

# THE EFFECTIVENESS OF THE IMPLEMENTATION OF PERFORMANCE-BASED BUDGETING IN INDONESIAN NATIONAL POLICE (A CASE STUDY IN TANAH LAUT POLICE RESORT)

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## ABSTRACT

*The research aims at examining the effect of the factors in Syah Model, the capability, authority and acceptance level of the effectiveness of the implementation of performance-based budgeting within Indonesian National Police (a case study in Tanah Laut Police Resort). The three factors consist of nine variables: performance assessment ability, human resources ability, technical skills ability, legal aspects authority, job procedural authority, organizational authority, political acceptance, administrative acceptance and motivational acceptance. The study employs the quantitative approach using the multiple linear regression to analyse data determined by purposive random sampling method. The results of the hypothesis testings show that the variables of human resource ability, legal aspect authority, organizational ability and political acceptance have positive effects on the effectiveness of implementation of the performance-based budgeting within Indonesian National Police, especially Tanah Laut Police Resort.*

**Keywords:** *performance-based budgeting, budget, performance.*

## 1. INTRODUCTION

Performance-based budgeting has become the main budgeting system in many countries, seeking to measure the performance of their public sector. This is a budgeting system that is oriented towards organizational output and is closely related to the vision, mission and strategic plans of the organization. In the New Public Management, this budgeting system is expected to be a form of budgeting reform that aims to increase the transparency and accountability of public services as well as the effectiveness of the implementation of policies and programs (Taus, 2016: 111).

Over time, this budgeting process is still not running as expected. Complaints related to the effectiveness

of planning and budgeting have always been classic problems that continue to occur. The classic problems faced by the government include: (1) the planning function which is not directly related to budgeting; (2) it is input-oriented budgeting, not output or outcomes-oriented budgeting; (3) there is still a duplication in budgeting and implementation; (4) unclear priority policies set by the government; and (5) the financial management function is not integrated and the operational function is not optimal (let the managers manage).

In the context of Indonesian National Police, the implementation of performance-based budgeting also faces problems, including those related to the effectiveness of planning and budgeting itself towards the expected performance achievement. This is reflected in the evaluation report on the performance

accountability report of government agencies conducted by the Ministry of Administrative Reform and Bureaucratic Reform of the Republic of Indonesia. In the evaluation on the National Police's Performance Accountability in 2018, it is stated that the performance report of the National Police has provided information on the analysis of performance achievements

and comparison of performance information for the current year with the previous year, but had it has not provided an analysis of the efficiency and effectiveness of budget use on performance achievement. In addition, the performance report has not been able to present the completeness and reliability of performance information.

**Table 1 Police Performance Assessment**

	Rated Components	Weight	Mark		
			2017	2018	2019
A.	Performance Planning	30	23.69	24.54	24.91
B.	Performance Measurement	25	15.59	16.41	17.63
C.	Performance Reporting	15	10.79	10.63	10.93
D.	Performance evaluation	10	6.83	7.02	7.05
E.	Performance Achievements	20	15.21	15.48	14.89
	<b>Value of Evaluation Results</b>	<b>100</b>	<b>72.11</b>	<b>74.08</b>	<b>75.40</b>
	<b>Performance Accountability</b>		<b>BB</b>	<b>BB</b>	<b>BB</b>

Source: Results of the 2018/2019 National Police AKIP Evaluation by Kemenpan RB

The evaluation also states that the National Police has made improvements/sharpening of performance in the 2020-2024 strategic plans by formulating targets and performance indicators that better explain the outcomes of the National Police and Echelon I Work Units. However, there are still performance indicators on the level of the Strategic Plan of the National Police which is not yet result oriented and does not yet describe the performance of the National Police that should be. The quality of program evaluation is still focused on the achievement of outputs and budget absorption and has not focused on the analysis of the relationship between activities with strategic goals and program targets to be achieved by the organization. This can be seen from the existence of a significant gap between the level of achievement of activity outputs and the level of achievement of outcomes in the organization's strategic goals and programs.

The Ministry of State Apparatus Empowerment and Bureaucratic Reform recommends improving the quality of

monitoring and evaluation of internal performance accountability through increasing the competence of the apparatus so that they can provide quality advice and recommendations. In addition, it is necessary to increase the commitment of all work unit leaders, so that the suggestions and recommendations given can be followed up to improve performance management. Improving the quality of program evaluation can be done by focusing on analysing performance achievements and the linkages between activities with strategic goals and program objectives to be achieved by the organization. The results of measuring performance achievements and reporting on performance should be used optimally as the basis for giving rewards and punishments. It is expected that by utilizing the results of the measurement of optimal performance achievements, it can encourage an increase in performance culture both at the individual and organizational levels and be able to encourage increased effectiveness and efficiency of budget use.

