A Review on Current Research Trend in Local Government Financial Information System (LGFIS) in Indonesia And Direction for Future Research

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Abstract: *This paper aims at reviewing current literatures trend regarding the application of local government financial information systems (LGFIS/Sistem Informasi Keuangan Daerah) with the stressing on the context of local governments in Indonesia. It is found that recent research on LGFIS mostly focus on the use of Delone and McLeane IS Success Model, quality of system , quality of information, utilization of systems, effectiveness of system, user satisfaction, internal control, and reporting quality. Research in this area is still in the early pahse, therefore few direction for future research are also discussed in this paper.*
Keywords: *local government information system, quality of system, quality of information, utilization of system*

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I. Introduction

Currently research on Information System especially Local Government Financial Information System (LGFIS) in Indonesia increasingly central among researchers. This can be understood based on the background that the use of information and communication technology has been extended to the government sector, especially in the implementation of LGFIS among the increasingly massive local government and increasingly needed especially in decision making (Imam, 2009). With the availability of financial data in various sectors of government affairs, it is believed the decision making process will be easier, faster and more accurate. From the productivity side, the application of LGFIS in the processing of local government financial information has also increased significantly compared to the manual or conventional ways that executed in the past. The rapid development of information and communication technology has enabled the ongoing management of information and transactions online. It has also a role in improving the performance of government agencies in providing services to the community through e-government ([1]). However, research under LGFIS topic is still in the early phase, if we compare with the study on accounting information system, banking information systems and the adoption information technology in business domain.

Research on LGFIS has gained attention among researchers in Indonesia, especially after the issuing of Gorvernment Regulation No. 56 Year 2005 regarding Local Government Financial Information System. The rapid delopment in information and communication technology (ICT) entered the public sector, especially in the implementation of local government financial information system among local government in Indonesia becomes massive and it is needed mostly in decision making. Local Government Financial Information Sistem (LGFIS) is a system which is used to document, manage, and process the local government financial data and other related data to be presented as information for public and a basis for decision making in terms of planning, implementation and reproting local government accountability.

Generally, govenment has determined a policy framework regarding LGFIS by issuing goverment regulation no. 56 Year 2005. The regulation is a main guidance in implementing LGFIS. According to the regulation verse 4, local government has to convey the following local financial information to central government: Local Government Budget, Realitation of Provincial and District Budget, Local balance sheet, cash flow information, note on local government financial reporting, decosentration fund and assistanship task fund, financial statement of local government linked corporation, and data relates to the need of fiscal and fiscal capacity. These information must be submitted to Ministry of Finance and Ministry of Internal Affairs. Furthermore the implementation LGFIS aims at : 1) assisting Governor and Head of District in composing local budget and report the administration of local budget; 2) Assisting governor and head of district in formulating local government financial policy.Assisting governor and head of district and other related agencies in evaluating local government financial performance. Assisting in providing the need for local government financial statistic ([2]).

As a policy framework, the implementation of LGFIS certainly will encounter challenges and problems. For example rapid development and innovation in ICT have caused the government to always observe about newly changes and trends in this area. Therefore, it is necessary to conduct research regarding LGFIS comprehensively in local government accross Indonesia. Research topics such as efectivity, information and quality of systems do relevent to be researched, so that findings of the research can cantribute to the betterment and improvement of LGFIS in the future.

This paper aims at reviewing current literature trend in regards with the implementation of LGFIS in the context of local government in Indonesia. Based on this present review, researcher intend   (1) to provide general overview regarding LGFIS research topics in Indonesia; (2) to provide advice on future research direction under this topic. By presenting the two themes, it is expected that the researchers may refer to this recommendation in undertaking research under LGFIS topic in the future. This paper will be divided in to two parts: current trend under LGFIS topic is presented first, and discussion on future research direction will be included in the second section.

II. Current Research Themes

It is no doubt that Delon dan McLean [3] model does draw many attentions from the researchers when they study about information systems. This model is developed in order to enable in making comparison and measurement. The model firstly developed in 1992, then revised in 2003 and 2004. The model then becomes main reference, especially in connected with informations sistem success model. It is targeted at assesing the successfull of an information system [4]. This model was extensively used by Peter, DeLone and McLean [5]. Even Raija [4] used the model for his research basis which offered intrepretive and descriptive approach. Through this approach, Raija [4] created significant development in presenting information retrospectively. It is due to his new approach that rather descriptive and easy to be learned. It differs mainly with few previous approaches, Raija [4] did not undertake any correlation and statistical concepts in his work. In Indonesia, Radityo and Zulaikha [6] utilized DeLone and McLeane Model in testing the relationship between system quality, information quality, individual impact and organization over user satisfaction and user intention. However Radityo and Zulaikha [6] unveiled that quality of system and quality of information do not affect user satisfaction.

