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Performance-Based Budgeting, Preventive Supervision, and Effectiveness of Budget Control

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Abstract: This study aims to determine the effect of performance-based budgeting and preventive supervision on the effectiveness of budget control. The population in this study were employees at BPKAD, South Sumatra Province, Indonesia. The sampling technique used the purposive sampling technique and obtained as many as 77 respondents. Primary data were collected in a questionnaire and analyzed using multiple linear regression analysis. Based on the results of the study, it shows that partially, performance-based budgeting and preventive supervision have a positive and significant effect on the effectiveness of budget control. The implication of this research is to increase the effectiveness of budget control, namely supervision of the procedures for managing and placing the budget as well as increasing the competence of government officials in BPKAD, South Sumatra Province.

Keywords: Performance-Based Budgeting; Preventive supervision; Effectiveness; Budget Control

Introduction

The effectiveness of budget control can describe whether the budget management of a region produces social benefits for the community or not (Pekei, 2016). The level of effectiveness of budget control can be seen from the comparison in the existing financial statements based on budget planning and realization for each fiscal year (Pekei, 2016). The Regional Government of South Sumatra Province, during the 2017-2020 period, the realization of the expenditure budget showed an average of 84.55%, this means that the level of effectiveness for the absorption of the expenditure budget is quite effective because it is between 80-90% (Pekei, 2016). This indicates that the financial performance in

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terms of budget absorption is good. The level of achievement of Regional Original Income during the 2017-2020 period, on average, is still below one hundred percent. The highest percentage of achievement was in 2019 at 95.53%, while the lowest percentage was in 2017 which was only 16.64%. According to (Pekei, 2016), this can happen because setting the revenue budget is not based on fiscal potential (fiscal potential) but according to last year's calculations (incremental).

Regional Financial and Asset Management Agency (BPKAD) of South Sumatra Province in managing finances and assets are already implementing Performance-Based Budgeting as a form of implementation of budget reform (budgeting reform) (Law No. 23 of 2014). Performance-based budgeting as part of a broader program of governmental reform (Clark & Stewart, 2018). The main aspects of budgeting reform based on Halim & Iqbal (2019) is a change from the traditional budget approach (traditional budgeting) to the new approach, known as performance-based budgeting (performance budgeting) which is an orienting system of preparation and budget management on the achievement of performance or results reflects the efficiency and effectiveness of services to the public. Applying performance-based budgeting also improve the quality of public services, and reinforce the impact of improved public services (Kurrohman, 2013). The Government of Indonesia has designed the concept of performance-based budgeting and has integrated it into short, medium and long term planning (Hartanto, 2018). The existence of performance-based budgeting is expected able to increase the effectiveness of socio-economic development and quality of life of the community (Law No. 17 of 2003).

Previous research related to performance-based budgeting and the effectiveness of budget control conducted by Karacan, & Yazici (2015) and Gomero, Bhat & Khan (2020), revealed that performance-based budgeting has a positive and significant effect on the effectiveness of budget control because there are clear performance indicators to be desired, achieved, the public administration system has been well organized, structured, and consistent so that budget performance can be achieved by the predetermined size, and there is added value, if performance-based budgeting is carried out in the form of increasing the effectiveness of budget use (Trenovski & Nikolov, 2015). One of the objectives of implementing a performance-based budgeting system is to improve the efficiency and effectiveness of government performance (Octavia, 2017). However, the contradictory results of Dendi (2017) research state that performance-based budgeting does not affect the effectiveness of budget control because the performance-based budgeting that is made does not have clarity in performance targets, between performance targets and budget preparation documents are not aligned, there is no consideration from the orientation of the budget to the outputs and objectives of the vision and mission program, which resulted in the effectiveness of budget control not being implemented properly. There are differences in the results of previous studies, for that it is necessary to further investigate the effectiveness of budget control.

Furthermore, in Government Regulation No. 20/2001, the government guides to prepare competent supervisory officers by providing guidance, guidelines, direction, training, evaluation, and supervision to officials who supervise and run their budgets in the field of regional financial management. The Summary of the 2019 South Sumatra Province Regional Audit Report by the South Sumatra Province Representative Audit Board stated that in the regional income policy, the South Sumatra Provincial government's financial

statements require an increase in supervision efforts, in addition to the need for simplification of the collection administration process and also coordination.

