

## The Role of Information Technology and Employee Ability on the Effectiveness of Accounting Information Systems

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### Abstract

The effectiveness of accounting information systems is a success achieved by accounting information systems in producing information in a timely, accurate, and reliable manner. This study aims to determine the role of information technology and employee knowledge of the accounting department on the effectiveness of accounting information systems. This research was an associative - quantitative type with a survey approach. The sample in this study were all managers and employees of the financial division of the Republic of Indonesia Employee Cooperative in Jombang Regency (saturated sample). The data used were primary data obtained through questionnaires. The data analysis technique used multiple linear regression analysis. The results of this study indicated that the sophistication of information technology and the knowledge of employees of the accounting department had a positive and significant effect on the effectiveness of the accounting information system.

**Keywords:** information technology, employee knowledge, the effectiveness of accounting information systems

### A. INTRODUCTION

In the business world, advances in information technology are very useful for improving the performance of a company. A competitive business requires companies to be able to make the most of their capabilities in order to show their superiority. With the advancement of technology, all activities will be carried out effectively and efficiently so as to ultimately increase the productivity of a company. Companies use information technology for their primary needs in supporting the success and progress of the company (Mutiarni, R, 2017). Information technology is used to convert raw data into information needed by companies. All the information generated aims to support the company's operational activities in terms of decision making. Information is not only generated from manual performance, but information can be processed using technology (Handoko & Dharmadiaksa, 2017).

Kustono (2014) said that the advancement of information technology has made accounting information systems an important tool in a competitive business world. The use of information systems can increase the competitiveness of companies not to be left out in their environment. The existence of information technology aims to assist humans in processing data into a system needed by the company. So that the decision on investment in information systems becomes an important thing in the organization and is a determining factor for success. Information systems can, add value to a company by producing information that is timely, accurate and reliable. The information system used in accounting is called the Accounting Information System (AIS).

Accounting information systems affect organizational effectiveness. The effectiveness of the accounting information system is very much dependent on the successful performance of the system, the user, and the sponsor. Several important factors that can affect the effectiveness of the accounting information system are expected to have a positive influence that can indicate the success rate of the system in

carrying out its functions. The effectiveness of the accounting information system can measure the competitive advantage that the company can create. Increasing the effectiveness of the accounting information system requires the role and participation of management in supporting the implementation and development of the accounting information system (Putra, Atmadja, & Darmawan, 2014).

Stephen A. Moscovice and Mark G. Simkin quoted by Febrianingsih (2010) explain that Accounting Information System is an organizational component that collects, classifies, processes, analyzes, communicates decision-making information with a financial orientation that is relevant to outsiders and parties. - parties in the company (in principle is management). Most companies at this time have started to leave manual systems, they began to switch to computer-based Accounting Information Systems (AIS). Computer-based Accounting Information Systems are designed to convert accounting data into information or a series of formal procedures (Handoko & Dharmadiaksa, 2017).

The implementation of a system in a company is faced with two things, namely the company getting the success of implementing the system or system failure. Handoko & Dharmadiaksa (2017), state that the success of the system is influenced by individual and system factors (hardware, software, networks, procedures, tasks). Individual factors are factors related to humans who use accounting information systems in which humans contain aspects of humanity who have desires, wills, motivations, likes and dislikes, is satisfied and dissatisfied, which in practice affects behavior in the use of accounting information systems.

Knowledge of accounting employees of accounting information systems is an important factor in the application and development of the accounting information system itself. Ismail & Malcolm (2014) stated that the accounting manager (controller) is an executive who coordinates management participation in planning and control to achieve company goals, in particular to determine the effectiveness of policy implementation and develop organizational structures and procedures. The accounting manager is the highest executive who has responsibility for the sustainability of all activities in the accounting department. The big responsibility that is carried out requires an employee of the accounting department to have high knowledge of the implementation of the accounting information system. The output generated from the accounting information system in the form of financial reports will be submitted to management and will be used as a decision-making tool (Putra, Atmadja, & Darmawan, 2014).

The use of information technology in supporting accounting information systems has an influence on almost all aspects of the company. In the development of a company, technology plays an important role to help improve employee performance and to produce more accurate, trustworthy and reliable information regarding financial reports. And to produce a good and reliable financial report requires employees who are reliable in their fields and of course who can keep up with developments in current technological advances. So it is very clear that with the sophistication of information technology and the knowledge of the employees of the accounting department, it plays an important role in supporting the effectiveness of the accounting information system so that it can produce accurate, reliable, and reliable financial reports (Budiarto & Agung, 2015).

## **B. LITERATURE REVIEW**

### **1. Measuring the Effectiveness of Accounting Information Systems**

In general, an effective system is defined as a system that can provide added value to the company. Therefore, an effective system must be able to have a positive influence on the behavior of its users. After a system has been operated for some time, it is necessary to conduct a post-implementation review, which, among other things, aims to find out the extent to which the system has achieved the predetermined goals and whether the system can no longer be used or can be continued, and if it is to be continued, whether modifications need to be made so that can achieve the targets set better.

