Empirical Study on Banking in Indonesia: Factors Affecting Information Systems Quality

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ABSTRACT

Information system quality is a term for success. In an information system, the quality of information will be available if there is a success of a system. Many organizations experience failures in the application of information systems because these organizations do not pay attention to the importance of human resource factors and organizational factors. This research is done to examine and achieve empirical facts about the effects of organizational commitment, organizational culture, transformational leadership style, and information technology used toward information systems quality. Problems related to the application of information systems occur in various business sectors in Indonesia, one of which is banking organizations. The results of this study are expected to be a solution to the problems that occur and to develop information systems science.

CCS Concepts

• **Information systems**

Keywords

Information System Quality; Organizational Factors; Human Resource Factors

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1. INTRODUCTION

Currently we live in the era of the corona virus where all organizational activities center on the use of technology. The use of technology will make organizations' operational will depend on information systems [1]. The definition of an information system is a collection of interconnected components in collecting, manipulating, storing and distributing data and information and providing feedback mechanisms to achieve goals [2]. Every company needs information systems to be able to maintain its capabilities, especially against competitors [3]. The ability to face competitors will depend on how the company gets the information generated by the information system owned by each company [4]. There are four factors that need to be considered in order to avoid inaccuracy in designing information system [5]. The first one is organizational commitment [6][7]. According to Bernier and Potter [8], organizational commitment has a linkage with the development of performance information system which influences the success of performance measurement. Another factor that needs to be considered is organizational culture that affects the successful application of information systems in an organization [9]. Within an organization, leadership is a pivotal factor in achieving the organizational goals [10]. The empirical findings suggest that transformational leadership is positively related to the success of information systems, these findings are mediated by perceptions of organizational support and user beliefs in the information systems used [11]. The fourth factor which affects the implementation of information system is the mastery of information technology [12]. Information technology is a computer-based system that is used by people to do information-related work and support the needs of information processing and information from an organization [13]. Every company will need financial reports that contain information for the company's internal and external interests. The presentation of this information is carried out by the accounting department.

Accounting also requires information technology because the accounting department uses technology, accounting information will be generated from an information system [12].

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Organizational commitment is very influential on the success of information systems where organizational commitment is the company's main support for the implementation of information systems [14]. Vucetic [15] formulates that information system needs full support and commitment from all levels of organization starting from top management to lower-level employees. Based on prior researches mentioned, it can be agreed that organizational commitment influences information system quality. On that account, we build the hypothesis as follows:

H1: Organizational commitment influences information systems quality.

Organizational culture affects the success of information system implementation gauged to be part of a framework to evaluate information system performance[16]. Stair and Reynolds [2] state that the usage of information system is to add value to an organization that is deeply affected by organizational culture, structure, and other changes. Organizational culture and subculture are a very significant determinants on how people use information and information system. Hence, it can be concluded that organizational culture influences information system quality. Therefore, according to the elaboration of theoretical frameworks, and some empirical researchers mentioned, we design the hypothesis as follows:

H2: Organizational culture affects information system quality.

Implementing the system will challenge the team leadership skills especially in terms of environment, people, processes. The key factor of this implementation is related to the understanding of the importance of quality management in managing all team members to achieve successful implementation [17]. The understanding of leadership style according to Stoner & Freeman [18] is a pattern of behaviors that is favored by leaders in a process of directing and affecting employees. Leadership is a process by which a person is able to influence other members of the organization in order to achieve group goals or organizational goals. A leader is someone in a group or organization who has the highest influence from other members [19]. Consequently, the hypothesis developed is as follows:

H3: Transformational leadership style influences information system quality.

Aksoy and Denardis [20] state that information technology is a device or system that catches, processes, exchanges or storage for information. Information systems start from planning, developing, managing and using information technology equipment to help people do all tasks related to processing and organizing information [21]. That being the case, we represent the hypothesis as follows:

H4: Information technology used influences information system quality.

