

## The Effect of Participatory budgeting on Managerial Performance with Moderating Variables

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**Abstract.** *The research explains both the direct and indirect effects of participatory budgeting on managerial performance by examining organizational culture (people oriented versus job oriented), organizational commitment and perception of innovation that serves as the moderating variables. The research samples are selected by using the purposive sampling method, with the respondents being the public executives at Kantor Pelayanan Perbendaharaan Negara (KPPN). Data for the study was collected from 68 KPPN. The contingency variables were tested either by using the component-based or variance-based structural equation modeling (known as Partial Least Square). The results of the research were consistent with proxy research, which showed that participatory budgeting had a significant influence on managerial performance. Meanwhile, organizational culture (people oriented versus job oriented), organizational commitment, and perception of innovation do not have a significant influence on the relationship between participatory budgeting and managerial performance. Thus, all related parties should actively involve in budgeting to get better results in*

**Keywords:** *Participatory budgeting; organizational culture; organizational commitment; perception of innovation; managerial performance*

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### INTRODUCTION

This study on the effects of participatory budgeting on managerial performance at public organizations has been an interesting topic since budget has become a multi-functional important instrument used to achieve an organization's objectives (Mardiasmo, 2009). In addition, the process of budgeting is significantly complex since it may lead to either functional or dysfunctional impacts on the attitudes and behaviors of an organization's members (Milani, 1975). To prevent the dysfunctional budgetary impact from occurring, Brownell (1982) suggested the importance of participative budgeting that allows lower-level managers to take part in the budget preparation.

Participatory budgeting is a managerial approach generally perceived to improve

managerial performance. However, results of previous studies have shown that the correlation between participatory budgeting and managerial performance has not been consistent. Results of the studies conducted by Milani (1975), Brownell (1982), Brownell and McInnes (1986), Frucot Shearon (1991), Sardjito and Muthaher (2008) revealed the existence of a positive and significant influence of participatory budgeting and managerial performance. However, the studies conducted by Latham and Marshall (1982) and Latham and Yukl (1976) found insignificant positive correlation between the two variables. Other studies conducted by Supomo and Indriantoro (1998) and Ahmad and Fatima (2008) found indirect association between participatory budgeting and managerial performance. Even Ivancevich (1977) in Supriyono (2005) revealed

contradictory or negative correlation of the two variables. Therefore, this study examines the effectiveness of participatory budgeting on managerial performance being an interesting topic in the field of management accounting (Sardjito and Muthaher, 2008). Therefore, this study took the topic.

Govindarajan (1986) revealed that to overcome the inconstancy and differences in various studies, contingency approach can be applied to evaluate various conditional factors or variables that may influence the effect of participatory budgeting on managerial performance. Using the contingency approach, the researcher can assess the interdependence of various contingency factors and the effects on management accounting effectiveness. Sardjito and Muthaher (2008) used organizational culture and organizational commitment as the moderating variables. Accordingly, the researcher combined the conditional factors that focus on organizational commitment, organizational culture, and innovation perception as the moderating variables that interactively influence the effect of participatory budgeting on managerial performance. However, not many researches on this area especially in governmental organization. The recent research update was conducted by Derfuss (2016).

In Indonesia, there are only few empirical studies on such a correlation in public sector. Therefore, the study aims to identify the extent of the effect of participatory budgeting on managerial performance in public sector in Indonesia. This study also tested if organizational commitment, organizational culture, and innovation perception as the moderating variables have an influence on the correlation between participatory budgeting and managerial performance.

## **LITERATURE REVIEW**

### **Participatory budgeting**

Participation has been widely known as the organizational process that involves individuals and has effects on the decision making with a direct influence on the life of

the individuals (Supomo and Indriantoro, 1998). In a more specific context, participatory budgeting is a process that involves individuals directly and has an influence on the decision of budget objectives the achievement of which will be measured and awarded (Brownell, 1982 in Supomo and Indriantoro, 1998).

