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RESEARCH ARTICLE

IMPROVING MANAGERS PERFORMANCE IN BUDGETARY SETTING USING TRAIL MODEL
APPROACH: EVIDENCE FROM MECHANISTIC ORGANIZATION

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ABSTRACT

Human dimension plays a critical role in determining budget outcomes. The managers performance in budget setting will indicates the extent of the organizational success. As budget represent the important tool in translating the planned strategies into action, it is therefore critical for the managers to adapt the correct behavior that could significantly shape and lead them into good performance. This paper presents the examination of the 'Trail Model' in determining a manager's performance in budget setting. The model suggest that managers performance is improved by influential factor of and the integration effect of human dimension of fairness, commitment and satisfaction with budget performance. The dimension of fairness, which is represented by procedural fairness is investigated. The result of the study on 128 budget managers in mechanistic public organization via survey questionnaire found to be favorable, positive and significant. The paper suggests the usefulness of Trail Model as behavioral guidance instrument of human dimension in budget setting.

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INTRODUCTION

Budget has become indispensable performance management tool in the organization, widely used to assist in decision making process. It is a key management tool used to direct organizational activities in achieving their desired goals. Budget is known as a detailed financial plan for a specific period, normally prepared and produced a year ahead by operational unit managers. An act of preparing a budget process, or budgeting, involved a series of departmental review through meeting, discussion, screening and presentation before the final amount is derived and approved for spending. In this context, the focal point is to know whether the managers are satisfied with the final budget and to what extent the budgets has assisted in improving managers performance in meeting the operational planning and organizational goal.

Budgetary setting environment propound either autocratic or participative budgeting technique, where the former concern in top down approach while the latter as a bottom up (Adler and Reid, 2008). The budgeted amount approved for spending has

to pass various screening stages during budget formulation process. At this point, superior and subordinate manager at each level of responsibility exchange their budget proposal and counter proposal and finally compromise to some quantum of budget allocation. Therefore, it is critically important for the budgeting procedure to be carried out in ethical manner as this will affect the managers attitude and behaviour and consequently, budgetary outcomes.

This paper investigates the interaction effect of fairness, organisational commitment, budget satisfaction and budget performance in improving managerial performance. Employing 'Trail Model' conceptual framework, the paper suggest that managers performance is improved by influential factor and integration effect of human dimension of fairness, commitment and satisfaction with budget performance. Extending organizational justice theory within contingency setting, this study posits that budgetary procedural fairness has a positive effect on managerial performance via organizational commitment, budget satisfaction and budget performance.

The diagram of the Trail Model is presented in the diagram at Figure 1 below:

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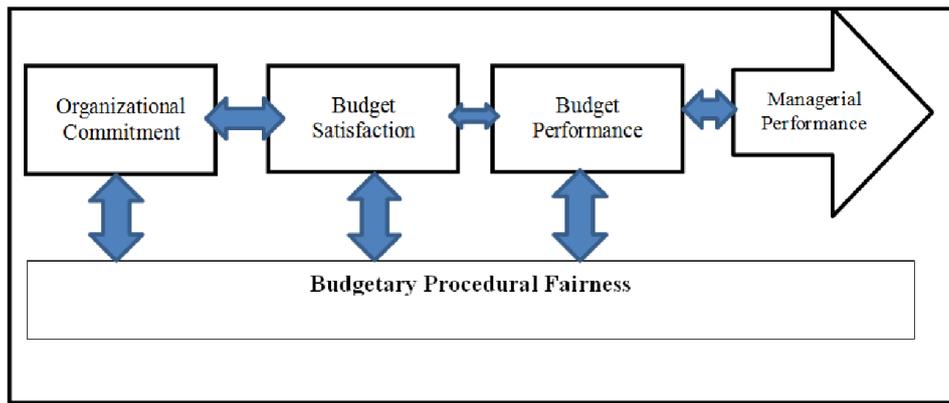


Figure 1. The Diagram of Trail Model

Operational Definition, Literature Review and Hypothesis Development

Operational Definition

Budgetary Procedural Fairness: Budgetary procedural fairness is defined as the best practices that upholding fairness procedure in dealing with budget activities at every departmental level. It is emphasized on the fairness of the procedure employed to determine the budget outcomes (Zainuddin and Isa, 2011). Procedural fairness emphasis on the utilisation of the fair procedure in resource distribution intended for the best outcome (Levanthal, 1980).