As an effort to improve supervision, the Representative of the Financial and Development Supervisory Agency (BPKP) of South Sumatra Province has activity indicators, one of which is preventive supervision activities carried out before the activity takes place as an early prevention effort so that there are no deviations in the implementation of the budget that can burden or harm the state (Halim & Iqbal, 2019). This preventive supervision is very necessary because it can stop the emergence of problems so that it can help achieve control over the implementation of the budget. Previous research on preventive supervision and the effectiveness of budget control by Periansya, Sopiyan, & Pratiwi (2020), and Hadi, Diantimala, & Fahlevi (2018) revealed that preventive supervision has a positive and significant effect on the effectiveness of budget control because the implementation of the budget has been regulated by the local work unit with implementation procedures as one of the bases for the implementation of activities that are part of the supervision so that deviations can be minimized and make the realization of the budget more focused in achieving budget targets. On the other hand, the results of research from Dendi (2017) reveal that preventive supervision does not affect the effectiveness of budget control due to the lack of thoroughness and consistency of employees and/or supervisory units in carrying out correct supervisory procedures, as a result, the effectiveness of budget control does not work well. In government activities, supervisory procedures as they should be implemented are contained in government regulations regarding the internal control system. In terms of budgeting, so that the effectiveness of budget control can be achieved, of course, the relevant regional apparatus is expected to further improve preventive supervision, and the problem of human resources in the government sector in Indonesia is still a major concern (Surianti & Dalimunthe, 2015).

There are research gaps as revealed by Sara, Cinquini & Grossi (2017), which have been a critical topic and represent an issue that requires further clarification, one of which is about the implementation of a performance-based budget. This article examines the effect of performance-based budgeting and preventive supervision on the effectiveness of budget control. The novelty of this research is to conduct an assessment of the effectiveness of budget control which is focused on all managers of work units or structural officials in the BPKAD of South Sumatra Province, because most of the previous research has examined the Regional Apparatus Organizations. Furthermore, empirical estimates of performance-based budgets and appropriate preventive monitoring to increase the effectiveness of budget control are expected to contribute to the theoretical and empirical literature. It is hoped that the results of the study will provide implications for local governments, especially BPKAD of South Sumatra Province in terms of program planning and evaluation, especially in the public financial budgeting system and effectively controlling local government revenue and expenditure budgets.

Literature Review

Performance Based Budget Theory

The Performance-Based Budgeting reform was aimed at improving the efficiency and effectiveness in the allocation of public resources, the budgeting data were expected to work as enlightening devices able to orient the allocation and use of resources in an

efficient, effective and responsible way (Mauro & Pianezzi,2021). Performance-based budgeting is intended to improve the efficiency and effectiveness of public expenditure by systematically linking the funding of public sector organizations with expected outcomes (De Vries, Nemec, & Spacek, 2019). According to Geraghty & Klosek (2016), Performance Based Budget is an allocation of funds based on programmed results that contribute to organizational goals. Performance Based Budget can maximize budget allocations for successful programs and minimize budget allocations for less successful programs according to organizational goals Performance-based budgeting systems are able to increase the efficiency and effectiveness of the public sector by including performance information in the budget process (Karacan, E., & Yazici, K. (2015).

Performance-Based Budgeting as a concept that overcomes various weaknesses in traditional budgets emphasizes more effective and efficient use of budgets. (Halim & Iqbal, 2019:173) stated that performance-based budgeting is a budgeting method for management to link each funding outlined in activities with expected outputs and results including efficiency in achieving the results of these outputs. The outputs and results are stated in the performance targets for each performance unit.

In the preparation of performance-based budgeting, it is necessary to pay attention to the principles of performance-based budgeting. The principles of performance-based budgeting are budget transparency and accountability, budget discipline, budget justice, budget efficiency, and effectiveness, and are prepared with a performance approach (Halim & Iqbal, 2019:174).

Effectiveness of Budget Control

Effectiveness is a measure that shows the level of success of the output and the goals or objectives to be achieved. Budget is used to avoid spending too much (overspending), too low (underspending), one goal (misappropriation), or there is improper use (misspending). The budget becomes a tool to control the financial condition and operational activities of the government as well as a planning tool management achieve organizational goals. The effectiveness of budget control is a budget goal to be achieved from the budget function as a controlling tool. Budget control is carried out to ensure state revenues, state expenditures, and state distribution so as not to deviate from the plans set by the government. For controls to be effective should be able to compare results and enhance control and planning of an organisation (Mazikana, 2019). (Widjaja, 2002:94) stated that in its objective, the effectiveness of budget control can be broken down into four dimensions described namely budget realization, compliance with regulations, efficient results, and overcoming obstacles and irregularities.