In the context of implementing a performance-based budget, there are

elements that must be well understood by all parties related to the implementation of a performance-based budgeting. According to Bastian (2006), the main elements of a performance-based budget that must be understood include:

- a. Government spending is grouped by program and activity.
- b. Performance measurement
- c. Program reporting

There are several triggers for the successful implementation of performance-based budgeting as described by the Financial and Development Supervisory Agency (2005: 29), including (i) leadership and commitment from all organizational components, (ii) focus on continuous improvement of the administrative system, (iii) sufficient resources for the improvement efforts (money, time, and people), (iv) rewards and punishments, and (v) a strong desire to succeed.

The results of research conducted by Hermawan (2011: 62) show that the implementation of performance-based budgeting in the Presidential Household environment has not been as expected. Hermawan said that the implementation of performance-based budgeting is only limited to fulfilling existing provisions. A research, conducted by Cipta also concludes that the preparation of the Local Expense and Income Budget (APBD) of Tanah Datar Regency has not implemented the performance-based budgeting because the performance indicators cannot be directly linked to the budget (2011). This is in line with the research conducted by Suhardjanto and Cahya, namely to implement an effective performance-based budget, the Surakarta City Government still needs a long time and improvements in rational aspects (2008).

In this regard, this study aims to analyse the effect of the nine variable factors in the Shah Model on the effectiveness of the implementation of

performance-based budgeting in the National Police environment. The expected benefit is that this research can be taken into consideration in increasing the effectiveness of performance-based budgeting in the National Police environment.

## 2. LITERATURE REVIEW

### 2.1 Performance-based budgeting

- a. *Understanding Budget*—Mardiasmo (2005) defines the budget as a statement regarding the estimated performance to be achieved during a certain period of time expressed in financial measures, and budgeting is a process or method for preparing a budget. Bastian (2006) argues that the budget is a package of statements of estimates of revenues and expenditures that are expected to occur in one or several future periods. According to Nafarin (2004) the budget is a periodic financial plan that is prepared based on a program that has been approved. A budget is a written plan regarding an organization that is expressed quantitatively and is generally expressed in units of money for a certain period of time.
- b. *Budgeting approach*—In accordance with the mandate of Law Number 17/2003 concerning the State Finance (UU 17/2003), budget preparation by K/L refers to three pillars of the budgeting system, namely (1) integrated budgeting, (2) performance-based budgeting (PBK), and (3) the medium-term expenditure framework (KPJM).
- c. *Performance-Based Budgeting*—it is basically an output-oriented budgeting system. Bastian (2006) suggests that performance-based budgeting is a budgeting system that is oriented towards organizational “output” which is closely related to the vision,

mission and strategic plans of the organization. Silalahi (2012) explains the notion of a budget prepared with a performance approach, namely:

- A budget system that prioritizes efforts to achieve the work results (output) and cost allocation planning (input) that are determined.
- Output shows the product (goods or services) produced from the program or activity in accordance with the input used.
- Input is the amount of funding sources, human resources, materials, time and technology used to implement programs or activities in accordance with the inputs.
- Performance is indicated by the relationship between input and output.

Indonesian Supreme Audit Agency and Development (BPKP) (2005) explains the notion of performance-based budgeting is a budgeting method for management to link each cost that is outlined in activities with the benefits generated. These benefits are described in a set of goals and objectives as outlined in the performance targets for each work unit.

According to Madjid and Ashari (2013), the instruments used in implementing performance-based budgeting include:

- 1) Performance indicator—it is an instrument used to measure performance;
- 2) Standard cost—it is a unit cost that is determined in the form of standard input costs and standard output costs as a reference for calculating budget needs;
- 3) Performance evaluation—it is an assessment of the achievement

of performance targets, consistency of planning and implementation, level of efficiency, and realization of budget absorption.

In practice, performance-based budgeting is based on the principles of value for money and good corporate governance.

## **2.2 Factors affecting the effectiveness of performance-based budgeting**

According to Joyce in Joyce and Sieg, there are at least four conditions for the successful use of performance information at each stage of budgeting:

- a. Public entities know what they want to achieve.
- b. There is a valid performance measurement.
- c. There is an accurate cost measurement.
- d. Cost and performance information are used together in making budgeting decisions.