Milani (1975) concluded that the main factor that differentiates between participatory budgeting and non-participatory budgeting is the level of involvement and the influence of subordinates on the decision making in the process of budgeting. Participatory budgeting results in respective attitude of the subordinates to the work and organization (Milani, 1975 in Ghozali and Yusfaningrum, 2006). Such factors as performance criteria, reward system, and conflict are expected to reduce the negative impact of budget and improve the motivation to reach the objective and target specified in the budget.

### **Managerial performance**

Performance is the ability of the manager in carrying out the managerial activities, such as planning, investigation, coordination, evaluation, supervision, staff arrangement, negotiation, and representation (Mahoney et al., 1963). In the context of public sector, Mardiasmo (2009) suggested that measurement of performance in public sector constitutes a system that aims to help public managers achieve the strategy through financial and nonfinancial measures. The measurement of performance in public sector is intended to: (1) improve the government's performance, (2) allocate resources and decision making, and (3) realize public accountability and improve institutional communication. They all lead to much better organizational efficiency and effectiveness in public sector to enable them to provide the required public services.

To evaluate and measure performance, organizations' leaders apply different financial and non-financial measures. Mahoney et al. (1963) suggested that measurement of managerial performance aims to identify how well a manager can implement

such managerial functions as planning, investigation, coordination, evaluation, supervision, staffing, negotiation, and representation.

### **Effect of Participatory budgeting on Managerial Performance**

Staff participation in budget formulation and budgetary role in performance measurement are closely associated. Brownell (1982) and Lukka (1988) in Sardjito and Muthaher (2008) revealed two reasons in their study on management accounting of why the topic is interesting. They are (1) in general participation is perceived as a managerial approach to improve the performance of organization members, and (2) results of previous studies testing the two variables have been inconsistent. The findings suggest further testing of the effectiveness of participatory budgeting on the improvement of managerial performance.

Brownell's study (1982) used Milani's instrument (1975) to measure participatory budgeting and Mahoney et al's instrument. (1963) to measure managerial performance. The study found a positive and significant effect of participatory budgeting and managerial performance. Similar research was conducted by Derfuss (2016).

Accordingly, the researcher proposed the following hypothesis:

**H1. Participatory budgeting has a positive and significant effect on managerial performance.**

### **Organizational commitment**

Organizational commitment is defined as the level of emotional binding and trust of an individual to the organization in which they work (George and Jones, 1999 in Ahmad and Fatima, 2008). Mathieu and Zajac (1990) in Supriyono (2005) explained that organizational commitment is the association of an individual to an organization so that the individual has a sense of belonging to the organization where he works. From these definitions, it can be concluded that organizational commitment is a condition

where an individual has trust, binding, and sense of belonging to the organization so that the individual will put the organization's interest over his own interest.

Luthans (1998) in Abdullah and Arisanti (2010) suggest that when an individual has a strong organizational commitment, the organization will find it easy to achieve the objectives. Low organizational commitment will make an individual behave for his own interest (Sardjito and Muthaher, 2008). Besides that, organizational commitment can be a psychological aid for an organization to carry out the activities to reach the expected performance (Nouri and Parker, 1998).

### **Effect of organizational commitment on association between participatory budgeting and managerial performance**

Strong organizational commitment will lead an individual to work harder to achieve the organizational objectives (Angel and Perry, 1981; Porter et al., 1974 in Sumarno, 2005). Sardjito and Muthaher (2008) also suggest that organizational commitment has a positive and significant effect on the association between participatory budgeting and performance. Strong commitment has made an individual put the organization's interest over his personal interest and strives seriously to improve and develop the organization. Nouri and Parker (1998) suggested that strong organizational commitment will improve performance accordingly.

