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Despite the recognition of procedural justice in the participative budgeting literature, no studies have attempted to investigate its potential moderating influence on the joint effect of information asymmetry and budget emphasis on the relationship between budgetary participation and subordinates' propensity to create budgetary slack. L&E demonstrate that under low information asymmetry conditions, high budgetary participation is associated with a low propensity to create budgetary slack because subordinates find budgetary participation useful and do not wish to jeopardise their participation privileges. Procedural justice, therefore, should not impact subordinates' propensity to create budgetary slack as prospect theory holds under low information asymmetry situations. It is expected that under such situations, both the superior and his/her subordinate possess similar information. Moral hazard problems are likely to be low because subordinates do not possess private information which can be used to engage in opportunistic behaviour (e.g. to pursue in private goals, cheat by intentionally creating budgetary slack, and shirking).

However, in high information asymmetry situations, L&E, relying on prospect theory, demonstrated that high budgetary participation and high budget emphasis are associated with a low subordinates' propensity to create budgetary slack. This study argues that L&E prediction will hold in the presence of high rather than low procedural justice situations. Combining organizational justice theory and prospect theory, this study predicts that subordinates are unlikely to risk losing their participation privileges by building slack in their budgets. The justifications are as follows: when the subordinates are given the opportunity (i.e. high budgetary participation) to ensure that the procedures for the budget targets set for them are fair (i.e. high procedural justice), realistic and attainable, they will more likely value their participation privileges especially when their performance evaluations are based on budget target attainments (i.e. high budget emphasis). Thus, it is predicted that under high information asymmetry situations, budget emphasis and procedural justice will moderate the relationship between budgetary participation and propensity to create budgetary slack. Stated formally, the following hypothesis is tested:

**H<sub>3</sub>:** In high information asymmetry situations, the relationship between budgetary participation and the subordinates' propensity to create budgetary slack is moderated by budget emphasis and procedural justice.

Thus far, it seems that budgetary participation is a *necessary* condition for procedural justice to occur. However, it should not be assumed that budgetary participation is a *sufficient* condition for procedural justice to occur. Situations exist where budgetary participation may not necessarily lead to a greater acceptance of organizational procedures. For example, budgetary participation may lead to subordinates learning that the processes employed by their superiors and/or the organizations as a whole are unfair (see Renn, 1998). Consequently, subordinates may

react in a negative or dysfunctional manner to decisions resulting from procedures they perceive as unfair. Therefore, fair procedures need to be implemented within the organization to ensure subordinates accorded with participation privileges do not engage in dysfunctional behaviour.

High procedural justice can have certain effects on the subordinates' attitudes, behaviours and performance (see e.g. Lau & Tan, 2006). When procedural justice is high, employees perceive their organization as 'doing the right thing'. Lau and Sholihin (2005) find procedures that are high in fairness to be positively associated with job satisfaction. High job satisfaction is associated with increased commitment to the organization and increased organizational interest. Increased organizational commitment is likely to result in employees not 'retaliating' against the organization or engaging in dysfunctional behaviour (i.e. budgetary slack creation). Nouri and Parker (1996) demonstrate that high organizational commitment coupled with high budgetary participation results in low propensity to create budgetary slack. Likewise, this study suggests that high procedural justice coupled with high budgetary participation will result in low propensity to create budgetary slack.

L&E establish that in high information asymmetry situations, budgetary participation is negatively associated with subordinates' propensity to create budgetary slack when budget emphasis is high. This study suggests that when employees are evaluated with a strict regard to their ability to achieve budgeted targets (i.e. high budget emphasis), possess private information (i.e. high information asymmetry) and when the opportunity for them to participate in setting their budget is high (i.e. high budgetary participation), the end result should be a low propensity to create budgetary slack, when procedural justice within the organization is high. Hence, the following hypothesis is tested:

- H4:** In high information asymmetry and high budget emphasis situations, there is a negative association between budgetary participation and the subordinates' propensity to create budgetary slack when procedural justice is high.

## **METHOD**

### **Sample Selection**

This study employed a survey approach to collect data. Participants consisted of managers from Australian manufacturing firms listed in the *Who's Who in Business in Australia* database. Firms were selected from only the manufacturing sector to provide some degree of control for industry. Additionally, the use of budgets is common amongst manufacturing firms. The criteria for inclusion in the sample are as follows. First, each manager must hold a senior executive position in a manufacturing firm and have budget-setting responsibility. Second, the firms must have an annual sales turnover in excess of Australian \$200 million to provide a control for firm size. Smaller organizations are likely to rely on informal methods rather than formal methods when it comes to budgetary control systems. Therefore, the benchmark of Australian \$200 million is

deemed appropriate. A total of 100 firms met these criteria. Only a maximum of three managers were selected from each firm to ensure that respondents are independent.