Organizational Commitment: O'Reilly and Chartman (1986) viewed organisational commitment as 'the extent to which employees identify with their organisation and managerial goals, show a willingness to invest effort, participate in decision making and internalise managerial values'. It measures the level of employee attachment to the organization.

Budget Satisfaction: Satisfaction is a pleasurable or positive emotional state that result from self- appraisal of experiences (Livingstone et al 19950 as quoted in Maiga (2006). This study defines budget satisfaction as a high degree of acceptability after an individual feel that their budget requirement has been fulfil to enable them to execute and achieve their planned activities accordingly.

Budget Performance: Budget performance is the degree to which managers perceive they have met budgetary target (Maiga, 2006).

Managerial Performance: Nouri and Parker (1996) asserted that managerial performance is a function of willingness, capacity and opportunity. Willingness mostly concern to work motivation while capacity is related to individual abilities, skills and energy levels. Opportunity refers to the job-related environmental factors that facilitate or hinder performance, such as equipment, supplies, co-worker actions and organisational policies. Managers with high organisational commitment and who are innovative tend to aim for better output or results, which in turn leads to improved performance. Drucker (1967) as cited in Stoner and Freeman

(1992) measured managerial performance in terms of efficiency and effectiveness. Efficient refers to doing things right while effectiveness refers to doing the right thing. These two functions provide positive indicators about how well the managers are doing their jobs which, indirectly will reflect their job performance.

Literature Review

The word budgetary fairness is initially derived from organizational fairness domain which emphasis justice at workplace, as pioneered by Adams in equity theory (Adams, 1965). Adams (1965) asserted that employees seek to maintain fairness in term of wages they should receive when at work by comparing input (in term of their work contribution) and the output they produced (job done). The evolution of equity theory has contributed to the development of organizational fairness which concern employees performance. Current budgetary literature highlights three dimensions of fairness that are procedural, distributive and interactional fairness, which are importance variables in determining organizational success. Procedural fairness is defined as a procedure used in the allocating the resources (Thibaut and Walker, 1975).

Distributive fairness is concerned on 'fair share' that is expectations about what that have received or allocated in relative to other managers (Maiga, 2006). Interactional fairness is defined as the quality of formal communication between employees in organization in decision making process (Baldwin, 2006).

The effect of full dimension of budgetary fairness encompassing procedural, distributive and interactional fairness showed consistent evidence with direct and significant effect on budget satisfaction (Maiga, 2006). The result of budgetary fairness mainly represented and viewed from a single dimension of procedural fairness also continuously consistent. Positive and significant both direct and indirect effect on performance includes (Lau and Lim, 2002; Maiga, 2006; Rachman, 2014), positive and significant effect as mediating role affecting motivation (Zainuddin and Isa, 2011).

