesis

Based on the description above, the hypotheses are as follows:

H.1. Support of Senior Manager has a positive and significant effect on the effectiveness of IT Governance

H.2. IT Risk Management has a positive and significant effect on the effectiveness of IT Governance

H.3. Organizational culture has a positive and significant effect on the effectiveness of IT Governance

H.4. Effectiveness of IT Governance has a positive and significant effect on the Company Performance

MATERIALS AND METHODS

Research Design

This research is an explanatory causal relationship research in the form of a survey, aimed at finding out the pattern of the causal relationship between the variables tested. The study design is a guideline that shows the steps that will be followed by us in conducting the research. The study design should be made systematically and logically so it can be used as a guideline which is easy to follow.

The research method of this explanation also aims to provide a picture/ description to generate construct on a phenomenon that is based on models of relationships derived from theoretical models. After the testing the hypothesis, we tested the relationship model to determine the relationship between several independent variables and the dependent variable.

Determination of Data Sources and Method

The population is a collection of individuals or objects of research that has the qualities and characteristics that have been set. Based on these characteristics, the population can be understood as a group of individuals or objects of observation that has at least one common characteristic (Hendryadi & Suryani, 2014). The population in this study are employees of PT. Bank Mandiri (Persero) branch of Metro Tanah Abang.

The sample is representative of the majority or the population studied. According to Ghazali (2013), the sample size for SEM analysis method is around 100 to 200 respondents, depending on the number of indicators used

in all latent variables. The number of sample is the number of indicators multiplied by 5 to 10. If there are 20 indicators, the sample size is around 100 to 200 respondents. This study uses 17 indicators, therefore the amount of sample needed is 170.

Data Analysis Technique

According to Ghazali (2013), there are seven steps that must be performed when using Structural Equation Model (SEM), namely:

1. Developing theory-based models
2. Developing the path diagram
3. Converting the flowchart to equation
4. Selecting the input matrix and estimation models
5. Determining the possibility of the emergence of problem identification
6. Performing evaluation criteria of goodness of fit
7. Interpreting and modifying the model

RESULTS AND DISCUSSIONS

Table 1. Research Results of Structural Equation Model

Effect between variables	C.R.	P-value
Effectiveness <--- Manager	2.306	0.021
Effectiveness <--- Risk	4.171	0.000
Effectiveness <--- Culture	6.181	0.000
Performance <--- Effectiveness	2.126	0.033

Based on the above table, the following is an explanation of the interpretation of the model mainly to answer hypothesis 1-4:

1. Support of Senior Manager has a positive and significant effect on the effectiveness of IT Governance. It is based on the value of C.R $2.306 \geq 1.96$ and P value of $0.021 \leq 0.05$ (Ghozali, 2013). Under these conditions, the hypothesis is “accepted”.
2. IT Risk Management has a positive and significant effect on the effectiveness of IT Governance. It is based on the value of C.R $4.171 \geq 1.96$ and P value of $0.000 \leq 0.05$ (Ghozali, 2013). Under these conditions, the hypothesis is “accepted”.
3. Organizational Culture has a positive and significant effect on the effectiveness of IT Governance. It is based on the value of C.R $6.181 \geq 1.96$ and P value of $0.000 \leq 0.05$ (Ghozali, 2013). Under these conditions, the hypothesis is “accepted”.
4. The effectiveness of IT Governance has a positive and significant effect on the Company performance. It is based on the value of C.R $2.126 \geq 1.96$ and P value of $0.033 \leq 0.05$ (Ghozali, 2013). Under these conditions, the hypothesis is “accepted”.

CONCLUSIONS

Summary

This study aims to analyze the effect of Support of Senior Manager, IT Risk Management, and Organizational Culture on the Effectiveness of IT

Governance and its impact on the Company Performance. After testing the effect through the structural equation, we concluded that: 1) Support of Senior Manager has a positive and significant effect on the effectiveness of IT Governance; 2) IT Risk Management has a positive and significant effect on the effectiveness of IT Governance; 3) Organizational Culture has a positive and significant effect on the effectiveness of IT Governance; 4) Effectiveness of IT Governance has a positive and significant effect on the Company Performance