A total of 260 participants who were the departmental heads or supervisors of the accounting, production, marketing and sales functions were selected. The administration of the survey was based on the recommendation by Dillman (2007) which involved the following procedures: (1) telephone calls to check the availability of the potential participants; (2) a questionnaire package composed of a cover letter, questionnaire and reply-paid envelope; (3) a reminder postcard to be sent two weeks after the questionnaire package; and (4) a follow-up phone call to be made two weeks after the reminder postcard. Of the 260 survey questionnaires sent, a total of 134 responses were returned, yielding a response rate of 51.54%. Of the 134 responses, a total of 18 questionnaires were excluded due to incomplete and/or inappropriate responses. Ultimately, 116 responses were used in the final statistical data analyses.

The mean age of the respondents was 43.7 years. The average length of experience of respondents in their area of responsibility was 12.0 years. They had spent an average of 10.3 years in their current organization and they had held their current positions for an average of 5.2 years. The mean number of employees in their areas of responsibility was 49. The demographic data denotes that respondents are generally experienced managers in positions of high responsibility.

### **Measurement of Variables**

Existing measurement scales were used in this study as a means of enhancing the validity and reliability of the data collected as well as any results inferred from the data. The survey questionnaire used in this study is shown in Appendix A.

### **Budgetary Participation**

Budgetary participation was measured by a six-item, seven-point Likert-type scale developed by Milani (1975). This study attests the reliability of the measure by obtaining a Cronbach alpha of 0.90. The results of a factor analysis indicate that all six items in the measure loaded on a single factor, with an Eigenvalue of 4.055 and 67.59% of the variation in the underlying variable explained.

### **Information Asymmetry**

Information asymmetry was measured by a six-item, seven-point Likert-type scale originally developed by Dunk (1993). This scale has been used in prior studies (e.g. Chong & Eggleton, 2007). The Cronbach alpha for the present study is 0.81. The results of a factor analysis reveal

that all six items loaded on a single factor, obtaining an Eigenvalue of 3.123 and explaining 52.05% of the variation in the underlying variable.

### **Budget Emphasis**

This study used an item, “Meeting the budget”, from Hopwood’s (1972) instrument to assess budget emphasis. This approach is consistent with prior management accounting studies (see Dunk 1993; L&E). L&E, for example, emphasise the fact that Hopwood (1972) had intended this item to represent situations when a cost centre head’s performance was evaluated based on the ability to continually meet the budget on a short-term basis. The argument posits that budgetary slack creation is an important issue only when there is a short-term emphasis on meeting targets in the budget. Thus the item, ‘Meeting the budget’, provides the appropriate score for the measure of budget emphasis in relation to budgetary slack creation.

### **Procedural Justice**

Procedural justice was measured by a four-item, seven-point Likert-type scale developed by McFarlin and Sweeney (1992). This scale has been used in prior justice studies in accounting (e.g. Lau & Moser, 2008). The scale obtains a Cronbach alpha of 0.96. A factor analysis provided results that indicate that all four items loaded on a single factor with an Eigenvalue of 3.539 and 88.48% of the variation in the underlying variable being explained.

### **Propensity to Create Budgetary Slack**

Subordinates’ propensity to create budgetary slack was measured by using Onsi’s (1973) four-item instrument. This instrument is an established scale that has been used extensively in prior studies. The Cronbach alpha attained in this study is 0.94. The results of a factor analysis reveal that all four items loaded on a single factor with an Eigenvalue of 3.418, explaining 85.46% of the variation in the underlying variable.

## **RESULTS**

Table 1 presents the descriptive statistics for the independent and dependent variables and Table 2 depicts the zero-order (Pearson) correlation coefficients and levels of significance among the independent and dependent variables.

