

Influence Quality System Information Management and Utilization of Information Technology to Effectiveness System Information Accountancy

Novien Rialdy^{a*}, Tiara Putri Annisa Pohan^b

^{a*} *Accounting Studi Program, Universitas Muhammadiyah Sumatera Utara, Indonesia.* novienrialdy@umsu.ac.id

^b *Accounting Studi Program, Universitas Muhammadiyah Sumatera Utara, Indonesia.* tiaraanisa130901@gmail.com

Article History	Submitted	Revised	Accepted
	2023-09-11	2023-11-12	2023-11-17

Abstract

The purpose of this study was to determine the effect of the quality of information systems, information systems management, and the use of information technology on the effectiveness of accounting information systems at PT. Ody Lestary Medan, either partially or simultaneously. This study uses a quantitative approach with multiple linear analysis techniques while the data collection technique in this study uses a questionnaire. As for the results of the research partially, the quality of information systems do not affect the effectiveness of accounting information systems. The results of this study concluded that simultaneously there is an influences of Information System quality, Information System Management and Utilization of Accounting Information Technology at PT. Ody Lestary Medan, this can seen by the value of $f_{count} 44,770 > F_{table} 2.93$. the coefficient of determination (R square) obtained is 0.822, this result means that 82.2% of the Effectiveness of Accounting Information Systems variable can be explained by the variables of Quality of Information Systems, Information Systems Management and Utilization of Accounting Information technology, while the remaining 17.8% is explained by other variable not examined.

Keywords: Quality of Information Systems, Management of Information Systems, Utilization of Information Technology, Effectiveness of Accounting Information Systems



INTRODUCTION

The current era of information and globalization causes the business environment to experience change which very rapidly with level competition Which strict. company- Companies are required to carry out operational activities effectively and efficiently to maintain its existence. (Prayogi et al., 2019) For that information system must be used and applied by every company to its employees both in processing data And produce information so that matter the expected can increase productivity And performance employee in a company (Rozi et al., 2021).

According to Larasati (2018) the integration of every component and subcomponent connected to the information systems accounting for the production of high-quality information defines the quality of accounting information systems. Elements Which The integrated accounting information system is also known as a component consists from hardware, software, brainware, procedure, databases And network (Hanum et al., 2021).

According to Gaol J.L & Jimmy L (2014) system information management in a manner general can said as A system man And machine Which integrated in provides information to support the management and determination operations function alternative courses of action in an organization the system. Whereas according to Davis (2004) a management information system is A unity, system machine user which integrated in give information to support the operations, management, and decision-making functions in an organization (Ainanur & Tirtayasa, 2018).

Management Information System or MIS is the application of information systems in in organization For support information Which needed by all management level (Jogianto, 2013). This is supported by opinions (Simarmata et al., 2021) which suggests that the management information system is system implemented in an organization to decision support and the resulting information is needed by all levels of management or by say other technique manager information in something organization (Sinambela & Tanjung, 2018).

Technology is derived from Greek, according Sudaryo et al., (2018) the Webster Dictionary defines technology as the systematic treatment or handling of something, while techne, the word's root, refers to knowledge, expertise, and skills (Saragih et al., 2021). Meanwhile, most ordinary people understand technology as goods related to machines or in the form of machines.

LITERATURE REVIEW

Understanding the Effectiveness of Accounting Information Systems

Susanto (2013) defines effectiveness as information that is delivered in a way that is easy to grasp, at the proper moment, in a format that is consistent with the prior arrangement and that is appropriate and fully supports business processes and user tasks.

(Handoko, 2013) states that: "The effectiveness of an Accounting Information System is a measure that provides an illustration of the extent to which targets can be achieved from a collection of resources that are organized to collect, process and store electronic data, then convert it into useful information and provide formal reports required in terms of both quality and time."

Measuring the Effectiveness of Accounting Information Systems. Another information system success measurement model put forward by (Romney & Steinbart, 2012, p. 36), known as the D & M Is Success Model, provides six dimensions of Accounting Information System success as follows:

1. System quality,
2. Information quality,
3. Service quality,
4. Use,
5. User satisfaction,
6. Net benefit (company profit).

Understanding Quality of Information System

The integration of all elements and sub-elements involved in creating an accounting information system to generate high-quality information defines the quality of an accounting information system (Setiawati, 2011). These integrated components, including databases, communication networks, Brainware, hardware, software, and procedures, are also called accounting information system components. A high-quality, cost effective, and easily accessible telecommunications network, or the integration of interconnected sub-systems that function well together, is necessary to convert transaction data about financial matters into financial information that management decision makers can use.