According to Kawedar et al., in Izzaty, the triggering factors for the successful implementation of the use of performance-based budgeting are leadership and commitment of all organizational components focus on continuous administrative improvement, sufficient resources for such improvements (money, time, and people), clear rewards and sanctions, and a strong desire to succeed. Meanwhile, according to Madjid and Ashari, these factors include the completeness of the rules, knowledge of the implementers regarding the rules, consistency of implementation and evaluation of implementation.

Shah (1998) provides a framework for analysing the factors that influence the effectiveness of implementing decentralized governance. The framework, known as the Shah Model, was later developed by Andrews (2004) to determine the factors that affect the effectiveness of the implementation of performance-based budgeting. According to

Andrews (2004), the factors that influence the effectiveness of the implementation of a performance-based budgeting system are as follows:

a. Ability—it is often that the failure to implement a new system is due to a lack of capacity or incompetence of the government. There are three dimensions in the ability factor, namely:

- 1) Performance Assessment Potential—it refers to measuring the results and outputs of activities carried out by the government. The results of this performance measurement should be used in the decision-making process, resource allocation and incentive design.
- 2) Human Force Potential—it is the ability to assess performance and manage data banks. In addition, human resources are also needed who are able to formulate performance goals and connect users of performance information.
- 3) Technical Ability—it is the ability to develop systems that can collect performance information and create a data bank is required.

b. Legitimacy or authority—it is the authorization mechanism at the government, with three dimensions, namely:

- 1) Legal Authority—if there is a difference between the system change and the applicable law, the change cannot be applied. This is also experienced in the implementation of performance-based budgeting when some legal grounds still refer to input-based budgeting.

- 2) Procedural Authority—its procedural authority relates to the manager's authority to measure performance. The use of old procedures that still emphasize inputs and costs can hinder the implementation of performance-based budgeting.

- 3) Organizational Authority—it is about the decision making about resource allocation is very likely to be influenced by political authorities, who do not pay attention to performance appraisal information so that it can reduce the authority possessed by the organization.

c. Acceptance—the success of implementing the new system depends on convincing government officials, managers and employees. Acceptance consists of three dimensions:

- 1) Political Acceptance—political officials need to provide the necessary resources to implement performance-based budgeting.

- 2) Administrative Acceptance—managers support is important in the use of performance information as a basis for managerial decision making as well as in the creation of incentive schemes. Managers do not assume that performance-based budgeting will not influence future decisions or will make them more difficult.

- 3) Motivational Acceptance—in order for the process of implementing performance-based budgeting to run better, a reward and punishment system is needed, transparency and changes to the budget allocation system to improve the incentive scheme of budget managers.

### 2.3 Previous research

This research is a further development of the empirical study conducted by

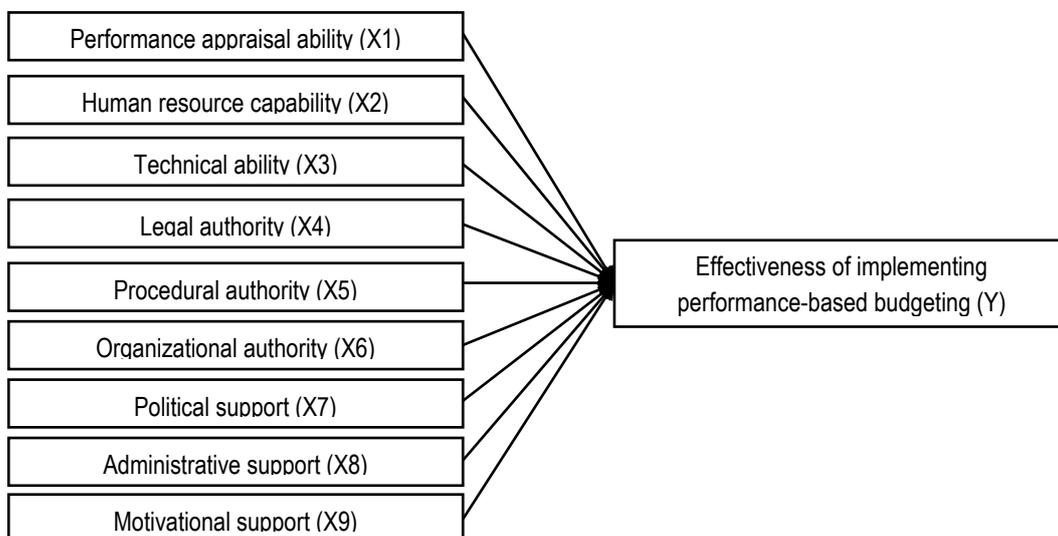
Rizaldi (2016) with changes in respondents and research objects, namely the work unit in the Jakarta II KPPN work area to within the police environment. Rizaldi, in his research concluded that: (i) the Shah Model can be used to explain the effectiveness of implementing a performance-based budget; (ii) technical ability, procedural authority and motivational support is not sufficient evidence to show its effect on the effectiveness of the implementation of performance-based budgeting; (iii) performance appraisal ability has a negative effect on the effectiveness of the implementation of performance-based budgeting. This is due to the perception of most respondents who state that the definition of performance information in each work unit is adequate, but has not yet had an impact on the implementation of a good performance-based budget; (iv) in budget planning, performance information data has been used in budgeting, but the performance information system has not been integrated with the budgeting system; (v) procedures that are too complicated have an impact on the

