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Original Research Article

**BUDGET PARTICIPATION, MANAGERIAL PERFORMANCE  
AND BUDGETARY SLACK: THE INTERVENING ROLE OF  
BUDGET PRESSURE AND MONITORING**

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***Abstract***

*The study seeks to ascertain the role budget pressure and monitoring plays in the relationship between budget participation, managerial performance and budgetary slack. The study used data collected through questionnaire administered on 247 employees of the 177 firms listed on the floor of the Nigerian Stock Exchange as June, 2016. The test items were analysed using factor analysis and the specified models were estimated using the ordered logit and probit regression technique through computer software IBM SPSS 23.0 and E-view 9.5. The study finds a significant negative relationship between budgetary slack and managerial performance. Moreover, the study finds a significant positive relationship between organisational commitment and managerial performance. The study also finds that budget participation alone tends to reduce managerial performance as a result of budgetary slack creation but when employees and subordinate managers are closely monitored at the time of preparing the budget, budget participation tends to improve managerial performance. Thus, the study concludes that there is an indirect positive relation between budget participation and managerial performance through the intervening role of budget pressure and monitoring.*

**Keywords:** Budget participation, managerial performance, budgetary slack, budget pressure and monitoring.

**JEL Classification:** G310

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## 1.0 INTRODUCTION

Planning pervades every sphere of life and it is an exercise carried out by individuals, firms, and government on a daily basis either consciously or unconsciously. When the plan is expressed in quantitative terms, it translates into a budget which now serves as a guide for allocating resources among competing needs as well as controlling behaviour and assisting in making better decisions. Budgeting remains a topical issue in management accounting and in public circles. Budgets help clarify goals and objectives, communicate and coordinate plans, allocate resources as well as serve as a benchmark and tool for evaluating managers (Garrison & Noreen, 2003). However, one of the behavioural problems encountered in budgeting occurs when participation is allowed in budgeting as participation might create room for employees to communicate inaccurate information to their superiors (Omolehinwa, 2013).

Participation in budgeting affords subordinate managers and employees the opportunity to influence decisions concerning expectations of their superiors (Kren, 2003). Thus, budget participation can have positive or negative effect on organisational goals depending on the level of employee commitment. The existence of budgetary slack has negative impact on the budget process because budgetary slack provides the potential for a budget to be easily achieved and gives a false perception of managers' performance (Merchant, 1985). Creation of slack in the budget defeats the basic purpose of budgets by creating inefficiency and wastage and potentially diminishing the quality of comparing actual performance with budgeted data (Hopwood, 1972; Yuen, 2004).

Advocates of participation claim that it communicates a sense of responsibility, leads to improved accuracy of the estimates and less biases as a result of information sharing. Moreover, studies have claimed that participation may help to create a sense of belonging and foster commitment to organisational goals. For example, Eker (n.d) argues that budget participation leads to higher quality decisions as it fosters improved flow of information between superiors and subordinates. From this perspective, participation leads to higher motivation, higher commitment, higher quality decisions and hence higher performance. In the view of Shillinglaw (1982), participation enables the individual manager to see the decisions affecting their operations as joint decisions between them and their superiors and may be used to increase the acceptability of

organisation's goal by the individual manager. Individuals involved in setting their own standards/target tend to work harder to achieve them (Shields & Shields, 1998), this reduces information asymmetry and provides non-monetary incentives that lead to higher level of performance (Hansen & Mowen, 2006).

Otley (1978) asserts that "where budget information is used as a basis for performance evaluation, it is likely that the effects of such use will predominate in determining how a manager responds to the accounting information, because of the immediate and personal impact that results" (p.124). In the budget participation process, the managers' privileged situation provides them a condition for exhibiting opportunistic behaviour, taking advantage of the information at their disposal to bargain results favourable to their own interests, especially when the goals negotiated in the budgeting forms the basis for variable compensation (Faria & Silva, 2013; Hansen & Mowen, 2006). This dysfunctional behaviour results in the creation of budget slack. Moreover, participation in budgeting may not encourage employees to be truthful about their abilities since they can use it to bargain result and ease pressure for achievement of targets (Faria & Silva, 2013). Consequently, as Leavins, Karim, and Siegel (1997) asserted, managers' perception of the likelihood of participating in the formulation of the budget tends to increase the expectation of being able to inject budgetary slack. Caplan (1971) also argued that participation of managers in the budgeting process plays a crucial role in the creation of budget slack. Therefore, the objective of this paper is to examine the intervening role of budget pressure and monitoring on budget participation and managerial performance vis-à-vis budgetary slack.

Conversely, employees with low level of commitment to the organisation tend to take advantage of the opportunity to participate in the budget process to pursue personal goals in order to satisfy personal interest while employees with strong commitment are likely to seek achievement of organisational goals above personal goals (Nouri & Parker, 1996).

A positive relationship exists between budget participation and manager's performance (Dunk & Nouri, 1998; Maiga & Jacobs, 2007; Nouri & Parker, 1998; Ogiedu & Odia, 2013) which tends to explain the near absence of budgetary slack, however, no direct relationship has been established. Rather, other intervening variables (Nouri & Parker, 1998) such as environmental uncertainties (Govindarajan, 1986; Kren, 1992); employees'

commitment to organisational goals, employees' perception of procedural and distributive fairness (Maiga & Jacobs, 2007) have been reputed to be responsible for this positive relationship.

