

**THE EFFECTIVENESS IMPLEMENTATION OF THE REGIONAL FINANCIAL MANAGEMENT INFORMATION SYSTEM CLOUD AT THE JEMBER REGENCY****Diana Sugiyantari* & Purnamie Titisari**

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DOI: 10.5281/zenodo.1254391**Keywords:** effectiveness, information system, cloud computing**Abstract**

The increase in the volume of financial transactions of local government, demands transparency from the community, and to enhance the accountability of decentralization became the basis of the Central Government sets the Government Regulation Number 56 in 2005 about the Regional Financial Information system (SIKD). Based on PP Number 56 in 2005, the local government is obliged to convey information that is accurate, relevant financial employee administration and be accountable to the Central Government. It is encouraging local governments to use the tech no logical advances in the management of financial information. The utilization of information technology in the Finance employee administration local government in Indonesia was facilitated by the BPKP by forming a regional financial management application called Regional management information system (SIMDA). Applications continue to be developed appropriate Financial SIMDA development technology, and the last is SIMDA Financial Cloud. This paper discusses the effectiveness of the SIMDA Financial cloud at the Jember Regency using population 75 Unit Working Device Area.

Introduction

In Indonesia, regional autonomy encourages the utilization of information systems in the management of local government finances. Law Number 32 Year 2004 renewed by Law Number 23 of 2014 on Regional Government states that local governments are authorized to regulate their affairs including financial affairs.

The development of information technology can improve performance and activities to be executed quickly, precisely and accurately, so that eventually will increase productivity (Wardiana, 2002). Information technology is needed to improve transparency and accountability of decentralization. Government Regulation No. 56/2005 on Regional Financial Information System (SIKD) is issued. SIKD is a system that administers and processes local financial management data and other related data into information presented to the community and as a decision-making material in the framework of planning, implementing and reporting the responsibilities of local governments. Government Regulation number 56 of 2005 on SIKD, the Central Government Finance Agency developed an application that can be used by regional governments in managing regional finances called SIMDA. The SIMDA application is constantly being developed and refined, and currently under development is SIMDA Financial Cloud.

Implementation of SIMDA Finance helps local governments to manage their finances and develop quality financial reports (Alfian, 2015). The computerized SIMDA program has more benefits than the manual simulation programs (Padli, 2013). Since 2012, Jember Regency has been using SIMDA program but not yet network based (Pujiantoro, 2015). Since March 18, 2015 Jember Regency has treated the application of web-based or online SIMDA called SIMDA Cloud (Wirawan, 2015).

SIMDA Finance Cloud makes financial management more efficient and effective accessible from anywhere as long as it is connected to the internet, the encrypted data so it is safe from leads and real time (Pujiantoro, 2015). Supriyanto (2015) states that the use of web-based SIMDA applications is needed to facilitate verification and coordination functionality. The development of a web-based system makes it easy to access data from anywhere (Ambarita, 2016). Integrated Financial Management Information Systems (IFMIS) can improve public sector management by providing real-time financial information to managers in order to enhance their decision-making capabilities (Hendriks: 2012)



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In addition to the various benefits, the implementation of cloud computing contains many challenges. Challenges in the implementation of integrated FMIS are lack of capacity, weak commitment to change, institutional challenges and technical challenges (Hendriks: 2012). The measure of the success of a system is its efficiency and effectiveness. An effective and reliable system will improve the individual performance of Sahusilawane (2015).

Literature Review

Effectiveness of Information Systems

The measure of the success of a system is efficiency and effectiveness. The effectiveness of a system is measured to the extent that the system is able to achieve its objectives. Efficiency is comparison of inputs and outputs, resources used and outcomes. (Tyoso, 2016: 6). The diversity and volume of the processed transaction, or user satisfaction is a measure of effectiveness. The use of computer resources or memory, the server operating costs to achieve a certain level is effectiveness and efficiency. Information system effectiveness focuses on the organizational effects produced by an information system (Haga and Zviran, 1990 in Cyrus 1991: 2). According to Laudon (2015: 221) an effective information system provides accurately, timely and relevant information to the users.

1. Accurately, meaning that the information produced is free of error and bias. Free from error means that the information is real, honest, declaring what to say. Free from bias means that information must be thorough, complete
2. Timely, the information is there when it is needed and the time is right. Expired information is of no value.
3. Relevant, means the information generated in accordance with the needs of users and benefits of such information for decision-making.

