

EFFECTS OF INFORMATION TECHNOLOGY AND ORGANIZATIONAL CULTURE ON THE PERFORMANCE OF ACCOUNTING INFORMATION SYSTEMS (SURVEY IN BANK "X" BRANCH OFFICES IN BANDUNG)

Diamonalisa Sofianti, Nunung Nurhayati, Neisya

Accounting Program, Faculty of Economics and Business
Bandung Islamic University

ABSTRACT: *The purpose of this study is to (1) find out the description of information technology, organizational culture and the performance of accounting information system of Bank 'X' in Bandung. (2) to determine how much is the influence of technology on the performance of Accounting Information system (3) To find out how much is the influence of organizational culture on the Performance of Accounting Information system. (4) To find out how much is the influence of information technology and organizational culture on the performance of accounting information systems. This study is expected to contribute to developing knowledge and solving problems. The methods used are descriptive method and verification method. The analysis unit for this study is a bank branch office in Bandung. Statistical data analysis uses multiple regressions. Based on the study result descriptively, information technology, organizational culture and the performance of Accounting Information System in Bank "X" of Bandung is good but, verivicatively it turns out that information technology has a significant effect on the performance of accounting information system, while organizational culture does not significantly affect the performance of accounting information system.*

KEYWORDS: Information Technology, Organizational Culture and the Performance of Accounting Information Systems (AIS)

INTRODUCTION

Background

Accounting information is the result of an accounting process which includes the process of recording, grouping, and summarizing financial data of a specific entity (Kieso, 2012: 5) and Azhar Susanto (2013: 65), has expressed the same thing that accounting information is an output of accounting process. In general, accounting information is presented in the form of a financial statement. (Kieso, 2012: 5).

In the field, various types of companies in Indonesia have not presented good quality accounting information. Boediono (2010) has stated: "bank reports have not been accurate and transparent". The same thing is also expressed by Budi Mulya (2010), who said that banks are required to be more transparent and honest in reporting their balance sheet. Based on the above phenomenon one of the factors that affects the performance of accounting information systems is the use of information technology. Information technology is all forms of hardware and software technology, communications and networking, and combinations that are formed among those technologies that are used as means to perform input activities, processing and output to become quality accounting information and data storage. (O'Brien, 2004: 7).

The performance of accounting information systems is also influenced by organizational culture whereas; organizational culture is as system of shared value, beliefs and norms that unite the members of the organization (Barthol & Martin, 1998: 91). Many organizations run accounting information system development programs that failed because there is no effort to change the organizational culture. Organizational culture is one of the important factors that shape management behavior and needs to be studied more deeply in its correlation with the implementation of accounting information systems.

The advances in information technology lead to cultural changes that are constant, rapid, radical, and *persuasive*. Advances in information technology require organizations to adjust their old culture into a more modern culture, because these adjustments will enable organizations to compete. A good information technology and organizational culture will improve the performance of company's accounting information system

Problem Formulation

Based on the above description, problem formulations of the study are:

1. How much is the influence of information technology, organizational culture and performance of accounting information systems of Bank branch office in Bandung
2. How much is the influence of information technology systems on the performance of accounting information system
3. How much is the influence of organizational culture on the performance of the accounting information system

THEORETICAL BASIS

Information Technology

Rapid change of technology will significantly affect business development, so the winning – key strategy selected is often not adequate anymore. Therefore, the selection and determination of a new strategy is needed for the organization to be more competitive (Atkinson, 2006: 123). The same thing was also delivered by Ravens (2006: 112) who stated that technology affects the competitive position in an industry.

The Efforts of organizations to survive and thrive in a global business environment relies on organizational competence in using technology, especially information technology, to break through the barriers. According to O'Brien (204: 7), information technology is a computer-based information system involving the use of: computer, hardware, software, internet and other communication networks and, to use human resource data base management techniques and other computer-based technologies to convert data into various number of information. Atkinson (2006: 12), has stated a similar idea and defined information technology as all forms of computer-based information systems, which includes *mainframes* and computer applications. Meanwhile, according to (Basu, 2003: 96) and, Sarosa and Zowghi (2003: 133), information technology is something that is used to create information systems, all of which are hardware and software used to implement a computer-based system.