To determine the level of effectiveness of the budget that is implemented, it can be measured by the level of effectiveness of the budget as shown in the table below (Pekei, 2016):

Table 1. Financial Performance Criteria

No.	Category (%)	Interpretation
1.	> 100	Very effective
2.	90 – 100	Effective
3.	80 – 90	Effective enough
4.	60 – 80	Less effective
5.	< 60	Ineffective

Source: Pekei, 2016

Preventive Supervision

Preventive supervision is supervision that is carried out before the activity takes place, and this supervision can be used as early prevention of the possibility of deviations from the budget. With preventive supervision, the budget that has been set can be effectively monitored, its use by calculations, and there will be no more wasted funds that are not fully absorbed so that the budget that has been set will be realized and controlled according to what has been determined. The better and better preventive supervision is carried out, the better the budget control will be (Dendi, 2017).

Based on the Decree of the Minister of Finance of the Republic of Indonesia No. 435 of 2012, supervision is part of control designed to avoid unexpected events or errors. One of the failures in implementing performance-based budgeting is the problem of human resources both in the budget preparation process and budget use (Surianti & Dalimunthe, 2015). For this reason, it is important to supervise the implementation of budgeting effectiveness and in preventive activities including approval, authorization, security of assets, and segregation of duties.

Hypothesis Development

The Effect of Performance-Based Budgeting on The Effectiveness of Budget Control

Performance-Based Budgeting is a budgeting system that is oriented to the outcomes and is closely related to the vision, mission, and strategic plan of the organization. According to Ahmad & Ahmad (2018), performance-based budgeting is part of a broad public sector reform known as results-based management. By using performance-based budgeting takes a public administration system that has been laid out with good, consistent and structured so that performance on a budget can be achieved by size - the size of which has been set. This is in line with Wokas & Gerungai (2019) which states that "Budgeting based on performance is the answer to use as a tool for measuring and accounting for government performance".

In performance-based budgeting will be seen a clear link between inputs, outputs, and outcomes that will support the creation of good governance systems to make a budget effective, efficient, and economical by considering the workload and unit costs of each structured activity. By then, will materialize bear responsibility (accountability) and disclosure (transparency) in carrying out the service to the community. Oktavia (2017) state that performance-based budgeting has a very high contribution in achieving the effectiveness of budget control, so it is evident that performance-based budgeting has a positive effect on the efficiency and effectiveness of budget control. Performance-based budgets systematically describe effectiveness standards because they contain a set of desired outputs and detail the allocation of human, material, and other resources needed to produce the desired outputs. The effectiveness of budget control is the goal to be achieved from the budget function itself. The budget prepared with a performance approach prioritizes efforts to achieve the output (outcome) of the planned cost allocation or input that has been determined so that the better the performance-based budget that is prepared, the more effective the budget control is reflected in the achievement targets. Based on the explanation and research, the first hypothesis can be formulated in this study, namely:

H1: Performance-based budget has a positive effect on the effectiveness of budget control.

The Effect of Preventive Supervision on The Effectiveness of Budget Control

The existence of weaknesses in supervision will result in the implementation of budget realization that is not optimal. Preventive supervision is supervision carried out before the implementation of activity begins or in other words before state financial expenditures occur. This indicates that preventive supervision is needed so that budget control can continue to run effectively. Halim & Iqbal (2019) stated that "effectiveness is a measure of the success or failure of an organization to achieve its goals". So, the effectiveness of budget control is the success or failure of the purpose of controlling the budget that is implemented.

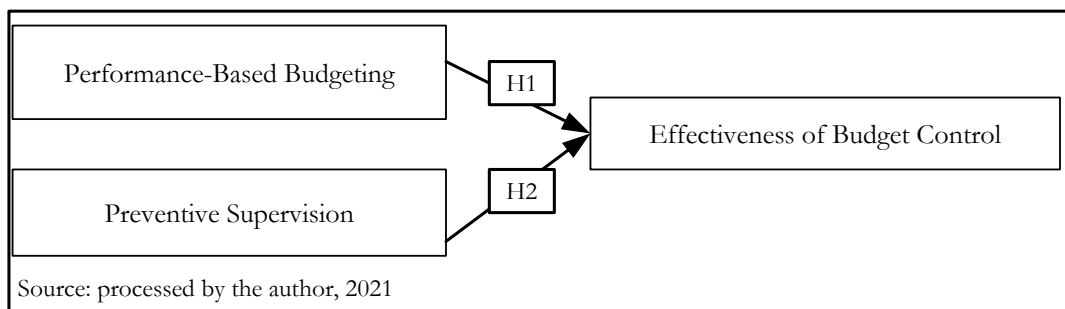
From the explanation above, the relationship between preventive supervision and the effectiveness of budget control, preventive supervision as a form of supervision before and during the activity and supervision can be early prevention if there is a possibility of deviations from the budget, and prevent the budget from being achieved by what has been determined. The implementation of the budget must be monitored for its use according to its designation so that it is not wasted and is fully absorbed.