**Table 1: Descriptive Statistics of Independent and Dependent Variables**

Variable	Mean	Std. Dev.	Theoretical Range		Actual Range	
			Min	Max	Min	Max
Budgetary Participation	29.98	7.72	6	42	12	42
Information Asymmetry	31.15	5.97	6	42	14	42
Budget Emphasis	3.52	1.63	1	7	1	7
Procedural Justice	13.95	5.50	4	28	4	28
Propensity to Create Budgetary Slack	13.06	5.89	4	28	4	28

**Table 2: Correlation Matrix among Independent and Dependent Variables**

	Budgetary Participation	Information Asymmetry	Budget Emphasis	Procedural Justice
Information Asymmetry	0.206*			
Budget Emphasis	-0.038	-0.033		
Procedural Justice	-0.159	0.005	0.379**	
Propensity to Create Budgetary Slack	-0.219*	0.049	-0.175	-0.071

\*\* p < 0.01 (two-tailed)

\* p < 0.05 (two-tailed)

## Hypotheses Testings

To test Hypothesis H1 which states that the relationship between budgetary participation and subordinates' propensity to create budgetary slack is moderated by information asymmetry and budget emphasis, a model of a linear regression with moderating effect was computed using the SPSS and PROCESS statistical tool developed by Hayes (2013).<sup>2</sup> The findings that correspond to this model were generated by PROCESS and are presented in Table 3.

**Table 3: Regression of Propensity to Create Budgetary Slack on Budgetary Participation, Information Asymmetry and Budget Emphasis**

Variable	Coeff.	SE	t-value	p
Constant	3.234	0.137	23.565	0.001
Budget Emphasis (BE)	-0.092	0.081	-1.134	0.259
Budgetary Participation (BP)	-0.216	0.120	-1.803	0.074
Information Asymmetry (IA)	0.208	0.151	1.378	0.171

<sup>2</sup> The advantages of using PROCESS tool over the normal regression tool because it will “centre predictors” and “compute the interaction automatically” (Field, 2013, p. 401)

Variable	Coeff.	SE	t-value	p
BE x BP	-0.016	0.066	-0.237	0.813
BE x IA	0.136	0.083	1.640	0.104
BP x IA	0.022	0.107	0.211	0.833
BE x BP x IA (H1)	-0.197	0.057	-3.438	0.001

$R^2 = 0.213$ ; F-value = 5.407;  $p < 0.001$

The results presented in Table 3 indicate that the relationship between budgetary participation and subordinates' propensity to create budgetary slack is negative and statistically significant ( $t = -0.197$ ,  $p < 0.001$ ) moderated by information asymmetry and budget emphasis. The model as a whole explains 21.3% of the variation in propensity to create budgetary slack. Hypothesis H1 is, therefore, supported. This result is consistent with that of Dunk (1993) and L&E.

Hypothesis 2a states that in low information asymmetry situations, high budgetary participation is associated with a low subordinates' propensity to create budgetary slack, regardless of the level of budget emphasis. Hypothesis 2b states that in high information asymmetry situations, high budgetary participation is associated with a low subordinates' propensity to create budgetary slack when budget emphasis is high. In order to test for hypotheses H2a and H2b, the total sample was dichotomised (at the mean value = 31.15) into two subsamples based on information asymmetry: low information asymmetry and high information asymmetry conditions. Consequently, 53 responses were recorded for the low information asymmetry subsample and 63 for the high information asymmetry subsample.

It is expected that the coefficient of budgetary participation should be negative and statistically significant. The results from Table 4 indicate that budgetary participation (-0.323) is significant ( $p < 0.027$ ) and negatively related to propensity to create budgetary slack. The model as a whole explains 30.9% of the variation in propensity to create budgetary slack. These results provide support for hypothesis H2a, and are consistent with those of L&E.

**Table 4: Regression of Propensity to Create Budgetary Slack on Budgetary Participation and Budget Emphasis for the Low Information Asymmetry Condition**

Variable	Coeff.	SE	t-value	p
Constant	3.020	0.170	17.727	0.001
Budget Emphasis (BE)	-0.311	0.099	-3.130	0.003
Budgetary Participation (BP) (H2a)	-0.323	0.142	-2.282	0.027
BE x BP	0.146	0.093	1.564	0.124

$R^2 = 0.309$ ; F-value = 4.466;  $p < 0.008$



The results for the high information asymmetry subsample are presented in Table 5. As expected, the coefficient of the two-way interaction between budget emphasis and budgetary participation is negative and statistically significant (-0.223,  $p < 0.033$ ) related to propensity to create budgetary slack. The model as a whole explains 12.9% of the variation in propensity to create budgetary slack. These results provide support for hypothesis H2b, and are consistent with those of L&E.

