

## **BUDGETARY PARTICIPATION: HOW IT AFFECTS PERFORMANCE AND COMMITMENT**

by

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### **ABSTRACT**

The Malaysian public sector has undergone a number of reforms in the past two decades. They have focused on decentralization to improve performance and participative decision-making. A Modified Budgeting System (MBS) was adopted to encourage more participation from employees. Previous researchers report that budgetary participation can lead to certain behaviours such as employees' positive attitude and performance. This study examines the role of organizational commitment and budgetary participation on managerial performance. We distributed questionnaires to middle level managers involved in the budget process of a government ministry to identify their budgetary participation level and the impact on managerial performance. The findings reveal that budgetary participation has a significant effect on managerial performance by enhancing organizational commitment. Overall, the study findings provide a better understanding of the effects of budgetary participation in the public sector, allowing governments to improve organizational commitment among employees and refine budgetary processes so more employees can participate. Most of the studies on budgetary participation has been conducted in the private sector rather than the public sector even in developing countries. This study attempts to fill up the gap. In addition, this study relies on participative decision-making approach to examine the relationship between budgetary participation and managerial performance.

**Keywords:** Budget, Participation, Performance, Public Sector, Government

## **INTRODUCTION**

In a participative budgeting process, both superiors and subordinates are involved (Weil and Maher, 2005). A bottom-up approach is participative since it involves lower-level employees. Top management may initiate the budget process and provide general guidelines but it is lower-level employees who develop the budget for their own units. The employees normally comprise representatives from each unit or segment who are able to provide valuable insights on their segments' activities or operations. The final resource allocation is based on their input and it is thus critical that they are involved throughout the budget-setting process.

Participation in the budgetary process yields benefits such as increasing employee motivation and commitment to the budget, fostering creativity among all levels of employees, increasing a sense of responsibility (Hoque, 2005), increasing job satisfaction and also performance (Weil and Maher, 2005). Participative budgeting helps ensure that estimates are more accurate and reliable, leading to greater acceptance from organization members (Hoque, 2005).

While some studies report a positive link between budgetary participation and performance, others report a negative association (Bryan & Locke, 1967) and some report no association (Milani, 1975; Kenis, 1979) and managerial performance (Brownell & Hirst, 1986; Hirst, 1987). These inconsistent findings may be the result of certain variables unable to determine causality effects or an inappropriate research design in making causal inferences (Brownell and McInnes, 1986). There is no simple relationship between budgetary participation and performance and therefore other variables have been suggested, including motivation (Brownell and McInnes, 1986), organizational commitment (Awamleh, 1996; Mowday, 1998; Suliman, 2002; Yahya et al., 2008) and job satisfaction (Yiing and Ahmad, 2009; Etemadih, Dilami, Bazaz and Parameswaran, 2009). Most of these studies were conducted in the private sector rather than the public sector (Yuen, 2007) of developing countries (Yahya et al., 2008).

As a progressive nation, Malaysia has undergone a series of reforms since the 1990s. These reforms include administrative improvements such as systems and procedures, rules and regulations, structure of public bureaucracies, nature of the government and other aspects of public administration. The intent is for the public sector to be more flexible, responsive, effective and efficient to achieve the Malaysian Vision of 2020, becoming a developed country by that year. These initiatives have resulted in decentralization of authority and decision-making, employee participation in budgeting process and streamlined financial management comparable to the private sector.

This study investigates the relationship between budgetary participation and managerial performance with organizational commitment as the intervening variable in a Malaysian public sector organization—the Ministry of Home Affairs (MOHA), as suggested by Mowday (1998), Suliman (2002) and Yahya et al. (2008).