Thus it can be concluded that preventive supervision can increase the effectiveness of the budget, that the better preventive supervision is carried out, the more budget control can be carried out. As stated by Solikin et al. (2015), Periansya, Sopiyan, & Pratiwi (2020), and Hadi, Diantimala, & Fahlevi (2018) that preventive supervision has a positive effect on effectiveness budget control. So that the effectiveness of budget control can be achieved, of course, the relevant regional apparatus is expected to further improve preventive supervision by established procedures. Preventive supervision is carried out before implementation, the main purpose of which is to prevent deviations from budget execution. Preventive Supervision to ensure that all government activities run as they should, according to the target time and budget. The success or failure of the purpose of controlling the budget can be seen from the level of effectiveness of budget control. The effectiveness of budget control can be achieved if the relevant regional apparatus further enhances preventive supervision with established procedures. So the better the preventive control, the better the effectiveness of budget control. Based on the explanation and research, the second hypothesis can be formulated in this study, namely:

H2: Preventive Supervision has a positive effect on the effectiveness of budget control.

Based on this explanation, the research framework can be described in Figure 1 below:

Figure 1. **Research Model**



Methods

Research Design.

This research design is a survey research that take a sample from one population and uses a questionnaire as a data collection tool. Researchers distributed questionnaires related to independent and dependent variables to employees at BPKAD, South Sumatra Province who were directly responsible for the planning and budget control processes.

Operational Definition and Measurement Variable.

In this study, there are 2 (two) independent variables used, namely Performance-Based Budgeting (PBB) and Preventive Supervision (PS). The dependent variable in this study is the Effectiveness of Budget Control (EBC). This variable is measured by an interval scale, namely measuring attitudes by saying agree or disagree with the statement he made with a score of 1-5.

Effectiveness of Budget Control (EBC)

For budget control to be effective, budgets must be aligned with budget realization, compliance with regulations, and useful results (Widjaja, 2002). The questionnaire on this variable was adopted from Widjaja (2002). The dimensions and measurement indicators are (1) Budget Realization, with 3 indicators namely Activities are by the instructions on calculation and income techniques, Budget according to need, and Shop on a budget; (2) Compliance with regulations, with 3 indicators, namely Activities have limitations in the budgeting process, Activities have a time limit in delivering information, and Budget according to requirements; (3) Useful results, with 2 indicators, namely Activities already have instructions in spending funds, and The budget had done efficiently; (4) Overcoming obstacles and deviations, with 2 indicators, namely Human resources barriers in budgeting, and Budget researched carefully. Answers to the questionnaire used a 5 Likert scale (1=Strongly disagree; 5 = Strongly Agree).

Performance-Based Budgeting (PBB)

Performance-based budgeting is a budgeting method for management to link each funding outlined in activities with the expected outputs and results including efficiency in achieving the results of these outputs. The questionnaire on this variable was developed from Halim & Iqbal (2019). The dimensions and measurement indicators are (1) Budget transparency and accountability, with 2 indicators namely Financial Statements by Government Accounting Standards (SAP) and Completed financial information; (2) Budget discipline, with 3 indicators, namely The budget refers to the Budget Implementation Document, Budget refers to the Cash Budget Plan and Validation time; (3) Budget discipline, with 3 indicators, namely The budget refers to the Budget Implementation Document, and Budget refers to the Cash Budget Plan; (4) Budget justice, with 3 indicators, namely Budget Work Plan by the Temporary Budget Ceiling Priority, Execution of budget approval, and Appropriateness of reasons for budget approval; (5) Budget efficiency and effectiveness, with 3 indicators, namely Application of the principles of performance-based budgeting, and Oriented on budget efficiency; (6) Performance approach, with 5 indicators, namely Application of the principles of performance-based budgeting, Oriented on budget efficiency, Evaluation of target suitability, Reporting by the terms of reference for activities, and Budget Realization Report gives a clear picture. Answers to the questionnaire used a 5 Likert scale (1=Strongly disagree; 5 = Strongly Agree).