3. RESEARCH METHOD

The aim of the research is to know the magnitude of influences of organizational commitment, organizational culture, transformational leadership, and information technology toward the information system quality. Rooted on the research purpose, the research method used is descriptive and verificative.

3.1 Operationalization Variables

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a. Organizational Commitment (X1)

The dimension used in the study are: **affective commitment** reflects strong emotional attachment between employees and organization so that the employees have motivations to contribute significantly toward the organization [22]. **Continuous commitment** makes the employees to stay in the organization not because of emotional reasons, but because of self awareness or huge loss that will be gained if they leave the organization [19]. **Normative commitment** makes employees stay within in an organization because of sense of responsibilities, hence making employees to behave well and do the right actions for the organization.

b. Organizational Culture (X2)

The following are some dimensions that are used for organizational culture which is quoted from the Luthans [23]. **Norms** are unwritten regulation that act as guidelines for the behaviors of the organizational members. **Values** are main principles that are supported by the organization and are expected to be shared with the organizational members and also to control the behaviors in shaping the corporate culture.

Organizational climate is the aggregate feelings that are felt through the interactions within the organizational members or between the organizational members and outsiders.

c. Transformational Leadership Style (X3)

Some dimensions are **Charisma, Inspiration, Intellectual Stimulation, Individual consideration** [24]. **Charisma** means that leaders can make the followers admire, respect, and also trust the leaders. **Inspiration** envisions leader as one that is able to focus the effort by using symbols and describing intention simply. **Intellectual stimulation** portrays leader's behaviors as able to give creative solution toward problems and also able to act rationally toward his/her followers to apply new approaches in doing organizational. **Individual consideration** represents leader's behavior as one who listens followers' opinions and helps to fulfil the followers' needs in career developments.

d. Information Technology Used (X4)

Some dimensions that are used described in the following. **Computer technologies** appoint to multifunction machines that are able to do programming, process data to be useful information for problem solving and the increase of productivity [25]. **Software** needs to fulfil the needs of its users by using the quality indicators such as reliability, usability, efficiency, maintainability, and integrity [26].

e. Information System Quality(Y)

The following are some dimensions that are used for information system [27]. **System integration** facilitates information acquisition from heterogeneous sources to support business decision making. **Flexibility** makes system to adapt to innumerable needs and to environmental changes. **Accessibility** makes system and information to be easily accessed by the users. **Formalization** makes system to have a set of regulations and procedures to coordinate activities.

3.2 Research Method

This research is included in the category of survey research. The survey method will collect information from people who act as sources of information so that they can describe, compare and explain facts related to certain people, events or situations. This type of research is verification and research explanatory or causality study. The method used for data collection is questionnaires. The questionnaires given to the respondents were arranged by the dimensions in the operationalization variables to obtain data that will be statistically processed. Banking industry plays crucial strategic role in the movement and development of one country's economy. The target population is 50 commercial banks in Bandung-Indonesia. The observation unit is the operational department. Sample collection is done through purposive sampling techniques, which means researcher decides on the sample taken with his/her own considerations, while the minimum sum of sample is decided using the Slovin Formula [28]. According to the formula, the minimum sample is 33,33, which means 33 banks will be randomly taken out of the 50 commercial banks in Bandung which have total of 65 respondents.

3.3 Data Analysis

In this study, data analysis was carried out using multiple regression analysis with the help of a software called SPSS. In general, regression analysis is basically a study of the dependence of the dependent variable with one or more independent variables (explanatory/independent variables) with the aim of estimating and/or predicting the population average or the average value of the dependent variable based on the known value of the independent variable.