Regional Financial Management Information System

The regional financial management information system is a system of grouping, recording, and processing of financial activities of local governments into a financial statement as information that can be used by certain parties in decision-making (Rahman : 2016). One of regional financial management system that is integrated and implemented by local governments in Indonesia is SIMDA. SIMDA's applications include budgeting, administration and accounting and reporting. IFMIS is an information system that enables efficient resource allocation, improves management decision making through availing timely financial and other information to aid in accelerating economic growth (Jared et.all: 2017). Hendriks (2012) conclude that integrated FMIS has many benefits such as effective control over public finances, contributes to the enhancement of transparency and accountability and serves as a deterrent to corruption and fraud.

SIMDA has been prepared since 2003 by BPKP. SIMDA has been used by 425 of 539 local governments or 79% of local governments in Indonesia. SIMDA Finance users are 365 local governments, SIMDA BMD 347 local governments, SIMDA Salaries 69 local governments and SIMDA 55 local government revenues (<http://www.bpkp.go.id/> accessed on October 25, 2016).

Cloud Computing

Cloud computing is internet based technology offers computing resources as a services to end users support various IT business process (Ramamoorthy, 2016). Cloud computing is a process for acquiring and delivering computingservices via internal or external information technology (IT) networks (GAO : 2016).Cloud computing is "a means for enabling on-demand access to sharedand scalable pools of computing resources with the goal of minimizingmanagement effort or service provider interaction." (The National Institute of Standards and Technology/NIST cited in GAO : 2016).

Methodology Research

The research method that researchers use is a quantitative research method with descriptive experiments. Eskperimen research method is used to find the effect of treatment in controlled conditions (Sugiyono, 2015: 36). This research design is pre-experimental design of one group pretest and posttest design to know effectiveness of SIMDA Finance implementation before and after cloud-based so that result is more accurate,



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because it can compare before and after condition given treatment (Sugiyono, 2015: 338). One group pretest and posttest design can be described as follows:

Table 1. One group pretest dan posttest design

Pretest	Independent Variable	Posttest	Dependent Variable
T ₁	X	T ₂	Y

Based on data collection techniques, this study uses questionnaires. Researchers took respondents of 75 SIMDA Finance Cloud operators on all SKPD in Jember District Government as the first local government in East Java region that implements SIMDA Finance Cloud (Noer 2015). The data analysis used in this research is t paired sample test / parametric statistic test if the data is normally distributed and if the data is not normally distributed.

Research Funding

Jember Regency is geographically located at position 6027'29 " - 7014'35" east longitude and 7059'6 " - 8033'56" south latitude with an area of 3,293.34 km² with an altitude between 0 --3,330 masl. Climate Jember Regency is tropical with temperature range between 23oC - 32oC. The boundaries of Jember Regency are as follows:

- North : Bondowoso District and Probolinggo District
- East : Banyuwangi District
- West : Lumajang District
- South : Indonesian Ocean

Table 2. One-Sample Kolmogrov-Smirnov Test

		Ya	Yb
N		75	75
Normal Parameters ^a	Mean	10.9333	13.1333
	Std. Deviation	1.89118	1.97507
Most Extreme Differences	Absolute	.247	.214
	Positive	.206	.172
	Negative	-.247	-.214
Kolmogorov-Smirnov Z		2.139	1.856
Asymp. Sig. (2-tailed)		.000	.002
a. Test distribution is Normal.			

With the significance level of 5%, it can be concluded that Ya and Yb significance value <0,05 then the population is not abnormal distribution, then hypothesis test is done by non-parametric test (Wilcoxon test).



Table 3. Ranks

	N	Mean Rank	Sum of Ranks
Xb - Xa Negative Ranks	2 ^a	31.75	63.50
Positive Ranks	57 ^b	29.94	1706.50
Ties	16 ^c		
Total	75		

- a. $X_b < X_a$
- b. $X_b > X_a$
- c. $X_b = X_a$

Table 4. Test Statistic

	Xb - Xa
Z	-6.276 ^a
Asymp. Sig. (2-tailed)	.000

- a. Based on negative ranks.
- b. Wilcoxon Signed Ranks Test

5% significance level is obtained by asymp value. $Sig = 0.00 < \alpha = 0.05$ H_0 is rejected, there is a difference. Based on the normality data test is not normal distribution, then the data analysis using non parametric statistical test / Wilcoxon test. Wilcoxon test with 5% significance level obtained by asymp value. $Sig = 0.00 < \alpha = 0.05$ H_0 is rejected, there is a difference in effectiveness of SIMDA Finance implementation in Jember District Government before and after cloud-based.

Conclusion

Based on the results of data analysis known that there are significant differences in the effectiveness of information systems before and after cloud-based. In accordance with some previous research that cloud-based information system is more effective. Suggestions for governments in Indonesia is cloud-based systems can be applied to continuously improve the quality of service to the community. Along with the implementation of cloud computing, the government, especially the local government should prepare adequate infrastructure and quality human resources to support the successful implementation of cloud computing.

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