E-Budgeting to Enhance the Quality of Information

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Abstract ⸺**Regional Organization (RO) in implementing the budgeting system has not yet integrated the system. The budget is one of the government finances that must be appropriately managed where the funds collected must be adequately budgeted. The purpose of this study was to find out the implementation of *e-budgeting* in Bandung city and find out the effect of *e-budgeting* on the quality of information. The study was conducted on seven (7) Regional organizations by distributing questionnaires to the program and financial sections of 21 respondents. The data processing was done using multiple regression. The results of the study indicate that the Bandung Regional Organization has implemented *e-budgeting*. However, users do not feel helped by *e-budgeting*. Besides that, *e-budgeting* has not been well integrated. There is the influence of *e-budgeting* on the quality of information on the Regional Organization in Bandung.**

Keywords—E-Budgeting, Information Quality, Regional Organization

I. INTRODUCTION

E-budgeting is one of the breakthroughs in reforming bureaucracy in Bandung City [1]. Furthermore, it is said that *e-budgeting* is a system of performance transparency and accountability that the government seeks in the preparation of the budget which is part of the innovation contained in the Bandung development triangle formula, namely innovation, decentralization, and collaboration. The purpose of *e-budgeting* is for a variety of activities to be carried out optimally. One of the benefits of *e-budgeting* is to avoid corruption in government budgets [2].

If a ceiling is previously given at the beginning before making the ceiling of the program is the opposite of the current Organization of Regions shall submit a detailed program activity to be carried out, with the approval of the new budget can be processed. This is done to change the mindset so that it no longer makes the program based on the presence or absence of a budget but is creative in making innovative programs and then the budget follows [3]. The Regional Secretary of Bandung said that *e-budgeting* would succeed if it fulfilled two conditions, namely *political will* and planning [4]. The benefits obtained with the implementation of the system *of e-budgeting* is an activity easily tracked so that it can cut activities that are not essential, other benefits can create changes in the composition of the upper portion of the shopping service to the community and shopping to civil servants who originally

52 and 48 percent widened 61 and 39 percent. Thus, the implementation of *e-budgeting* has saved government spending up to 1 Milion Rupiahs [1]. The system's advantage of *e-budgeting* is to prevent corruption, run the principles of public transparency, and the efficiency of financial data collection [5]. E- *budgeting is* not just a planning tool but also serves as a tool for city government budget control [4].

In addition to getting the usefulness of the application of the system *of e-budgeting* also found problems, such as not all the area knew how to use the *e-budgeting* [1], in detail stated that the weakness of the system implementation *of e-budgeting* is in the planning stage are less detailed. The *e-budgeting system* contains a budget to be made in detail and clearly. Another obstacle is that the *e-budgeting* system tends to be easily hacked or exposed to viruses *online* so it can damage the data, then another obstacle is inadequate HR competency in the implementation of *e-budgeting* [5]. The system (*e-budgeting*) can be said to run well if the system is easy *of use,* namely the system used is clear and understandable [6], meaning *usefulness* can help users in doing their work [7], *adaptability* which emphasizes the ability to manage internal changes and external [8] and integrated which means integrated information systems for the basic parts of the system in achieving better functions in accordance with expectations [9].

Based on the benefits and phenomena that have been described, researchers see the need for research that can provide empirical evidence about the implementation of *e-budgeting* in Bandung. The purpose of this study was to determine the impact of the implementation of e-budgeting in the Regional Organization in Bandung and its impact on the quality of financial statements. The research result show with the implementation of e-budgeting, the Bandung city government could manage the budget issued more efficient and the activities carried out by regional organizations became more effective. Regional organizations asked to make the program as detailed as possible so that its implementation is more efficient. The advantage of implementing e-budgeting will save the budget of the Bandung city government because there is a price equation of the budget proposed by each regional organization. From that advantage known, the implementation of e-budgeting produces an effective report for decision-makers.