3.4 Hypotheses Testing

There are four existing hypotheses in this study, all of the hypotheses will be tested using t-test statistic. The stipulation is that Ho will be rejected if t-count is bigger than the t-critical for $\alpha = 0,05$. The hypotheses testing in this research can be outlined as below:

H1: states that the organizational commitment influences information system quality

H2: presents that the organizational culture influences information system quality

H3: pictures that the transformational leadership influences information system quality

H4: presents that the information technology used influences information system quality

4. RESEARCH RESULTS

4.1 Respondents' Responds Frequency

To measure every variable used in the questionnaires questions that have been adjusted according to the concepts are used. Organizational commitment variable is measured using 7 (seven) statements. The organizational culture variable is gauged by using 9 (nine) questions, the transformational leadership style is measured using 8 (eight) statements, while the information technology used variable is measured using 9 (nine) statements and the information system quality is gauged using 8 (eight) statements. All the statements have scale of minimum 1 (one) and maximum of 5 (five).

4.2 Validity Test

A questionnaire is said to be valid if the statements in the questionnaire can reveal something that will be measured by that certain questionnaire [29]. The variables that will be tested for their validity are organizational commitment (X1), organizational culture (X2), transformational leadership (X3), information system (X4), and information systems quality (Y). The results for the validity test for all variables are good. This means that the data are valid to be used in the research.

4.3 Reliability Test

A reliable questionnaire is one that presents respondents' answers consistently from time to time. A variable is reliable if it has a Cronbach Alpha > 0.6 [29]. In this research, all variables, such as organizational commitment (X1), organizational culture (X2), transformational leadership (X3), information system (X4), and information systems quality (Y) were tested for the reliability test as follows:

Table 1. Cronbach's Alpha Score

No	Variables	Cronbach's Alpha	Description
1	Organizational Commitment	0.82	Reliable
2	Organizational Culture	0.77	Reliable
3	Transformational Leadership	0.93	Reliable
4	Information Systems	0.76	Reliable
5	Information System Quality	0.77	Reliabile

Table 1 shows that the questionnaire used is reliable to measure every variable because all variables have Cronbach's Alpha bigger than 0.6.

4.4 Descriptive Analysis of Data on Respondents' Responses

To simplify the interpretation of data on repondents' responses, categorization is done on the score of the respondents' responses. The categorization is useful to depicts the variables organizational commitment, organizational culture, transformational leadership style, information technology used, and information system quality. Therefore, the scores are presented as follows:

Table 2. Mean Score Recapitulation of Respondents about Organizational Commitment, Organizational Culture, Transformational Leadership Style, Information Technology Used, and System Information Quality

No	Indicators	Grand Mean Score	Criteria
1	Organizational Commitment	**3,93**	**Good**
2	Organizational Culture	**4,07**	**Good**
3	Transformational Leadership Style	**3,96**	**Good**
4	Information Technology Used	**3,93**	**Good**
5	Information System Quality	**3,85**	**Good**
	Grand Mean	**3,93**	**Good**

Organizational commitment is measured using seven dimensions that are operationalized as seven statements. Table 2 shows grand mean score of respondents' responses toward every indicator of the organizational commitment variable. The grand mean score of the respondents' responses is 3.93 which is in the interval 3.75 - 5. This means that organizational commitment to the banking industry in Bandung-Indonesia is good.

Organizational culture is measured using nine dimensions that are operationalized into nine statements. Table 2 shows grand mean score of respondents' responses on every indicators of organizational culture variable. The grand mean score for respondents' responses on organizational culture is 4.07 which is between 3,75 - 5. This indicates that organizational culture in the banking sector in Bandung-Indonesia is good.

Transformational Leadership Style is measured using eight dimensions that are operationalized into eight statements. Table 2 shows grand mean score of respondents' responses on every indicators of transformational leadership style variable. The grand mean score for respondents' responses on transformational leadership style is 3,96 which is between 3,75 - 5. This indicates that transformational leadership style in the banking sector in Bandung-Indonesia is good.

Information System Quality is measured using eight dimensions that are operationalized into eight statements. Table 2 shows grand mean score of respondents' responses on every indicators of information system quality variable. The grand mean score of 3,85 which lies in the interval 3,75 – 5. This means that the information system quality in the banking sector in Bandung-Indonesia is good.