lack of effectiveness in implementing performance-based budgeting. However, in the long term this is expected to have a positive impact in the form of preparing better outputs and outcomes; and (vi) the current system of rewards and sanctions is not in accordance with the principles of performance-based budgeting, because it is not based on the achievement of outputs and outcomes, and is in the form of additional or reduced budgets beyond the outputs and outcomes that have been prepared by the ministry/institution.

## 2.4 Relationship Between Variables and Research Model

Based on the explanation above, it can be formulated a framework of thinking that the previously mentioned factors, namely the ability of performance appraisal, human resource capability, technical ability, legal authority, procedural authority, organizational authority, political support, administrative support, and motivational support have an effect on the effectiveness of the implementation of performance-based budgeting. This relationship can be explained in the research model as illustrated in Figure 1.

**Figure 1 Research Model**



Based on the above framework, the hypotheses in this study are:

- a. Performance Appraisal Ability—according to Kettl and Foltin in Andrews, the ability to measure performance affects the implementation of performance-based budgeting at every level. This is in accordance with the research of Cahya (2009) which concludes that performance measurement has a positive effect on the effectiveness of performance-based budget implementation. The proposed hypothesis:

H1: The ability of performance appraisal has a positive effect on the effectiveness of the implementation of performance-based budgeting.

- b. Human Resources Capability—human resource capabilities consist of various levels and are needed at every stage of implementing a performance-based budget. This is shown in the research of Cahya (2009), Achyani and Cahya (2011), Fitri, et al., (2013), Madjid and Ashari (2013), and Asikin (2014). According to Foltin in Andrews (2004), agencies need to develop the ability to measure performance, and use the data in a constructive way. Therefore, the following hypotheses can be proposed:

H2: The ability of human resources has a positive effect on the effectiveness of the implementation of performance-based budgeting.

- c. Technical Ability—according to Willoughby and Melkers in Andrews (2004), government agencies must be able to develop information systems that collect output-oriented data. Sembiring (2009) and Asikin (2014) conclude that the administrative system has a significant and positive effect on the implementation of performance-based budgeting. The proposed hypothesis is:

H3: Technical ability has a positive effect on the effectiveness of the implementation of performance-based budgeting.

- d. Legal Authority—according to Harris in Andrews (2004), one of the causes of the lack of use of performance information is the regulation regarding the budget that is set without any performance information. The results of research by Madjid and Ashari (2013) show that support from the regulatory aspect has a significant effect on the effectiveness of the implementation of performance-based budgeting. The proposed hypothesis:

H4: Legal authority has a positive effect on the effectiveness of the implementation of performance-based budgeting.

- e. Procedural Authority—if the budgeting procedure is still input-oriented, the implementation of performance-based budgeting can be hampered. This is expressed by Young in Andrews (2004), where there are still remnants of the traditional budgeting approach even though the best efforts to spur the use of performance information have been given. The proposed hypothesis:

H5: Procedural authority has a positive effect on the effectiveness of the implementation of performance-based budgeting.

- f. Organizational Authority—Andrews (2004) states that the many levels in the organizational structure can hinder the implementation of performance-based budgeting. Therefore, it is necessary to have authority for organizations/agencies without any political influence as well as personal and group interests. The proposed hypothesis:

H6: Organizational authority has a positive effect on the effectiveness of the implementation of performance-based budgeting.