Besides that, organizational commitment is a psychological tool for an organization to reach the expected performance (Nouri and Parker, 1998; McClurg, 1999; Chong and Chong, 2002; Wentzel, 2002 in Sardjito and Muthaher, 2008). Sumarno's study (2005) shows a positive and significant effect of organizational commitment on the correlation between managerial performance and participatory budgeting. Results of the studies show the correlation between participatory budgeting and managerial performance with organizational commitment being a

moderating variable. Therefore, the following hypothesis can be proposed:

**H2. Organizational commitment as a moderating variable has a positive and significant effect on the correlation between participatory budgeting and managerial performance**

**Organizational culture**

Organizational culture is the basic pattern accepted by an organization to solve problems, develop employees to be adaptable to the environment, and integrate organization's members (Abdullah and Arisanti, 2010). Hofstede et al. (1990) classified organizational culture into six practical dimensions. They are Process-Oriented vs Results-Oriented, Employee-Oriented vs Job-Oriented, Parochial vs Professional, Open System vs Closed System, Loose Control vs Tight Control, and Normative vs Pragmatic. Of the six dimensions, according to Supomo and Indriantoro (1998) Employee-Oriented vs Job-Oriented has a strong correlation with the participation.

In participatory budgeting, important decision in the budget formulation process is made collectively rather than individually. Collective decision making is a distinguished characteristic of people-oriented culture. Therefore, participatory budgeting is likely to be more effective in employee-oriented organizational culture than job-oriented organizational culture. It implies that higher people-oriented organizational culture will lead to higher managerial performance. On the contrary, higher job-oriented organizational culture will decrease managerial performance.

**Effect of organizational culture on the correlation between participatory budgeting and managerial performance**

Participatory budgeting implies that important decisions are made collectively rather than individually. Hofstede et al. (1990) suggested that collective decision making is a distinguished characteristic of people-oriented

organizational culture. The study conducted by Frucot and Shearon (1991) and Goddard (1997) found that cultural dimension has a positive and significant effect on the effectiveness of participatory budgeting in the improvement of managerial performance.

Therefore, the researcher concludes that organizational culture has an effect on participatory budgeting in the improvement of managerial performance. Thus, the following hypothesis is proposed:

**H3. People-oriented organizational culture has a positive and significant effect on the correlation between participatory budgeting and managerial performance; and job-oriented organizational culture has a negative and significant effect on the correlation between participatory budgeting and managerial performance.**

**Innovation perception**

Innovation perception among managers has been studied in previous studies on the effect of participatory budgeting on performance. Innovation perception describes how far managers perceive themselves innovative. Subramaniam and Ashkanasy (2001) defined innovation in such these values: innovative and experimental with new ideas, opportunistic, risk-taking, and not limited by rules. Innovation is finding a new idea or formulating an old idea, whether it is discovered or created, yet considered new by individuals in an organization (Dunk, 1995). Managers will be more motivated in the carrying out of their work when their ideas are appreciated by the organization. Such a condition will lead to managerial performance. Managers with high innovation perception will have high-quality performance accordingly.

**Effect of innovation perception on the correlation between participatory budgeting and managerial performance**

Subramaniam and Ashkanasy (2001) used innovation perception as the moderating variable in their study. Results of the study showed that interaction between high

participatory budgeting and innovation perception will have a positive and significant effect on managerial performance. When one gets involved in the budget formulation process, innovation perception will grow. Managers will be more motivated in the implementation of the work when their ideas are appreciated by the organization. Such this condition will lead to the improvement of innovation in their work. Managers with higher innovation perception will have higher performance. Therefore, the following hypothesis is proposed:

**H4. High innovation perception as a moderating variable has a positive and significant effect on the correlation between participatory budgeting and managerial performance**

**METHODS**

The population of this study includes all echelon-4 structural officials of 177 Kantor Pelayanan Perbendaharaan Negara (KPPN) of the Treasury Directorate General in 30 regional offices throughout Indonesia. The sampling was based on Ghozali's opinion (2008) suggesting that sampling suitable for the approach of Variance Based or Component Based Structural Equation Modeling (SEM) minimally ranges from 30 to 100 samples.

The preferred purposive sampling method was based on particular criteria requiring the respondents to have contributed in the budget formulation process and have been in the occupational tenure of minimally one year.