4.5 Hypotheses Testing

To interpret the coefficients of the independent variables, unstandardized coefficients and standardized coefficients can be used.

Table 3. Standardized Coefficient for Each Independent Variable towards Information System Quality

Model		Unstandardized Coefficients		Std. Coef.		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.948	3.111		2.876	.006
	TOTAL_OC	.085	.065	.127	1.314	.194
	TOTAL_OC	.009	.086	.011	.100	.921
	TOTAL_TLS	.134	.066	.227	2.043	.045
	TOTAL_ITU	.444	.090	.539	4.953	.000

a. Dependent Variable: TOTAL_ISQ Source: Results of SPSS 16

From the four independent variables included in the regression model, it is known that the organizational commitment and organizational culture variables are not significant. This can be seen from the probability of significance for organizational commitment of 0.194 and organizational culture of 0.921, both of which are above 0.5. Meanwhile, the transformational leadership style variable and the information technology variable used were known to be significant at 0.05.

From there it can be concluded that the variable information system quality is influenced by transformational leadership style and information technology used with mathematical equations:

ISQ= 8,948 + 0.085 OC + 0.009 OC + 0.134 TLS + 0.444 ITU

Explanation

ISQ=Information System Quality, OC=Organizational Commitment, OC=Organizational Culture, TLS=Transformational Leadership Style, ITU=Information Technology Used.

5. CONCLUSION

1. The results of data testing indicate that organizational commitment has not contributed optimally to the implementation of the information system used by banks in Bandung-Indonesia. This is due to the commitment related to policies and procedures in information systems implementation still depends on the application maker. One of the efforts that can be done is that organizational leaders must facilitate subordinates to hold internal discussions for the units involved in communicating policies and problems in the use of information system applications.

2. The results of hypothesis testing in this study indicate that the application of information systems has not fully adopted organizational culture. This is due to the value dimension related to the competence of organizational members that is not suitable for their work. The work can still be done because it is assisted by other members of the organization that are more qualified. So it is hoped that top management will be able to understand the competence of members of the organization so that they can determine how well the tasks are performed by members of the organization.

3. Transformational leadership style affects information system quality. The results of this study reveal that leadership is needed to change the organization so that it is able to achieve high performance and is able to consistently create high-quality information systems. It is also known that leadership in increasing confidence and inspiring employees greatly influences the use of information systems in banking organizations.

4. The results of this study provide empirical evidence that the information technology used contributes to improving information system quality in banking. In other words, it can be interpreted that information system quality can be improved if it improves the information technology used by maximizing the dimensions of information technology variables, namely computer technology and software. Information technology that is easy to learn and operate is technology that has menus and instructions that are easy to understand and follow.

There are limitations in this study, because the respondents in this study were only the operational part of the banking organization, so the respondents should be expanded to include the accounting department which is identical to the information system quality variable. In order to be in line with the characteristics of the research it can be said to be scientific, that is, it can be replicated and considered generally accepted, it is recommended that other researchers conduct further research based on the results of this study.

6. REFERENCES

[1] Gelinas, U.J and Dull,R.B. 2008. Accounting Information Systems. Seventh edition. USA: Thomson South Western

[2] Stair, R. and Reynolds, G. 2012. Fundamentals of Information Systems. Sixth Edition. USA: Cengage Learning.

[3] Bodnar, G.H. and Hopwood,W.S. 2014. Accounting Information Systems. Tenth Edition. USA: Pearson Education, Inc

[4] Wilkinson, J.W., Cerullo,M.J. dan Raval,V. 2000. Accounting Information Systems: Essential Concepts and Applications. Fourth Ed. USA: John Wiley & Sons, Inc

[5] Laudon,K.C. and Laudon,J.P. 2012. Management Information Systems: Managing the Digital Firm. Twelfth Edition. USA: Pearson Education, Inc

[6] Schwalbe,K. 2010. Information Technology Project Management. 6e. USA: Course Technology. Cengage Learning

[7] Luthans,F. 2008. Organizational Behavior. Eleventh Edition. Boston: McGraw.Hill International Edition.