Under DeLone and McLeane model, generally, researchers observe from few aspects which connect to user satisfaction (Isthianingsih and Setyo, [7]; Isthianingsih dan Wiwik, [8]; Arifin dan Partolo, [9]) and organisational factor [10]. Theoritically, the implementation of information system, including in public sector is the exemplify of organizational change (Davis and Olson,[11]; Lyytinen, [12]). Meanwhile the latest research which conducted by Wartini and Yasa [13] the focus is slightly stress on system effectivenes of LGFIS in the context of Government of Jembrana, Bali. Arifin dan Partolo [9] also employs DeLone and McLeane model in their research. They found that quality of LGFIS   positively affects user satisfaction, in this senses was government officers. However, information quality of LGFIS does not affect user satisfaction. Likewise, quality of LGFIS does not positively affect the use of system. Similarly, the reciprocal relationship between satisfaction and the use of system does not affect positively to each other as well. In addition, the use of SIKD have no positive effect on individual impact of each officer, but, satisfaction of government officer does have positive influence on individual impact.

Apart from DeLone dan McLeane, a model such as Seddon [14] IS success model has been adopted with modification by Isthianingsih dan Wijanto [7]. This can be done by setting up system deadline as an indicator to successfull of accounting software based on users perception on it. This model then modified in terms of testing relationship between perceived usefullness and the use of system. Data that collected through this research then analysed by using Structural Equation Modelling (SEM). Yet, the adoption of this model in LGFIS is still lacking. Therefore, use of this model ini assesing LGFIS for future research is highly recommended, even with another kind modification within local context of Indonesia. Yuliani, Nadirsyah dan Bakar [15] investigates the influence of the utilization of local government accounting information system in Banda Aceh toward reporting quality of local government financial statement. Whereby, the utilization of system was set as independent variable that content of four indicators : 1) Speed rate; 2). Security level; 3). Cost eficiency ; d) Level of output quality. Yuliani et.al. [15] then unveiled that the utilization of system does affect around 5% over reporting quality of Government of Banda Aceh Financial Statement. The research undertaken by including 66 high-rank officers and staffs from 22 agencies under Government of Banda Aceh administration, whose taks are composing financial statement. By resultinf 5% influence, it is meant that every improvement and development regarding the utilization of local accounting information system will be able to increase the reporting wuality around 5% as well. However, it is acknowledged by the aurthor themselves that the degree of influence is still low toward the quality of financial statement. Beside, it shoudl another factor that may have stonger influence toward quality of financial statement (Yuliani et.al., [15]).

Imran, Darwanis dan Arfan [16] also study about the utilization of LGFIS in Banda Aceh. They assess that the utilisation of LGFIS, easy of use and computer expertise simultaneously together and partly affect the effectiveness of system that managing local government finance. Imran et. al. [16] mentioned that the imeplementation of LGFIS is effective, since the employees perceive the system useful in supporting their tasks. The authors also confirms that their finding is in line with Davis [17] who concluded that everyone will opt to use a system only if the system does useful in raising their performance. Otherwise, someone will not use it. Additonally, Imran et.al. [16] found that the influence of the utilization of system over the effectiveness of LGFIS is around 0,073 (7,3%). It is meant that every singe increase or improvement in the utilization of system, it will contribute to the increase of the effectiveness of LGFIS around 7,3% as well. The influence of the utilization of system toward the effectiveness of LGFIS is found at low level.

Pujiswara, Herawati, and Sinarwati [17] evaluate the relationship between the utilisation of information system toward value of financial information and local government financial accountability. They conducted research by analysing 82 questionnaires using multiple regression. The respondents are staff of Government of Klungkung, Bali. Pujiswara et.al [17] found that the utilization of information systems positively affect the value of financial information and financial accountability area. Not only that, the supervisory variable also tested showed a positive influence on the financial value and financial accountability of the region. Wartini and Yasa [13] concluded that the implementation of SIKD in Jembrana District was effective in facilitating local financial management. This is based on the results of the test on the perceptions of LGFIS users in Government of Jembrana. The quality of the system and the quality of information have a significant and direct impact on user satisfaction. However, these two variables indirectly affect the benefits of the system for the organization through the variable intermediaries (intervening) user satisfaction. Similarly, the variable user satisfaction and management motivation directly affect the system benefits for the organization. Arifin and Partolo [9] also make variable user satisfaction as the dependent variable. However, this variable is one indicator of the DeLone Model and McLeane [3]. From the test results, they found that the quality of the system affects user satisfaction, while the quality of information does not have a positive effect on user satisfaction.