### **BUDGETING AND ITS ROLE IN NEW PUBLIC MANAGEMENT (NPM)**

Malaysia is not the only country to embrace New Public Management. The Malaysian people have been more vocal than ever demanding a major shift in public sector administration to be more efficient. This can be observed from the last election results when the long-serving coalition parties lost seats. The government has to find new ways to counter criticisms in the public sector for its inefficiency in providing services, lack of flexibility, lack of accountability and poor performance. Those criticisms have paved the way for reforms and reorganization to address various administrative ailments and enhance the efficiency and performance of public bureaucracies (Siddiquee, 2006).

The underlying idea of NPM is to transform the management of public organizations into business-like management (Siddiquee, 2006; Vienazindiene and Ciarniene, 2007), to convert its processes from the traditional rule-bound and process-oriented administrative culture into a more flexible, innovative, dynamic and result-oriented culture, and to shift from bureaucratic organizations to those characterized by collaboration, trust, negotiation, groups, teamwork,

decentralization of authority and reduced management layers (Parker and Bradley, 2004).

The changes resulting from implementation of NPM in the Malaysian public sector can be seen in its systems and procedures, rules and regulations, structures and other aspects of public administration (Sarji, 1993). The former Secretary of the Malaysian Government, Tun Ahmad Sarji, stated that the administrative reforms have changed the civil service of Malaysia from being “law and order” oriented in the 1960s into one that is a pacesetter and facilitator for national development in the 1990s. The civil service is now a customer-focused, mission-driven, performance-based and proactive force that is responsible and accountable.

In terms of budgeting, processes need to be transformed to improve efficiency while emphasizing decentralization of authority and decision-making. The budgeting process should be more efficient, effective and transparent and provide clearer links between inputs, outputs and outcomes (Kolthoff, Huberts and Heuvel, 2007). The Malaysian public sector has implemented the Modified Budgeting System (MBS) to improve efficiency. MBS is essentially an output-based budgeting system where managers receive lump-sum appropriations and have the flexibility to use them in return for agreed-on results or outputs (Shah, 2007). This devolution of the authority element allows line management to participate in the budget-setting processes by redeploying its resources according to their accountability level. MBS, a major initiative by the Treasury for financial reform in the government budgeting system (Rauf et al. 2008), was introduced in 1990 and was implemented by all ministries and departments by 1995. Starting in 1997, MBS was extended to all statutory bodies that received allocations from the Federal Government. The Ministry of Home Affairs adopted MBS in 1992.

Though the main objective of MBS is to improve and modernize the process of resource allocation on the basis of performance, it also promotes better programme management through better management practices (Xavier, 1996).

With MBS, budget authority is in the hands of line management and they are accountable for programme performance. It is a tool for line management to be more involved in the budgeting process (Rauf et al., 2008) and encourage them to manage their resources better under a strict budget constraint (Xavier, 1996). MBS promotes participative budget-setting and this affects behaviour and attitudes (Mowday, 1998).

A local study by Yahya et al. (2008) on budgetary participation was conducted in the Ministry of Defences (MINDEF). As different ministries have different functions, it is expected that the accounting controls and culture in MOHA may be different. Hence, managers' attitudes and behaviour resulting from involvement in the budget-setting process may be different. As one of the ministries in Malaysia, MOHA underwent substantial reforms that helped ensure that policies, laws and regulations concerning citizenship meet the current needs of the nation. MOHA's mission is to administer internal security matters to ensure peace and wellbeing through internal security. MOHA has 25 divisions in areas such as policy making, legislation, finance, human resources and technology. These divisions have to work as teams to use resources as efficiently as possible.

This study relies on participative decision-making approach for a theoretical framework to examine the relationship between budgetary participation and managerial performance. Participative decision-making is defined as employee participation in organizational decision-making wherein a formal vehicle for an employee voice is operative and employee views and decisions are given serious consideration (Kearney and Hays, 1994). There is also an alternative theory, known as goal-setting theory, to examine the relationship between budgetary participation and performance. Goal-setting theory provides insights into why and how goals can motivate behaviour (Griffin and Moorhead, 2009). However, its efficacy and applicability depends upon the mediator and moderator variables used (Locke and Latham, 2006). In budgetary participation studies, the common variables used are 'budget goal commitment' and 'budget goal acceptance' (Chong and Johnson, 2007), but they are not used in this study. Participative decision-making approach is more suitable for this study as this approach caters

all variables used in this study such as budgetary participation, organizational commitment and managerial performance.

