

The influence of organisational culture and budgetary participation on propensity to create budgetary slack in public sector organisations

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Abstract

This study investigated the relationship among organizational culture, budgetary participation and budget holders' propensity to create budgetary slack in public sector organizations. Survey data were obtained from 272 budget holders in ten federal government-owned universities in Nigeria using a questionnaire. The data were analysed using descriptive statistics including arithmetic means; and inferential statistical tools including ANOVA and mediation regression analysis. Results showed statistically significant partial mediating influence of budgetary participation on the relationship between organizational culture and propensity to create budgetary slack ($\beta = .707$; $R^2 = .496$; $F = 132.561$ at $p < 0.05$). An interesting finding is that budgetary participation has a significant positive influence on budgetary slack. The study concluded that reform strategies focusing on using participation to reduce budgetary slack may not be appropriate in public sector organisations.

Key words: Organisational culture, public sector, budget holders, budgetary participation, propensity to create budgetary slack

1. Introduction

Several authors have noted the continued significance of budgeting as a critical element of organisations' management control systems (MCS). Kaplan (1991) argued that as a component of Management accounting control systems, budgeting makes it possible for organisations to adapt to environmental instabilities; make efficient use of available resources, evaluate performance, and provide a medium for communicating important information. Raj (2008) noted that budgeting provides resource managers an opportunity to match organizational goals with resources. Asel (2009) suggested that it ensures that employees exhibit cooperative patterns of behaviour in order to achieve organisational objectives.

Budgeting has thus been the subject of more and more research attention in the quest for effectiveness in budgetary systems. Apart from positive behavioural consequences of the use of budgets including performance, job satisfaction and motivation, literature has also directed attention to dysfunctional consequences such as the creation of slack in the budget (Dunk, 1990; Bratton and Gold 2007; Busch & Gustafsson, 2002; Morris, Bakan & Wood 2006; Onsi 1973; Özer & Yilmaz, 2011). Onsi (1973) noted that in evaluation of budgetary system effectiveness, it is necessary to identify the nature of budgetary slack and behavioural factors affecting its creation and usage. In prior behavioural research on factors affecting budgetary slack, budgetary participation has featured prominently (Hoque, 2005; Lukka, 1988; Merchant, 1985; Noor & Othman, 2012). However, results from such studies have not yielded consistent results. While some studies supported the hypothesis that participation can reduce slack through positive communication which will reduce the pressure to create budgetary slack (Onsi, 1973; Merchant, 1985), others argued that high participation provides lower manager the opportunity to create slack (Lukka, 1988). These studies did not however consider the effect of the shared meaning that members of the organisation have about the concept of budgetary slack.

Effectiveness of Public sector budgeting in developing countries including Nigeria has been a major source of concern to researchers. Caiden (cited in Omolehinwa, 2005, p.1) stated that "if there was ever a subject which has been overwritten, overanalysed but so little practical results to show for the efforts it is budgeting in poor countries....." Omolehinwa, focusing on public sector budgeting in Nigeria suggested that the starting point for improvement is to find out whether, the prescriptions of reformers have been grounded in the realities of the environment within which government budgeting takes place in Nigeria. This suggestion is in line with Otley's (2005) suggestion that "management accounting and other performance measurement practices need to be evaluated, not just from an economic perspective but also from a social, behavioural and managerial perspective within an overall organisational context" (p.305). Both suggestions underscore the importance of organisational culture, a significant part of the internal environment in organisations, in the budgetary process.

A number of findings have been provided especially from the developed nations on the role of national culture in different aspects of organisations' Management Control Systems (MCS). However, as Henri (2006) noted, organisational culture influences have been less researched generally in MCS literature in spite of studies that have pointed to its significance. Specifically, the current authors are not aware of any known empirical study of the role of organisational culture in budget systems in public sector organisations in Nigeria.

Based on the foregoing, this study contributes to literature by investigating the influence of organisational culture and budgetary participation on propensity to create budgetary slack. The rest of the paper is divided into four sections. The next section covers the theoretical framework, the third section presents the hypotheses of the study; the fourth

section presents the method of the research; the results and discussions are presented in the fifth section; and the final section presents the summary and conclusion.