Consequently, this study is of the opinion that budget pressure and monitoring may be another intervening factor that can lead to the positive relationship between budget participation and managerial performance. The budgeting process demands commitment on the part of all concerned but the prospect of not achieving budget goals could be a source of pressure (Caldwell & O'Reilly, 1982) and budget monitoring creates pressure which prompts the individual to attempt to overcome the pressure by creating slack into the budget (Yuen, 2004, Tagwireyi, 2012). When managers know that they will be under pressure to meet targets which they consider difficult to achieve, they tend to create slack into the budget to make it easy to achieve thereby painting a wrong picture of employees' performance and defeating the fundamental purpose of the budget (Merchant, 1985; Yuen, 2004)

In view of the forgoing, there is a lack of consensus on the relationship between budget participation and the creation of budget slack. Moreover, relationship between budget participation and managerial performance is not direct as evidenced by varying research findings. The consideration of the effect of budget pressure and monitoring on organisational commitment and hence managerial performance vis-à-vis budgetary slack constitute a gap which this study seeks to fill. Consequently, the main research questions of this study are: (1) What is the effect of budgetary slack on managerial performance?; (2) What is the extent of the influence of budget participation on budgetary slack with budget pressure and monitoring as an intervening factor?; (3) To what extent does budget participation affect managerial performance with budget pressure and monitoring as an intervening factor?; (4) What is the extent of the impact of organizational commitment on managerial performance when participation is allowed in the budgeting process?; (5) What is the effect of budget participation on organisational commitment?; (6) What is the extent of the influence of budget participation on organisational commitment with budget pressure and monitoring as an intervening variables?

The hypotheses tested in the study were based on the models adopted by (Mah'd, Al-Khadash, Idris, & Ramadan, 2013, Ogiedu & Odia, 2013; Steven, 2000) which have been adapted as appropriate. The remainder of this paper is divided into sections: (2)

Literature review and hypotheses development, (3) Methodology, (4) Estimation results and Discussion of findings and (5) Conclusion.

## **2.0 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

### *Managerial performance and budgeting*

Managerial performance, like its antecedent- organisational performance- is a multidisciplinary construct difficult to define, hence, several nomenclature such as success, effectiveness, maximised utility, improvement, productivity, efficiency accountability and so on have been used to characterise it (Schiehl & Morissette, 2000). Managerial performance therefore, is better explained by examining managerial performance evaluation (Schiehl & Morissette, 2000). The evaluation of managerial performance, as an important organisational function provides accounting information which is useful to the organisation as well as serving as a basis for evaluating individual manager (Otley, 1978). Managerial performance evaluation entails assessing both the effectiveness (ascertaining whether the manager is doing the right thing) and efficiency (determining whether the manager is achieving desired results by utilising minimum resources) against some set standard (Otley, 1978). However, the evaluation of managerial performance is a difficult managerial task carried out in different ways and which cannot be precisely determined.

The budget represents a standard of effectiveness which specifies a set of desired outputs and a standard of efficiency to the extent that it details the inputs deemed necessary to produce the specified outputs. Otley (1978) asserts that using budget information for performance evaluation has the tendency of determining how the manager responds to the accounting information, due to the immediate and personal considerations that may be associated with the evaluation.

### *Intervening Variable between Budget Participation and Budgetary Slack and Managerial Performance*

#### *Budget pressure and monitoring*

Participation in budgeting process creates an opportunity for subordinate managers to build slack into the budget. Moreover, the fear of not being able to achieve targets can be a source of pressure

which can lead to dysfunctional behaviour. While some researchers have identified budget pressure as one of the significant factors contributing to the creation of budgetary slack (for example, Caldwell & O'Reilly, 1982; Irvine, 1979; Schuler 1980; Sweringa, 1975; Tagwireyi, 2012; Yuen, 2007), others like Bradshaw, Hills, Hunt, and Khanna (2007) and Nouri (1994) have argued that the more closely subordinate managers are monitored at the point of preparing the budget, the less the chances of the creation of slack. Reid (1997) asserted that close monitoring of budget leads to lower level of budgetary slack. The amount of emphasis placed on monitoring measured by how closely lower level subordinates are monitored at the point of preparing the budget have the tendency of reducing the likelihood of creating slack as such practices will be detected easily (Bradshaw et al., 2007).

The budgeting process requires commitment on the part of the individuals involved but the prospect of not achieving budgetary goals could be a source of pressure on the individual. Therefore, Yuen (2007) argues that tight budgets lead to undesirable behaviour by managers who are usually under pressure to achieve such tight targets. Managers exhibit this undesirable behaviour when they overestimate expenses or underestimate their productive capacity to remove possible work pressure from the perceived tight budgets so as to satisfy personal aspirations in years of good fortune, with the hope of converting the slack into profit during years of unfavourable fortunes (Tagwireyi, 2012).

The literature reviewed above show that the tendency to create budgetary slack increases with budget pressure resulting from seemingly hard to achieve targets. When managers know that they will be under pressure to meet targets which they consider difficult to achieve, they tend to build slack into the budget to make it easy to achieve. This is so because individuals are economically rational and motivated solely by self-interest (Baiman, 1990).