## ***HYPOTHESES DEVELOPMENT***

### ***Budgetary Participation and Performance***

Budgetary participation is defined as a process where a manager is involved with, and influences, his or her budget (Shields & Shields, 1998). Budgetary participation relates to the extent to which managers participate in setting their budgets (Subramaniam & Mia, 2001). Parker and Kyj (2006) state that vertical information-sharing involves both upward communication of information from subordinate to superior and downward communication from superior to subordinate. Generally, increased task uncertainty causes increased information needs from subordinates, which in turn, increases their desire to participate. This helps them to better understand their tasks (Shields & Shields, 1998; Parker & Kyj, 2006; Chong & Johnson, 2007) and set difficult but attainable budget goals (Chong & Johnson, 2007). In this way, they are more confident that their performance targets are challenging yet realistic (Subramaniam & Mia, 2001).

Chong and Chong (2002) find that budgetary information affects subordinates job performance through information sharing, sense of control and trust, which are reflected in a higher commitment (Chong & Johnson, 2007; Subramaniam & Mia, 2001). This commitment improves employee morale, job satisfaction and performance. In addition, employees are less resistant to change and more accepting of, and committed to, budget decisions (Shields and Shields, 1998). Accordingly, the above findings lead to the following hypothesis:

*H<sub>1</sub>: Budgetary participation has a significant positive relationship with managerial performance.*

### ***Budgetary Participation and Organizational Commitment***

Researchers have investigated a number of intervening variables that moderate the relationship between budgetary participation and performance, including motivation (Brownell & McInnes, 1986), organizational commitment (Nouri & Parker, 1998; Yahya et al., 2008), budget goal commitment (Chong & Chong,

2002), innovation (Dunk, 1995; Subramaniam & Ashkanasy, 2001; Yahya et al., 2008), locus of control (Brownell, 1981, 1982), decentralization (Gul, Tsui, Fong and Kwok., 1995), job satisfaction (Leach-Lopez et al., 2007, 2009) and job relevant information ( Leach-Lopez et al., 2007, 2009; Chong & Chong, 2002).

When using organizational commitment as an intervening variable, the study by Nouri and Parker (1998) and Yahya et al. (2008) concludes that budgetary participation indirectly affects managerial performance through the mediating variable of organizational commitment. Organizational commitment refers to a wide range of feelings, attitudes, values, practices and the implementation of ideas in the interest of the organization (Awamleh, 1996). According to Allen and Meyer (1990), organizational commitment refers to a psychological state that binds the individual to the organization (and makes turnover less likely). It is also defined as a bond or linking of the individual to the organization (Mathieu & Zajac, 1990). Thus, stronger and more generalized commitment may enhance organizational development, growth and survival (Awamleh, 1996).

Yousef (2000) states that the behavioural consequences of continuance commitment and (to some extent) normative commitment are more specific than those for affective commitment. Prior studies focus on the affective conceptualization of organizational commitment as an intervening variable in examining the relationship between budgetary participation and performance (Nouri & Parker, 1998; Yahya et al. (2008). Meyer, Paunonen, Gellatly, Goffin, and Jackson (1989) conclude that affective commitment is correlated positively with all measures of performance rather than continuance commitment. Stanley, Meyer, Topolnytsky and Herscovitch. (1999) state that affective commitment correlates more strongly with job performance than normative and continuance commitment. Suliman (2002) proposes that commitment mediates antecedent-consequence relationships where the antecedents predict commitment, and commitment in turn predicts the consequences. In this study, the antecedent that predicts commitment was budgetary participation and the consequence of commitment was managerial performance.