II. METHODS

The research method used descriptive and verification methods (*explanatory research*). The analytical unit in this study was the Regional Devices Organization (OPD) in Bandung. The total of organizational device Regions are used as the unit of analysis in this study include:
a) Education office
b) Department of Housing and neighborhood preservation, land, and landscaping
c) Department of labor
d) Service of population control and family planning
e) Development and agriculture office
f) Office of the population and registration of civil
g) Office of communication and informatics

The type of research used to collect data was a survey. The method used to collect data in this study was an interview, questionnaires, observation, and motivational techniques. This research has been tested for validity and reliability.

III. RESULTS

The results of data processing in the form of research scores that have been obtained are then interpreted with the following conditions (table 1)

TABLE I. INTERPRETATION OF RESEARCH SCORES

Mean Score			Interpretation
4,21	-	5,00	Very Good
3,41	-	4,20	Well
2,61	-	3,40	Enough
1,81	-	2,60	Not Good
1,00	-	1,80	Not Very Good

Based on the results of research for the analysis description of the e-budgeting variable with indicators easy of use, usefulness, adaptability, and integration can be seen in table 2.

TABLE II. DESCRIPTIVE ANALYSIS OF E-BUDGETING VARIABLES

Dimension	Item No.	Frequency of Answers					Mean Score	Interpretation
		5	4	3	2	1		
Easy of use	30	1	2	4	0	0	3.57	Well
	31	1	1	4	1	0	3.29	Enough
	Average Dimension						3.43	Well
Usefulness	32	0	0	6	1	0	2.86	Enough
	33	0	0	5	2	0	2.71	Enough
	Average Dimension						2.79	Enough
Adaptability	34	1	5	0	0	1	3.71	Well
	35	0	6	1	0	0	3.86	Well
	Average Dimension						3.79	Well
Integration	36	0	2	4	1	0	3.14	Enough
	37	0	1	3	2	1	2.57	Not good
	Average Dimension						2.86	Enough
E-Budgeting Average							3.21	Enough

Based on the table above, it is known that overall, the respondents' evaluations regarding *E-Budgeting are* included in the Fairly Good category (3.21 in intervals of 2.61 - 3.40). Of the four dimensions of *E-Budgeting*, the highest rating is given to the *Adaptability* dimension with an average score of 3.79 (Good), then to the *Easy of Use* dimension with an average score of 3.43 (Good), and an assessment of the other two dimensions stated Enough Good Integration (2.86) and *Usefulness* (2.89). Based on the results of the study for the analysis of the description of the variable quality of accounting information with indicators accurate, timelines, relevant and complete can be seen in table 3 (descriptive analysis on quality variables of accounting information)

TABLE III. DESCRIPTIVE ANALYSIS OF QUALITY VARIABLES OF ACCOUNTING INFORMATION

Dimension	Item No.	Frequency of Answers					Mean Score	Interpretation
		5	4	3	2	1		
Accurate	38	0	1	4	2	0	2.86	Enough
	39	0	0	2	4	1	2.14	Not good
	Average Dimension						2.50	Not good
Timelines	40	0	2	4	1	0	3.14	Enough
	41	0	0	5	2	0	2.71	Enough
	Average Dimension						2.93	Enough
Relevant	42	0	1	3	3	0	2.71	Enough
	43	1	1	5	0	0	3.43	Well
	Average Dimension						3.07	Enough
Complete	44	0	1	2	4	0	2.57	Not good
	45	0	2	5	0	0	3.29	Enough
	Average Dimension						2.93	Enough
Average Quality of Accounting Information							2.86	Enough

Based on the table above, it is known that the overall assessment of respondents regarding the Quality of Accounting Information is included in the Fairly Good category (2.86 is in the interval of 2.61 - 3.40). Of the four dimensions of Accounting Information Quality, the highest rating is given to the relevant Relevant with an average score of 3.07 (Fairly Good), then to the dimensions of Complete and Timely with an average score of 2.93 (Good Enough), and the assessment of one other dimension is stated as Not Good, which is Accurate (2.50).