- g. Political Support—according to Andrews (2004), the use of

performance information will have an impact on political officials. Some may reject the implementation of the new system because the impact will only be visible in the long term. The proposed hypothesis: H7: Political support has a positive effect on the effectiveness of the implementation of performance-based budgeting.

h. Administrative Support—Carter in Andrews (2004) mentions that one of the biggest challenges is how to convince managers about the value of performance measurement. Asikin stated that organizational commitment has a significant effect on the implementation of performance-based budgeting. The proposed hypothesis:

H8: Administrative support has a positive effect on the effectiveness of the implementation of performance-based budgeting.

i. Motivational Support—according to Andrews and Hil in Andrews (2004), to increase motivation, it is necessary to open up and change the budget allocation system. Transparency aims to make budget managers more responsive to community needs, while the allocation system aims to make managers more concerned with achieving results. The significant effect of improving the incentive scheme is in accordance with the results of Sembiring's (2009) research. The proposed hypothesis:

H9: Motivational support has a positive effect on the effectiveness of the implementation of performance-based budgeting.

### 3. METHODS

#### 3.1 Research Objects

The object of the research is the personnel of Tanah Laut Resort Police (TLRP). The objects are the heads of functional units, heads of

affairs, heads of units, and personnel. Tanah Laut Police Resort is chosen because it is one of police resorts with the best Public Service Index and the winner of the Corruption-Free Area predicate with a good category.

#### 3.2 Types and Techniques of Data Collection

The type of data used in this research is primary data in the form of survey results to respondents from questionnaires distributed online via Google Form. This questionnaire is used to analyse the effect of the independent variable on the dependent variable. The study uses the purposive random sampling method, namely the method of selecting respondents with certain criteria at random, including respondents who carry out performance measurements, are directly involved in the planning and budget management processes, and play a role in the decision-making process.

#### 3.3 Research Variables and Operational Definitions

The study employs ten variables: nine independent variables and one dependent variable. The nine independent variables are based on the variables in the research of Moradi, et al., (2012), Naseri, et al., (2014) and Amjadi, et al., (2015). Meanwhile, the dependent variable is a variable developed by Melkers and Willoughby (2001). The variables uses a five-point Likert Scale (lowest 1 and highest 5).

##### a. Independent Variables

- 1) Performance appraisal ability (X1)—this variable consists of four question items: output or outcome information (performance information) is well defined (X1.1); output or outcome information (performance information) has been used to assess performance (X1.2); the performance information used is accurate (X1.3); and performance information used

- is relevant/in accordance with what is needed (X1.4).
- 2) Ability of human resources (X2)—this ability is measured through five questions: the work unit has human resources who are able to determine performance targets (X2.1); the work unit has human resources capable of measuring performance (X2.2); the work unit has human resources capable of evaluating performance (X2.3); the work unit has human resources capable of managing performance data (X2.4); and the work unit has human resources capable of communicating performance data between users of performance information (X2.5).
  - 3) Technical ability (X3)—this ability is measured through five questions: the work unit has a performance information system (X3.1); performance information data is easily accessible (X3.2); performance information has been integrated with the budgeting process (X3.3); performance information has been integrated with the accounting process (X3.4); and performance information has been integrated with the monitoring and evaluation process (X3.5).
  - 4) Legal authority (X4)—this authority is measured through four questions: regulations related to performance-based budgeting are adequate (X4.1); regulations related to performance-based budgeting can be implemented properly (X4.2); there are other regulations that hinder the implementation of performance-based budgeting (X4.3); and regulations related to performance-based budgeting direct the orientation on output/outcomes (X4.4). The third question is a question with a negative statement, where at the time of data processing, the interpretation of the respondent's answer will be different from other questions. Respondents' answers who chose 5 would be interpreted as strongly disagree (scale 1), 4 would be interpreted as disagree (scale 2), 3 would be undecided (scale 3), 2 agree (scale 4), and 1 would be interpreted as strongly agree (scale 5).
  - 5) Procedural authority (X5)—this variable is measured through two question items: the work unit has the authority to use performance information in the preparation of performance-based budgets (X5.1); and decision making in the performance-based budgeting process has utilized performance information (X5.2).
  - 6) Organizational authority (X6)—organization authority is measured through three questions: the work unit has the authority to determine the budget (X6.1); the work unit has the authority to allocate existing resources according to the needs of the organization (X6.2); and the work unit has the freedom to use performance information (output and outcome) in budgeting (X6.3).
  - 7) Political support (X7)—this support is measured through three questions: implementation of performance-based

budgeting has support from the legislature (X7.1); funds are available to implement performance-based budgeting effectively (X7.2); and organizational leaders support the implementation of performance-based budgeting (X7.3).