Employees and managers as agent act on behalf of the organisation, and as rational being, there is the tendency that they may not always act in the interest of the organisation but seek ways to maximise personal goals. This creates agency problem, hence this study rests on the agency theory. Modern agency theory derives its root from the consequences of separation of ownership from control which results in conflict between the interest of managers and owners of the firm (Berle & Means, 1932; Manawaduge, 2012). From the Agency Theory perspective, organisational slack is created

in the form of budgetary slack as a result of discretionary behaviour which occurs in the agency relationship as a consequence of the existence of bonding and monitoring costs which gives the agent sufficient control over certain resources that can be exploited to satisfy personal preferences at the expense of the organisation (Jensen & Meckling, 1976; Leitner, 2009). This is what Williamson (1964) referred to as opportunism. Opportunism is defined as a serious attempt to satisfy individual gains through dishonesty or insincerity in business dealings.

There is lack of consensus in the literature on the relationship between participation in budgeting and the creation of slack in the budget. Although studies such as Maiga and Jacobs (2007), Ogiedu and Odia (2013), and Qi (2010), have demonstrated a positive relationship between budget participation, managerial trust, organisational commitment and managers' performance as well as weak association with budgetary slack (that is, they lead to reduction in the creation of budgetary slack), the impact of budget pressure and monitoring has not been examined. Similarly, studies that reported positive relationship between budget participation and budgetary slack did not indicate whether budget pressure and monitoring could be responsible for the increase in the propensity to build slack into the budget, when participation is allowed. Moreover, little is known about the simultaneous impact of budget pressure and monitoring on organisational commitment and budgetary slack. Thus, it is not clear whether an employee who is committed to the organisation would build slack into the budget when he perceives he is likely to be under pressure to meet targets. Similarly, we cannot say whether the reported reduction in budgetary slack and improved performance of employees in participative budgeting is due to the fact that they are aware that any slack built into the budget will be detected as they are being monitored. The consideration of the effect of budget pressure and monitoring on organisational commitment and hence, managerial performance vis-à-vis budgetary slack justify the contribution to knowledge by this study.

### *Budgetary Slack and Managerial Performance*

The concept of organisational slack introduced by Barnard (1938) was the watershed for discussions on budgetary slack in the accounting literature. Banovic (2005) opines that until the early 1950, accounting literature and practices have largely treated

budgeting as a technical phenomenon only, but also points out practitioners' observation that organisations with good technical budgeting sometimes had undesirable social-psychological events related to budgeting. Several definitions of budgetary slack have been given by researchers, some of which are: Budgetary slack can be defined as the amount by which a subordinate underestimate his/her productive capability when given a chance to select a work standard against which his/her performance will be evaluated (Young, 1985). Budgetary slack has also been defined as the intentional underestimation of revenues and productive capabilities and/or overestimation of costs and resources needed for the completion of a proposed task (Dunk & Nouri, 1998). Steven (2002) defined budgetary slack as the amount by which a subordinate underestimate his productive capability at the time of preparing the budget/estimates against which his performance will be measured. Budgetary slack is created when a subordinate understates their capabilities (by overestimating costs and underestimating revenue) or the capabilities of a business unit in their budget (Hobson, Mellon, & Stevens, 2011). Budgetary slack is the difference (excess/shortfall) between the budgeted resources and the resources required for the efficient attainment of the goals of the organisation (Kilfoyle & Richardson, 2011).

Honest information is required to achieve optimal organisational performance. However, truthfulness poses a great challenge to most people hence employees may be tempted to provide management with false performance information in order to protect their jobs (Collins, 2002). The false information is provided in the form of budgetary slack creation which results in a target that can be easily achieved. Thus, budgetary slack paints a misleading picture of the manager's performance even when they are not performing (Bradshaw, Hills, Hunt, & Khanna, 2007).

According to Hopwood (1972), placing high premium on achieving budget target and the use of budget for evaluating the performance of the subordinate can lead to high job-related tension. High budget emphasis, thus, encourages employees to find ways of protecting themselves from risk of not meeting such budget target (Lukka, 1988). Often, organisations make the mistake of using budgets as their only measure of managerial performance and overemphasis on this measure can lead to a form of dysfunctional behavior called *milking the firm* or *myopia* (Bhimani, et al., 2008). Myopic behaviour occur when a manager takes action that improve

budgetary performance in the short run but bring long-run harm to the firm (Bhimani, et al., 2008)

It should be noted that the study adopted a multi-stage model by specifying the model for the relationship between the dependent variable and independent variable which is tagged baseline model and an intermediate model which explain the role of the intervening variables. Therefore, hypothesised relationship between managerial performance and budgetary slack is stated thus:

*Hypothesis 1a (Baseline model 1): There is no significant relationship between creation of budgetary slack and managerial performance.*

### *Budget participation and Budgetary slack*

Young (1985) defined participation as “the process whereby the superior selects the form of the compensation contract and the subordinate is permitted to select specific value for each parameter in the contract” (p.830). Budget participation has also been defined as a means of communicating and influencing managers in the budgetary process, and as the extent of subordinate influence over setting budgetary targets (Mah'd, Al-Khadash, Idris & Ramadan, 2013). Budget participation is a process which entails the active involvement of subordinates and superiors in the determination of budget targets. Thus, the subordinate has influence over what the targets should be (Ajibolade & Akinniyi, 2013; Kochik, 2011).

The study by Onsi (1975) indicates that the greater the degree of participation of managers in the budgetary process, the greater the opportunity for managers to influence resource allocation thereby creating budget slack. Studies by Benke and O'Keefe (1980) and Swieringa and Moncur (1972) shows that highly participative budgetary systems provide opportunities for the injection of budget slack. Budgetary slack is created by managers who are able to conceal some private information from their supervisors and deliberately misrepresent that information in order to maximise their own benefit through the introduction of slack (Damrongsukniwat, Kunpanitchakit & Durongwatana, 2013).