**Table 5: Regression of Propensity to Create Budgetary Slack on Budgetary Participation and Budget Emphasis for the High Information Asymmetry Condition**

Variable	Coeff.	SE	t-value	p
Constant	3.486	0.191	18.277	0.001
Budget Emphasis (BE)	0.068	0.127	0.535	0.595
Budgetary Participation (BP)	-0.207	0.162	-1.281	0.205
BE x BP (H2b)	-0.223	0.102	-2.182	0.033

$R^2 = 0.129$ ; F-value = 2.245;  $p < 0.092$

Hypothesis H3 states that in high information asymmetry situations, the relationship between budgetary participation and subordinates' propensity to create budgetary slack is moderated by budget emphasis and procedural justice. To test for hypothesis H3, the total sample was dichotomised (at the mean value = 31.15) into two subsamples based on information asymmetry: low information asymmetry and high information asymmetry conditions. Table 6 below presents the results of the three-way interaction between budget emphasis, budgetary participation and procedural justice affecting the propensity to create budgetary slack under the high information asymmetry condition.

**Table 6: Regression of Propensity to Create Budgetary Slack on Budgetary Participation, Budget Emphasis and Procedural Justice for the High Information Asymmetry Condition**

Variable	Coeff.	SE	t-value	p
Constant	3.433	0.211	16.275	0.001
Budget Emphasis (BE)	0.010	0.146	0.070	0.944
Budgetary Participation (BP)	-0.097	0.186	-0.522	0.604
Procedural Justice (PJ)	-0.123	0.147	-0.835	0.408
BE x BP	-0.017	0.134	0.128	0.899
BE x PJ	0.027	0.071	0.377	0.708
BP x PJ	-0.005	0.158	-0.029	0.977
BE x BP x PJ (H3)	-0.122	0.069	-1.763	0.083

$R^2 = 0.210$ ; F-value = 3.772;  $p < 0.002$

The results presented in Table 6 indicate that the interaction term is marginally significant (-0.122,  $p < 0.083$ ) and negatively related to propensity to create budgetary slack. The model as a whole explains 21.0% of the variation in propensity to create budgetary slack. Hypothesis H3 is, therefore, partially supported.

Hypothesis H4 states that in high information asymmetry and high budget emphasis situations, there is a negative association between budgetary participation and the subordinates' propensity to create slack when procedural justice is high. To test for hypothesis H4, the high information asymmetry subsample was further dichotomised (at the mean value = 3.32) based on budget emphasis: low budget emphasis and high budget emphasis conditions. Table 7 below presents the results of the two-way interaction between budgetary participation and procedural justice affecting the propensity to create budgetary slack under the high budget emphasis, high information asymmetry condition.

**Table 7: Regression of Propensity to Create Budgetary Slack on Budgetary Participation and Procedural Justice for the High Budget Emphasis, High Information Asymmetry Condition**

Variable	Coeff.	SE	t-value	p
Constant	3.486	0.191	18.277	0.001
Procedural Justice (PJ)	-0.166	0.173	-0.959	0.349
Budgetary Participation (BP)	-0.172	0.314	-0.548	0.590
BE x BP (H4)	-0.441	0.159	-2.781	0.012

$R^2 = 0.403$ ; F-value = 5.435;  $p < 0.007$

As expected, the coefficient of the two-way interaction term is statistically significant and negative. The results presented in Table 7 indicate that the two-way interaction term (-0.441) is statistically significant ( $p < 0.012$ ) and negatively related to propensity to create budgetary slack. The model as a whole explains 40.3% of the variation in propensity to create budgetary slack. Hypothesis H4 is, therefore, supported.<sup>3</sup>

<sup>3</sup> A robustness test was conducted for hypothesis H4. Procedural justice was dichotomised into two subsamples within the high information asymmetry condition (i.e. low procedural justice and high procedural justice conditions). The robustness test for hypothesis H4 is concerned only with the high procedural justice condition within the high information asymmetry subsample (number of observations = 29). The results for the two-way interaction between budget emphasis and budgetary participation affecting the propensity to create budgetary slack under the high procedural justice, high information asymmetry condition, along with the plot for the interaction model, is presented in Appendix C. The results indicate that the coefficient for the interaction term (-0.313) is statistically significant ( $p < 0.013$ ) and negatively related to propensity to create budgetary slack, providing additional support for hypothesis H4.