Organizational Culture

According to Stair (2010: 51) organizational culture is a set of understandings and principal assumptions that are propagated by a group, while according to Kreitner & Kinichi (2003: 79) organizational culture is a manifestation of assumption, implicitly accepted by a group and determines what the group feels, thinks and reacts to in diverse environments. Furthermore, Robbins & Coulter (2012: 52) stated that organizational culture is described as shared values, principles, traditions, and ways of doing things that affect the way members of the organization take actions. Based on these expert opinions, it can be said that organizational culture is a pattern of behavior and thinking that characterize the values that are embraced and accepted in an organization that becomes the characteristics that distinguish one organization from another.

Accounting Information System Performance

According to Fung Tjhai Jen (2002), measuring the performance of accounting information systems can be viewed from two dimensions, one of which is the level of satisfaction of accounting information system users. According to Ives (1983), the satisfaction of accounting information system users can be measured from how satisfied the users are and the trust of users in the information system provided to fulfill information needs. User satisfaction is measured using 5 characteristics that were developed by Weber (1999), they are: (1) *content*, (2) *Accuracy*, (3) *Format*, (4) *easy of Use* and (5) *Timeliness*.

Research Hypothesis

There is influence of information technology and organizational culture on the performance of the accounting information system. There are two hypotheses Tests:

Hi = There is a significant influence of information technology on the performance of the accounting information system

H1 = There is influence of organizational culture on the performance of the accounting information system

METHODOLOGY

Research Methods

The research method used is *explanatory research*. *Explanatory research* is research that explains the causal relationship between variables (Cooper & Schindler, 2006: 154). *Explanatory* research method refers to a theory or hypothesis that will be tested as the cause of the phenomenon. According to Singarimbun and Sofian Effendi (2011: 5), *explanatory* research is research that describes causal relationships between variables through hypothesis testing.

The type of data used is primary data, the unit of analysis in the study is 6 Bank "X" Branch offices in Bandung with managers and leaders of bank "X" as accounting information users and observers. The statistical analysis instrument used is multiple regression analysis which follows classic assumption test which covers; normality test, multicollinearity test, heteroscedasticity test, autocorrelation classic assumption test, hypothesis test (t test and f test). Data processing uses SPSS software.

RESULTS OF RESEARCH AND DISCUSSION

Descriptive Analysis

Descriptive analysis is conducted to have an overview on information technology, organizational culture and performance of accounting information systems at bank "X" branches in Bandung. Descriptive analysis is performed based on the responses of respondents to the questionnaires. When scores of each variable and research dimension are achieved, category determination is performed based on score interval criteria as follows;

Table 1: Guideline of respondents value category

Description/interval	Category
20.00% - 35.99%	Very bad
36.00% - 51.99%	Bad
52.00% - 67.99%	Fair
68.00% - 83.99%	Good
84.00% - 100.00%	Very Good

Source: Stuges

Based on the result of descriptive analysis, the use of information technology in Bank X branches in Bandung is in good category (83.15%), It proves that the company has allocated significant funds for the newest technology and, the working atmosphere in these banks have created a good relationship to ease the information exchange needed, and every staff understands the importance of a solid teamwork. Meanwhile, the organizational culture is in good category at (79.36%), this can be seen from the indicators such as organizational culture that provides a good incentive for an employee who fulfill their obligations properly. These banks give a proportional responsibility according to each employee's capacity. These banks provide enough freedom for each employee to actualize the skills possessed by each employee. They also greatly appreciate and give the principles of good integrity to the employees. The banks are able to provide maximum support to the employees to optimize the potential of employees and are able to control the good behavior of every employee. Therefore, each employee can give their best contribution and the banks will always reward the employees based on professional service given by the workers.