According to Leavins, Karim, and Siegel (1997) managers' perception of the likelihood of participating in the formulation of the budget tends to increase the expectation of being able to inject budgetary slack. However, the manager's participation in the budgeting process does not explain slack because it is necessary that

this slack is not known by the director (asymmetry) so that the manager can establish a reserve and protect himself from an unsatisfactory performance evaluation, prioritising his own interests over that of the organisation (Dechow & Shakespeare, 2009; Junqueira, Oyadomari, & Moraes, 2010; Libby, 2003). This is so because top management may not be able to detect the level of slack in the budget due to subordinates' private information regarding local operating conditions (Stevens, 2000). The following hypothesis is premised on the argument that participation in budgeting may not adequately explain slack:

*Hypothesis 1b (Intermediate model): There is no significant relationship between budget participation (with budget pressure and monitoring as intervening variable) and creation of budgetary slack.*

#### *Budget participation and managerial performance*

Qi (2010) investigated whether the budgeting process has any impact on the performance of Small and Medium Enterprises (SMEs) in China and found that a positive relationship exists between budget participation and managerial performance. Kochik (2011) examined budget participation and departmental performance in Malaysian Local Authorities and posited that budget participation and budget users affect departmental performance indirectly through the mediating influence of budget adequacy, organisational commitment and role ambiguity. Thus, budget adequacy, organisational commitment and role ambiguity are important intervening variables in the relationship between budget participation and departmental performance.

*Hypothesis 1c (Broad model): There is no significant relationship between budget participation (with budget pressure and monitoring as intervening variable) and managerial performance.*

#### *Organisational commitment*

Although, there is no universally agreed definition of organisational commitment, some attempts have been made at defining the concept. Ogiedu and Odia (2013) defined it as either employee's attitudes or as a force that binds an employee to an organization. Organisational commitment has also been described as the passion employees have for the organisations they work for resulting from his/her willingness to identify with the expectations (goals and values) of the organisation and a strong desire to remain

loyal and continue to be part of that organisation and the readiness of the individual employee to make sacrifices for the overall well-being of the organisation (Buchanan, 1974; Mowday, Steers, & Porter, 1979; Mowday, Porter, & Steers, 1982; Porter, Steers, Mowday & Boulian, 1974; Steers, 1977). The degree of organisational and managerial commitment to the budget has considerable influence in determining whether or not operators will build slack into the budget (Nouri, 1994).

Wentzel (2002) investigated the influence of fairness perception and goal commitment on managers' performance and finds that greater participation foster higher sense of fairness which in turn increases managers' commitment and ultimately enhances performance. Chong and Chong (2002) explored the effect of budget goal commitment and information of budget participation on performance of middle-level managers and finds a positive relationship between participation and budget goal commitment, that is, budget goal commitment influences job related information which in turn has positive influence on performance. Qi (2010) argues that subordinate's participation in the budgeting process has the tendency to arouse their motivation and commitment thereby improving their job satisfaction and performance.

The hypothesised relationship between managerial performance and budgetary slack is stated thus:

*Hypothesis 2a (Baseline model 2): There is no significant relationship between organizational commitment (with budget participation as an intervening variable) and managerial performance*

*Hypothesis 2b (Intermediate model): There is no significant relationship between budget participation (with budget pressure and monitoring as intervening variable) and organisational commitment*

*Hypothesis 2c (Broad model): There is no significant relationship between budget participation (with budget pressure and monitoring as intervening variable) and managerial performance.*

### 3.0 METHODOLOGY

#### *Research Design, Sampling, Instrumentation and Method of Data Analysis*

The population of the study consists of the employees of 129 out of the 177 firms listed on the floor of the Nigerian Stock Exchange as at June, 2016. The sample was drawn from the firms in all the sectors except Construction and Real Estate, ICT, Oil and Gas, and Services. The exclusion of firms listed under the four sectors is predicated on our belief that it may not be easy for those companies to set target for individual employee or manager in view of the nature of their businesses – products or services offered cannot be easily moved from one place to another or can only be marketed pictorially.

In view of the difficulty in reaching all members of the population of interest or sampling frame, a subset of the population was determined using the table developed by Krejcie and Morgan (1970) based on the following formula for an infinite population is given as:

$$n = \{Z^2 x p(1 - p)\} / M^2 \text{ ----- (3.1)}$$

Where:

- n = Sample size for infinite population
- Z = Z value (e.g. 1.96 for 95% confidence level)
- P = population proportion (expressed as decimal) (assumed to be 0.5 (50%))
- M = Margin of Error at 5% (0.05)

As we are unable to determine the exact number of employees of our population of interest, we adopted the formula for infinite population which gives a sample size of 400 and since in our judgement we expected a 50% response rate, we distributed 800 questionnaire to the respondents in person and through e-mail addresses for those we could not reach in person. A total of 302 questionnaire were returned, out of which 247 (representing 82%) were found usable.

Both primary and secondary were used in the study. The secondary data consist of data extracted from the financials of the 129 firms under study, while the primary data was obtained from the responses to the administered instrument. The questions relating to three of the variables of study (namely: budgetary slack creation, budget participation and budget pressure and monitoring) were designed on a seven-point Likert scale of strongly agree to strongly

disagree and factor analysis was employed to determine the validity and reliability of the test items. This method used by Presslee (2013) was adopted to give the respondents a wider range of choice.