The contribution of fairness in budget setting has been linked and tested in fractional dimension, mostly procedural fairness (Lau & Lim, 2002; Lau and Tan, 2012; Zainuddin and Isa, 2012 and Rachman, 2012, Rachman, 2014) and full dimension of organizational fairness inclusive of procedural, distributive and interactional fairness (Maiga, 2006). Fairness has been studied in many perspective of budgetary setting in manufacturing unit in combination with other variables such as a predictor to performance in direct relationship (Lau and Lim, 2002; Rachman, 2014a), mediator via intervening effect (Zainuddin and Isa, 2012; Lau and Tan, 2012, Rachman, 2014a, Rachman, 2014b, Kohimeyer, 2014) mediator to motivation (Zainuddin and Isa, 2012). Fairness has been linked to have interaction effect in budgetary participation and motivation relationship (Zainuddin and Isa, 2012), budget satisfaction and budget performance (Maiga, 2006), as a predictor in relation to turnover intention (Staley and Magner, 2008), as predictor to work performance (Wang et al, 2010). Despite its linkages to motivation, satisfaction and performance, some studies show evidence its role on budget slack (Maiga and Jacobs, 2007; Oktorina and Soenarno, 2014), organizational commitment (Kohimeyer, 2014). Most of previous research utilise structural equation modelling with path model for their hypothesis testing analysis, using Smart PLS as a statistical tools (Maiga, 2006; Zainuddin and Isa, 2011; Rachman, 2012, Rachman 2014).

Evidence from prior research has confirmed fairness as an important organizational behaviour that has been linked to managerial outcomes in several budgetary studies (Lau & Lim, 2002; Maiga, 2006; Zainuddin and Isa, 2012 and Rachman, 2014). The underlying foundation that supported the evidence were derived from different theory perspectives such as contingency theory (Rachman et al 2014a), goal setting theory (Zainuddin and Isa, 2012) and both expectancy theory and social exchange model (Maiga, 2006).

Previous research in this area has found that the ability of the manager to exercise perceive budgetary fairness, to certain degree, has influenced budget satisfaction and that budget satisfaction finally related to budget performance (Thibaut and Walker, 1975; Moorman, 1991 in Maiga, 2006). Other studies suggest that perceived fairness also positively associated with managerial performance (Lindquist, 1995; Lau and Lim, 2002; Aryani & Rahmawati, 2010), organizational commitment (Rachman, 2014) and motivation (Zainuddin and Isa, 2011), budgetary participation (Nahartyo, 2013), related to interpersonal trust (Sholihin et al, 2011), impact on goal commitment (Maiga and Jacobs, 2007), moderator between Reliance on Accounting Performance Measure (RAPM) to job satisfaction (Sholehin et al, 2007), moderator to budget performance (Lau and Tan, 2012). Study by Wentzel (2002) has found positive association between distributive fairness with participation, which finally influenced budget goal commitment. On the other view, Lau and Lim (2002) found that procedural fairness was related to performance via budgetary participation. Lau and Lim (2002) study suggested procedural justice as antecedent to managerial attitudes and outcomes. It is noted procedures are universal in the organizational setting and become important element in

decision making process as it effect on functional behaviour of the manager. Unfavourable perceptions of final budget may affect negative reaction of attitude and behaviours of the managers. Fair budgetary procedure are important in budgetary system as they promote more positive attitudes and behaviour of the managers with budget responsibility accomplish organizational goal and objectives (Magner et al., 2006). Therefore, fairness is seen as importance criteria to ensure successful budgeting procedure.

Interestingly, the study by Maiga and Jacobs (2007) has pointed out that outcome of budgeting procedure influences managers attitude and behaviour because budget performance may affect manager's organizational reward both tangible and intangible reward. This is due to managers concern on their performance, increase in organizational commitment and trust. Fairness is important as it increase organizational commitment, trust and reduces negative perceptions reactions to unfavourable budget. Employing social exchange model and expectancy model of motivation, they found the three fairness dimension have direct positive effect on budget satisfaction and budget satisfaction subsequently has direct effect on budget performance.

Maiga and Jacobs (2007) has identified several important criteria for fair budgetary procedures to include:

- Providing platform for managers to voice their opinions on budget decision negative effect.
- Allowing managers for appeal process.
- Providing accurate information on budget.
- Ensuring consistent procedure across budget period.