The variable indicators of the effectiveness of the Accounting Information System according to Ray & Jay (2014) are: a) Information Quality, related to information system output, b) Quality System, which evaluates the information processing system itself, b) Service Quality, to access consumer expectations and perceptions of service quality in retail and service organizations, c) System Use, relating to the use of output from the information system by the recipient, d) User Satisfaction, relating to the recipient's response to the use of the information system output, e) Net Benefits, a series of entities from individual to national entities that can have an impact for information system activities.

### **2. Sophisticated Information Technology and Employee Knowledge**

Today's technological sophistication has rapid development and is even able to produce a variety of system technologies designed to assist human work in producing the best quality information. This technological diversity makes it easy for technology users to implement. Companies that have sophisticated information technology (computerized and integrated) and supported by supporting applications of modern technology are expected to have a positive impact on the continuity of company performance by producing timely, accurate and reliable financial reports.

Employee knowledge in the accounting department is the level of knowledge of employees in the accounting department related to financial and management accounting techniques (Adheta, 2017). Knowledge of accounting employees of accounting information systems is a factor that is no less important in the application and development of the accounting information system itself. The accounting department employees referred to in this study are accounting managers, (Nelson & Jay, 2006) stated that the accounting manager (controller) is an executive who coordinates management participation in planning and control to achieve company targets, in particular to determine the effectiveness of policy implementation and develop structures. and organizational procedures. The accounting manager is the highest executive who has responsibility for the sustainability of all activities in the accounting department. The big responsibility that is carried out requires an accounting manager to have high knowledge of the implementation of the accounting information system. The output generated from the accounting information system is in the form of financial reports that will be submitted to management and will be used as a decision making tool (Putra, Atmadja, & Darmawan, 2014)

Ratnaningsih & Suaryana (2014) define the sophistication of information technology as a construction that refers to the use of nature, complexity and interdependence of information technology and management in an organization. Based on research (Ratnaningsih & Suaryana, 2014) that the sophistication of information

technology partially has a significant positive effect on the effectiveness of accounting information systems (Y).

*H1: The sophistication of information technology has a positive effect on the effectiveness of the accounting information system.*

Employee knowledge in the accounting department is the level of knowledge of employees in the accounting department related to financial and management accounting techniques (Adheta, 2017). Based on research Putra, Atmadja, & Darmawan (2014) that the Accounting Department Employee Knowledge variable has a significant effect on the effectiveness of the accounting information system.

*H2: Employee knowledge of the accounting department has a positive effect on the effectiveness of the accounting information system.*

### C. METHOD

The type of research in this quantitative approach is associative. The population in this study were all managers and employees of the accounting department who worked at 28 Indonesia Employee Cooperative (IEC) in Jombang Regency. By using a saturated sample, the sample in this study were an employee and a manager taken from 28 IEC in Jombang so that the number of respondents were 56.

Independent variables in this study are the sophistication of information technology (X1) and knowledge of accounting employees (X2), the dependent variable in this study is the Effectiveness of Accounting Information Systems (Y). The analytical method used in this research is the multiple linear regression analysis method. Hypothesis testing is carried out after testing the quality of the data by testing the validity and reliability as well as testing the classical assumptions

### D RESULTS AND DISCUSSION

#### 1. Multiple Linear Regression Test

This study uses a multiple linear regression model which is used to determine whether there is an influence between two independent variables on one dependent variable consisting of Information Technology Sophistication (X1), Knowledge of Accounting Section Employees (X2) on the Effectiveness of Accounting Information Systems (Y). The model developed to test the hypothesis that has been formulated with  $Y = \alpha + \beta_1X_1 + \beta_2X_2 + e$ . The multiple linear regression equation obtained from calculations was:

**Table 1: Multiple Regression Analyze**

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
		B	Std. Error	Beta	t		e	VIF
1	(Constant)	7,146	1,011		7,066	,000		
	KTI	,536	,040	,404	13,391	,000	,919	1,088
	PKBA	,179	,048	,111	3,697	,000	,919	1,088

a. Dependent Variable: ESIA

Based on the regression coefficient values in the table above, an equation could be prepared:  $Y = 7,146 + 0,536X_1 + 0,179X_2 + e$

From the above equation it can be explained that with a constant (a) of 7.146 and the independent variable is assumed to be 0 (zero), it can be seen that the value of the IEC Accounting Information System Effectiveness is 7.146. The regression coefficient for the Information Technology Sophistication variable (X1) is 0.536, which means that each increase in the Information Technology Sophistication variable will be followed by an increase in the Effectiveness of the Accounting Information System by 0.536. Meanwhile, the regression coefficient of the Accounting Section Employee Knowledge variable (X2) is 0.179 which means that any increase in the Accounting Section Employee Knowledge variable (X2) will be followed by an increase in the Effectiveness of the Accounting Information System by 0.179.