Preventive Supervision

Preventive supervision is supervision carried out before an action in the implementation of activities is carried out which is intended to prevent deviations from carrying out activities (Widjaja, 2002). Preventive Supervision, in this study was measured by the instrument in the Decree of the Minister of Finance Number 152/KMK.09/2011 and the measurement scale for this variable used a 5-point Likert scale. The dimensions and measurement indicators are (1) Approving, with 3 indicators namely Review on performance, Determination and review of performance indicators, and Determination and review of performance measures; (2) Authorization, with 3 indicators namely Authorization of important transactions and events, Restrictions on access to resources and their records, and Accountability for resources and records; (3) Safeguarding assets, with 3 indicators namely Physical control over assets, Control over the management of information systems, and Good documentation of the Internal Control System, important transactions, and events; (4) Segregation of duties, with 3 indicators namely Segregation of functions, Human resource development and Accurate and timely recording of transactions and events.

Population and Sample

The population in this study were employees at BPKAD of South Sumatra Province, amounting to 94 employees. The sampling technique used purposive sampling technique based on the following criteria:

1. Civil Servants at BPKAD of South Sumatra Province consist of the Secretary, Head of Subdivision, Head of Sub-Division, Head of Sub- Division, Functional Financial Analyst of Central and Regional Junior Experts, and several civil servants staff.
2. Employees BPKAD of South Sumatra Province which is connected directly in the preparation and control of budgets in BPKAD of South Sumatra Province in the field of the Secretariat, field Budget Planning Regions, areas of Treasury Area, the field of Accounting and fields Financial Reporting Regions.

Of the total population of 94 people, who met the purposive sampling criteria were 77 people, and the number of questionnaires that were returned and could be processed was 65 people (return rate of 84.4%).

Data characteristics

The characteristics of the respondents from the 65 questionnaires can be shown in table 2 below:

Table 2 Characteristics of Respondents

No.	Description	Quantity	%
1.	Age		
	a. ≤ 40 years	31	47,69
	b. 41 – 50 years	25	38,46
	c. ≥ 50 years	9	13,85
	Total	65	100
2.	Length of work		
	a. 1 – 2 years	0	0
	b. 3 – 5 years	4	6,15
	c. 6 – 10 years	12	18,46
	d. ≥ 10 years	49	75,39
	Total	65	100
3.	Education		
	a. PhD	0	0

No.	Description	Quantity	%
	b. Master	17	26,15
	c. bachelor	40	61,54
	d. Diploma	6	9,23
	e. Senior High School	2	3,08
	Total	65	100
4.	Educational background		
	a. Accounting	36	55,38
	b. Non-accounting	29	44,62
	Total	65	100

Source: Processed data, 2021

Validity Test

The statement is said to be valid if r_{count} is greater than r_{table} , $n = 30$ ($df = n - 2$) with a significant level of 5% r_{table} value of 0.3061. This test is conducted to determine whether the measuring instrument designed in the form of a questionnaire can perform its function. The value of r_{count} is compared with r_{table} , if $r_{count} > r_{table}$, it can be concluded that the data is valid.

Table 3. Results of the Validity Test of Performance-Based Budgeting (PBB) Variables

Question Items	Value of r_{count}	Value of r_{table} (n=30)	Note.
PBB.1	0.730	0.3061	Valid
PBB.2	0.696	0.3061	Valid
PBB.3	0.738	0.3061	Valid
PBB.4	0.625	0.3061	Valid
PBB.5	0.684	0.3061	Valid
PBB.6	0.574	0.3061	Valid
PBB.7	0.641	0.3061	Valid
PBB.8	0.685	0.3061	Valid
PBB.9	0.756	0.3061	Valid
PBB.10	0.606	0.3061	Valid
PBB.11	0.527	0.3061	Valid
PBB.12	0.553	0.3061	Valid
PBB.13	0.447	0.3061	Valid

Source: SPSS output processed, 2021

Based on table 3, the results of the validity testing conducted on the thirteen statements used in the performance-based budget (PBB) variable are valid.