Measuring the Quality of Information Systems

According to Davis (2004), system performance is usually determined by factors such as the following :

1. Timeliness of output, provided on time for decision makers to make decisions.
2. Ease of use, creating apps that managers and staff can utilize and learn is crucial to ensuring that users will utilize the program effectively.
3. Scalability, increased business volume and expansion can be handled by a high-quality information system without causing a discernible decline in performance.
4. System response time, a system's average response time for online transactions is frequently a crucial component in assessing employee productivity and customer satisfaction.
5. Availability, the amount of time the system is expected to be available for use each month is measured by its availability. Usually, systems are offline for a while in order to perform maintenance and software updates.
6. Reliability, reliable information is anticipated to be produced by a quality system. Employee productivity declines as the competitive system weakens and customer discontent rises.

According to Romney & Steinbart (2012) the quality of accounting information systems can be measured by the following characteristics:

1. Usability (Usefulness)

- A quality accounting information system is expected to produce information output that will help management and users in making decisions. (Information output should help management and users make decisions).
2. **Economical (Economy)**
The system benefits are expected to exceed the costs. (System benefits should exceed the costs).
 3. **Reliability**
The system must process data accurately and completely. (The system should process data accurately and completely).
 4. **Availability**
Users should be able to access the system at their convenience. (Users should be able to access the system at their convenience).
 5. **Service (customer service)**
A quality accounting information system is expected to provide efficient service to users. (An information system that makes it possible to provide efficient service to users).
 6. **Capacity**
System capacity must be sufficient to handle peak operating periods and future growth. (System capacity must be sufficient to handle periods of peak operation and future growth).
 7. **Ease of Use (Ease Of Use)**
The system must be easy to use. (System should be user-friendly).
 8. **Flexibility**
The system must be able to accommodate reasonable changes in requirements. (The system should be able to accommodate reasonable requirement changes).
 9. **Tractability**
The system is easy to understand and facilitates problem solving and future development. (System is easily understood and facilitates problem solving and future development).
 10. **Auditability**
The system is designed to be auditable from the beginning. (The system is designed to be auditable from the start).
 11. **Security (Security)**
For information security only authorized users are given access to or permitted to modify system data. (Only authorized users are granted access to or allowed to change system data)

Understanding Management of Information Systems

A system is a collection of linked processes assembled to perform a task or reach a specific goal (Jogiyanto, 2010). (Chandra, 2002) a system can generally be defined as a collection of things or elements that work together or are connected in certain ways to form a single unit to carry out a function to achieve a goal.

Information is data that has been processed so that it has meaning for users (James, 2007). This is supported by the opinion (Moekijat, 2001) which states that information is the result of processing data into a form that is useful for the recipient in making decisions.

According to (Onong U, 2001) a management information system can generally be said to be an integrated human and machine system that provides information to support management operations functions and determine alternative actions within an organizational system. Meanwhile, according to Gordon in (Murdick, 2003) a management information system is a unified, integrated user-machine system that provides information to support operations, management and decision-making functions in an organization.

Management Information System or MIS is the application of an information system within an organization to support the information needed by all levels of management (Jogiyanto, 2010). This is supported by the opinion (Mulyadi, 2011) which states that a management information system is a system implemented in an organization to Supporting decisions and the resulting information is needed by all levels of management or in other words information management techniques in an organization.

Understanding the Use of Information Technology

According to Simarmata et al., (2021) technology is a design or design for action aids that reduces uncertainty with a cause and effect relationship in achieving a desired result. Meanwhile, Ellul's opinion in (Dalle et al., 2020) defines technology as a whole method that rationally leads and has efficient characteristics in every human activity. And Arifin and Setyawan, (2018) argue that technology is the application of behavioral and natural sciences as well as other knowledge in a systemic and systemic manner to solve problems. (Rianto & Dozan, 2020), states that information is the result of data processing which provides meaning and benefits. Meanwhile, information in the Indonesian dictionary is a amount of data that has been processed through data processing in order to test its level of truth and its achievability according to needs. Information is also facts that can be used as input in producing information.