2. Theoretical Framework

Budgetary slack has been defined as budget resources controlled by a manager in excess of optimal to accomplish his or her objectives (Kren, 2003). It is the excess over the required resources built by managers into a budget by underestimating revenues, overestimating costs or underestimating performance capabilities in order to make a budget target more easily achievable. Several studies have noted that creating budgetary slack is one of the behavioural consequences that may result from the use of budget. Williamson (cited in Swieringer and Moncur 1972) pointed out that managements have and use discretion to achieve both personal and organisational goals through slack creation. Although some studies have argued that budgetary slack could be beneficial for organisations (Bourgeois, 1981; Onsi, 1973), it is generally seen as a serious impediment to the use of organisational budget in an effective manner. According to Lukka (1988) it allows managers to gain extra resources and get away with their inefficiencies. Managers both protect themselves against unforeseen events and increase the probability of attaining budget target by creating slack; it thus leads to distortion in the distribution of resources and waste of resources (Wu 2005).

For several decades, accounting researchers have sought to understand the nature of budgetary slack, as the behaviour of inducing slack in budget is highly relevant to the achievement of internal economic efficiency in an organisation (Belkaoui, cited in Abas, 2006). This is of particular importance in the public sector as emphasis of control in that sector is usually on efficiency in the use of resources and contribution to government objectives in the absence of objective profit measurements as in the case of the private sector (Omolehinwa, 2005). Reduction of budgetary slack described as a conscious overestimate of the costs *ex ante* (in the case of public sector) has therefore been the purpose of a range of reforms and new management techniques introduced in the sector (Busch, 2002). Understanding the influences on the budgetary slack behaviour should constitute an important step in ensuring the establishment of appropriate and effective reforms.

2.1 Resource Dependence perspective

Although many studies of budgetary slack have been of the private sector slacks have been documented in both private and public organisations. Busch and Gustafsson (2002) in fact concluded that the amount of slack in public organisations is higher in comparison with private sector organisations. It has been reported as a common feature of public sector organisations (Abdullah, Warokka & Kuncoro, 2011) consistent with the resource dependence theory perspective. This theory argued that the key to organisational survival is the ability to acquire and maintain resources and organisations devise strategies to deal with environmental uncertainties and dependence on interest groups especially those upon which they depend for resources and support (Pfeffer and Salancik, 1978). The degree of dependence increases with concentration and importance of the provided resources which means that organisations that depend heavily on one or very few resource providers are likely to experience stronger constraining influences from their environment (Verbruggen, Christiaens and Milis, 2011). Onsi (1973) argued that budgetary slacks serve as balance devices, which organisations use against turbulence in their environments. Bourgeois (1981) also suggested that slacks form bases for resource allocation which enable organisations to adapt to internal and external pressures as well as initiate necessary survival strategies.

Based on this perspective, studies have argued that managers of public sector organisations in order to manage their dependence on government for resources engage in creation of slack in the budget. Busch and Gustafsson (2002) observed that slack is higher in

public sector than in the private sector; Tagwireyi (2012) also concluded that budgetary slack may account for as much as 20% of the budgeted expenses of a cost centre in a public sector organisation. This situation according to Ozer and Yilmaz (2011) is one of the greatest obstacles to efficient use of public sector organisational resources.

Federal government owned Universities in Nigeria being public sector organisations in the education subsector of the economy obtain the bulk of their funding (almost 95%) from the federal government through the Nigerian Universities Commission through a budgetary system (Hartnett, 2000). As these universities like other public agencies experience high dependence on government for resource support, if the resource dependence theory explains slack behaviour, it would be expected that budget holders in them would generally exhibit the same high level of propensity to introduce budgetary slack.

2.2 Role theory perspective

The basic idea in the Role theory according to Wiggins, Wiggins and Vander Zanden (1994) is that social interactions (such as budgeting process) are observed in terms of actors who play their assigned roles/functions/parts/responsibilities in accordance with a script specified by culture. The study described Role as a set of normative expectations that apply to the actions of a specific class of people in a particular position. Role theory recognises that roles, temporarily stable and developed in a systematic and evolutionary manner are capable of generating a predictable pattern of behaviour (Cox, Hager and Lowery, 1993). It is therefore expected that budgetary behaviour of managers in playing their role as budget holders, would be guided by the organisational culture.