## **DISCUSSIONS AND CONCLUSION**

This study examines if the results presented in L&E regarding the moderating influence of information asymmetry and budget emphasis on the relationship between budgetary participation and propensity to create budgetary slack hold in a different sample. Additionally, this study examines procedural justice as an additional moderating variable on the relationship between budgetary participation and propensity to create budgetary slack under high budget emphasis and high information asymmetry situation.

Results of this study are consistent with that of Dunk (1993) and L&E. Specifically, subordinates' propensity to create budgetary slack is *low* when budgetary participation, information asymmetry and budget emphasis are all *high*. Unlike Dunk (1993) who argued that the subordinates' self-interest is best served by budgetary slack creation, this study maintains the same premise as that proposed by L&E in that the subordinates' self-interest is best served by preserving their participation privileges. This assumption is consistent with suggestions of earlier studies (Pope, 1984) regarding the lessened prioritisation of concealing or misrepresenting private information when it comes to the self-interest of individuals. The notion that the preservation of participation privileges takes precedence over budgetary slack creation is founded on the long run versus short run considerations of subordinates. In reality, employment relationships typically span across multiple periods (Chow, Cooper & Haddad, 1991). Thus, subordinates are more likely to be concerned with long-term benefits as opposed to short-term benefits. Slack creation may be beneficial to subordinates in the short term; however, the preservation of participation privileges is likely to be more beneficial to them in the long term.

Results of this study find that when information asymmetry is *high*, subordinates' propensity to create budgetary slack is *low* when budgetary participation, budget emphasis and procedural justice are all *high*. When subordinates are given the opportunity (i.e. high budgetary participation) to ensure that the procedures for the budget targets set for them are fair (i.e. high procedural justice), realistic and attainable, they will more likely value their participation privileges especially when their performance evaluations are based on budget target attainments (i.e. high budget emphasis). Thus, subordinates are unlikely to risk losing these privileges by engaging in budgetary slack creation.

Results of this study support the prediction that in high information asymmetry and high budget emphasis situations, there is a negative association between budgetary participation and the subordinates' propensity to create slack when procedural justice is high. This result suggests that when employees are evaluated with a strict regard to their ability to achieve budgeted targets (i.e. high budget emphasis), possess private information (i.e. high information asymmetry) and when the opportunity for them to participate in setting their budget is high (i.e. high budgetary participation), high procedural justice is sufficient in ensuring a low propensity to create budgetary slack.

The results of this study have numerous theoretical and practical implications. From a theoretical perspective, the results of this study reinforce the theoretical implications ensuing from L&E, as well as creating a comprehensive theoretical framework in which to view the moderating effect of procedural justice on the relationship between budgetary participation and propensity to create budgetary slack. Firstly, the results of this study reinforce the significance of considering the interactive effects of budgetary participation, information asymmetry and budget emphasis on subordinates' propensity to create budgetary slack as opposed to only their isolated effects. For example, Onsi (1973) and Merchant (1985) found budgetary participation to be negatively associated with budgetary slack while Young (1985) reported a negative association. The differing conditions of information asymmetry regarding the usefulness of budgetary participation in light of the long-term versus short-term considerations of subordinates outlined in L&E and reinforced by this study explain these conflicting results. Young (1985) conducted a single-period experimental study while data from Onsi (1973) and Merchant (1985) consisted of observations from real world managers. In real working environments, subordinates are concerned with the loss of their participation privileges, while in a single-period experimental setting, these concerns are unlikely to exist. Engaging in dysfunctional behaviour (i.e. budgetary slack creation) may jeopardise these participation privileges, thus explaining the low propensities to create slack amongst the observations of Onsi (1973) and Merchant (1985) whereas Young's (1985) experimental subjects created budgetary slack when accorded with high budgetary participation privileges.

In regards to information asymmetry, Jaworski and Young (1992) found information asymmetry to be negatively associated with dysfunctional behaviour (i.e. creating budgetary slack) while Chow, Cooper and Waller (1988) found this association to be positive. The interactive effect of information asymmetry with budgetary participation and budget emphasis helps to explain these conflicting results. The results of this study, as well as that of L&E, indicate that the main effect of information asymmetry on subordinates' propensity to create budgetary slack is insignificant. However, this effect is conditional upon both the levels of budgetary participation and budget emphasis. Thus, the integration of budgetary participation, information asymmetry and budget emphasis into a single model facilitates a more coherent framework by which to explain the occurrence of budgetary slack.