Information technology is defined as science in the field of computer-based information and its development is very rapid. Information Technology as an educational medium is carried out using communication media such as telephone, computer, internet, email. According to Lucas, information technology is all forms of technology that are applied to processing and sending information in electronic form, microcomputers, mainframe computers (Kristanto, 2008).

According to Irwansyah & Moniaga (2014), Information technology is the use of technology to process, acquire, compile, store, and manipulate data to generate high-quality, timely, and relevant information. It is a strategic component for decision-making and is utilized for private, commercial, and governmental reasons.

Information Technology Functions

The function of information technology according to (Kristanto, 2008) is as follows:

1. Capture
2. Processing
3. Generating
4. Save (storage)
5. Looking Back (retrifal)

6. As a transmission

Information Technology Utilization Factors

According to (Thomson, et al), there are 6 factors that influence the use of information technology, namely:

1. Social factors
The extent to which a person believes others may persuade him to use information technology is a social element.
2. Feelings (affect)
Individual feelings can be understood as the way a person feels while using information technology for work, whether that sensation is good or bad.
3. Task Suitability
The appropriateness of tasks utilizing information technology demonstrates the connection between task needs and information technology use.
4. Long-term consequences
If the output created has benefits in the future, like professional progression and additional opportunities to receive more significant employment, then those are the long-term effects.
5. Conditions that facilitate the use of information technology
Conditions that support the use of information technology include objectivity elements in the workplace and make it simpler for users to complete tasks (Jogiyanto, 2010).
6. Complexity
The degree of perceived innovation that is comparatively challenging to comprehend and apply is known as complexity.

METHOD

This type of research uses quantitative research. This research is study Which aim For know connection between four variable (Sanusi, 2014). Study This done in PT. Ody Sustainable Medan. Definition operational study This is:

1. Independent variable (X1): The quality of the information system is the integration of all elements and sub element Which related in form system information For produce information Which quality.
2. Independent variable (X2): Information system management is a system that do function - function For provide all information Which influence all operation organization.
3. Independent variable (X3): Utilization of information technology is a technology Which used For process data.
4. Variable bound (Y) : Effectiveness system accounting information is something a measure that gives an idea of the extent to which a target can be achieved gathering source Power yes arranged For gather, process And keep data (Azuar et al., 2015).

ANALYSIS AND DISCUSSION

In this study, researchers took the object of PT. Ody Lestary Medan. Processing data in form questionnaire This each from 10 items statement for variable X 1 (Information System Quality),

10 statement items for variable X 2 (Management System Information), 10 items statement for variables X 3 (Utilization of Accounting Information Technology), 10 statement items for variables Y (Effectiveness System Information Accountancy) with spread questionnaire in accordance with a sample of 33 respondents who will be processed later using a scale Likert Sumated Ratings so that get results valid And reliable (Herdiansyah, 2010).



Picture 1. Normality Test Results

The picture above identifies that the regression model meets the assumptions which has been stated before, so that the data in the research regression model This tend normal.

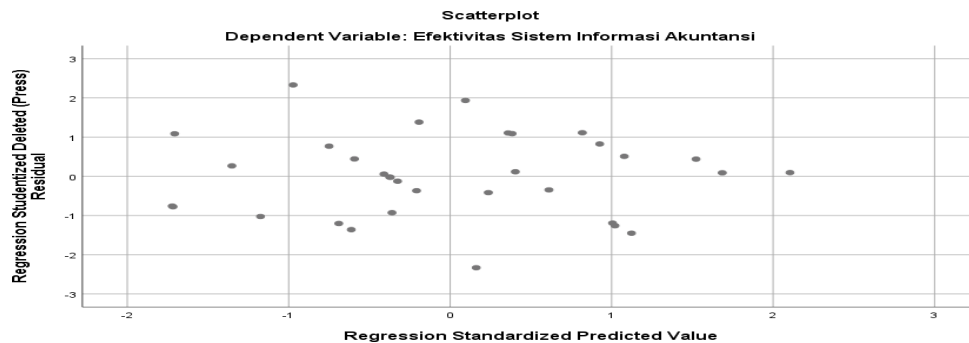
Table 1. Multicollinearity Test Results

Model	Collinearity Statistics	
	Tolerance	VIF
1 Quality System Information	0.618	1.617
Management System Information	0.276	1.627
Utilization Technology Information Accountancy	0.212	1.717

a. Dependent Variable: Effectiveness System Information Accountancy

Source: SPSS Data Processing Results, 2023

The five independent variables are X1, X2, and The X3 has a VIF rating within limits tolerance Which has determined (No exceed 10), so that No happen multicollinearity in variable independent.