**Operational Definition**

Five variables are employed in this study. Participatory budgeting (PA) is individual (manager) extent of involvement and an influence in a budget formulation process. This variable was measured using a questionnaire developed by Milani (1975). The questionnaire consists of 6 (six) items of questions and is measured with 7-score Likert scale from 1 (one) representing absence of involvement in participatory budgeting to 7

(seven) representing full involvement in participatory budgeting.

Organizational commitment (KO) is the strong trust and support to the organization's values and objectives (Mowday et al., 1979). This variable is measured using the questionnaire developed by Mowday et al. (1979). The questionnaire includes 9 (nine) items and is measured with 7-score Likert scale from 1 (one) representing absolute disagreement to 7 (seven) absolute agreement.

Organizational culture (BO) consists of the values of trust among the organization's members manifested in individual or collective behavioral norms (practical dimension approach) (Hofstede et al., 1990 in Sardjito and Muthaaher, 2008). This variable is measured using the questionnaire developed by Supomo and Indriantoro (1998) based on the factor analysis of Hofstede et al's instrument. (1990). The response is measured using 7-score Likert scale from 1 (one) representing absolute disagreement to 7 (seven) representing absolute agreement.

Innovation perception (PI) indicates how much managers perceive that they are innovative in job implementation. This variable is measured using the questionnaire adapted from the study conducted by O'Reilly et al. (1991) and Windsor and Ashkanasy (1996). The questionnaire consists of 6 (six) items and is measured using 7-score Likert scale from 1 (one) representing absolute disagreement to 7 (seven) representing absolute agreement.

Managerial performance (KM) is measured using self-rating instrument consisting of the questionnaire developed by Mahoney et al. (1963), which was also used by Sardjito and Muthaaher (2008). Managerial performance is measured using 8 (eight) items that comprise levels of managerial performance at each managerial activity such as planning, investigation, coordination, evaluation, supervision, staff arrangement, negotiation, and representation. Responses to the questionnaire are measured using 7-score Likert scale ranging from 1 (one) that represents low performance to 7 (seven) that represents high performance.

**Data Analysis Method**

Hypothesis 1, 2, 3 and 4 in this study were analyzed using structural equation modeling.

The model is,

$$KM = \alpha + \beta1PA + \beta2KO + \beta3BO + \beta4PI + \beta5[PA * KO] + \beta6[PA * BO] + \beta7\{PA * PI\} + e \tag{1}$$

Data is analyzed simultaneously using the Component based Structural Equation Modeling or popularly known as Partial Least Square (PLS) method.

**RESULTS AND DISCUSSION**

Table 1 shows respondents' identities collected during the period of 15 May 2012 to 4 June 2012.

Table 1 Sample and Level of Questionnaire Return

Description	Number	Percentage (%)
Number of KPPN receiving the questionnaire	177	100
KPPN returning the questionnaire	69	39
KPPN not returning the questionnaire	108	61
Number of Respondents in 177 KPPN	782	100
Respondents not returning the questionnaire	609	78
Respondents returning the questionnaire	173	22
Ineligible Questionnaire	19	2
Eligible Questionnaire	154	20

The questionnaire of this study consists of 37 items. The descriptive statistics of

respondents' responses per latent variable is shown in table 2.

Table 2 Descriptive Statistics of Respondents' Responses per Latent Variable

Latent Variable	Minimum	Maximum	Mean
PA	1	7	3,8
KO	1	7	6,2
BO	1	7	4,3
PI	1	7	4,6
KM	1	7	5,2

Source: primary data modified

**Phases and Results of Structural Equation Model Testing**

This study employs the software of SmartPLS 2.0 M3. Wold (1985) in Ghazali (2008) suggested that Partial Least Square (PLS) is a powerful analysis method since it is not based on any assumption. Data does not have to possess normal multivariate distribution (indicators with the category scale, ordinal, interval, and ratio used at the same model) and the number of sample is not necessarily large. The model of path analysis for all latent variables in PLS consists of two

sets of the correlation between: (1) inner model specifying the correlation among latent variables (structural model) and (2) outer model specifying the correlation between latent variables and the indicators (measurement model) (Ghozali, 2008).