Data Analysis Method

In this study, we will look for the effect of e-Budgeting on the Quality of Accounting Information, using Simple Linear Regression analysis with the following formulations of linear regression equations :

$$Y = a + bx$$

Where: Y = Quality of Accounting Information
X = E-Budgeting
a = Constant
b = Regression Coeffitient

A Research Data

Based on the results of data processing for e-budgeting variables and accounting information can be described in table 4 (e-budgeting and quality of accounting information):

TABLE IV. *E-BUDGETING* AND QUALITY OF ACCOUNTING INFORMATION

No.	Y	Z
1	18,685	15,120
2	27,864	17.259
3	17,020	15,120
4	21,350	25,676
5	19,659	17,780
6	17,993	12,030
7	12,905	9,666

Source: Transformed questionnaire data into MSI Intervals

Simple Regression Analysis

After obtaining data from 7 respondents who have been transformed into intervals using the *Method of Successive Interval* (MSI), then the total scores for the Y and Z variables as shown in Table 2 above, are then analyzed using simple linear regression analysis. Regression analysis is used to determine the extent of the influence of the independent variable namely e-budgeting on Information Quality. Simple linear regression analysis is carried out with the help of the IBM SPSS 25.0 program. The results of the analysis are presented in the following tables. The effect between e-budgeting variables and the quality of accounting information can be seen in table 5 (model summary)

TABLE V. MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Erro the Estin
1	,568ᵃ	,322	,187	4,5!

a. Predictors: (Constant), Y E-Budgeting

The table above shows the magnitude of the value of r (correlation) of 0.568 so that the two variables can be said to have a correlation or a fairly close relationship (r is in the interval from 0.400 to 0.699). Then obtained R ^{2} (coefficient of determination) of 0.322 or equal to 32.2%. This means that *e-budgeting can* explain changes in the Quality of Accounting Information by 32.2%. And the remaining 67.8% is a contribution from other variables not examined. Table 6 shows the simple linear regression equation :

Table 6 (coefficients) shows the simple linear regression equation :

TABLE VI. COEFFICIENTS

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,870	8,116		,477	,654
	Y	,632	,410	,568	1,542	,184

a. Dependent Variable: Z KIA

From the table above the simple linear regression equation is obtained as follows:

$Z = a + bY$

For the estimation :

$$\hat{Z} = 3{,}870 + 0{,}632\,Y$$

Where:

$\hat{Z}$ = Accounting Information Quality

Y = *e-budgeting*

The values in the above equation can be explained as follows:

1. Constant (a)

   A value of 3.870 shows that if the *e-budgeting* is 0, then the Quality of Accounting Information will be positive 3.870.

2. Regression Coefficient (b)

   The value of b is 0.632 indicating that each increase in the quality of *e-budgeting* by 1 will be followed by an increase in the Quality of Accounting Information of 0.632, meaning that changes in *e-budgeting are* directly proportional to changes in the Quality of Accounting Information.

Hypothesis testing

In this study the proposed hypothesis is:

H_0 : $\beta = 0$; *e-budgeting has* no significant effect on Information Quality

H_a : $\beta \neq 0$; *e-budgeting* has a significant effect on Information Quality

The null hypothesis is rejected if the value of sig <0.05, whereas the null hypothesis is accepted if the value of sig$>$ 0.05.

Based on the results of data analysis using simple linear regression analysis techniques obtained a significance value of 0.184 or it can be said sig value > 0.05, then the null hypothesis (H_0) is accepted and the alternative hypothesis (H_A) is rejected, or it can be stated that *e-budgeting* no significant effect on the Quality of Accounting Information.

IV.   DISCUSSION

Based on the results of the study, it can be described that regional apparatus organizations, in general, have implemented *e-budgeting* with quite good criteria with a score of 3.21. This shows that the implementation of *e-budgeting* has not yet reached an ideal score so it needs to be optimized again. The statements related to *easy of use* are *easy to use* and *clear* systems. *Usefulness* occupies the lowest score of 2.79, where the statement is that *e-budgeting* helps users in carrying

out their duties, besides that *e-budgeting* increases the intensity of the use of the system itself. It turns out that this indicator ranks the lowest compared to other indicators. This indicates that *e-budgeting* users have not been optimal in using it because they have not felt helped by their work.