The banks are able to introduce a good tolerances on the conflicts or risk actions and able to create an effective, integrated and sustainable communication pattern in the organization, meanwhile the performance of accounting information is in fair category This can be seen from its contents in which the information provided in these banks are appropriate as needed, information contents can be used , the information is appropriate and accurate which means the information system is accurate and the format is just what needed. and the format of the information can be clearly understood. Based on *ease of use*, the existing system of these banks is *user friendly* and easy to use and, to be accessed. From the *timeliness* aspect, information needed by these banks is appropriate and presented on time.

Verification Testing

Verification testing is basically to test information technology and organizational culture on the performance of accounting information but, before the test is conducted, instrument tests (*validity and reliability test*) are conducted.

Research Instrument testing

Before the data of questionnaires result is processed, validity and reliability test as research instruments are tested through research to prove the validity and reliability of the measuring instruments. Based on the processing result using Spearman rank correlation and *Cronback Alpha*, the result of validity and reliability tests is as follows:

Table 2 Validity and Reliability Result

Variables	Validity average	Reliability (Cronbach Alpha)
Information technology	0.741	0.895
Organizational Culture	0.531	0.789
Performance of accounting information system	0.833	0.956

Source: Data processing result

Table above shows that the average correlation coefficient of validity test for information technology is at 0.741, Cultural Organization is at 0.531 and performance of accounting information is at 0.833 and this correlation is bigger than the critical value (0.30). The test results shows that on average the questions on each variable in information technology, organizational culture and are fit for use as a measuring tool of research. The performance of accounting information system is valid and fit to be used for further analysis. (Barker, 2002).

The table above shows the reability test result in which information technology variable is at 0.895. Organizational culture is at 0.789 and the performance of accounting information system is at 0.956. Barker (2002) has stated that statistical approach is used to see the reliability of measurement instrument. If reliability coefficient is bigger than 0.70, the statement is reliable. The table above shows that the questionnaires to measure each variable is reliable when (Cronbach's Alpha Value) of each questionnaire is higher than the reliability standard (0.70). This result explains that all statement items used are reliable; therefore the questionnaires have provided a consistent result.

Data Analysis

Multiple linear regressions is Data analysis used to find out the effect of information technology and organizational culture on the performance of accounting information system, the tests of data normality, multicollinearity and heterocedasticity as the requirements of multiple regression tests.

Classical assumption Test

Normality test

Result of Kolmogorov-smirnov test is 0.490, this means the data distribution is normal, because $p \text{ (sig)} > 0.05$

Multicollinearity test

Multicollinearity tolerance value is bigger than the determined default value (which is 0.771). Meanwhile the value of VIF (1.294) is lower than 10. Therefore, it can be concluded that all variables meet the minimum required tolerance and VIF value. This means multicollinearity problem does not occur here.

Heterocedasticity Test

Heterocedasticity test with Glejser test resulted in the coefficient value of each independent variable is not significant ($p > 0,05$) on residual, Therefore the data in this model does not have heterocedasticity problem.

Multiple linear Regression Analysis

Regression model is used to predict and examine the changes that occur in an individual taxpayer which may be described or explained by changes of the two independent variables (information technology and organizational culture). Based on the results of data processing, the regression result is as follows:

Table 3: Result of Multiple regression linear Estimation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	14.639	7.994		1.831	.079
Information technology	1.887	.449	.671	4.203	.000
Organizational culture	.174	.348	.080	.499	.622

Based on the result of data processing in Table 5, we can create a multiple regression equation prediction model of information technology and organizational technology on the performance of accounting information system as follows:

$$Y = 14.639 + 1.887 (X_1) + 0.174 (X_2) + e_i$$

The interpretations of the regression model are as follows:

The above equation can be interpreted as follows:

($b_0 = 14.639$) means if Information Technology (X_1) and Cultural Organization (X_2), are zero then the performance of accounting g information system is (14.639).