Several studies use organizational commitment as an intervening variable to predict the relationship between budgetary participation and performance. Nouri and Parker (1998) and Yahya et al. (2008) suggest that budgetary participation affects job performance indirectly via organizational commitment. They also conclude that budgetary participation has a positive link with organizational commitment. Managers who participate in budget processes become more satisfied with their working environment. They develop higher organizational commitment which leads to improved performance (Nouri & Parker, 1998; Yahya et al., 2008).

Parker and Kyj (2006) claim that there is no direct relationship between budget participation and organizational commitment. However, they find an indirect relationship between budget participation and organizational commitment through role ambiguity. If subordinates participate in the budgeting process and perceive that the allocation is fair, they become more motivated and satisfied with their work, leading to positive consequences such as increased commitment to the organization. This suggests the following hypothesis:

*H<sub>2</sub>: Budgetary participation has a significant positive relationship with organizational commitment.*

#### *Organizational Commitment and Performance*

Organizational commitment was chosen as a mediator because of its significant influence on individual attitudes such as job satisfaction, performance, turnover intention and absenteeism (Yousef, 2000). Suliman (2002) concludes that committed employees are rated more positively than those who are less committed, because motivated employees perform better. Meyer and Herscovitch (2001) find that the expected behavioural consequences of commitment to an organization include lower turnover, reduced absenteeism, improved performance and increased organizational citizenship behaviour.

Yousef's study (2000) investigates the mediating effects of organizational commitment on the relationships of leadership behaviour with job satisfaction and job performance in a non-Western work environment. The results show that the



relationships between organizational commitment and job satisfaction and job performance are positive and significant, indicating that employees who are committed to their organizations are more satisfied with their jobs and their job performance is better. Scott-Ladd et al. (2006) suggest that affectively committed employees seek to overcome organizational problems, thereby improving their performance and satisfaction. The dominance of affective commitment suggests it remains an important attitudinal response for both employers and employees.

Prior studies on organizational commitment and performance indicate a positive association between these two factors (Nouri & Parker, 1998; Yahya et al., 2008). The studies use organizational commitment as a mediating role in the budgetary participation and performance relationship. Parker and Kyj (2006) argue that organizational commitment has no significant direct effect on job performance, but they find that it has a significant indirect effect on job performance through information sharing. Consequently, this study proposes the following hypothesis:

*H<sub>3</sub>: Organizational commitment has a significant positive relationship with managerial performance.*

## **RESEARCH METHODOLOGY**

The present study uses a sample from a single organization rather than representative samples across a range of organizations. This is because accounting controls, which form only a small part of a wider set of organizational controls, differ significantly across organizations (Otley and Pollanen, 2000). It is thus more meaningful to select managers from a single organization in order to control for this effect and increase our understanding of how variables interact in a specific setting before attempting more ambitious generalisations.

Quantitative research is often used to measure behaviour, knowledge, opinions or attitudes (Cooper and Schindler, 2008). Since the present study investigates the effects of budgetary participation, a questionnaire is assumed to be an appropriate medium for data collection. The questionnaires distributed to the respondents consisted of four parts. The first part of the questionnaire contains

six items related to the budgetary participation variable. Part two consists of nine items related to the organizational commitment variable. Part three consists of nine items related to the managerial performance variable. The final part of the questionnaire collects demographic information about the respondents.

A pilot study was conducted with six executives of the Bursary Department and two managers from the Ministry of Home Affairs (MOHA). The pilot was conducted: (a) to identify any problems on question contents, wording and sequencing (b) to test whether the English version was understandable (c) to determine the average time to complete the questionnaire. The pilot also explores how the overall quality of survey data can be improved (Cooper & Schindler, 2008). Feedback evaluation forms were collected from the pilot respondents to help modify the final questionnaire. Overall, there were no major changes made to the questionnaire except for the layout design of the questionnaire. A reliability analysis was conducted to further refine the instrument. Sekaran (2003) indicates that reliabilities less than .60 are considered to be poor, those in the .70 range acceptable, and those over .80 good. There was no need for further adjustment on the questionnaire items since the Cronbach's alpha value for each scale is considered good. The Cronbach's alpha value for budgetary participation and organizational commitment is .855 and .963 respectively. Table 1 shows the Cronbach's alpha value reported by previous studies and the present study. The reliability of managerial performance was obtained by regression where the overall performance was regressed against the eight performance dimensions.