The effectiveness of the system is one of the variables that become the center of attention of researchers, especially linked with the internal control system. Systems supported by good internal control will improve the quality of local financial information (Widyaningsih, Triantoro and Wiyantoro, [19]). In their study on the effectiveness of the use of regional financial accounting system in 26 districts in West Java, Widyaningsih et. Al. [19] found a strong correlation between a good accounting information system and the strengthening of internal control systems. In this case the researchers make the effectiveness of the system as an independent variable. However, this variable can also be used as a dependent variable as in Imran et.al [16]. They examined the relationship between ease of use, the usefulness of the system and the computer expertise on the effectiveness of information systems.

III. Future Research Direction

Based on the current trend of LGFIS research, researchers see there are several aspects of LGFIS that need to be followed up for further study. First look at the more specific aspects of LGFIS itself, for example on reports or presenting information. There is also a need for comparative research between established regions in the application of SIKD with newly adopted LGFIS areas. Referring to the DeLone and McLean models, this comparative study will be able to simultaneously illustrate the differences between the two objects. Research will also be more challenging if included elements of the outermost and leading areas. Whether the LGFIS implementation is in place and effectively helps policy makers in making decisions in these underdeveloped areas.

Further research on the adaptation of the Delone and McLean Models in the Indonesian context must be empowered. Existing research this far directly includes the model in doing research on LGFIS as conducted by Arifin and Partolo [9], adopted by Radityo and Zulaikha [6] and slighty modified by Isthianingsih and Setyo [7]. Future research needs to look more closely at the context of LGFIS implementation in Indonesia and then critically question whether the DeLone and McLean models fit the LGFIS Indonesia context, or indeed require adjustments, so as to be an appropriate measuring tool in assessing success in the application of LGFIS, both in terms of quality of systems, quality of information, the use of systems and users satisfaction. It can be commenced for example by firstly review the attitude aspects of the users of LGFIS itself. Do they have a negative attitude, if so then surely will make the implementation of IS will become more difficult (Raija, [4]).

The emergence of new models in the assessment of the effectiveness of LGFIS is also still likely to be done by researchers. Either by using the quantitative method in developing the evaluation model of LGFIS effectiveness. The development of this assessment model requires a comprehensive approach. For those who use the positivistic approach, of course, can build the model by relying on deductive logic and further develop generalization. It is required in developing a valid and reliable model. However, it is possible that a qualitative

approach by building the theory from the field will produce a model that is much more simple and easy to understand as the model developed by Raija ([4]).

From a number of studies that have been successfully reviewed, very little for example that links between the variables of behavior in the organization and its relation to the effectiveness and quality of information systems. Behavioral aspects are important to be examined, so that in the future can be analyzed further whether personality factors, work environment, deviation behavior at work for example affect the implementation and effectiveness of LGFIS. This idea is based on the context of the use and application of LGFIS which involves the human factor as the user (operator or policy maker).

From the perspective of research design, research on LGFIS still many that focus on quantitative side. There is still little research with the qualitative designs produced. It also provides a great opportunity for researchers to look at this research topic qualitatively, whether it can describe a relationship that can be demonstrated by using domain analysis, content analysis and with participatory observational approaches. The use of qualitative research design in the future will enrich the research literature on LGFIS in Indonesia. Lastly, it is also necessary to take into consideration that number of sample can be made greater than 100 in order to look at more representative, probability and generalizability.

IV. Conclusion

In conclusion, research on the application of Local Government Financial Information System (LGFIS) in Indonesia is something new. At least this research only emerged after the government issued a regulation on regional financial information system in 2005. Indeed research on regional financial accounting information system also briefly surfaced, but this paper is more specific to review in the context of LGFIS implementation in various districts/cities in Indonesia. Current research trends in LGFIS range from the use of the DeLone and McLean models, Seddone model and a number of other studies that generally look at aspects of expediency, the utilization of system, and their relation to internal control systems, system effectiveness and user satisfaction. There are still many research gaps that can still be filled by researchers, to explore the relationship and causality between one variable with other variables. For future research direction, it is expected that the current model can be modified to suit to Indonesia context. The employment of qualitative approach instead of quantitative is needed in order to have the balanced overview on the output of the research.

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