Secondly, the results support the hypotheses and the expectation of this study that procedural justice plays an important role in influencing subordinates' propensity to create budgetary slack in participative budgeting. The results provide the empirical support for management accounting researchers to place greater emphasis on organizational justice theory when attempting to explain and resolve management accounting issues. Given the extensive amount of management accounting procedures within an organization, continuous opportunities exist for management accounting researchers to play an important role not only in further developing procedural justice theories but also in providing new insights into procedural justice issues. It is hoped that this study contributes to the existing literature by not only presenting a comprehensive framework in which to examine the effect of procedural justice on propensity to create budgetary slack in a participative budgeting setting, but by also inspiring further research into the procedural justice theory.

From a practical perspective, the results obtained in this study may have important inferences for the design and implementation of control systems within organizations. There is a fine balance between healthy budgetary slack created as a buffer for uncertainty and dysfunctional budgetary slack creation. Excessive budgetary slack creation results in subordinates obtaining additional resources that are otherwise not required. Not only does this have detrimental effects on the resource allocation process, but these additional resources may also be diverted to non-productive purposes.

Procedures are an ever-present feature of any organization. Lau and Lim (2002) note that more people encounter formal decision-making procedures in the course of their work than in any other area of their lives. Lind and Tyler (1988) suggest that “Organizational designers look to procedural justice research for effective means to enhance and maintain the quality of work life and internal cohesiveness of organizations”. Furthermore, they stated that when procedures are considered fair, the organizations can expect to see greater employee satisfaction, less conflict and more obedience to procedures and decisions. With respect to budgeting, it appears as though budgetary participation is necessary but not a sufficient condition required for procedural justice to occur. The results of this study dictate that subordinates’ propensity to create budgetary slack is decreased when the procedures and processes implemented by the organization in participative budgeting setting are perceived by the subordinate as fair.

Hence, the model developed and tested in this study may assist superiors to understand the manner in which budgetary participation, information asymmetry, budget emphasis and procedural justice affect their subordinates’ propensity to create budgetary slack. This understanding can help superiors in the management of budgetary slack through the manner in which their control systems are designed and implemented. By identifying the different conditions under which the propensity to create budgetary slack is low or high, superiors are able to effectively and efficiently select the appropriate combinations to manage the creation of budgetary slack within their organization. Furthermore, the results of this study may provide a guide for superiors to manage budgetary slack in regards to developing non-financial targets for their subordinates.

The methodology used in this study is subject to a number of limitations. Firstly, the statistical techniques used in this study do not infer causation. These techniques only confirm association and not cause. The support for causation in this study is derived from the theoretical argument and previous findings. Secondly, as is the case with most studies of this nature, caution should be exercised in regards to the generalization of the results found in this study to other dependant variables, functional areas and sectors. This study is based on manufacturing firms with an annual sales turnover in excess of Australian \$200 million. Therefore, the results derived from this study are not necessarily reflective of firms of any sector and size but rather restricted to similar levels of management and types of organization. Similarly, as indicated by a number of other studies (Mia & Chenhall, 1994; McInnes & Ramakrishnan, 1991), important differences may exist in regards to management control systems across different functional areas. Consequently, caution is needed if the results of this study are to be generalised to other functional areas.

The usual limitations associated with the questionnaire survey research approach are prevalent in this study. This method of data collection warrants for both increased leniency error and decreased variability (Prien & Liske, 1962; Thornton, 1968). Leniency error regards the potential tendency of subordinates to display a bias when assessing their own performance, often ranking themselves higher than what is realistically reflective. Decreased variability refers to the natural occurrence of subordinates rating all similar questions in a questionnaire with very low variability as they fail to see any major difference in meaning. Both of these phenomena have the possibility of being present in the data collected for this study. Procedural justice, as a construct, may be viewed in both a clinical and an emotive light. This study is concerned only with clinical measures of procedural justice. However, the possibility exists that the questionnaire responses of managers may be founded on an emotive platform, thus prejudicing the results obtained in this study.

This study implies numerous possible avenues for future research. These are: (1) using different research methods to further investigate the theoretical causal relationships tested in this study, (2) replicating this study in a different industry (e.g. service) as a means of enabling the results to be generalised into other contexts, and (3) using different measuring instruments for the variables examined in this study in order to improve the robustness of the results. Additionally, it is hoped that this study inspires an increased amount of replication-based studies, especially within the organizational study setting, so as to cement the accounting academy as a genuine scientific community.