Following the widespread definition of Schein (1993; 2004), Organisational culture may be described as a pattern of shared basic assumptions and values that a group learned as it solved its problems of external adaptation and internal integration that has worked well enough to be considered valid and therefore to be taught to new members as the correct way to perceive, think and feel in relation to those problems. Behavioural science theorists have argued that organisational culture is a fundamental construct, which defines how efforts are directed towards improving managerial and organisational performance (Baker, 2002) and empirical evidence in support of such argument has been provided in literature. Ogbonna & Harris (2002) concluded that a strong degree of association exists between organisational culture and organisational effectiveness. Al-Yahya (2009) also noted that elements of organisational culture exert some influence on both decision-making and work related outcomes in public sector organisations.

Organisational culture and its effect on various work related outcomes have been studied using several models which classified culture based on a definition of different elements or indicators The Cameron and Quinn's (1999) competing value framework which used organisations' flexibility /control and internal/external focus as basis for categorising culture is considered more relevant to the study of MCS. This according to Henri (2006) is because the competing values of flexibility versus control are related to the very essence of MCS which is to manage the tension between creative innovation and predictable goal achievement and to balance the basic organisational dilemma between control and flexibility. Organisations with control culture (hierarchy and market values) emphasize tight control of operations, highly structured channels of communication and restricted flow of information. Organisations with a focus on flexibility (clan and adhocracy values) on the other hand emphasize adaptability, spontaneity and teamwork. They promote employee participation, loose and informal controls, open and lateral channels of communication and free flow of information (Henri 2006; OCAI- online 2010).

2.2.1 Organisational culture and budgetary slack

One of the external adaptation problems that organisations face is that of the pressure of ensuring inflow of resources. Creating slacks in the budget has been noted as an adaptation mechanism which enables organisations to deal with such pressures. Going by the role theory argument, culture will guide the performance of the role of budget holders in terms of actions taken to ensure the flow of resources (including creating budgetary slack).

When organisational culture supports creative innovation and emphasize adaptability and spontaneity such environment is expected to place less emphasis on budget targets and view slack as an acceptable mechanism to deal with environmental changes. On the other hand, organisations which emphasize tight controls are expected to have a reduced level of budgetary slack because control system gives more information to superiors and increases top managers' ability to detect slack (Lau, 1999). Van der Stede (2000) demonstrated that increase in the tightness of budgetary control decreases budgetary slack. Yilmaz and Ozer (2011) also argued that effectiveness of budgetary control affect budgetary slack creation in two ways: first, managers will be less prone to create budgetary slack because of the concern of being detected and secondly, superiors' ability to detect slack is increased thus reducing budgetary slack creation. The study found that the effectiveness of budgetary control has negative and statistically significant impact on managers' propensity to create budgetary slack. On the basis of these it could be argued that Organisations with control culture (lower OC value scores) emphasising tight budgetary control will exhibit lower propensity to create budgetary slack while organisations with flexible culture (higher OC scores) will exhibit higher propensity to create budgetary slack.

2.2.2 Organisational culture and budgetary participation

Schein (2004) identified three levels of organisational culture, the artefacts, values and basic assumptions. According to Nerdinger (2008) participation is regarded as a fundamental part of these three levels of organisational culture. As part of artefacts, the different forms of participation including budgetary participation are identified. As part of values, participation can be conceptualized as a value which is worshipped in an organisation to a greater or lesser extent. Finally, the assumptions held in organisations will lead to whether or not participation is valued. Organisational culture may therefore be studied as a context factor influencing the functioning of participation and as a construct that is itself determined by the level of participation allowed in the process of decision making.

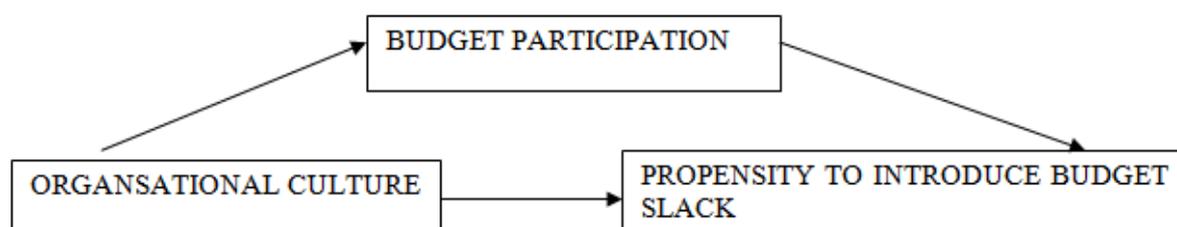
Budgetary participation which involves active participation of all parties in arriving at a consensus about what the budget target should be among the several participants (Shields & Shields, 1998; Subramaniam & Mia, 2001; Hughes, 2008) is viewed in this study as a value worshipped to a larger or lower extent by organisations. When organisations emphasize innovation and adaptability, (Flexible culture) such organisations would be expected to promote budgetary participation as creating new standards and employee involvement are part of the quality improvement strategy in them.