**Assessment of Outer Model or Measurement Model**

This phase consists of (1) validity testing by calculating the values of discriminant validity, average variance extracted (AVE) and convergent validity and

(2) reliability testing by calculating the values of composite reliability (CR), Cronbach's alpha and comparing the values of AVE root to the value of correlation among the constructs (Ghozali, 2008).

**Assessment of Construct Validity**

Figure 1 shows that of all variables of 37 indicators observed, 30 variables had the loading factor over 0.50. Meanwhile, other 7 variables of BO1, BO2, BO3, BO4, BO5, PI5

and PI6 had the loading factor below 0.50. Based on the criteria suggested by Chin (1998) the indicators with the loading value below 0.50 will have to be excluded from the measurement model.

Figure 2 shows the new estimate that reveals all indicators with the loading factor over 0.5. To value the construct validity, the discriminant validity is ensured through the value of cross loading and the value of AVE of each construct.

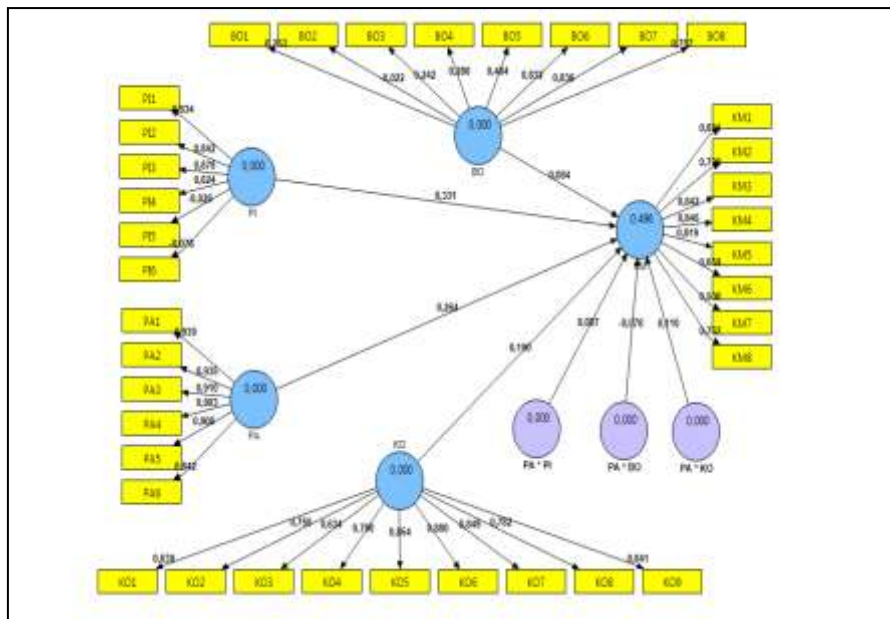


Figure 1 Path Diagram of Outer Model of all latent variables

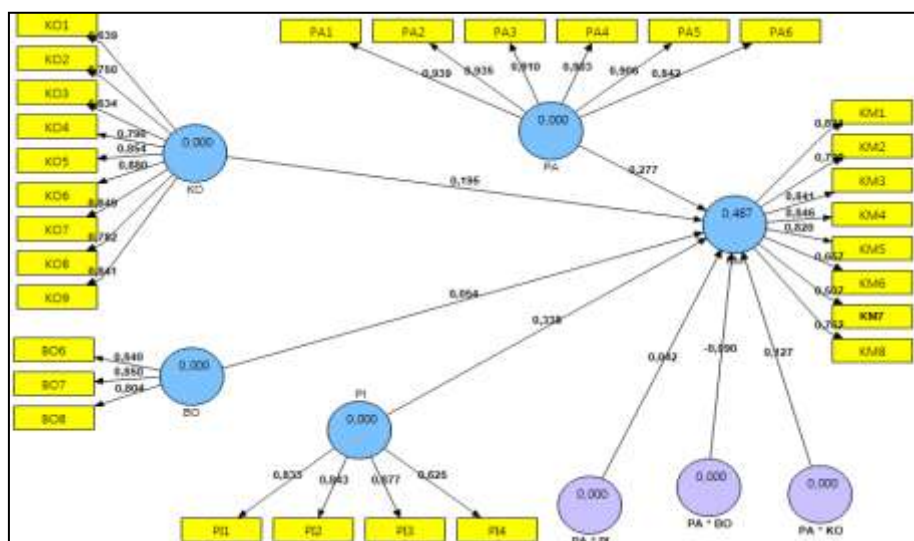


Figure 2 Path Diagram of Outer Model (re-estimated model)