**Table 1**  
**Cronbach's Alpha for Budgetary Participation and Organizational Commitment**

	Cronbach's Alpha	
	Budgetary Participation	Organizational Commitment
Dunk (1995)	.88	
Nouri and Parker (1998)		.86
Subramaniam and Mia (2001)	.84	
Parker and Kyj (2006)		.90
Present study	.96	.96

Each of the 25 divisions and units that comprise the Ministry of Home Affairs has its own function and philosophy in connection with policy-making, legislation, finance, human resources and technology. We chose purposive sampling to obtain information from the specific target groups. Sekaran (2003) states that purposive sampling is used when only specific types of people can provide the desired information, either because they are the only ones who have it or they conform to research criteria.

In order to gather information on the impact of budgetary participation on managers, the sample draws from all those responsible for managing their division and unit budgets. Since only two managers from each division and unit manage the budget, there were about 74 managers participating in this study. The managers were middle level and came from various functional areas, activities and responsibility centres.

The questionnaires were personally administered. According to Sekaran (2003), personally administered questionnaires have several advantages: (a) the researcher can collect all the completed responses within a short period of time (b) it is less expensive and (c) the process consumes less time. The questionnaires were distributed and collected during a budget proposal seminar organized by the ministry. A permission letter was sent to the Principal Assistant Secretary of the Finance Division of the Ministry for approval first. Of the 74 questionnaires distributed, 72 were returned, yielding a response rate of 97 percent. However, only 70 questionnaires were completed, yielding a final response rate of 95 percent. All usable responses were further analysed using Statistical Package for Social Science (SPSS).

The mean age of all respondents was 35.46 years, with the youngest respondent being 23 years old and the oldest respondent 54 years old. As the table shows, out of the 70 respondents, 44 (62.9%) are female and 26 (37.1%) are male. More than half of the respondents (54.3%) have working experience of 10 or fewer years and only six (8.6%) respondents have worked for more than 30 years.

Respondents had various levels of budget experiences, from less than one year to more than seven. The majority (30 people, or 42.9%) had one to three years of experience in the budgeting process, followed by 23 (32.9%) respondents with less than one year. Eleven respondents (15.7%) had four to six years of experience while six (8.6%) had seven or more years.