2.2.3 Organisational culture, Budgetary Participation and Budgetary Slack

Studies have shown that participation in the establishment of budget targets provides managers the opportunity to create budget slack (Young, 1985; Kren, 1993). However, studies have also argued that participation in the budget process is not responsible for propensity to introduce slack into the budget (Lu, 2011). These studies have not considered the organisational cultural context in which participation takes place. Where the culture emphasizes creativity and innovativeness, the strategy would encourage individual initiative, anticipating needs and employee involvement (OCAI online, 2013); budget participation as promoted in such an environment will provide managers the opportunity to create slack as an

acceptable means of providing for anticipated needs and new creative solutions. Where the culture focuses on results through tight controls, leaders are hard drivers and formalised and structured work environment is favoured, budgetary participation would not be encouraged in such an environment as leaders are proud of their efficiency based coordination and organisation leading to lower budgetary slack. Based on these arguments the major proposition in this study is that organisational culture through the influence of budgetary participation influences budgetary slack, that is participation mediates the relationship between organisational culture and budgetary slack. The proposed model of these relationships is presented in Figure 1.

FIG. 1: THEORETICAL MODEL FOR THE STUDY



Source: designed for study

1. Hypotheses

Based on the arguments in this study, the following hypotheses were tested:

- H1: Universities budget holders significantly exhibit the same level of propensity to create budget slack.
- H2: Organisational Culture values have a significant positive relationship with propensity to create budgetary slack in public sector organisations
- H3: Organisational culture values have a significant positive influence on budgetary participation
- H4: The relationship between organisational culture and propensity to introduce budget slack is mediated by budgetary participation

4 Research Method

A cross sectional survey design was adopted in this study. The target population consisted of 36 federal universities. However, a sampling frame of 25 universities (that had been in operation for more than one budget period) comprising 1886 academic and non academic departments was constructed. Multistage sampling procedures were adopted in selecting a sample of 10 universities located in four major geopolitical zones in Nigeria from this which 50 departments each were selected. Data were collected through a structured questionnaire administered on the 500 heads of departments who represented budget holders in their respective departments.

The questionnaire was divided into three sections. Section 1 contained eight items, designed to capture bio-data relating to the university and the individual respondents. The second section focused on gathering data relating to the dominant Organisational Culture. Section 3 focused on data relating to budgetary participation and propensity to create slack into the budget.

272 responses were obtained from the survey after several follow up calls. This represented a response rate of about 54.4%, which was considered adequate when compared to the 24% considered acceptable in Henri (2006).

4.1 Measurement of Variables

Organisational culture was measured based on the Institutional performance survey measures of OC adapted from Henri (2006). The four OC values were measured along a continuum of 100 points and dominant culture determined from the overall score derived. A positive score indicate a flexible culture and negative score a control culture, that is, the higher the score, the more flexible the organisational culture.

Participation and propensity to introduce budget slacks, were measured using multiple item scales adapted from earlier studies (Henri 2006; Zammuto et al 1991; Williams et al.,1990; Lu 2011) and tested for reliability. Test of reliability yielded Cronbach Alpha values greater than 0.7, considered acceptable for establishing instrument reliability (Haung, et al., 2011). The variables were measured on a five-point scale and an index computed from the mean of responses obtained on the multi-item measures. A mean score between 1.0 and 3.0 was interpreted as low propensity/participation; while mean scores greater than 3.0 implied high propensity/participation.

4.2 Data Analysis

Data were analysed using descriptive statistics including Mean and Standard deviations and inferential statistics including ANOVA and regression analysis. The analyses were carried out with the aid of Statistical Packages for Social Sciences (SPSS) version 17.0. A mediation regression analysis was used to observe extent to which participation mediates the relationship between organizational culture and budgetary slack. The regression models for the analyses are of the following form:

$$PBS = i_1 + cOC + e_1 \quad (1)$$

$$BP = i_2 + aOC + e_2 \quad (2)$$

$$PBS = i_3 + c`OC + bBP + e_3 \quad (3) \text{ where;}$$

c is the overall effect of Organisational culture on Propensity to create budgetary slack