Table 3 shows the results of validity testing for each observed variable that serves as the indicator for each latent variable. All observed variables of 30 indicators had the value of loading factor over 0.50. Therefore, it can be concluded that only 30 observed variables had good convergent validity and eligible for further analysis.

Besides that, the value of cross loading of the 30 variables also shows good

discriminant validity. Therefore, the value of indicator of the correlation to construct is higher than the value of indicator of the correlation to other constructs (loading factor printed in bold).

Table 4 shows that the values of AVE for the constructs of PA, KO, BO, PI, and KM are over 0.50, indicating that all constructs in the estimated model meet the criteria of good construct validity.

Table 3. *Cross Loadings*

	BO	KM	KO	PA	PI	Conclusion
BO6	0.832	0.347	0.402	0.247	0.238	Valid
BO7	0.836	0.317	0.386	0.194	0.283	Valid
BO8	0.787	0.315	0.377	0.227	0.314	Valid
KM1	0.467	0.831	0.348	0.501	0.466	Valid
KM2	0.250	0.799	0.422	0.285	0.388	Valid
KM3	0.314	0.842	0.359	0.304	0.468	Valid
KM4	0.325	0.845	0.421	0.265	0.461	Valid
KM5	0.250	0.819	0.525	0.273	0.504	Valid
KM6	0.232	0.659	0.297	0.273	0.320	Valid
KM7	0.208	0.506	0.163	0.533	0.267	Valid
KM8	0.321	0.762	0.295	0.315	0.521	Valid
KO1	0.284	0.274	0.639	0.062	0.218	Valid
KO2	0.436	0.339	0.750	0.198	0.256	Valid
KO3	0.178	0.183	0.634	0.048	0.132	Valid
KO4	0.331	0.424	0.790	0.218	0.474	Valid
KO5	0.421	0.369	0.854	0.155	0.331	Valid
KO6	0.476	0.459	0.880	0.163	0.507	Valid
KO7	0.371	0.368	0.849	0.112	0.395	Valid
KO8	0.308	0.347	0.782	0.095	0.403	Valid
KO9	0.430	0.430	0.841	0.181	0.400	Valid
PA1	0.242	0.395	0.185	0.939	0.241	Valid
PA2	0.291	0.410	0.147	0.935	0.218	Valid
PA3	0.206	0.429	0.203	0.910	0.260	Valid
PA4	0.223	0.401	0.109	0.903	0.270	Valid
PA5	0.224	0.435	0.164	0.906	0.248	Valid
PA6	0.210	0.372	0.195	0.842	0.206	Valid
PI1	0.349	0.459	0.443	0.243	0.834	Valid
PI2	0.309	0.527	0.367	0.273	0.842	Valid
PI3	0.248	0.431	0.409	0.131	0.876	Valid
PI4	0.166	0.357	0.266	0.200	0.624	Valid

Source: Data analysis



Table 4 Average Variance Extracted

	AVE
BO	0.691101
KM	0.586486
KO	0.615475
PA	0.821754
PI	0.640741

Reliability of a construct is assessed from the composite reliability (CR), Cronbach's alpha, and comparing the value of AVE root to the value of correlation among constructs (Ghozali, 2008). Construct has a good reliability when the values of composite reliability is over 0.80, Cronbach's alpha over 0.70 and the value of AVE root of each construct higher than the value of correlation among constructs.