The specified model was estimated using a qualitative response (the ordered logit and probit) model due to the qualitative nature of the data used in the study. The ordered logit and probit model built around the latent regression similar to the binomial probit model (Greene, 2003; Greene & Hensher, 2008, 2010) is specified as:

$$Y_i^* = \beta'X_i + \epsilon_i, i = 1, \dots, n \text{ ----- (3.2)}$$

The following residual diagnostic test were carried out: (i) Normality test (ii) test for Multicollinearity, and (iii) test for heteroscedasticity.

*Model Specification and Operationalisation of Variables*

The theoretical model depicting the hypothesised relationship between the variables is shown:

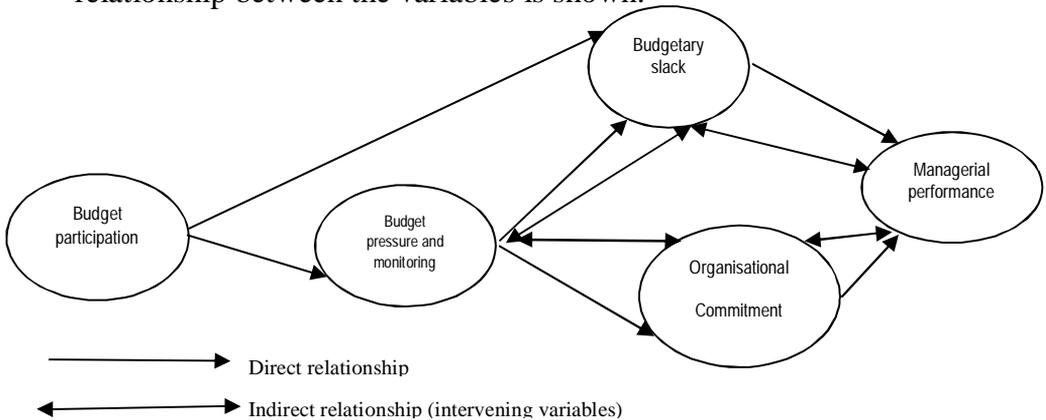


Figure 1: Schematic representation of the link between opportunistic behavior and budgetary slack  
 Source: Researcher (2017)

Two models are specified each comprising a baseline model, intermediate model and broad model. In the first model, the baseline model captures the relationship between budgetary slack and managerial performance, the intermediate model hypothesizes that budgetary slack is a function of budget participation and budget pressure and monitoring as a mediating factor, while the broad model suggests that managerial performance is a function of budget participation and budget pressure and monitoring as a intervening factor. Similarly, the baseline model in the second model, postulates

that managerial performance is a function of organisational commitment with budget participation as a control variable, the intermediate model presupposes that organisational commitment is function of budget participation with budget pressure and monitoring as a mediating factor, while the broad model presumes that managerial performance is a function of organisational commitment, budget participation and budget pressure and monitoring. The various model are specified thus:

*Model 1*

(a) Baseline model

$$\text{MGRPERF} = f(\text{BUDSLACK}) \text{-----} (3.3)$$

(b) Intermediate model

(i)  $\text{BUDSLACK} = f(\text{BPART}, \text{BPREMON as an intervening variable}) \text{-----} (3.4)$

(c) Broad model

$$\text{MGRPERF} = f(\text{BPART}, \text{BPREMON as an intervening variable}) \text{-----} (3.5)$$

BPREMON as an intervening variable suggests that if managers/employees are closely monitored during the budgeting process, it could lead to reduction in the creation of budgetary slack and ultimately, enhanced performance. The plausible explanation for this result is that budget participation tends to afford managers/employees the opportunity of creating slack in the budget.

*Model 2*

(a) Baseline model

$$\text{MGRPERF} = f(\text{ORGCMM}, \text{BPART as a control variable}) \text{-----} (3.6)$$

BPART used as a control variable implies that budget participation leads to enhanced managerial performance as it engenders commitment to the organizational.

(b) Intermediate models

(i)  $\text{ORGCMM} = f(\text{BPART}) \text{-----} (3.7)$

(ii)  $\text{ORGCMM} = f(\text{BPART}, \text{BPREMON as an intervening variable}) \text{-----} (3.8)$

BPREMON as an intervening variable suggests that BPART may bring about organizational commitment, but the prospect of budget pressure and monitoring could dampen enthusiasm and reduce commitment.

(c) Broad model

$$\text{MGRPERF} = f(\text{ORGCOMM}, \text{BPART}, \text{BPREMOM}) \text{-----} (3.9)$$

#### 4.0 ESTIMATION RESULTS AND DISCUSSION OF FINDINGS

*Validity and reliability of measurement*

Table 1: 1Rotated Factor Matrix (Oblimin)

Variable	$\lambda$	Cronbach's alpha	Eigen Value	KMO	% variance extracted	$\chi^2$	$\chi^2$ -p value	$\lambda^2$
<b>BUDSLACK</b>								
BS2	0.961	.67 (.657)	2.210	.549	0.55	909.6	0.000	0.924
BS1	0.954							0.911
BS3	0.555							0.308
<b>BPART</b>								
BP6	0.829	.62 (.584)	2.343	.557	0.39	259.7	0.000	0.731
BP2	0.824							0.690
BP5	0.893							0.861
BP4	0.599	.62 (.584)	1.155	.557	0.19	259.7	0.000	0.771
BP1	0.518							0.406
BP3	0.903							0.859
<b>BPREMOM</b>								
BPM3	0.723	.44 (.436)	2.115	.602	0.27	257.9	0.000	0.643
BPM6	0.941							0.867
BPM4	0.902	.44 (.436)	1.147	.602	0.16	257.9	0.000	0.808
BP5	0.721	.44 (.436)	1.060	.602	0.13	259.7	0.000	0.650

Source: Researchers' computation (2017) from IBM SPSS Statistics 23.