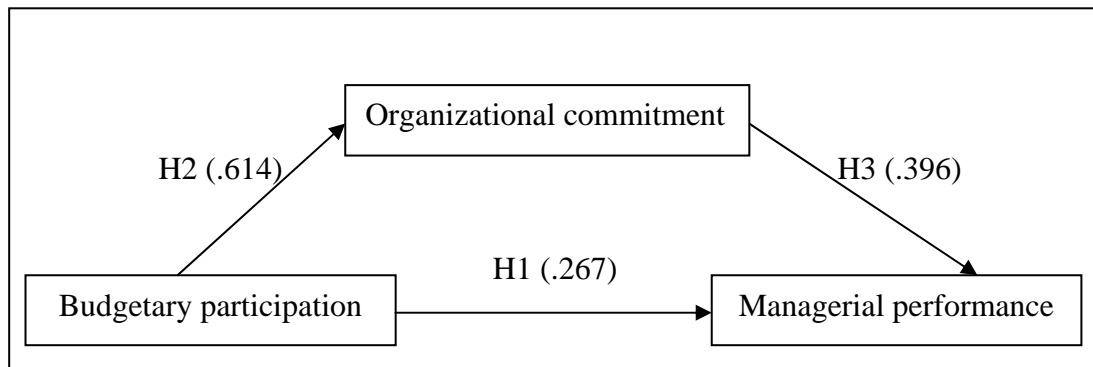
## **HYPOTHESES TESTING**

Path analysis was used for hypotheses testing because it allows us to examine the direct, indirect and spurious effects of the relationship among variables (Foster et al., 2006). In path analysis, the regression coefficient only gauges the direct effect of the explanatory variable on the dependent variable. The Pearson correlation summarizes the total relationships and contains not only the direct effect but also the indirect effects. The effects exerted on the dependent variable by the independent variables are resulted through the agency of one or more other independents, spurious effects and residual correlation due to non-causal associations among independent variables (Archdeacon, 1994).

Table 2 lists each hypothesis and its corresponding path coefficient, which was estimated using regression analysis. The value for path coefficients is the standardized beta regression coefficients. Preliminary analyses on the assumptions underlying the use of regression were performed and confirmed no violation on the assumptions of normality, linearity and homoscedasticity. In addition the results of collinearity, statistics and a correlation matrix also confirm that multicollinearity assumptions are not violated in this analysis. This is because the examination of the correlation matrix among the study variables reveals that no correlation value exceeded .70. The tolerance value for the two independent variables is quite respectable (not near 0), as suggested by Pallant (2001).

**Table 2: Path Analysis Results**

Variable	Hypothesis	Path coefficient	t-value	p-value
BP/MP	H1	.267	2.149	.035
BP/OC	H2	.614	6.416	.000
OC/MP	H3	.396	3.191	.002



The values for path coefficients are taken from Table 3. As indicated in Table 3, all coefficient values have a  $p$ -value < 0.05.

**Table 3: Decomposition of Observed Correlations**

Combination of variables	Observed correlation	Direct effect	Indirect effect	Spur effect
BP/OC	.614	.614	-	-
OC/MP	.560	.396	-	.164
BP/MP	.510	.267	.243	-

The results in Table 2 support all the hypotheses since each related path coefficient is significant ( $p < .05$ ). Figure 1 illustrates the path coefficients of this study. The results supports Hypothesis  $_1$  with a significant path coefficient of .267 ( $p < .05$ ) and suggest that budgetary participation has a significant positive relationship with managerial performance. It also suggests that budgetary participation makes a unique contribution to predicting managerial performance.

The result also support Hypothesis  $_2$  with a significant path coefficient of .614 ( $p < .05$ ) and suggest that budgetary participation has a significant positive relationship with organizational commitment. It suggests that budgetary

participation makes a significant and unique contribution to predicting organizational commitment. The findings also supports Hypothesis <sub>3</sub> with a path coefficient of .396 ( $p < .05$ ) and suggest that organizational commitment has a significant positive relationship with managerial performance. It suggests that organizational commitment makes a significant and unique contribution to predicting managerial performance.

### ***Direct and Indirect Effects***

The results in Table 2 (illustrated in Figure 1) suggest that budgetary participation affects managerial performance both direct and indirectly via organizational commitment. Nouri and Parker (1998) find that the advantage of using path analysis in analyzing these effects is that their relative magnitude can be assessed by decomposing the total relationship between budgetary participation and managerial performance.

Table 3 shows that the total relationship between budgetary participation and managerial performance, with a correlation of .510, consists of a direct effects of .267 and indirect effect of .243. The direct link between budgetary participation and managerial performance shows a significant path coefficient of .267 ( $p < .05$ ). The indirect effect of budgetary participation on managerial performance consists of the following path:

$$(1) \text{ BP} \rightarrow \text{OG} \rightarrow \text{MP} \quad .614 \times .396 = .243$$

Path 1 indicates the indirect effects of budgetary participation on managerial performance via organizational commitment. It also suggests that organizational commitment partially mediates the relationship between budgetary participation and managerial performance. This relationship is meaningful since the magnitude satisfies the criterion of 0.06 (Bartol, 1983). In addition, Baron and Kenny (1986) argue that if a significant bivariate relationship exists between independent variables and outcome variables, a third variable functions as a mediator under the following conditions: (1) when the independent variables are significantly related to the mediating variable; (2) when the mediating variable is significantly related to the outcome variable; (3) when the path coefficient in the relationship

between independent variables and dependent variables decreases after controlling for the mediating variables.