$c`$ is the effect of Organisational culture on Propensity to create budgetary slack controlling for Budgetary participation

a is the effect of Organisational culture on Budgetary participation

b is the effect of participation on budgetary slack

i_1, i_2, i_3 are the intercepts for each equation

e_1, e_2, e_3 are the corresponding residuals in each equation

5 Results

5.1 Descriptive Statistics

Organisational culture (OC) measurement: The results obtained as shown in table 1 indicate that the sampled universities (U1 – U10) exhibited different levels of the four OC values measured. This is consistent with the position of Cameron (1986) and Henri (2006) that organisations often exhibit a combination of the different values of OC. All sampled universities exhibited high scores for hierarchical value supporting the position of Cameron and Michigan, (2004) and Schimmoeller, (2010) that public sector organisations are policy and procedure driven. However, the overall scores showed that 2 (20%) of the universities exhibited flexible OC type.

Propensity to create budgetary slack (PBS): As shown in Table 2, the results indicate a high mean score of PBS, with a mean score >3.0. This appears to be in line with the arguments in the resource dependence perspective that public sector organisations device coping strategies including slack to deal with uncertainties in their environments. However, as shown in table 3, organisations with flexible OC exhibited slightly higher mean level of propensity to create budgetary slack than organisations with control OC.

Budgetary Participation (BP): As can be observed from Table 4 the BP level is high in universities with flexible type of OC (mean>3.0) but low in universities with control OC.

Table 1: Result of the measurement of type of organisational culture

University code	Flexible OC values (A)		Control OC values (B)		A -B	OC Type
	Clan	Adhocracy	Hierarchical	Rational		
U1	21.81	20.91	37.03	20.25	-14.56	Control
U2	17.24	25	37.58	20.18	-15.52	Control
U3	26.50	24.29	28.13	21.08	1.58	Flexible
U4	17.33	15.5	39.66	27.5	-34.33	Control
U5	41.17	18.33	21.42	19.08	19	Flexible
U6	19.64	25.34	33.33	21.69	-10.04	Control
U7	21.25	26.81	30.27	21.47	-3.68	Control
U8	25.18	16.07	36.31	22.44	-17.5	Control
U9	19.59	26.12	29.09	25.2	-8.58	Control
U10	20.19	23.78	32.75	23.28	-12.06	Control

Table 2: Descriptive statistics of propensity to create budgetary slack and budgetary participation in sampled universities

	Mean	SD	N
Propensity to create budgetary slack	3.2079	0.2733	272
Budgetary participation	2.9492	0.2428	272

Table 3: Mean Scores of Propensity to create budgetary slack in sampled Universities based on their OC

MEASURES OF PROPENSITY TO CREATE BUDGETARY SLACK	Flexible OC	Control OC
	Mean	Mean
Extent to which Standards set in the budget induces high productivity.	3.6222	3.0617
Extent to which unit budgets are safely attainable.	3.7333	3.2863
Extent to which ability to monitor costs because of budgetary constraints.	3.5111	3.4009
Extent to which targets incorporated into budgets are difficult to achieve.	2.2667	3.0001
Overall Mean	3.2833	3.1872
SD	40%	24%

Table 4: Mean Scores of Participation in sampled Universities based on their OC

MEASURES OF PARTICIPATION	Flexible OC	Control OC
	Mean	Mean
Extent to which subordinates are involved in preparing budget.	3.2222	3.2555
Extent to which new budgets include recommendations from head of department.	2.9778	2.8987
Extent to which superiors accept explanation of budget variations.	3.4222	3.0749
Extent to which assistance from other members staff is solicited in the budget process.	3.0889	2.7885
Overall Mean	3.2667	2.8502
SD	20%	18%

5.2 Test of hypotheses

Hypothesis 1 was tested using ANOVA to determine whether significant differences exist in the level of propensity to create budgetary slack among budget holders. The ANOVA result as shown in Table 5 suggests significant differences in the budget holders' propensity to introduce budgetary slacks ($F = 434.56$; $p < 0.05$).

Hypothesis 2 was tested to determine the total influence of OC on propensity to create budgetary slack. The test of hypothesis was carried out using a regression model of organisational culture value scores on propensity to create budgetary slack scores (regression model 1). The model yielded statistical significance at $p < 0.05$ as presented in Table 6 indicating that OC has a significant influence on slack. However, the model although statistically significant accounted for only 7.8% variance ($Adj R^2 = .078$) in the criterion variable (budgetary slack). Furthermore, contrary to our a priori expectations the model showed a negative relationship between OC value scores and budgetary slack, ($\beta = -0.286$) suggesting that the higher the OC scores, (flexibility) the lower the budgetary slack.