($b_1 = 1.887$) means if Information Technology (X_1), increases by one unit and the other variables are constant, the variable of Accounting Information System performance (Y) will increase by 1.887

($b_2 = 0.174$) means if Cultural Organization (X_2) increases by one unit and the other variables are constant, the variable of Accounting Information System variable (Y) will increase by 0.174

Coefficient of Determination

Coefficient of Determination (R^2) is to measure to what extent the ability of a model has in explaining dependent variable variations (Ghozali, 2005). The value of determination coefficient is between zero (0) and one. The small value of R^2 means the limited/lower ability of variables in explaining dependent/bound variables (the performance of accounting information system). A value that is close to one means that independent variables provide

almost all the information needed. *Adjusted R Square* is the value of R Square that has been adjusted, this value is always smaller than R Square and this value can have negative value.

According to Santoso (2001), if the regression uses more than two independent variables, Adjusted R^2 is used as determination coefficient. By using SPSS 19.00 the determination coefficient value is as follows:

Table 4 Result of Determination coefficient

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
1	.713 ^a	.508	.469	7.76484	1.615

a. Predictors: (Constant), Organizational Culture, Information technology

b. Dependent Variable: Performance of Accounting Information System

The value of determination coefficient can be seen from R square values shown in the table. The determination coefficient is 0.508 and *Adjusted R square* is 0.469. *Adjusted R Square value is used*. This means that the Effect of Information Technology (X_1), and Cultural Organization (X_2), on the performance of accounting information system in Bank “X” is 46.9%, while the remaining is 53.1% influenced by other factors that are not observed.

Hypothesis Testing

Partial Hypothesis Test (t test)

This type of test is conducted to test whether each independent variable of the research (Information Technology (X_1) and Cultural Organization (X_2)) have a significant effect on the dependent variable (the performance of Accounting Information System).

The effect of Information Technology on the Performance of Accounting Information System

Hypothesis test is formulated as follows:

$H_0 : b_1 = 0$ Information Technology variables do not influence the performance of Accounting information system in Bank “X” branches in Bandung

$H_1 : b_1 \neq 0$ Information technology variable influences the performance of accounting information system in Bank “X” in Bandung significant level (α) is 5%, and $t_{table} = 2.059539$

Testing criteria:

- If $t_{1/2\alpha} \leq T \leq t_{1/2\alpha}$. H_0 accepted and if $t < t_{1/2\alpha}$ or $t > t_{1/2\alpha}$. H_0 rejected or
- If the P-value (Sig) > 0.05 , H_0 is accepted and if P-value (Sig) < 0.05 , H_0 is rejected

Result of hypothesis testing using SPSS 19.00 as follows:

Table 5: Information Technology

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	14.639	7.994		1.831	0.079
Information technology	1.887	0.449	0.671	4.203	0.000

Based on the result of the calculation using SPSS version 19.00, the output results of the first hypothesis: the *p-value* (sig) is 0.000 and smaller than 0.05, so H_0 is rejected. This means that the variable of information technology significantly influences the Performance Accounting Information System variable in bank "X" branches in Bandung with its influence is at (46.5%).

Influence of Organizational Culture on the Performance of Accounting Information System

Hypothesis Test is formulated as follows:

1. $H_0 : b_2 = 0$ Organizational culture variables does not influence the performance accounting information system variable in Bank "X" branches in Bandung.

$H_1 : b_2 \neq 0$, Organizational culture variable influences the performance of accounting information system variable in Bank "X" branches in Bandung.

2. Significant level (α) is 5% and $t_{table} = 2.059539$

3. Testing criteria:

- If $t_{1/2\alpha} \leq T \leq t_{1/2\alpha}$. H_0 accepted and if $t < t_{1/2\alpha}$ or $t > t_{1/2\alpha}$. H_0 rejected or
- If *P-value* (Sig) > 0.05, H_0 accepted and if *P-value* (Sig) < 0.05, H_0 rejected

Result of hypothesis test using SPSS 19.00 as follows:

Table 6: Organizational Culture

	B	Std. Error	Beta		
1 (Constant)	14.639	7.994		1.831	0.079
Organizational Culture	0.174	0.348	0.08	0.499	0.622

For the second hypothesis, *p-value* (sig) is 0.622 with $\alpha = 0.05$, H_0 is accepted. This means that the variable of organizational culture does not significantly affect the performance of accounting information system variable in Bank "X" branches in Bandung. The influence is 4.3%.