In contrast, study by Lindquist (1995) and Libby (1999) found no evidence to support that procedural fairness is directly related to performance. Libby (1999) suggested that prior studies were unclear and could not establish whether there are direct relationship between fairness and performance or there are some indirect influence by either mediating or moderating variable. Libby (1999) proposed further research to identify causal relationship between fairness and performance. The study by Netmeyer et al. (1997), explored social exchange theory found satisfaction as a mediating variable that mediates the fairness and performance relationship while Maiga (2006) found budget satisfaction mediates the relationship between the three fairness and budget performance. However, these studies only provide evidence pertaining to relationship between fairness and budget performance in manufacturing companies and very little evidence on public sector.

This study attempts to fill this gap and provide new evidence to the literature the role of fairness on managerial performance in public sector.

Organizational Justice Theory

Organizational justice theory encompasses three dimensions namely procedural justice, distributive justice and interactional justice. Previous study showed that these three dimensions of justice are correlated and can be meaningfully

treated as representing overall fairness (Maiga, 2006; Ambrose and Schminke, 2007). Initial works on organizational justice tend to derived from the concept of distribution, which was emerged and developed based on equity theory. This theory was first initiated by Aristotle in his *Nicomachean Ethics* (Cropanzano et al., 2007) which argued that justice in distribution should be in accordance to 'something proportionate'. Adam (1965) as quoted by Cropanzano (2007), theories the distributive justice concept in mathematical equation which explains that an outcome is relative to inputs (contribution). Procedural justice is concerned about the appropriateness of allocation process (Cropanzano, 2007). Lavenenthal (1980) as cited in Oktorina and Soenarno (2013) described six main criteria of fair procedures to include consistency, bias suppression, accuracy, correctability, representativeness and ethicality. Perceived fair procedure may trigger supportive action from subordinate, trusted their leaders more and will be committed to their leaders (Kim and Mauborgne, 1991). Procedural fairness is therefore related to superior treatment in decision making process (Lind and Tyler, 1988).

Contingency Theory in Budget Setting

Contingency theory assumes that 'the effect of one variable on another depends upon some third variable' (Donaldson, 2001). Sometimes referred to as 'situation-dependent theory' (Charpentier, 1998), it is based on the notion that the nature of the relationship depends on situational features that may vary from one situation to another. Broadly, contingency theory argues that some variables may moderate the effects of an organisational characteristic on performance (Donaldson, 2001). Donaldson (2001) noted that the theory assumes that the effect of one variable on another depends upon some third variable. It is a sub-set of the contingency approach that has emerged as the dominant theoretical framework for viewing organisational structure, design and effectiveness (Lee et al., 1986). Donaldson (2001) describes contingency theory as a major theoretical lens used to view organisations. He added that contingency differs from universalistic theories on the grounds that performance achievement is based on the adoption of the appropriate level of structural variable that fits or is dependent on a contingency variable.

In view of contingency setting, the relationship between independent and dependent variables may be subjected to the existence of other variables known as moderator or mediator variables. The effect of moderator in the relationship is also known as interaction effect (Mia, 2001). A variable is said to function as a mediator when it intervenes the relationship between independent variable and dependent variable. Mediators play a role as external element that explains how and why the effects of independent variable on dependent variable occur (Baron and Kenny, 1986). The effect of moderator variables is examined in terms of form and strength and the results are analysed using multiple regression and correlation analysis. The effects of mediator variables, on the other hand, are analysed using a path analysis model (Gerdin and Greve, 2004).

This study investigates interaction (moderator) effect of organizational commitment, budget satisfaction and budget performance in the procedural fairness and managerial performance relationship.