Table 1 presents the result of the factor analysis for test items measuring the creation of budgetary slack, budget participation and budget pressure and monitoring. All test items for the three variables loaded highly with  $\lambda$  ranging from 0.518 to 0.961 and and eigenvalue of 1.038 to 2.343 indicating that the items are practically significant. The factor explains between 31 and 92 percent of the variation {communality ( $\lambda^2$ )} in the distribution of items. The Kaiser-Meyer-Olkin (KMO) value of 0.549 and 0.602 shows that the sample size is adequate, while the unstandardized Cronbach-Alpha of 0.436 to

0.657 confirms the reliability of test items or the existence of internal consistency.

### *Diagnostic tests*

In line with the ordinary least square (OLS) regression assumptions we tested for normality, heteroscedasticity, and multicollinearity.

*Table 2: Diagnostic test for the regression results*

	Normality	Heteroskedasticity	Multicollinearity Centered VIF
Variable			
C	NA	<b>Bruesch-Pagan-Godfrey</b>	NA
MGRPERF	41.69(0.000)	F = 0.734 (F4,242); Prob. = 0.57	NA
BUDSLACK	2.41(0.300)	Obs*R <sup>2</sup> = 2.96; Prob. = 0.56	1.07
BPART	20.08(0.000)	<b>GLEJSER</b>	1.01
BPREMON	59.07(0.000)	F = 0.86(F4,242); Prob. = 0.49	1.05
ORGGCOMM	18.05(0.0001)	Obs*R <sup>2</sup> = 3.47; Prob. = 0.48	1.08

Source: Researchers' computation (2017) from E-view 9.5.

The result of the diagnostic test in Table 2 shows that all the variables except BUDSLACK = 2.41(0.300) are normally distributed thus: MGRPERF = 41.69 (0.000); BREMON = 59.07(0.000); ORGGCOMM = 18.05(0.000) and BPART = 20.08(0.000). The multicollinearity test reveals that there is no problem of collinearity among the regressors as none of them has variance inflation factor (VIF) greater than 10. Similarly, both the Bruesch-Pagan-Godfrey and the Glejser indicate that there is no problem of heteroscedasticity as the probability of the observed R-squares in both are greater than 5% ( $P < 0.05$ )

### *Regression Results and discussion of results*

Three approaches are used for the estimation of the censored model. The main statistics of interest for the ordered estimation are the coefficient estimates and their corresponding significance. The choice of the best model to interpret is based on the LR value with the smallest probability for each of the reports.

*Table 3: Estimation Results for Model 1 (Baseline model) — MGRPERF and BUDSLACK*

Variable	Probit			Logit			Extreme value		
	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.
BUDSLACK	-0.05	-2.22	0.03	-0.08	-2.43	0.02	-0.07	-2.83	0.005
Pseudo R-squared		0.010			0.01			0.01	
LR statistic		4.97	0.02		6.01	<b>0.01</b>		8.42	0.004

Source: Researchers' computation (2017) from IBM SPSS Statistics 23.

Table 3 shows that a significant negative relationship exists between budgetary slack creation and managerial performance. The coefficient of BUDSLACK is -0.08; z-value = -2.43(p=0.02). Thus, creating slack in the budget leads to suboptimal managerial performance. This result is in tandem with the findings of Lukka (1988) and Hopwood (1972).

*Table 4: Estimation Results for Model 1(Intermediate model)—BUDSLACK, BPART and BPREMON*

Variable	Probit			Logit			Extreme value		
	Coef	z-Stat.	Prob.	Coef	z-Stat.	Prob	Coef	z-Stat.	Prob
BPART	0.13	0.88	0.37	0.18	0.72	0.47	0.09	0.59	0.56
BPREMON	0.29	2.75	0.006	0.49	2.55	0.01	0.20	1.529	0.13
Pseudo R-squared		0.006			0.005			0.002	
LR statistic		8.16	0.017		6.97	0.03		2.77	0.25

Source: Researchers' computation (2017) from IBM SPSS Statistics 23.

Table 4 reveals that a significant positive relationship exists between budget pressure and monitoring and budgetary slack creation. The coefficient of BPREMON is 0.296; z-value = -2.75(p=0.006). The implication of this result is that budget pressure and monitoring results in budgetary slack creation. This agrees with the conclusions of Sweringa (1975); Yuen (2007 and Tagwireyi (2012).

*Table 5: Estimation Results for Model 1 (Broad model) — MGRPERF, BPART and BPREMON*

Variable	Probit			Logit			Extreme value		
	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.
BPART	-0.43	-2.68	0.007	-0.92	-2.959	0.003	0.369	4.78	0.00
BPREMON	0.255	2.20	0.028	0.437	2.059	0.039	0.32	2.11	0.035
Pseudo R-squared		0.02			0.03			0.02	
LR statistic		12.31	0.02		13.49	<b>0.000</b>		10.33	0.006

Source: Researchers' computation (2017) from IBM SPSS Statistics 23.