- 8) Administrative support (X8)—this variable is measured through two question items: performance-based budget implementation has the support of the head of the work unit (X8.1); and the head of the work unit uses performance information in making budget decisions (X8.2).
- 9) Motivational support (X9)—this support consists of two questions: there is a system of rewards/sanctions given related to the achievement of outputs and outcomes (X9.1); and there is a system of rewards/sanctions for the implementation of performance-based budgeting (X9.2).

**b. Dependent variable**

The dependent variable in this study is the effectiveness of the implementation of performance-based budgeting (Y), which consists of six question items as follows:

- 1) The Implementation of performance-based budgeting saves work unit costs (Y1);
- 2) The Implementation of performance-based budgeting improves program effectiveness (Y2);
- 3) The Implementation of performance-based budgeting reduces duplication of services (Y3);

- 4) The Implementation of performance-based budgeting improves the decision-making process (Y4);
- 5) The Implementation of performance-based budgeting changes the level of budget allocation (Y5);
- 6) The Implementation of performance-based budgeting improves public accountability (Y6).

**3.4 Data Analysis Models and Methods**

The data analysis method used is multiple regression analysis method. This method aims to determine how much influence two or more independent variables have on the dependent variable, and to know the direction of the influence while the statistical tool used is SPSS Statistics.

**4. RESULTS & DISCUSSION**

**4.1 Descriptive statistics**

The number of questionnaires collected until the deadline for filling out is 55 with the following respondents:

- a. Heads of dept/units/police sectors.
- b. Heads of subdivision/affairs/section at police sectors and police resort.
- c. Officers of affairs/head of units at police sectors and police resort.
- d. Other personnel.

The results of descriptive statistical tests for each variable are shown Table 2.

**4.2 Reliability and Validity Test**

According to Kuncoro (2013) and Sujarweni (2015), a questionnaire is considered reliable if the Cronbach's alpha value is more than 0.60. The results of the data reliability test using the SPSS program as summarized in the table below show the Cronbach's Alpha value of each variable is greater than 0.60 so it can be concluded that all research variables have a high level of reliability. According to Kuncoro (2013) and Sujarweni (2015), the questionnaire statement items are declared valid if  $r_{count} > r_{table}$  the

method of determining r table uses  $df = n-2$ , n is the number of samples so that  $df = 55-2 = 53$  and the value of r table research this is 0.2656. The results of the validity test with the SPSS program show that of all the question items, all of them have a

calculated r value that is greater than the r table value so that all question items can be declared valid and therefore deserve to be analysed further.

**Table 2 Descriptive Statistical Test**

Variables		Number of Items	Mean	Theoretical Range	Actual Range	Standards Deviation
Performance appraisal ability	X1	4	18,5273	4-20	11-20	2,41795
Human resource capability	X2	5	23,0364	5-25	15-25	3,00594
Technical ability	X3	5	22,8909	5-25	13-25	3,06517
Legal authority	X4	4	15,9273	4-20	10-20	2,58095
Procedural authority	X5	2	9,1455	2-10	6-10	1,23855
Organizational authority	X6	3	13,5273	3-15	8-15	1,97066
Political support	X7	3	14,0364	3-15	9-15	1,71014
Administrative support	X8	2	9,2182	2-10	6-10	1,19708
Motivational support	X9	2	9,2364	2-10	5-10	1,40058
The effectiveness of implementing performance-based budgeting	Y	6	27,4545	6-30	18-30	3,85774

Source: Processed from primary data

**Table 3 Validity Test Results (Item-Total Statistics)**

Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Performance appraisal ability	40,7309	23,269	,830	,953
Human resource capability	40,7555	23,100	,867	,952
Technical ability	40,7845	22,894	,887	,951
Legal authority	41,3809	24,582	,543	,965
Procedural authority	40,7900	22,657	,922	,949
Organizational authority	40,8536	22,936	,811	,954
Political support	40,6839	23,149	,911	,950
Administrative support	40,7536	23,006	,890	,951
Motivational support	40,7445	22,643	,801	,955
The effectiveness of implementing performance-based budgeting	40,7870	23,471	,737	,957

Source: processed from primary data

### 4.3 Classic Assumption Tests

#### a. Normality test

The test aims to determine whether the residual data in the regression model is normally distributed or not. The test is done by using the graphical analysis method. The histogram graph shows that the

distribution pattern of the residual data is normal, where the graph is neither skewed to the right nor to the left. Whereas in a normal plot graph, the points spread around the diagonal line and follow the direction of the diagonal line. Thus the research regression model has met the assumption of normality. Tests are

also carried out using statistical methods through the Komogorov-Smirnov test. The test results show that the assumption of normality has been met, where the p value is 0.058 (> 0.05).

b. **Linearity Test**

The test is conducted to determine whether the model used in the study was linear. If  $c_2$  count >  $c_2$  table then the hypothesis that the model is linear is rejected. Testing with the Lagrange Multiplier Test showed an R2 value of 0.009, with a total of n=110. Then the value of calculated  $c_2$  is 0.99 (0.009 x 110). While the value of table  $c_2$  is 129.56 (df = 100) so the research regression model has met the linear assumption.