Hypothesis Development

Procedural Fairness and Managerial Performance

Early empirical study on procedural fairness and performance relationship found inconsistent result. Early and Lind (1987) as noted in Lau and Lim (2002) found positive relationship between procedural justice and performance. Kanfer et al. (1987) however, found otherwise. Tang and Sarfield-Baldwin (1996) suggest that fair and consistent rules will lead to positive perception of procedural justice, which in turn will lead to positive managerial outcome. Wentzel (2004) suggest that performance is increased under high condition of justice. Wentzel (2004) also noted that perceptions of fairness can improve performance by increasing the manager's commitment on budgetary goals. Rachmand et al. (2014) found significant effect of procedural fairness on performance. However, Yucel and Gunluk (2007) found negative relation between procedural fairness and performance, therefore this study attempt to test relationship with the following hypothesis:

H1. There is a significant and positive influence of procedural fairness on managerial performance

Procedural Fairness, Organizational Commitment, Budget Satisfaction and Managerial Performance

Perceived procedural fairness may influence the subordinate satisfaction due to employees believe they are given a fair treatment over the budgeting process and outcomes decisions (Thibaut and Walker, 1975). When the employee feels they have been receiving fair treatment by the superior during the budget setting process, it will influence subordinate towards active collaboration with superior, thus improving budget satisfaction. Budget satisfaction on the other hand lead to higher performance. Therefore, the following hypothesis is developed:

H3. There is a significant three way interaction between procedural fairness, organizational commitment and budget satisfaction that influences managerial performance

Procedural Fairness, Organizational Commitment, Budget Satisfaction, Budget Performance and Managerial Performance

Procedural fairness will affect employee performance when the employees are given opportunity to participate in decision making (Maiga and Jacob, 2007). Perceived procedural fairness may influence budget performance when the subordinate believe they are given a fair treatment over the budgeting process and outcomes decisions (Thibaut and Walker, 1975). When the employee feels they have been receiving fair treatment by the superior during the budget setting process, it will drive the subordinate to improve budget

performance. According to Wentzel (2002), fairness can improve performance by increasing the manager's budgetary goals. It is suggested that improved in budget performance will improve in managerial performance. Thus the following hypothesis is developed and put forward:

H4. There is a significant interaction between procedural fairness, organizational commitment, budget satisfaction and budget performance that influences managerial performance

Research Methodology

Sample Selection and Data Collection Procedure

This study focuses on budget managers from 130 budget responsibility centres across department in mechanistic public organization selected for this study. The budget managers were purposively selected and nominated as sample respondents based on their full time direct involvement in budget setting, whose appointments are directly linked to budget related tasks and have years of relevant budget experience and budget authorisation. A budget responsibility centre with bigger budget volume is given more than one questionnaire considered appropriate as the managers such allocation are expected to have bigger accountability. These budget managers perform important budgetary roles and activities, therefore, the findings of a study may provide a meaningful and interesting comparison with prior studies which have largely focused on the private sector. The experience in budget is meaningful as this will add the credibility of the data.

A self-replied questionnaires were mailed to the 200 targeted respondents where 128 returned yielding 76% response rate and finally usable for data analysis.

Instruments Measurement, Validation and Data Analysis

The instruments used in this study are procedural fairness, organizational commitment, budget satisfaction, budget performance and finally managerial performance, which are adapted, extended and modified from previous research. Procedural fairness is measured using Five points Likert scales adapted from Six-item of Magner and Johnson's (1995) together with additional Two-item Greenberg (1993) scale which emphasises on the allocation procedure and level of representativeness. Organizational commitment is measured using Eight items, Five points Likert scale from Mowday et al (1979). Budget satisfaction was measured using Three-item measurement from Smith, Kendall and Hulin (1969). Budget performance was measured using single item self-rated performance adapted from Wentzel (2002) while managerial performance was measured using self-rated Nine-item developed by Mahoney *et al.* (1963,1965) and additional one item testing the transformational abilities of the manager with the given budget. All items of the research instruments were Five points Likert scale ranging from 1 (Strongly disagree/Strongly dissatisfied/Low/Very low performance) to 5 (Strongly agree/Strongly satisfied/High/Very high performance). The reliability and validity of the instruments were found to be high with Cronbach Alpha shown more than

0.60 which is considered very high reliability (Chua, 2006b; Henseler *et al.*, 2009; Sekaran & Bougie, 2010), while the factor loadings indicates more than 0.5, within the acceptable range as recommended by Chin (1998). A stepwise regression is used for hypothesis testing.