## 2. Hypothesis Test

From table 1 above, it appears that the Information Technology Sophistication variable (X1) has a regression coefficient of 0.536 with a significance level of  $0.00 < 0.05$ , meaning that information technology sophistication has a positive and significant effect on the effectiveness of accounting information systems, so the first hypothesis (H1) received.

The presence of technology is a source of strength that makes a company have a competitive advantage, and is identified as a factor that contributes to the company's success. Therefore, information technology has an influence on the success of IEC in managing its business. So that the more sophisticated information technology is applied, the effectiveness of the resulting information system will be even higher. The results of this study are supported by research conducted by Putra, Atmadja, & Darmawan (2014) and Ratnaningsih & Suaryana (2014) where the results obtained state that the use of technology has a significant positive effect on the effectiveness of accounting information systems. Thus, the higher the level of sophistication of information technology, the higher the level of effectiveness of the accounting information system.

Likewise, the Accounting Department Employee Knowledge Variable (X2) has a regression coefficient of 0.179 with a significance level of  $0.00 < 0.05$ , meaning that the accounting department's employee knowledge has a positive and significant effect on the effectiveness of the accounting information system, so the second hypothesis (H2) is accepted.

Knowledge of accounting employees can increase effectiveness in the implementation of accounting information systems. Accounting is an important component in modern information systems, employees with accounting knowledge are in a better position than if they do not have this knowledge. Employees can better understand the company's information needs and use their knowledge to determine what the company needs so as to increase the effectiveness of the accounting information system. With the knowledge of employees in the accounting department covering financial and management accounting techniques, employees not only become "robots" in inputting transactions but also can understand the logic and flow of existing accounting information so as to increase the effectiveness of the accounting information system. The results of this study are supported in the research of Putra, Atmadja, & Darmawan (2014) and Ratnaningsih & Suaryana (2014) which states that the results of this study have a significant effect and it says that the knowledge of the accounting

department employees has an effect on the effectiveness of the accounting information system.

## REFERENCES

- Adheta, M. (2017). pengaruh karyawan bagian akuntansi, kecanggihan teknologi informasi, dan partisipasi manajemen terhadap efektivitas sistem informasi akuntansi pada bank perkreditan rakyat. Semarang.
- Budiarto, D. S., & Agung, P. (2015). Accounting information systems alignment and SMEs performance: A literature review. *International Journal of Management, Economics and Social Sciences*.
- Febrianingsih, N. (2010). Pengaruh Pemanfaatan Teknologi Informasi dan Pengetahuan Karyawan Bagian Akuntansi terhadap Efektivitas Sistem Informasi Akuntansi dengan Pelatihan Sebagai Variabel Kontrol. *Jurnal Akuntansi dan Sistem Teknologi Informasi*, 11.
- Ghozali, I. (2011). *Aplikasi Analisis Multivariate Dengan Program SPSS*. Semarang: Badan Penerbit Universitas Diponegoro.
- Handoko, R., & Dharmadiaksa, I. B. (2017). Faktor-Faktor Yang Memengaruhi Pada Efektifitas Sistem Informasi Akuntansi Hotel Berbintang Tiga Di Denpasar. *Jurnal Akuntansi*, 1101-1130.
- Ismail, N. A., & Malcolm, K. (2014). Factors influencing the alignment of accounting information systems in small and medium sized Malaysian manufacturing firms. *Journal of Information Systems and Small Business*, 1-20.
- Lowe, A. (2011). Accounting information systems as knowledge-objects: some effects of objectualization. *Management Accounting Research*, 75-100. *MIS quarterly*, 409-432.
- Mutiarni, R. (2017). Implementasi Electronic Data Processing Pada Koperasi Wanita. *Eksis: Jurnal Riset Ekonomi dan Bisnis*, 12(2), 135-148.
- Nelson, K., & Jay, C. (2006). The contribution of shared knowledge to IS group performance.
- Putra, D. S., Atmadja, A. T., & Darmawan, N. A. (2014). Pengaruh Pengetahuan Karyawan Bagian Akuntansi Dan Pemanfaatan Teknologi Informasi Terhadap Efektivitas Sistem Informasi Akuntansi (Studi Empiris Pada Hotel Yang Terletak Di Kawasan Lovina, Kabupaten Buleleng). *Jurnal Akuntansi*.
- Ratnaningsih, K. I., & Suaryana, I. N. (2014). Pengaruh Kecanggihan Teknologi Informasi, Partisipasi Manajemen, Dan Pengetahuan Manajer Akuntansi Pada Efektivitas Sistem Informasi Akuntansi. *Jurnal Akuntansi*, 1-16.
- Ray, G. W., & Jay, B. (2014). Information technology and the performance of the customer service process: A resource-based analysis. *MIS quarterly*, 625-652.