Picture 2. Heteroscedasticity Test Results with Scatterplot Graphs

The picture above shows the dots spread randomly, not forming a clear pattern even though it appears to be attached to certain points and scattered at the top and slightly converge on the Y axis thus “didn't happen heteroscedasticity” on model regression This.

Table 2. Test Results Results of Multiple Linear Regression Analysis

1	Model	Coefficients ^a			T	Sig
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
	(Constant)	4.373	3.545		1.234	.227
	Quality System Information	.012	.069	.017	.172	.864
	Management System Information	.409	.138	.442	2.965	.006
	Utilization Technology Information Accountancy	.491	.169	.495	2.911	.007

a. Dependent Variable: Effectiveness System Information Accountancy

Source: SPSS Data Processing Results, 2023

Table 3. F Test Results

		ANOVA ^a				
1	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	179.886	3	59.962	44.770	.000 ^b
	Residual	38.841	29	1.339		
	Total	218.727	32			

a. Dependent Variable: Effectiveness System Information Accountancy

b. Predictors: (Constant), Technology Utilization Information Accountancy, Management System Information, Quality System Information

Source: SPSS Data Processing Results, 2023

Ftable = 2.93 Criteria test:

1. Reject Ho if F count > F table or -F count < -F table
2. Accept Ho if F count < F table or -F count > -F table

Tabel 4. R² Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.907 ^a	.822	.804	1.15730
a. Predictors: (Constant), Utilization Technology Information, Quality System Information, Management Information Systems				

Source: SPSS Data Processing Results, 2023

The results of the regression calculation can be seen that the coefficient of determination (R square) Which obtained as big 0.822, results This own meaning that 82.2% variable Effectiveness System Information Accountancy can explained by variable Quality System Information, Management System Information And Utilization Technology Accounting Information, while the remaining 17.8% is explained by other variables Which No researched.

CONCLUSION

Based on results study in on so can pulled conclusion as following:

1. Partially, Information System Quality has no effect on Effectiveness Accounting Information System at PT. Ody Lestary Medan, this can be seen from mark t count as big 0.172 temporary t table 2,039 And have number significant as big 0.864 > 0.05 or t count 0.172 < t table 2,039.
2. Partially Management Information Systems has a significant effect on The Effectiveness of Accounting Information Systems at PT. Ody Lestary Medan, this thing can be seen from the t value of 2.965 while the t table is 2.039 and has significant figure as big 0.006 < 0.05 or t count 2,965 > t table 2.039.
3. kindly Partial Utilization Technology Information Accountancy influential significant to Effectiveness System Information Accountancy on PT. Ody Lestary Medan, this can be seen from the calculated t value of 2.911 temporarily t table 2.039 and has a significant figure of 0.007 < 0.05 or t count 2,911 > t table 2.039.
4. The results of this study concluded that simultaneously there is influence Quality System Information, Management System Information dam Utilization Accounting Information Technology at PT. Ody Lestary Medan, this can be seen mark F count 44,770 > F table 2.93.

REFERENCES

- Ainanur, A., & Tirtayasa, S. (2018). Pengaruh Budaya Organisasi, Kompetensi dan Motivasi Terhadap Kinerja Karyawan. *Maneggio: Jurnal Ilmiah Magister Manajemen*, 1(1), 1-14. <https://doi.org/https://doi.org/10.30596/maneggio.v1i1.2234>
- Azuar, J., Irfan, & Manurung, S. (2015). *Metodologi Penelitian Bisnis*. UMSU PRESS.
- Chandra, R. (2002). *Management Information System*. Kalpaz Publications.
- Dalle, J., Akrim, A., & Baharuddin. (2020). *Pengantar Teknologi Informasi* (Divisi Buk). PT. Raja

Grafindo Persada.