CONCLUSION

Based on the results of research and discussion, the conclusion is as follows:

1. Information technology, organizational culture and the performance of accounting information contained system in Bank "X" branches in Bandung is in good category. This can be measured by the use of advanced technology, good integrity and providing relevant and punctual data.
2. Information technology has a significant effect on the performance of accounting information system in bank "X" branches in Bandung with its effect at 46.5%.
3. Organizational culture does not have a significant effect on the performance of accounting information system in bank "X" branches in Bandung

REFERENCES

- Atkinson, Helen, (2006), "Strategy Implementation: A Role for the Balanced Scorecard," Management Decision
- Azhar Susanto. 2013. *Sistem Informasi Akuntansi: Struktur-Pengendalian-Risiko-Pengembang (accounting information system – development and risk control structure)*, Edisi Perdana, Cetakan Pertama. Bandung: Lingga Jaya.
- Basu Swastha Dharmmesta (1998), "Teknologi Informasi dalam Pemasaran: Implikasi dalam Pendidikan Pemasaran", (Information technology in marketing; its implication in Marketing Education) Jurnal Ekonomi dan Bisnis Indonesia, Vol. 13, No. 3, pp. 116 – 125
- Bagranof, Nancy A. Mark G. Simkin, & Carolyn S. Norman. 2010. *Accounting Information Systems*. Seventh Edition: South-Western.
- Budi Mulya.2010. *Bank dituntut lebih Transparan dan Jujur Laporkan Neraca Keuangan*. (Banks are expected to provide a transperant and true financial Balance)Kontan.co.id,29/4/2010
- Cooper, Donald R. & Pamela S. Schindler. 2011. *Business Research Methods*, Eleventh Edition. NY: Mcgraw-Hill.
- Ives.,BM.H.Olson,and I.J. Baroudi,1983. The Measurement of user information communication of The ACM.Vol26 No.10:785-793
- Kreitner dan Kinicki.(2005). *Perilaku Organisasi (Organizational Behavior)* Jakarta. Salemba empat.
- Kieso, D. E., Weygandt, J. J & Warfield, Terry D. 2011. *Intermediate Accounting*, 14th Edition. John Wiley & Sons, Inc.
- O'Brien, J. A & Marakas, G. M. 2010. *Introduction to Information Systems*, Fifteenth Edition. New York: McGraw-Hill Companies, Inc.
- Robbins, Stephen P. dan Timothy A. Judge. 2014. *Perilaku Organisasi) Organizational Behaviour) Edisi ke-16*, Jakarta: Salemba Empat.
- Romney, Marshall B., Steinbart, Paul John. 2004. *Accounting Information System*. Buku Satu.Salemba Empat. Jakarta.
- Sarosa, Samiaji dan Zowghi, Didar (2003), "Strategy for Adopting Information Technology for SMEs : Experience in Adopting Email Within an Indonesian Furniture Company", Electronic Journal of Information Syatems Evaluation Vol. 6 Issue 2 pp. 165 – 176

Stair, R. M and Reynolds, G. W. 2010.*Principles of Information Systems – A Managerial Approach 9th Edition*.Course Technology.

Tjhai Fung Jen.2002.*Faktor-faktor yang mempengaruhi Kinerja Sistem Informasi Akuntansi*, (factors that influence the performance of accounting information system) dalam *journal Bisnis dan Akuntansi* 4(2), hal 135-154

Weber, Ron,1999, *Information System Control and Audit*. New Jersey: Prentice Hall.Inc