RESULT ANALYSIS

Procedural Fairness and Managerial Performance

The results for H1 which stated that procedural fairness has influence managerial performance is analysed through the regression equation below:

- $Y = a + b1X1 + e$
- $Y = \text{Managerial Performance}$
- $X1 = \text{Procedural Fairness}$
- $e = \text{error}$

The result in Figure 2 shows strong correlation between procedural fairness and managerial performance with R value at 0.611. The R square of 0.373 indicates the 37% variance in managerial performance is explained by procedural fairness. The ANOVA test shows that the relationship between both predictor variable and criterion variable is significant [$F(1,126) = 74.989, P < 0.000$]. Regression coefficient for the predictor variables of procedural fairness is significant at $p < 0.000$.

Therefore, H1 is supported.

Predictors	Procedural Fairness				
	B	se	β	t statistic	F statistic
Procedural Fairness	0.582***	0.067	0.611	8.686	74.989***
R	0.611				
R ²	0.373				

Notes: Dependent Variables: Managerial Performance
***Significant at $p < 0.000$

Figure 2. Result of Regression Test Predicting Procedural Fairness on Managerial Performance

Procedural Fairness, Organizational Commitment and Managerial Performance

The results of H2 which stated that procedural fairness interact with organizational commitment to influences managerial performance is analysed through the regression equation below :

- $Y = a + b1X1 + b2X2 + e$
- $Y = \text{Managerial Performance}$
- $X1 = \text{Procedural Fairness}$
- $X2 = \text{Organizational Commitment}$
- $e = \text{error}$

Figure 3. Summarises the result of multiple regression for H2

The result shows strong correlation between procedural fairness and organizational commitment on managerial performance with R value at 0.726. The R square of 0.459 indicates the 46% variance in managerial performance is explained by organizational commitment. Stepwise

regression shows the linear combination of organizational commitment and procedural fairness has increased the variance in managerial performance from 46% to 52%, indicating a 6% increase of its predictive power. This shows that more than 50% changes in managerial performance is influenced by combination of procedural fairness and organizational commitment. The ANOVA test shows that the relationship between both predictor variable and criterion variable is significant at $p < 0.000$. ANOVA test for organizational commitment is significant [F(1,126)=106.99, $P < 0.000$] and ANOVA test for a combination of organizational commitment and procedural fairness is also significant [F(2,125)= 69.53 $P < 0.000$]. Regression coefficient for the predictor variables of organizational commitment and procedural fairness is significant at $p < 0.000$.

Therefore, the H2 is supported.

Predictors	Model 1 (Organizational Commitment)				
	B	se	β	t statistic	F statistic
Organizational Commitment	.647***	.063	.678	10.344	106.99***
R	0.678				
R ²	0.459				
Predictors	Model 2 (Organizational Commitment and Procedural Fairness)				
	B	se	β	t statistic	F statistic
Organizational Commitment	0.464***	0.073	0.487	6.368	69.53***
Procedural Fairness	0.307***	0.073	0.322	4.220	
R	0.726				
R ²	0.527				

Notes: Dependent Variables: Managerial Performance
 ***Significant at $p < 0.000$

Figure 3. Result of Multiple Regression Test Predicting Procedural Fairness and Organizational Commitment on Managerial Performance

Procedural Fairness, Organizational Commitment, Budget Satisfaction and Managerial Performance

The results of H4 which stated that procedural fairness interacts with organizational commitment and budget satisfaction to influence managerial performance is analysed through the regression equation below:

- $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$
- Y = Managerial Performance
- X1 = Procedural Fairness
- X2 = Organizational Commitment
- X3 = Budget Satisfaction
- e = error