This study finds that these three conditions were fulfilled since budgetary participation is significantly related to organizational commitment. Secondly, organizational commitment is significantly related to managerial performance. Finally, the correlation between budgetary participation and managerial performance (.510) decreases after controlling for the mediating variables but remains significant (.267). Table 3 indicates the breakdown components of the direct and indirect effects of the two paths.

### ***Effects of Budgetary Participation on Managerial Performance***

H<sub>1</sub> predicts a significant positive relationship between budgetary participation and managerial performance and is supported since the result of the path coefficient is significant. Budgetary participation has a significant positive relationship with managerial performance ( $p < .05$ ). These findings are similar to those of previous studies (Brownell, 1981, 1982; Brownell & McInnes, 1986; Dunk, 1995; Nouri & Parker, 1998; Chong & Chong, 2002; Chong & Johnson, 2007; Leach-Lopez, 2007, 2009; Yuen, 2007; Yahya et al., 2008) and suggest that allowing employees to participate in the budget setting process enhances their managerial performance. Participative budgeting allowed employees to provide valuable input on all aspects of their segments' operations. In turn, they were motivated to perform better since they perceived the budget allocated to them was fair as a result of their involvement.

Table 2 supports H<sub>2</sub>, which predicts a significant positive relationship between budgetary participation and organizational commitment. Budgetary participation has a significant positive relationship with organizational commitment ( $p < .05$ ), which suggests that employees involved in budget setting develop a higher organizational commitment. They support the budget objectives and organizational goals more enthusiastically (Nouri and Parker, 1998), findings consistent with previous studies such those by Nouri and Parker (1998) and Yahya et al. (2008).

Table 2 also supports H<sub>3</sub>, which predicts a significant positive relationship between organizational commitment and managerial performance. Organizational commitment has a significant positive relationship with managerial performance ( $p < .05$ ), suggesting that more committed employees are more motivated and dedicated to their work, resulting in better managerial performance. These findings correspond with results reported by previous studies (Nouri & Parker, 1998; Parker & Kyj, 2006; Yahya et al., 2008).

## **CONCLUSIONS AND RECOMMENDATIONS**

This study provides additional empirical evidence on the effects of budgetary participation on managerial performance and the role of organizational commitment in mediating the relationship. Conducted in Malaysia's Ministry of Home Affairs (MOHA), the study finds that the budgetary participation process implemented by MOHA does have significant positive effects on managerial performance. Moreover, the intervening variable of organizational commitment has a significant role in mediating the relationship between budgetary participation and managerial performance. This suggests that public sector organisations should encourage participation from all level of employees in budgetary activities.

Through participative budgeting, employees can provide and obtain more relevant information for setting budgetary goals. Participative budgeting also gives the ministry's top management feedback to refine budgetary process. Thus, involvement should not be limited only to middle managers. The results show that organizational commitment leads to improved managerial performance since more committed employees are more motivated and dedicated. Therefore, employees should receive training to enhance their knowledge of budget-setting.

## **LIMITATIONS AND FUTURE RESEARCH DIRECTIONS**

This study has several limitations. First, data were collected from one organization only; thus, the generalizability of the results to other public sector organizations is limited. Secondly, we used only organizational commitment as



an intervening variable in order to better link the relationship between budgetary participation and managerial performance. Future researchers should examine other intervening variables such as job satisfaction (Brownell, 1982) and motivation (Brownell and McInnes, 1986) in public sector organisations since they may also influence the relationship between budgetary participation and managerial performance.

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