- Davis, G. B. (2004). *Kerangka Dasar Sistem Informasi Manajemen Bagian I*. PT. Pustaka Binaman Pressindo.
- Gaol J.L & Jimmy L. (2014). *A to Z Human Capital (Manajemen Sumber Daya Manusia) Konsep, Teori, dan Pengembangan dalam Konteks Organisasi Publik dan Bisnis*. PT. Gramedia Widia Sarana Indonesia.
- Hani Handoko. (2013). *Manajemen (Kedua)*. BPFE.
- Hanum, Z., Muda, I., Bukit, R., Erlina, & Muhyarsyah. (2021). The Impact of Accounting Information System on Organizational Performance Through Good University's Private Governance in Indonesia. *Management*, 18.
- Herdiansyah, H. (2010). *Metodologi Penelitian Kualitatif*. Salemba Empat.
- Irwansyah, E., & Moniaga, J. V. (2014). *Pengantar Tekonologi Informasi*. Deepublish.
- James, A. H. (2007). *Sistem Informasi Akuntansi* (A. A. Yusuf (ed.); Ketiga). Salemba Empat.
- Jogiarto. (2013). *Teori Portofolio dan Analisis Investasi*. BPFE.
- Jogiyanto. (2010). *Analisis & Desain Sistem Informasi*. Andi.
- Kristanto, A. (2008). *Perancangan Sistem Informasi dan Aplikasinya*. Gava Media.
- Larasati, S. (2018). *Manajemen Sumber Daya Manusia* (H. A. Susanto (ed.); Pertama). Deepublish.
- Moekijat. (2001). *Pengantar Sistem Informasi Manajemen*. Remaja Karya.
- Mulyadi. (2011). *Sistem Perencanaan Dan Pengendalian Manajemen*. Salemba Empat.
- Murdick, R. G. (2003). *Information System For Management Modern*. Erlangga.
- Onong U, E. (2001). *Sistem Informasi Manajemen*. CV. Mandar Maju.
- Prayogi, M. A., Lemana, M. T., & Siregar, L. H. (2019). The influence of communication and work discipline to employee performance. *First International Conference on Administration Science (ICAS 2019)*, 423–426. <https://doi.org/10.2991/icas-19.2019.88>
- Rianto, B., & Dozan, W. (2020). *DASAR-DASAR PENGANTAR TEKNOLOGI INFORMASI* (T. A. Sandy (ed.); Pertama). CV. Multimedia Edukasi.
- Romney, M. B., & Steinbart, P. J. (2012). *Accounting information Systems* (Twelfth Ed). Pearson Education, Inc.
- Rozi, F., Sari, M., & Astuti, W. (2021). PENGARUH SISTEM INFORMASI AKUNTANSI, PENGAWASAN INTERNAL DAN KEY PERFORMANCE INDICATORS (KPI) TERHADAP KINERJA PEGAWAI DENGAN MOTIVASI BEKERJA SEBAGAI VARIABEL MODERATING DI PERUM PERUMNAS REGIONAL I MEDAN. *Jurnal Riset Akuntansi Dan Bisnis*, 21(2). <https://doi.org/https://doi.org/10.30596/9453>
- Sanusi, A. (2014). *Metodologi Peneletian Bisnis* (4th ed.). Salemba Empat.

- Saragih, F., Rialdy, N., & Nainggolan, E. P. (2021). The Effect of Intellectual Intelligence, Emotional Intelligence and Spiritual Intelligence on Ethical Behavior of Educator Accountants at Private Universities in North Sumatra. *Journal Of International Conference Proceedings*, 4(2), 349–358.
- Setiawati, A. D. dan L. (2011). *Sistem Informasi Akuntansi, Perancangan, Prosedur dan Penerapan* (1st ed.). Andi Yogyakarta.
- Simarmata, J., Manuhutu, M. A., Yendrianof, D., Iskandar, A., Amin, M., Sinlae, A. A. J., Siregar, M. N. H., Hazriani, Sinambela, M., Negar, E. surya, Jamaludin, Herlinah, Ardiana, D. P. Y., & G, N. L. W. S. R. (2021). *Pengantar Teknologi Informasi* (R. Watrianthos (ed.); 1st ed.). Penerbit Yayasan Kita Menulis.
- Sinambela, E., & Tanjung, H. (2018). "Pengaruh Pelatihan, Kompetensi, Lingkungan Kerja Terhadap Kinerja Pegawai." *Maneggio: Jurnal Ilmiah Magister Manajemen*, 1(1), 46–58.
- Sudaryo, Y., Aribowo, A., & & Nunung Ayu Sofiati. (2018). *Manajemen Sumber Daya Manusia Kompensasi Tidak Langsung dan Lingkungan Kerja Fisik* (Theodorus Erang (ed.); 1st ed.). Andi.
- Susanto, A. (2013). *Sistem Informasi Akuntansi*. Lingga Jaya.