Figure 4. Summarises the result of multiple regression for H3

The result shows strong correlation between procedural fairness, organizational commitment and budget satisfaction and managerial performance with R value at 0.747. The R square of 0.459 indicates the 46% variance in managerial performance is explained by organizational commitment. In addition, stepwise regression shows the linear combination of procedural fairness, organizational commitment and budget satisfaction has increased the variance in managerial performance from 46% to 55%, indicating a 9% increase in its predictive power. This shows that more than 50% changes in managerial performance is influenced by combination of procedural fairness, organizational commitment and budget satisfaction. The ANOVA test shows that the relationship between both predictor variable and criterion variable is significant at $p < 0.000$. ANOVA test for organizational commitment is significant [F(1,126)=106.996, $P < 0.000$], organizational commitment and procedural fairness [F(2,125)=69.539 $P < 0.000$] and a linear combination of procedural fairness, organizational commitment and budget satisfaction [F(3,124)= 52.311, $P < 0.000$]. Regression coefficient for organizational commitment is significant at $p < 0.000$ whilst procedural fairness and budget satisfaction are significant at $p < 0.001$ and $p < 0.003$, respectively.

Therefore, the hypothesis is fully supported and accepted.

Predictors	Model 1 (Organizational Commitment)				
	B	se	β	t statistic	F statistic
Organizational Commitment	0.647***	0.063	0.678	10.344	106.996***
R	0.678				
R ²	0.455				
Predictors	Model 2 (Organizational Commitment, Procedural Fairness)				
	B	se	β	t statistic	F statistic
Organizational Commitment	0.464***	0.073	0.487	6.368	69.539***
Procedural Fairness	0.307	0.073	0.322	4.22	
R	0.726				
R ²	0.519				

Predictors	Model 3 (Organizational Commitment, Procedural Fairness, Budget Satisfaction)				
	B	se	β	t statistic	F statistic
Organizational Commitment	0.349**	0.08	0.36	4.33	52.311**
Procedural Fairness	0.241	0.074	0.25	3.25	
Budget Satisfaction	0.21	0.07	0.24	2.99	
R	0.747				
R ²	0.548				

Notes: Dependent Variables: Managerial Performance
 ***Significant at $p < 0.001$

Figure 4. Result of Multiple Regression Predicting Organizational Commitment, Procedural Fairness, and Budget Satisfaction on Managerial Performance

Procedural Fairness, Organizational Commitment, Budget Satisfaction, Budget Performance and Managerial Performance

The results of H4 which stated that procedural fairness interacts with organizational commitment, budget satisfaction and budget performance to influence managerial performance is analysed through the regression equation below:

- $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$
- $Y =$ Managerial Performance
- $X_1 =$ Procedural Fairness
- $X_2 =$ Organizational Commitment
- $X_3 =$ Budget Satisfaction
- $X_4 =$ Budget Performance
- $e =$ error

The result in the model summary in Figure 5a shows strong correlation between criterion variable and predictor variable with R value at 0.776. The R square of 0.603 indicates the 60% variance in managerial performance is explained by linear combination of procedural fairness, organizational commitment, budget satisfaction and budget performance. The ANOVA test in Figure 5b shows that the relationship between both predictor variable and criterion variable is significant at $p < 0.000$. ANOVA test for organizational commitment is significant [$F(1,126) = 106.996$, $P < 0.000$], organizational commitment and budget performance [$F(2,125) = 75.746$, $P < 0.000$], organizational commitment, budget satisfaction and budget performance [$F(3,124) = 57.885$, $P < 0.000$] and organizational commitment, budget performance, budget satisfaction and procedural fairness [$F(4,123) = 46.651$, $P < 0.000$].

Figure 5. Summarises the result of multiple regression for H4

Therefore, the H4 is fully supported and accepted.