**Assessment of construct reliability**

Table 5 Composite Reliability and Cronbach Alpha

	Composite Reliability Value $\geq 0.8$	Cronbach's Alpha Value $\geq 0.5$	Conclusion
BO	0,870266	0,776427	reliable
KM	0,917406	0,894277	reliable
KO	0,934354	0,92086	reliable
PA	0,965068	0,956353	reliable
PA * BO	0,925705	0,961416	reliable
PA * KO	0,869996	0,976168	reliable
PA * PI	0,962309	0,961952	reliable
PI	0,875386	0,807732	reliable

Table 5 shows that all of the constructs have the composite reliability over 0.80 and Cronbach's alpha over 0.70, in line with the recommended condition (Ghozali, 2008). Therefore, it can be concluded that all of the observed variables representing PA, KO, BO, PI, and KM are all reliable.

Another method to assess the reliability of a construct is comparing the square root of the average variance extracted ( $\sqrt{AVE}$ ) for each construct to the correlation between a construct and another construct in the model. Table 6 shows the output of SmartPLS on the latent variable correlations and AVE.

Table 6 reveals that the value of AVE root of the construct of participatory budgeting (PA) is 0.907 ( $\sqrt{0.691}$ ) which is higher than the correlation between constructs of PA and KO, BO, PI, and KM which is respectively 0.184, 0.269, 0.269 and 0.451. Besides that AVE root of constructs of KO, BO, PI, and KM are higher than the correlation among the constructs. This indicates that all constructs in the re-estimated model has met the criteria of good discriminant validity.

Table 6 Latent Variable Correlations and AVE Roots

	Latent Variable Correlations								AVE	Root of AVE
	BO	KM	KO	PA	PA * BO	PA * KO	PA * PI	PI		
BO	1								0.691	0.831
KM	0.393	1							0.586	0.766
KO	0.468	0.469	1						0.615	0.785
PA	0.269	0.451	0.184	1					0.822	0.907
PA * BO	0.359	-0.137	-0.172	0.002	1				0.420	0.648
PA * KO	0.214	0.316	0.170	0.184	-0.006	1			0.136	0.368
PA * PI	0.009	0.172	0.040	0.214	0.259	0.195	1		0.518	0.719
PI	0.337	0.562	0.468	0.269	-0.013	0.249	0.181	1	0.641	0.800

Table 7 R Square

	R Square
KM	0,487026

### Assessment of Inner Model or Structural Model

Table 7 shows the value of R-square of 0.487026 implying that the variability of the construct of Managerial performance (KM) that can be explained by the constructs of PA, KO, BO, PI, and 3 has the interaction variable of 48.7%. Table 4.9 clearly shows the test of the correlation among the constructs show that the construct of PA has a positive effect on KM with the coefficient of 0.277 and is significant because the value of t count statistics is 4.377 (> t significance table 1% = 2.61).

Meanwhile all moderating constructs (PA\*KO, PA\*BO and PA\*PI) are not proven to be the moderating variable affecting the correlation between participatory budgeting and managerial performance with the coefficient respectively of (+) 0.126, (-) 0.09, and (+) 0.042 and is insignificant because the value of t count statistic is respectively 0.956, 0.798, and 0.394 (< t significance table 5% = 1.96). In other words, there is no moderated correlation. The constructs of KO, BO and PI are not moderating construct.

Table 8 Path Coefficient (Mean, STDEV, T-Values)

<u>Structural Model:</u>					
$KM = 0.277*PA + 0.053*BO + 0.195*KO + 0.337*PI - 0.09* PA*BO + 0.126* PA*KO + 0.041* PA*PI, R^2 = 0.487026$					
	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>Standard Deviation (STDEV)</i>	<i>Standard Error (STERR)</i>	<i>T Statistic (/O/STERR/)</i>
BO -> KM	0.05377	0.08439	0.08245	0.0824	0.673
KO -> KM	0.19532	0.21346	0.08827	0.0882	2.263
PA -> KM	0.27713	0.26519	0.06516	0.0651	4.377**
PA * BO -> KM	-0.09023	0.02047	0.11144	0.1114	0.798
PA * KO -> KM	0.12693	0.02353	0.13350	0.1335	0.956
PA * PI -> KM	0.04194	0.05359	0.11398	0.1139	0.394
PI -> KM	0.33775	0.32741	0.08190	0.0819	4.154**
significant at $\alpha=50\%$ (t table 0.67) significant at $\alpha=10\%$ (t table 1.65) * significant at $\alpha=5\%$ (t table 1.96) ** significant at $\alpha=1\%$ (t table 2.61)					
PA = participatory budgeting ; BO = organizational culture; KO = organizational commitment ; PI = innovation perception; KM = managerial performance					