Suggestion

Here are suggestions put forward based on the research results and conclusions in this study: 1) Based on this research, it is known that the Support of Senior Manager has a positive and significant effect on the effectiveness of IT Governance. Therefore, the role of Senior Manager in supporting the success of IT governance should be improved. In order to build a strong IT governance, stakeholders must provide effective business and IT strategies; 2) Based on this research, it is known that IT risk management has a positive and significant effect on the Effectiveness of IT Governance. Therefore, every IT decision should be collectively controlled so its implementation is in accordance with the planning and any harm which may appear can be avoided; 3) Based on this research, it is known that the organizational culture has a positive and significant effect on the effectiveness of IT Governance. Therefore, culture management is required to make employees aware of the organizational context which refers to the management of IT workers and the workplace where there are interactions between groups with different viewpoints; 4) Based on this research, it is known that the effectiveness of IT Governance has a positive and significant effect on the company performance. Therefore, it is suggested that the IT and the business environment are very important for the survival of the company. It is recognized that the information infrastructure can effectively and efficiently increase shareholder value. Whereas IT failure can affect the image and reputation of the company, connected to the economy of the enterprise.

REFERENCES

- Ali, S. & Green, P.(2012). Effective Information Technology (IT) Governance Mechanism: An IT Outsourcing Perspective. *Information Systems Frontiers*, 14(2), 179–193.
- Arifah, D. A. (2011). Kasus *Cybercrime* Di Indonesia. *Jurnal Bisnis dan Ekonomi*,18(2), 185 – 195.
- Bank Indonesia. (2003). *Penerapan Manajemen Risiko Bagi Bank Umum*,PBI No: 5/8/PBI/2003, LN No. 56 Tahun 2003. Jakarta: Peraturan Bank Indonesia.
- Chappell, D. (2010). *Application Lifecycle Management And Business Strategy*.Chappell & Associates, White Paper.
- Ghozali, I. (2013). *Model Persamaan Struktural Konsep & Analisis Dengan Program AMOS 21*. Semarang: UNDIP Press.

- Grembergen, W. V., & Haes, S. D. (2009). *Enterprise Governance of Information Technology*. New York, NY: Springer.
- Griffin, W. R. (2004). *Manajemen*. Jakarta: Erlangga.
- Hendryadi & Suryani. (2014). *Structural Equation Modelling Dengan LISREL 8.80*. Yogyakarta: Kaukaba Dipantara.
- IT Governance Institute (ITGI). (2007). *Management Guidelines*. COBIT 3rd Edition, Retrieved 26 March 2015 from <http://www.isaca.org>.
- Lee, S. D. & Setiawan, A. B. (2013). Information Technology Governance: The Effectiveness In Banking Sector. *The Proceedings of The 7th ICTS*, Bali. Retrieved from http://icts.if.its.ac.id/openaccess/2013/files/PP_21_PAPER_4.pdf
- Manuliang, M. (2008). *Dasar-Dasar Manajemen*. Yogyakarta: Gadjah Mada University Press.
- Manik, R. (2013). *Faktor-Faktor Yang Mempengaruhi Efektivitas Asuhan Keperawatan Di Siloam Hospital* (Master's thesis). Universitas Esa Unggul, Jakarta.
- Mullins, L.J. (2015). *Management and Organizational Behaviour*. Spain: Mateu-Cromo, Artes Graficas.
- Simamora, B. H., Jerry, M., & Hartono, H. (2016). Strategy Alignment with Organizational Culture Assessment Instrument (OCAI) Results of Cellular Industry in Indonesia. *Int. Journal of Economics and Management*, 10(S1), 81 – 93.
- Sorong, E. & Nugroho, E. (2015). Analisa Pengaruh Keberhasilan Implementasi Tata Kelola IT Terhadap Organisasi. *Seminar Nasional Teknologi Informasi dan Multimedia*, ISSN : 2302-3805. Yogyakarta.
- Tampubolon, R. (2004). *Risk Management*. Jakarta: Elex Media Komputindo.
- Weill, P. & Ross, J. (2004). *IT governance: how top performers manage IT decision rights for superior results (1st ed.)*. Harvard Business Review.
- Widyaningrum, M. (2011) Influence of Motivation and Culture on Organization Commitment. *Academic Research International*, 1(3), 228-235.
- Wijaya, A.F. (2014). *Audit Tata Kelola Teknologi Informasi Pengelolaan Data Menggunakan Framework COBIT 4.1 Pada Bank Jateng* (Undergraduate thesis). Computer science faculty, Universitas Dian Nuswantoro, Semarang.