Predictors	Model 1 (Organizational Commitment)				F statistic
	B	se	β	t statistic	
Organizational Commitment	0.647	0.063	0.678	10.344	106.996***
R	0.678				
R ²	0.459				
	Model 2 (Organizational Commitment, Budget Performance)				
Organizational Commitment	0.489	0.066	0.513	7.453	75.746***
Budget Performance	0.272	0.055	0.341	4.952	
R	0.740				
R ²	0.548				
	Model 3 (Organizational Commitment, Budget Performance, Budget Satisfaction)				
Organizational Commitment	0.352***	0.076	0.369	4.626	57.885***
Budget Performance	0.234***	0.054	0.293	4.313	
Budget Satisfaction	0.216***	0.067	0.255	3.251	
R	0.764				
R ²	0.583				
	Model 4 (Organizational Commitment, Budget Performance, Budget Satisfaction and Procedural Fairness)				
Organizational Commitment	0.296***	0.078	0.31	3.791	46.551***
Budget Performance	0.202***	0.055	0.253	3.695	
Budget Satisfaction	0.174**	0.067	0.206	2.585	
Procedural Fairness	0.177**	0.072	0.186	2.445	
<hr/>					
R	0.776				
R ²	0.603				

Notes: Dependent Variables: Managerial Performance
 ***Significant at $p < 0.001$
 **Significant at $p < 0.05$

Figure 5. Summary of Multiple Regression Predicting Organizational Commitment, Procedural Fairness, Budget Satisfaction and Budget Performance on Managerial Performance

The result in Figure 5c shows that the regression coefficient for organizational commitment and budget performance is significant at $p < 0.000$ whilst procedural fairness and budget satisfaction is significant at $p < 0.01$ respectively.

Summary, Discussion and Conclusion

The primary purpose of this study is to investigate the interaction effect of budgetary procedural fairness on managers performance in budgetary setting using a 'Trail Model'. The model suggests fairness as a critical factor, correspondingly interacted with three other variables that are organizational commitment, budget satisfaction and budget performance to improve managers performance.

Overall results show significant findings. The result on the interaction effect of procedural fairness and organizational commitment on managerial performance is consistent with the proposed hypothesis with positive and significant result. The linear combination of procedural fairness and organizational commitment jointly has influenced the managerial performance, consistent with Ogiedu and Odia (2014). Therefore it is suggested that procedural fairness and organizational commitment are an important variables on the ground that procedural fairness increase attachment of the managers to the organization and therefore will lead to improve managerial performance. Subsequent test incorporating budget satisfaction in the linear relationship between procedural fairness and organizational commitment also has shown a degree of incremental effect on managerial performance. This result supports the importance of budget satisfaction as one of the key factor in budget process. Finally, enhance managerial performance was evidence with the inclusion of budget performance in the linear interaction of procedural fairness and budget satisfaction. As expected, procedural fairness jointly interacted with organizational commitment, budget satisfaction and budget performance towards improving managerial performance.

It is concluded that there is significant interaction effect of procedural fairness, organizational commitment, budget satisfaction, budget performance that influence managerial performance, thus support the usefulness of the Trail Model in budgetary setting. The result suggests the importance of a fairness environment in budgetary setting, as the budget process cannot be conducted or managed simply in authoritative manner without any prior consultation with subordinate. Management should have consistently and constantly upholding fairness in their daily business as fairness in budgetary setting will translates into higher commitment, satisfaction and budget performance. This interaction consequently leads to higher managerial performance and organisational success.

In the light of the findings of the study, there are several important limitations that can be addressed in future study. Firstly, the development of the Trail Model is not really final because the model only answers approximately sixty percent of effect on managerial performance. Additional input especially with regards to what constitute to the remaining forty percent influence on managerial

performance, therefore provide a gap for further research. Secondly, the model may not offer generalizability to other behavioural setting both at public and private sector as the model require additional test to be carried out, which is also provide avenue for future research.

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