*Table 6: Estimation Results Model 2 (Baseline model) — MGRPERF, ORGCOMM and BPART*

Variable	Probit			Logit			Extreme value		
	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.
ORGCOMM	0.14	1.73	0.08	0.31	2.16	0.03	0.369	4.78	0.00
BPART	-0.04	-0.47	0.63	-0.09	-0.59	0.55	-0.061	-0.59	0.55
Pseudo R-squared		0.006			0.009			0.012	
LR statistic		3.06	0.22		4.77	<b>0.09</b>		5.76	0.06

Source: Researchers' computation (2017) from IBM SPSS Statistics 23.

*Table 7: Estimation Results for Model 2 (Intermediate model) — ORCOMM&BPART; ORGCOM, BPART and BPREMON*

Variable	Probit			Logit			Extreme value		
	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.
BPART	0.16	1.92	0.05	0.30	1.87	0.06	0.09	1.03	0.30
Pseudo R-squared		0.006			0.005			0.002	
LR statistic		3.71	<b>0.05</b>		3.49	0.06		1.05	0.30
BPART	0.16	1.81	0.07	0.283	1.89	0.05	0.12	1.23	0.22
BPREMON	-0.29	-2.58	0.009	-0.495	-2.37	0.02	-0.22	-1.64	0.100
Pseudo R-squared		0.002			0.02			0.006	
LR statistic		10.40	<b>0.005</b>		9.24	0.09		3.80	0.149

Source: Researchers' computation (2017) from IBM SPSS Statistics 23.

In Table 7, the results indicate that there is a significant positive relationship between budget participation and organisational commitment. BPART has a coefficient of 0.16 with z-value = 1.92 ( $p=0.05$ ). This implies that when employees are allowed to take part in the budget process, it creates a sense of belonging in them, and consequently engenders commitment to organisational goals. This result agrees with the conclusions of Sweringa (1975); Yuen (2007) and Tagwireyi (2012).

Conversely, BPREMOM has a significant and negative (-0.29,  $z = -2.59$ ;  $p = 0.009$ ) relationship with organisational commitment. Thus, while budget participation may foster organisational commitment, budget pressure and monitoring tend to reduce the level of commitment as the fear of the consequences of being unable to meet budget target can increase the propensity of budgetary slack creation. This finding is in tandem with Yuen (2007) and Tagwireyi (2012)

Table 8: *Estimation Results for Model 2 (Broad model)—MGRPERF, BPART, BPREMOM and ORGCOMM*

Variable	Probit			Logit			Extreme value		
	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.
BPART	-0.45	-2.77	0.005	-0.93	-3.04	0.002	-0.53	-2.90	0.0037
BREMOM	0.031	2.50	0.01	0.55	2.46	0.014	0.33	2.16	0.0309
ORGCOMM	0.176	1.94	0.05	0.38	2.38	0.017	0.272	2.46	0.0139
Pseudo R-squared	0.03			0.038			0.032		
LR statistic	15.54 0.001			18.49 <b>0.0003</b>			15.41 0.001		

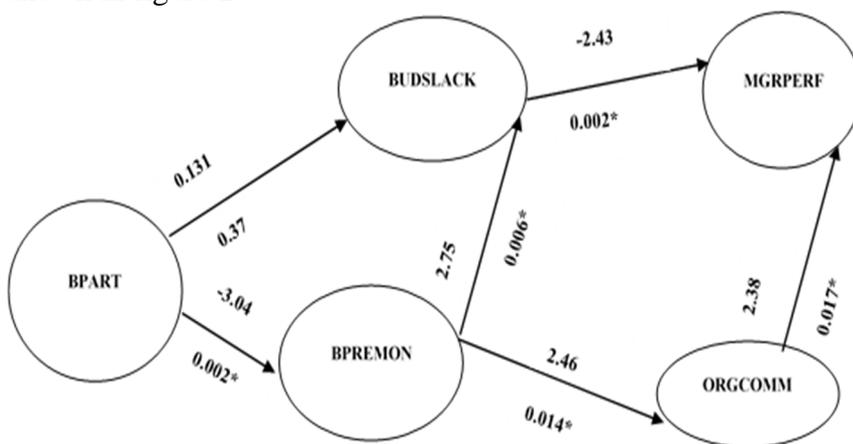
Source: Researchers' computation (2017) from IBM SPSS Statistics 23.

From Table 8, it can be seen that budget participation has negative relationship with managerial performance (BPART= -0.93,  $z = -3.04$  with  $p = 0.002$ ). As can be gleaned from Table 6 BPART has a negative relationship with managerial performance (MGRPERF) but the relationship is not significant. We thus, conclude that the significant result indicated by the result in Table 8 is due mainly to the intervening role of budget pressure and monitoring. While this finding agrees with the conclusion of Kochik (2011), it however negates the findings of Mah'd et al. (2013) and Qi (2010). Expectedly, budget pressure and monitoring (BPREMOM) and organisational commitment (ORGCOMM) both have significant and positive relationship with MGRPERF. While the coefficient of BPREMOM is 0.55 with  $z = 2.4$  and  $p = 0.014$ ; ORGCOMM has a coefficient of 0.38 with  $z = 2.38$  and  $p = 0.017$ .