**4.4 Hypothesis Tests**

The calculated F value is 36,334. It is greater than the table F value of 2.69 (k = 9; n = 110 and = 0.01). This shows that the regression model of the study proved to be statistically significant at the 0.01 level. In addition, the ANOVA test results show a probability value of 0.000 (less than 0.05). The two test results indicate that the independent variables have a significant effect on the dependent variable.

In the research model, there are five independent variables that are proven to have a significant effect on the dependent variable. The variables of human resource capability (X2), legal authority (X4) and organizational authority (X6) have a significant effect at the 0.01 level. The value of t table with =0.01 (k=9; n=110; one-tailed) is 2.3638. While the t value of the variable of human resource capability (X2) is 2.432, legal

authority (X4) is 4.311 and organizational authority (X6) is 3.830.

The variables of performance appraisal ability (X1) and political support (X7) have a significant effect at the 0.05 level. The t-table value with =0.05 (k=9; n=110; one-tailed) is 1.6601, while the t-value of the performance appraisal ability variable (X1) is -2.183 and the political support variable (X7) is 1,952.

Based on the value of the regression coefficient, the multiple linear regression equations produced in this study are:

$$Y = 2,643 - 0,319X1 + 0,226X2 + 0,842X4 + 0,487X6 + 0,301X7$$

Note:

- Y : The effectiveness of implementing performance-based budgeting
- X1 : Performance appraisal ability
- X2 : Human resource capability
- X4 : Legal authority
- X6 : Organizational authority
- X7 : Political support

**4.5 Discussion**

a. Hypothesis 1—the performance appraisal capability (X1) is statistically proven to have an effect on the effectiveness of implementing performance-based budgeting in work units in the work area of KPPN Jakarta II. However, the effect of this variable is negative. Thus, hypothesis 1 which states that there is a positive effect of performance appraisal ability on the effectiveness of performance-based budgeting is rejected. This result is different from the results of research conducted by Cahya (2009) and Madjid and Ashari (2013). Cahya's research (2009) concludes that performance measurement has a positive and significant effect on the implementation of performance-based budgeting, while Madjid and Ashari (2013) conclude that evaluation has no significant effect.

- b. Hypothesis 2—the ability of human resources (X2) is statistically proven to have a positive effect on the effectiveness of the implementation of performance-based budgeting. Thus, hypothesis 2 is accepted. These results are in line with research conducted by Cahya (2009), Achyani and Cahya (2011), Fitri, Ludigdo and Djamhuri (2013), and Asikin (2014) which state that the resource variable has a positive and significant effect on the effectiveness of performance-based budgeting. The results are also in accordance with the results of research conducted by Madjid and Ashari (2013) which states that the knowledge of the implementers has a significant effect on the implementation of performance-based budgeting. Based on the recapitulation of the answers collected, most of the respondents stated that each work unit already has the human resources needed to implement a performance-based budget.
- c. Hypothesis 3—based on the results of the regression analysis, technical ability (X3) has no significant effect on the effectiveness of the implementation of performance-based budgeting. Thus, hypothesis 3 which states that technical ability has a positive effect on the effectiveness of the implementation of performance-based budgeting is rejected. This is different from the results of research conducted by Sembiring (2009) and Asikin (2014), that the administrative system has a positive and significant effect on the effectiveness of implementing performance-based budgeting.
- d. Hypothesis 4—in terms of legal authority (X4), the results of the regression analysis show a significant and positive effect on the effectiveness of the implementation of performance-based budgeting. Therefore, hypothesis 4 which states that legal authority has a positive effect on the effectiveness of the implementation of performance-based budgeting is accepted. This is in line with the results of Madjid and Ashari's (2013) research which states that the rule variable has a significant effect on the effectiveness of the implementation of performance-based budgeting.
- e. Hypothesis 5—the results of the regression analysis show that procedural authority (X5) has no significant effect on the effectiveness of the implementation of performance-based budgeting. Therefore, hypothesis 5 is rejected. Although not significant, the effect of this variable is negative.
- f. Hypothesis 6—the results of the regression test of the research model show that organizational authority (X6) has a positive and significant effect on the effectiveness of the implementation of performance-based budgeting. Thus, hypothesis 6 which states that organizational authority has a positive effect on the effectiveness of the implementation of performance-based budgeting is accepted. There are 40% of respondents in the questionnaire stating that the work unit does not yet fully have the authority to determine the budget. This lack of authority can be seen in the discrepancy between the budget proposals submitted by the work unit and the budget received.
- g. Hypothesis 7—political support (X7) has a positive and significant effect on the effectiveness of the implementation of performance-