Table 4. Results of the Validity Test of Preventive Supervision Variables (PS)

Question Items	Value of r_{count}	Value of $r_{\text{table}} (n=30)$	Note.
PS.1	0.532	0.3061	Valid
PS.2	0.770	0.3061	Valid
PS.3	0.602	0.3061	Valid
PS.4	0.565	0.3061	Valid
PS.5	0.630	0.3061	Valid
PS.6	0.518	0.3061	Valid
PS.7	0.544	0.3061	Valid
PS.8	0.659	0.3061	Valid
PS.9	0.623	0.3061	Valid
PS.10	0.739	0.3061	Valid
PS.11	0.501	0.3061	Valid
PS.12	0.677	0.3061	Valid

Source: SPSS output processed, 2021

Based on table 4, the results of the validity testing conducted on the twelve statements used in the preventive control variable (PS) are valid.

Table 5. Results of the Validity Test of Effectiveness of Budget Control Variables (EBC)

Question Items	Value of r_{count}	Value of $r_{\text{table}} (n=30)$	Note.
EBC.1	0.584	0.3061	Valid
EBC.2	0.704	0.3061	Valid
EBC.3	0.651	0.3061	Valid
EBC.4	0.701	0.3061	Valid
EBC.5	0.769	0.3061	Valid
EBC.6	0.623	0.3061	Valid
EBC.7	0.701	0.3061	Valid
EBC.8	0.569	0.3061	Valid
EBC.9	0.520	0.3061	Valid
EBC.10	0.574	0.3061	Valid

Source: SPSS output processed, 2021

Based on table 5, the results of the validity tests carried out on the ten statements used in the Effectiveness of Budget Control variable (EBC) are valid.

Reliability Test

Reliability tests were carried out on statement items that were declared valid. To test the reliability of the measuring instrument in this study, Cronbach's Alpha coefficient was used. The reliability coefficient indicates the quality of the entire process of data collection in a study. A variable is said to be bad if it gives Cronbach's Alpha coefficient value < 0.60 , while 0.7 is acceptable and above 0.8 is good. The results of the reliability test are shown in table 6 below.

Table 6. Results of The Reliability Test

Variable	Reliability Value	Note.
Performance-Based Budgeting (PBB)	0.870	Reliable
Preventive Supervision (PS)	0.838	Reliable
Effectiveness of Budget Control (EBC)	0.825	Reliable

Source: Processed data, 2021

Findings

Descriptive statistics show a description of the data that has been collected and can be seen from the minimum, maximum, mean, and standard deviation values as shown in table 7 below.

Table 7. Descriptive Statistical Results

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
PBB	65	1.692	3.308	5.000	4.06982	.314797	.099
PS	65	1.583	3.417	5.000	4.09494	.293822	.086
EBC	65	1.400	3.600	5.000	4.11846	.281121	.079
Valid N	65						

Sumber: Data yang diolah, 2021

Based on table 7, it is known that for the performance-based budgeting variable (PBB) the minimum value is 3.308 and the maximum value is 5,000, which means that the respondents in this study on average gave fairly good answers to the statements in the questionnaires distributed. In addition, the average value (mean) of 4.06982 is greater than the standard deviation of 0.314797. The preventive monitoring variable (PS) has a minimum value of 3,417 and a maximum value of 5,000 with an average value (mean) of 4,09494 which means that it is quite good for the statements in the questionnaire distributed. The variable effectiveness of budget control (EBC) has a minimum value of 3,600 and a maximum value of 5,000 which indicates that the respondents in this study on average gave answers in a good category to the statements in the questionnaires distributed. In addition, the average value (mean) of 4.11846 is greater than the standard deviation of 0.281121. The average value and standard deviation value of the effectiveness of budget control indicate that there is a good distribution of data because the average value is greater than the standard deviation.

Classic Assumption Test

To test the parameter values generated by the model used, it is necessary to test the classic assumptions. The classic assumption test used in this study is the normality test, multicollinearity test, heteroscedasticity test, and linearity test. Based on the results of tests conducted with SPSS version 25, it was found that this study did not have problems with the classical assumption test.

Multiple Linear Regression Analysis

The test results can be seen in tables 8.

Table 8. Multiple Linear Regression Testing Results

Model	Coefficients	t	Sig.
(Constant)	.087	.440	.661
Performance-Based Budgeting (PBB)	.480	8.153	.000
Preventive Supervision (PS)	.519	8,349	.000
Adjusted R Square	.781		

Source: SPSS output processed, 2021

The Effect of Performance-Based Budgeting on the Effectiveness of Budget Control

Based on the results of multiple linear regression testing (table 8) shows the performance-based budgeting variable (PBB) has a t-count value of 8.153 > a t-table value of 1.669 (degrees of freedom $df = n - k - 1$ or $65 - 2 - 1 = 62$ (n is the number of data and k is the number of independent variables)) with a probability value of 0.000 which means less than

0.05, this means that performance-based budgeting has a positive and significant effect on the effectiveness of budget control in BPKAD of South Sumatra Province. That way, it can be determined that H0 is rejected or H1 is accepted.