These results indicate that if employees are closely monitored at the time of the budget, it reduces the chance of creating budget slack. This result is in tandem with the conclusions of Caldwell and O'Reilly (1982), Nouri (1994), Reid (1997), Bradshaw et al. (2007), Yuen (2007) and Tagwireyi (2012) who find

that close monitoring of employees increases managerial performance as a result of less slack. In the same vein, the result of the relationship between ORGCOMM and MGRPERF shows that commitment to the organisation leads to improved information sharing which enhances performance. It should be recalled that budget participation arouses commitment to the organization which in itself enhances managerial performance. This agrees with the findings of Chong and Chong (2002) who reports positive influence between organisational commitment and managerial performance.

The model path analysis which can be traced through *Baseline model 1*, *Intermediate model 1* and *Broad model 2* is shown in figure 2:



\*Significant at  $\alpha = 0.05$   
 Figure 2: Model path analysis  
 Researchers' computation, 2017

## 5. CONCLUSION AND RECOMMENDATIONS

The major finding of this research (*based on the first model*) shows that budgetary slack has a significant negative relationship with managerial performance. Creation of slack in the budget leads to suboptimal performance as it succeeds in making the employees appear efficient at the expense of the organisation. This is because budgetary slack as a dysfunctional behaviour performance gives an untrue picture of employees' performance.

The second finding of this study indicates that budget participation has a negative impact on managerial performance through the intervening role of budget pressure and monitoring. The implication of the result is that if employees/managers are not

monitored at the time of preparing the budget, there is a high prospect of building slack into the budget to make it more easily achievable, painting a misleading picture of managerial performance. But with close monitoring, exhibition of opportunistic tendencies can be detected, so that an appropriate target can be set for the employee/manager.

Thirdly, the study finds that budget pressure and monitoring leads to improved managerial performance because close monitoring of employees during the budgeting process reduces the chances of creating slack in the budget. Thus, the positive relationship between budget participation is not necessarily because employees/managers were allowed to take part in the budgeting process but due to the intervening role of budget pressure and monitoring. The implication of this result is that when employees/managers are allowed to take part in the budgeting process without close monitoring, it will result in sub-optimal performance.

Lastly, organisational commitment has the tendency to enhance managerial performance perhaps due to the motivational influence of budget participation. But allowing employees and subordinate managers take part in the budgeting process can result in budget biasing. Therefore, there are other factors that must be responsible for the positive influence organisational commitment has on managerial performance. The result of the study reveals that budget pressure and monitoring is one of the factors.

The focus of this study is to examine the intervening role of budget pressure and monitoring on budget participation and managerial performance vis-à-vis budgetary slack. The findings reveal that the relationship between budget pressure and monitoring and managerial performance is statistically significant, while budget participation has a negative though significant effect on managerial performance in Nigeria. The study concludes that the positive relationship between budget participation and managerial performance is not direct, rather budget pressure and monitoring is a contributory factor.

When subordinate managers and employees are allowed to participate in the budgeting process, management of firms should constantly monitor the staff and maintain closer contact with the environment so that they will be aware of happenings in the various

locations of their business and the local operating conditions to obviate information asymmetry and budgetary slack.

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## APPENDICES (I)

<b>BUDGET SLACK</b>	<b>AGRE E</b>	<b>NEUTRA L</b>	<b>DISAGRE E</b>	<b>TOTA L</b>	<b>MEA N</b>
Managers in my organisations tend to submit budget which can be easily achieved	159*	18	70	247	
Slack in the budget is good so that things can be done that cannot be officially approved	146*	30	53	247	
Department managers tend to influence their evaluations by adjusting the figures submitted in the budget.	188*	16	43	247	
<b>TOTAL</b>	511	64	166	741	13.14
%	68.96	8.64	22.40		

(II)

<b>BUDGET PARTICIPATION</b>	<b>AGRE E</b>	<b>NEUTRA L</b>	<b>DISAGR EE</b>	<b>TOTA L</b>	<b>ME AN</b>
I am involved in setting my unit or branch or departmental budget or targets	237*	26	6	247	
My contribution to the budget is very important	247*	11	11	247	
My superior initiates frequent budget discussions when the budget is being prepared	237*	11	21	247	
My superiors and I frequently discuss budget-related issues initiated by me	189*	23	57	247	
I have considerable influence over my unit/departmental/branch final budget	111	12	124*	247	
My superior clearly explains budget revision to me	218*	10	19	247	
<b>TOTAL</b>	1151	93	238	1482	5.07
%	77.67	6.27	16.06	100.00	

(III)

<b>BUDGET PRESSURE AND MONITORING</b>	<b>AGRE E</b>	<b>NEUTRA L</b>	<b>DISAGR EE</b>	<b>TOTA L</b>	<b>ME AN</b>
When my department has not been performing as budgeted, my superior has visited my department or summoned me to the controlling office	166*	34	50	247	
My superior has mentioned budgets while talking to me about my efficiency as a unit head/supervisor/manager	165*	38	44	247	
Budget matters have been mentioned in informal conversations with fellow unit heads/supervisors/managers	166*	26	55	247	
When budget conditions are tight, unit heads/supervisors/managers generally still attempt to find ways to make the targets less difficult to achieve	187*	23	37	247	
Performance review meetings are held with management monthly and quarterly	198*	9	40	247	
I have gotten extremely upset about budget variances in my department	189*	6	52	247	
<b>TOTAL</b>	1068	136	278	1482	4.76
%	72.06	9.18	18.76	100.00	