based budgeting. Thus, hypothesis 7 which states that political support has a positive effect on the implementation of performance-based budgeting is accepted.

- h. Hypothesis 9—based on the results of the regression, motivational support (X9) has no significant effect on the effectiveness of the implementation of performance-based budgeting. The motivational support in question is the existence of rewards and sanctions given related to the achievement of outputs, outcomes, and implementation of performance-based budgeting. Thus, hypothesis 9 which states that motivational support has a positive effect on the effectiveness of the implementation of performance-based budgeting is rejected. The results of this study are in accordance with a research conducted by Fitri, et al., (2013), where sanctions have no significant effect on the effectiveness of the implementation of performance-based budgeting. On the other hand, the results of Fitri, et al., (2013) states that the award has a positive and significant effect.

independent variables is able to explain the variation of the dependent variable by 74.2%, while the other 25.8% is explained by factors outside the research model.

- b. The variables of technical ability (X3), procedural authority (X5) and motivational support (X9) are not sufficient evidence to show their effect on the effectiveness of the implementation of performance-based budgeting (Y).
- c. The performance appraisal ability variable (X1) has a negative effect on the effectiveness of the performance-based budget implementation (Y). This is due to the perception of most respondents who state that the definition of performance information in each work unit is adequate, but has not yet had an impact on the implementation of a good performance-based budget.
- d. In budget planning, performance information data has been used in budgeting, but the performance information system has not been integrated with the budgeting system.
- e. Procedures that are too complicated have an impact on the lack of effectiveness in implementing performance-based budgeting. However, in the long term this is expected to have a positive impact in the form of preparing better outputs and outcomes.
- f. The current system of rewards and sanctions is not in accordance with the principles of performance-based budgeting, because it is not based on the achievement of outputs and outcomes, and is in the form of additional or reduced budgets outside of the outputs and outcomes that have been prepared by the work units of functions.

## 5. CONCLUSIONS & RECOMMENDATIONS

### 5.1 Conclusions

Based on the analysis and discussion above, several conclusions can be drawn as follows:

- a. Shah Model can be used to explain the effectiveness of the implementation of performance-based budgeting. The variation of the

### 5.2 Recommendations

Based on the results of the analysis and the conclusions, the author recommends the following things:

- a. The improvements of the legal authority variable (X4) are needed, especially regarding the perception of each work unit/function on the regulation through socialization, education and training or other means.
  - b. The increasing of the capacity of human resources (X2) is needed, especially in the ability to determine targets and evaluate performance.
  - c. The use of authority within the organizational authority (X6) needs to be applied carefully so that the prioritized outputs in budget planning actually support the achievement of the outcomes and objectives of the work unit/function.
  - d. It is necessary to standardize the definition of outputs and outcomes for all work units/functions and increase the use of this information in budget planning.
  - e. It is necessary to integrate performance information systems and budgeting systems.
  - f. It is necessary to increase the understanding of the work units/functions on the applicable procedures.
  - g. It is necessary to evaluate the current system of rewards and sanctions because it is not in accordance with the principles of performance-based budgeting. Rewards and sanctions should not be in the form of adding or reducing the budget in the following fiscal year.
- a. answers. This limitation is the limitation experienced by general perception research, where the respondent's perception does not necessarily represent the perception of the work unit concerned.
  - b. Too few respondents occupy positions.
  - c. The number of respondents who filled out the questionnaire do not represent every work unit/function within TLPR.
  - d. The administrative support variable (X8) do not pass the validity test (Cronbach's Alpha <0.60) so it is not included in the research regression model.

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## 5.3 Implications and Limitations

- a. Subjectivity of respondents—the respondents' answers to online questionnaires are still susceptible to subjectivity which can result in biased

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