The results of this study indicate that more implementation of performance-based budgeting, especially elements of budget discipline and performance approaches, will increase the effectiveness of budget control. The budget discipline element in BPKAD of South Sumatra Province, especially the timeliness of ratification, has been by the budget implementation plan. The budget discipline element in the BPKAD of South Sumatra Province can represent that the planned income is a rationally measured estimate that can be achieved for each source of income, while the budgeted expenditure for each post/article is the highest limit of expenditure. This statement is in line with Halim & Iqbal (2019:174) that expenditure budgeting must be supported by the certainty of the availability of sufficient revenue and it is not justified to carry out activities for which the budget is/not available. In addition, the elements of the performance approach in the BPKAD of South Sumatra Province, especially in terms of budget reporting, have been by the terms of reference for activities.

This is in line with the statement expressed by Gomero, Bhat & Khan (2020) and Habiburrochman & Rizki (2020) that the budget can be used as a strong basis for carrying out activities as previously planned during the execution of activities. Performance-based budgeting will show a clear relationship between inputs, outputs, and outcomes that will support the creation of a good government system to make a budget effective, efficient, and economical by considering the workload and unit costs of each structured activity. That way, there will be responsibility (accountability) and the realization (transparency) in carrying out services to the community. Budgeting based on performance is designed to create effectiveness and accountability in the utilization of public budget with clear output and outcomes (Wokas & Gerungai, 2019). However, in contrast to Dendi's research (2017), that performance-based budgeting does not affect the effectiveness of budget control, because the performance-based budgeting made does not have clarity in performance targets, between performance targets and budget preparation documents are not aligned, there is a consideration of the budget orientation towards the outputs and objectives of the vision and mission program, which results in the effectiveness of budget control not being implemented properly.

The variables of the effectiveness of budget control, the dimension of compliance with regulations have the highest level of response frequency from respondents. According to Widjaja (2002:94) in addition to making the realization run according to the planned budget, keeping the implementation by the established regulations (applicable regulations) is a very important part to do. Assessing compliance with applicable laws and regulations is carried out so that the implementation of general government duties runs in an orderly manner based on the applicable laws and regulations. In terms of conformity with regulations, especially the time limit in the delivery of budget information at BPKAD of South Sumatra Province has been carried out well. This is because, on the dimension of conformity with regulations, the indicator that has the highest value is found in the time limit in delivering information. In the preparation of the budget, it is carried out according to a predetermined time limit which is calculated from the work plan to the determination as in the process of preparing and stipulating the APBD which takes no later than one month before the start date of the relevant fiscal year carried out according to article 20

paragraph 4 of Law No. 17 of 2003. The time limit in the preparation of this budget serves only to provide limits on the work plan itself which will then be submitted in the form of budget information

The results of the study have implications for BPKAD of South Sumatra Province, so that the performance-based budgeting element, namely budgetary justice, is further enhanced, if the use of the budget is allocated fairly by the activity planning, the effectiveness of budget control in BPKAD of South Sumatra Province will increase. as revealed by Halim & Iqbal (2019:174), local governments are obliged to allocate the use of their budget fairly to be enjoyed by all community groups without discrimination in service delivery.

The Effect of Preventive Supervision on The Effectiveness of Budget Control

Based on the test results of multiple linear regression on table 8 showed that the value t-count 8.349 > than t-table 1.669 with a probability value of 0.000 means that less than 0.05, which means the preventive supervision has a positive and significant effect on the effectiveness of budget control in BPKAD of South Sumatra Province. This means that H0 is rejected or H2 is accepted. Preventive supervision ranging from granting approval, authorization, security of assets, and segregation of duties can influence the effectiveness of budgetary control in BPKAD of South Sumatra Province.