[8] Bernier,P. and Potter, E.H. 2001. Business Planning in Canadian Public Administration. New Direction Number 7.IPAC. Canada: L'Institut d'administration publique.

[9] O'Brien,J.A. and Marakas,G.M. 2009. Management Information Systems. Ninth Edition. NewYork: McGraw-Hill/Irwin.

[10] Armstrong, M. 1994. How to be an even better manager. Fourth Edition. London: Printed and bound in Great Britain by Clays Ltd, St Ives plc

[11] Cho, J., Park, I., and Michel, J. W. 2011. How does leadership affect information systems success? The role of transformational leadership. Information & Management, 48(7): 270–277. https://doi.org/10.1016/j.im.2011.07.003

[12] Davis, G.B. 1999. Encyclopedic Dictionary of Management Information Systems. USA: Blackwell Publishers.

[13] Rainer,R.K. and Cegielski, C.G. 2010. Introduction to Information Systems:Supporting and Transforming Business. USA: John Wiley & Sons,Inc.

[14] Cardoso, I., Pedron, C. 2013. "Users' Commitment in Information System Implementation: The Role of Top-Management Commitment and Organizational Context", Revista de Gestão em Sistemas de Saúde, ISSN: 2316- 3712, 2, 1: 03-25.

[15] Vucetic,J. 2008. Becoming a Successful Techpreneur. USA: Xilbris Corporation

[16] Samaha,A.A. and Mansi,I. 2006. The Use of Gap Analysis Charts to Judge IS Implementation Success/Failure. Proceedings of the 13th European Conference on Information Technology Evaluation. University of Genoa Italy. 28-19 Sept 2006. ISBN: 978-1-905305-32-2.

[17] Jacobs,A.J. 2012. Information System Implementations: Using a Leadership Quality Matrix for Success. USA: First Published by Author House.

[18] Stoner, J.A.F. and Freeman, R.E. 1992. Management-Fift Edition. USA: Prentice Hall International.

[19] Greenberg,J. 2011. Behavior in Organizations. 10th edition. England: Pearson Education Limited

[20] Aksoy, P. and Denardis, L. 2008. Information Technology in Theory. Printed in Canada: Thomson Course Technology.

[21] Rainer,R.K. and Cegielski, C.G. 2010. Introduction to Information Systems: Supporting and Transforming Business. USA: John Wiley & Sons,Inc.

[22] Meyer, J.P. and Allen, N.J. 1997. Commitment in the Workplace: Theory, Research and Application. United Kingdom: Sage Publication,Inc

[23] Luthans,F. 2011. Organizational Behavior: An Evidence Based Approach. NewYork: Irwin-Mc Graw Hill.

[24] Ivancevich,J.M. and Matteson,M.T. 2002. Organizational Behavior and Management. Sixth Edition. NewYork: Mc Graw Hill Companies,Inc

[25] Wilkinson, J.W., Cerullo,M.J. and Raval,V. 2000. Accounting Information Systems: Essential Concepts and Applications. Fourth Ed. USA: John Wiley & Sons, Inc

[26] Agarwal, B.B., Tayal, S.P., Gupta, M. 2010. Software Engineering and Testing. USA: Jones and Bartlett Publishers.

[27] Heidmann,M. 2008. The Role of Management Accounting Systems in Strategic Sensemaking. Germany: Deutscher Universitäts-Verlag.

[28] Umar.H. 2003. Metode Riset Bisnis. Jakarta: PT Gramedia Pustaka Utama

[29] Ghozali, I. 2006. Aplikasi Analisis Multivarite dengan SPSS. Cetakan Keempat, Semarang: Universitas Diponegoro.

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