From all available indicators for the *e-budgeting* variable, the *adaptability* indicator occupies the highest score of 3.79. In this indicator, two statements are presented which are related to adaptation to technological changes and *e-budgeting is* easy to access. Although overall it achieves the highest score compared to other variables but still does not reach the ideal score, meaning that it needs to be optimized again. Meanwhile, the integration indicator occupies the second-lowest score after usefulness. His statement is component integration and function integration. The results show that *e-budgeting* has not been well integrated. The success of a system can be integrated, and the results of the scores obtained have not shown optimal results. This is in accordance with the theory which suggests that the characteristics of the system include *ease of use, system flexibility, system reliability* and *ease of learning* [10]. The same thing states that the characteristics of a quality system include *cost-effectiveness, usefulness* and *flexibility* [10]. The quality dimension of the system consists of integration*,* flexibility, accessibility. and formalization [12]. The complete mentioned that the quality characteristics of the system include r*eliability, usability, adaptability, trust and maintainability* [13].

Furthermore, the information quality variable is not far from the *e-budgeting* variable*,* which is at a score of 2.87 which means good enough. Although there are quite good criteria, the number of information quality variables is below the *e-budgeting* variable. From the indicators, it turns out that the accurate indicator occupies the lowest score of 2.50. In this indicator, there are two statements, namely information in accordance with the actual situation and information free from material errors. This means that for this indicator, it has not reached an ideal score. This is in accordance with the theory stated that a curate is an information that must reflect the actual situation (according to reality) [14]. The indicators on time reached a score of 2.93, meaning that both of these indicators achieved quite good scores and had not reached the ideal score. Statements for timely indicators including information available when needed and frequency of reports consistent. It was stated that time is the information that must be available when needed, not tomorrow, or not a few hours (timely in presenting information) [15]. The full indicator statement includes a complete information statement, and information is presented on time. In line with the theory that states that complete information must be given in full in accordance with the user's needs to make a decision [14]. Finally, the relevant indicators reach a score of 3.07 and this is the highest score among the other indicators. His statement includes information in accordance with the needs and information capable of influencing decisions. It is stated in the theory that elevation r is the information provided must be in accordance with what is needed (according to needs) [15].

As for answering the hypothesis, the results show that *e-budgeting* affects the quality of information by 32.2%. This shows that 67.8% are influenced by other factors not examined. The results of this study are in line with previous researchers who stated that the implementation of *e-budgeting* in Surabaya was good but the development and improvement of the system needed to be improved again as well as the quality of HR [16]. The next researcher stated that in order to make a transparent budget, an *e-budgeting* information system should be built with object-oriented methods using UML [17]. Next, it can be explained that e- *budgeting* functions to correct ineffective activities for the Bandung city income and expenditure budget. *E- budgeting* is an effort to save more money. The budget is prioritized in the fields of education, health and infrastructure. *e-budgeting* also transforms the donor system into performance-based, this is done because so far the civil servant administration system is considered still unfair. Through *e-budgeting*, the fees earned are calculated based on performance. Employees who diligently attend with high productivity will get different incentives appreciation from lazy employees.

It was also stated that *e-budgeting was* an improvement of the Birem system (*Bandung integrated resources system*). *e-budgeting* is one of the control tools and is part of bureaucratic reform in the hope of becoming a role model. Previously there had been duplication of budgeting due to weak supervision, with *e-budgeting* all detected. *E- budgeting* also serves to monitor the budget composition of all OPDs and can take strategic steps to make budget efficiency. Some of the budgets can be trimmed include official travel are during this great well outside the area in the country in pieces 50% or less, as well as the procurement Stationery Office, which takes a lot of budgets. Next, regarding the cost of photocopying, which costs a lot of money, it is necessary to make savings by purchasing a copy machine for all OPDs.

Strategies and policies are examples of savings from implementing *e-budgeting*. After this system was implemented, the Bandung City Government could save a budget of up to hundreds of billions of rupiah. The expectation is that the proportion of the Bandung City budget is better, more priority, more accountable, and there are no stealth budgets. All will be allocated to priority matters such as infrastructure development, health, and education.

V. CONCLUSION

E-budgeting affects the quality of information. The Regional Government Organization of Bandung City has implemented *e-budgeting*. Implementation of *e-budgeting* aims to minimize fraud using the government budget. In its implementation, there are still several related constraints, there are still a number of accounts needed to be programmed that are proposed but not yet available on the *e-budgeting*

system. In addition, the readiness of the human resources who operate *e-budgeting*.

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