Preventive supervision is closely related to the effectiveness of a budget, the better preventive supervision, especially on the element of segregation of duties carried out, the better the effectiveness of budget control. The results of this study prove the element of segregation of duties in BPKAD of South Sumatra Province, especially in terms of accurate and timely recording of transactions and events according to Government Regulation No. 60 of 2008 concerning the Government's Internal Control System article 18 paragraph 3 has been implemented properly. BPKAD element of segregation of duties in South Sumatra province can represent that the separation of accounting functions of authorization, storage, and recording can minimize the ability of employees to commit fraud. According to Government Regulation No. 60 of 2008 in carrying out accurate and timely recording, local governments need to consider transactions and events that are properly classified and recorded immediately, and proper classification and recording are carried out including authorization, execution, processing, and final classification in summary records so that the information obtained remains relevant, valuable, and useful in controlling activities and decision making. Proper classification of transactions and events includes the arrangement and format of information in source documents and summary records as reporting sources.

In addition to accurate and timely recording, the element of segregation of duties in the BPKAD of South Sumatra Province, especially in terms of the separation of functions, has been carried out well. This is because based on the frequency table of respondents' answers in table 12, the frequency of answers for the indicator of separation of functions has a high value. The separation of functions is intended to reduce the risk of errors, waste, or fraud. This is in line with the statement in Government Regulation No. 60 of 2008 namely in carrying out the separation of functions, the leadership of government agencies must ensure that all major aspects of transactions or events are not controlled by 1 (one) person, but must be separated and authorized to several employees systematically so that checks and balances can be carried out and reduce the risk of collusion.

The results of this study are in line with previous research conducted by Periansya, Sopiyan, & Pratiwi (2020), and Hadi, Diantimala, & Fahlevi (2018) which states that preventive supervision has a positive effect on the effectiveness of budget control. This illustrates that the better the implementation of existing preventive controls, the more effective the budget control will be. However, the results of this study are not in line with research conducted by Dendi (2017) which revealed that preventive supervision does not affect the effectiveness of budget control. This happens due to the lack of thoroughness and consistency of the employees and/or supervisory units in carrying out the correct supervisory procedures, as a result, the effectiveness of budget control does not work well.

In terms of control, supervision can be carried out as an effort to early prevention of deviations that can occur, for example, the implementation of procedures in budget management that can be a reference and prevention of fraud or fraud in the implementation of budget management. In addition, good human resources are also needed. The existence of government officials who have qualified competencies by their respective fields of work and are in line with the direction of the vision and mission, so it is necessary to formulate and compile a competency-based human resource development system, accompanied by the placement of Human Resources by their fields, this is certainly a supporter in the implementation of programs and activities so that they are by the goals and objectives to be achieved. The increasing anticipation in overcoming obstacles to Human Resources, the better the level of effectiveness of budget control in BPKAD of South Sumatra Province, especially in terms of placing the right Human Resources in budgeting. BPKAD of South Sumatra Province is expected to increase performance-based budgeting especially on the element of budget justice and improve preventive supervision especially on the element of approving that has been implemented so that the effectiveness of budget control continues to increase.

The results of this study provide practical implications for the element of preventive supervision, namely the granting of approvals must continue to be improved, by Government Regulation No. 60 of 2008 that the organizers of the government must carry out controls by the size, complexity, and nature of the tasks and functions of government agencies concerned. In Article 18, paragraph 3 also stated the establishment and review of performance indicators and measures as an obligation for the leadership of government agencies. Therefore, if the leadership of the BPKAD of South Sumatra Province further enhances preventive supervision, especially in approving with indicators for determining and reviewing performance indicators and measures, the level of effectiveness of budget control can increase.

Conclusion

Based on the results of data analysis and hypothesis testing that have been described, the authors conclude, namely performance-based budgeting has a positive and significant effect on the effectiveness of budget control. Preventive supervision has a positive and significant effect on the effectiveness of budget control. The implication of this research is that to increase the effectiveness of budget control, namely by overcoming obstacles and irregularities, efforts can be made such as detecting and controlling deviations. Supervision can be carried out as an effort to early prevention of deviations that can occur, for example, the implementation of procedures in budget management that can be a reference and prevention of fraud or fraud in the implementation of budget management. The

contribution to theoretical is accentuated on our empirical that elements of budget discipline and performance approach and elements of separation of functions and duties are able to increase the effectiveness of budget control.

Research Limitation

The limitation of this research is that the number of respondents is only 65 people, of course, it is still not enough to describe the real situation. Future research is expected to use a larger sample size so that the results obtained are more representative of the population. Further research can also detail other factors that can increase the effectiveness of budget control by adding several independent variables such as Job Relevant Information, Information Asymmetry, or Budgetary Slack.

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