Source: Data analysis

### Analysis of Testing Results

#### Effects of Participatory budgeting on Managerial Performance

Table 8 shows that there is an effect of participatory budgeting on managerial performance as shown in the coefficient of 0.277 and t count statistics of 4.377 > t statistics with significance table 1% of 2.61. This result shows that H1 has significant result and participatory budgeting has a positive effect on managerial performance. It implies that higher participation in budgeting will improve managerial performance of the structural officials.

Results of this study support the previous findings that participatory budgeting has a positive effect on managerial performance (Supomo and Indriantoro, 1998; Sardjito and Muthaher, 2008; Derfuss, 2016). Results of this study prove that participation

in budgeting in KPPN has a positive effect on the improvement of managerial performance.

#### Effect of Organizational Commitment as the Moderating Variable to the Correlation between Participatory budgeting and Managerial Performance

Table 8 shows that H2 has insignificant results (t count statistics of 0.956 < t statistics with significance table 5% of 1.96). It implies that organizational commitment is not a moderating variable that has an effect on the correlation between participatory budgeting and managerial performance. This result does not support the finding of Sardjito and Muthaher (2008) who suggested that there is a positive and significant effect between organizational commitment in moderating the participatory budgeting and managerial performance. However results of the study are consistent with the study conducted by Erwati (2009) revealing that organizational

commitment is not a moderating variable that moderates the correlation between participatory budgeting and managerial performance.

### **Effect of Organizational Culture as the Moderating Variable to the Correlation between Participatory budgeting and Managerial Performance**

Table 8 shows that H3 gives insignificant results (t count statistics of 0.798 < t statistics of significance table 5% of 1.96). It means that people-oriented organizational culture is not proven to moderate the variable affecting the correlation between participatory budgeting and managerial performance.

Results of this study does not support the findings of the study conducted by Sardjito and Muthaher (2008) and Supomo and Indriantoro (1998) revealing that there is a positive and significant effect of people-oriented organizational culture in moderating the correlation between participatory budgeting and managerial performance . However, this result is consistent with the study conducted by Sukardi (2002) revealing that organizational culture is not a moderating variable that moderates the correlation between participatory budgeting and managerial performance.

### **Effect of Innovation Perception as a Moderator to the Correlation between Participatory budgeting and Managerial Performance**

Table 8 shows that H4 that tests the effect of innovation perception as a moderating variable gives insignificant result (t count statistics of 0.394 < t statistics with significance table 5% of 1.96). It implies that the interaction between innovation perception and participatory budgeting has no effect on the improvement of managerial performance. This result does not support the findings of the study conducted by Subramaniam and Askhanasy (2001) and Dunk (1995) revealing that there is a positive and significant effect of innovation perception in the moderation of the correlation between participatory budgeting and managerial performance.

Managerial implciatration is the participation of all related parties in governmental organization is strongly needed as it has a positive significant effect to the managerial performance. In practice, people can give comments by notes and email to accommodate big involvement.

### **CONCLUSION**

Based on the results of the study, a number of conclusions can be made: Participatory budgeting significantly has a positive effect on managerial performance. It implies that managers' higher participation in budget formulation process will lead to improvement of managerial performance. This is based on highest loading factors in the research.

While, there is a positive and insignificant effect of organizational commitment in moderating the correlation between participatory budgeting and managerial performance. In other words, organizational commitment is not a moderating variable affecting the correlation between participatory budgeting and managerial performance. This is similar to innovation perception in moderating the correlation between participatory budgeting and managerial performance.

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