Hypothesis 3 was tested using a regression analysis. The result as shown in Table 7, indicate that OC has a positive and significant effect on extent of budget participation with the model explaining 41% variation in participation (Regression model 2). These findings support the views of Subramaniam and Ashkanasy (2001) and Weare, et al. (2007) that the budget process is influenced by OC.

These results, from the tests of hypotheses two and three, show that the conditions for performing a mediation regression are met. Relationships were established between the independent variable (OC) and the dependent variable (PBS); and between the independent variable and the moderating variable (BP). Hypothesis 4 was therefore tested using a multiple regression analysis with OC and BP as the independent variables. It can be observed that the mediating effect of budget participation on the relationship between organisational culture and propensity to introduce budget slack is significant ($R^2 = .496$, $F = 132.561$, $p < 0.05$). Results of Sobel's test statistics of 14.83 at $p = 0.000$ provide confirmation. However, the results revealed an inconsistent mediation. The indirect effect of OC on budgetary slack through participation was found to be positive; higher OC scores (flexible culture) was associated with higher participation and this in turn was associated with higher slack, while the direct effect was found to be negative (higher scores, lower slack) although with low explanatory power.

Table 5: Result of ANOVA of Propensity to create budgetary slack among holders in sampled universities

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	18.975	9	2.108	434.564	.000
Within Groups	1.271	262	.005		
Total	20.246	271			

Table 6: Regression Results

Model	Indepen- dent variables	Depen- dent variable	β	t	F	R ²	Adj. R ²	Sig.
1	OC	PBS	-.286	-4.903	24.042	.082	.078	0.000
2	OC	BP	.413	7.448	55.470	.170	.167	0.000
3	OC BP	PBS	-.578 .707	-12.162 14.881	132.561	.496	.493	0.000

6 Summary and Conclusion

This study has contributed to the limited literature from the developing countries on the influence of organisational culture and participation on the propensity to create budgetary slack in public sector organisations. The study focused on federal government owned universities in Nigeria and analysed organisational culture by reference to the competing values of control versus flexibility adapted from Cameron and Quinns' (1999) model of culture types. In line with Henri (2006), the study argued that these values are most relevant for the study of MCS components including the budgetary system. The study examined Organisational culture as a context factor influencing the functioning of budgetary participation.

The majority (80%) of the universities studied exhibited a control culture in conformity with findings in other studies that public sector organisations exhibit a traditional bureaucratic culture. At a broad level, the results appear to support a resource dependence view that high dependence on one or few resource providers may result in coping strategies such as creation of budgetary slack. Organisations in the sample exhibited high levels of budgetary slacks. However, statistically significant differences were found among them. Differences were found along organisational culture types suggesting that although resource dependence perspective may provide some explanation for budgetary slack in the public sector, there are important organisational influences on budgetary slack.

The results provided adequate support for the study's theoretical model which argued that organisational culture constitutes an important organisational influence on budgetary slack. Organisational culture was found to have a significant relationship with budgetary slack through partial mediating influence of participation. Organisations with flexible organisational culture were found to exhibit high budgetary participation and high budgetary slack while organisations with control type of culture were found to exhibit low participation and low budgetary slack. An interesting finding in this study is that participation was found to have a positive relationship with propensity to create budgetary slack contrary to results in prior studies that reported a negative relationship between participation and budgetary slack (Kren,2003; Merchant, 1985; Onsi, 1973).

Caution must therefore be exercised in trying to use participation to reduce budgetary slack as part of reform strategy in public sector budgeting in Nigeria. A study of the usefulness of budgetary slack may be undertaken to see if organisations with flexible organisational culture and high budgetary slack show better performance indices than organisations with control organisational culture with lower budgetary slack.

Generalization of the results from this study should also be done with caution bearing in mind the limitation of studies of this nature. Using a survey method to gather data creates a potential for bias. The scope of this research is limited by its sample size, and geographical spread. Results might have been different if all federal universities had been considered and if the study had been longitudinal. Also, this study may be subject to variable measurement and structure issues which might have affected internal and external validity because organisational culture is a broad concept that cannot be fully captured with a single instrument.

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