Notwithstanding the aforementioned limitations, this study has demonstrated both the importance of replication in research, and the moderating influence of procedural justice on the joint effect of information asymmetry and budget emphasis on the relationship between budgetary participation and propensity to create budgetary slack. This study has developed a comprehensive theoretical framework in which to examine the effectiveness of procedural justice as moderating variable between budgetary participation and propensity to create budgetary slack. The findings not only reinforce the applicability of the implications derived from the results of L&E, but also support the significance of implementing fair procedures and processes within an organization. Thus, it is hoped that the findings of this study will inspire future research involving both budget behaviour and the importance of perceptions of justice in the design and implementation of management accounting control systems.

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## APPENDIX A: QUESTIONNAIRE

### Budgetary Participation

The following questions describe the role in which you play in the development of the budget for your department or business unit. Please answer the following six questions by **circling** a number from 1 to 7.

1. Which category below best describes your activity when the budget is being set? I am involved in setting  

1	2	3	4	5	6	7
None of the budget						All of the budget
  
2. Which category below best describes the reasoning provided by your superior when budget revisions are made? The reasoning is  

1	2	3	4	5	6	7
Very arbitrary and/or illogical						Very sound and/or logical
  
3. How often do you state your requests, opinions and/or suggestions about the budget to your superior without being asked?  

1	2	3	4	5	6	7
Never						Very frequently
  
4. How much influence do you feel you have on the final budget?  

1	2	3	4	5	6	7
None						Very high amount
  
5. How do you view your contribution to the budget? My contribution is  

1	2	3	4	5	6	7
Very Unimportant						Very important
  
6. How often does your superior seek your requests, opinions and/or suggestions when the budget is set?  

1	2	3	4	5	6	7
Never						Very frequently

**Information Asymmetry**

Please answer the following six questions by **circling** a number from 1 to 7.

1. In comparison with your superior, who is in possession of better information regarding the activities undertaken in your area of responsibility?

1	2	3	4	5	6	7
My superior has much better information			We have about the same quality of information			I have much better information

2. In comparison with your superior, who is more familiar with the input-output relationships inherent in the internal operations of your area of responsibility?

1	2	3	4	5	6	7
My superior is much more familiar			We are about equally familiar			I am much more familiar

3. In comparison with your superior, who is more certain of the performance potential of your area of responsibility?

1	2	3	4	5	6	7
My superior is much more certain			We are about equally certain			I am much more certain

4. In comparison with your superior, who is more familiar technically with the work of your area of responsibility?

1	2	3	4	5	6	7
My superior is much more familiar			We are about equally familiar			I am much more familiar

5. In comparison with your superior, who is better able to assess the potential impact of your activities of factors external to your area of responsibility?

1	2	3	4	5	6	7
My superior is much better able			We are about equally able			I am much better able

6. In comparison with your superior, who has a better understanding of what can be achieved your area of responsibility?

1	2	3	4	5	6	7
My superior has a much better understanding			We are about the same understanding			I have a much better understanding

**Budget Emphasis**

When your superior is evaluating your performance, how much importance do you think he or she attaches to the following items? Please indicate the extent of your agreement to the following questions by circling a number from 1 to 7, based on the following scale:

- |                                  |                             |
|----------------------------------|-----------------------------|
| <b>1. Never important</b>        | <b>5. Often important</b>   |
| <b>2. Seldom important</b>       | <b>6. Usually important</b> |
| <b>3. Occasionally important</b> | <b>7. Always important</b>  |
| <b>4. Sometimes important</b>    |                             |

1.	How well I cooperate with colleagues.	1	2	3	4	5	6	7
2.	My concern with costs.	1	2	3	4	5	6	7
3.	How well I get along with him or her.	1	2	3	4	5	6	7
4.	How much effort I put into the job.	1	2	3	4	5	6	7
5.	My concern with quality.	1	2	3	4	5	6	7
6.	Meeting the budget.	1	2	3	4	5	6	7
7.	My attitude toward my work and company.	1	2	3	4	5	6	7
8.	My ability to handle my work force.	1	2	3	4	5	6	7

**Procedural Justice**

Please respond to each of the following questions by circling a number from 1 to 7.

	<b>Very Unfair</b>							<b>Very Fair</b>
How fair are the procedures used to evaluate employee performance?	1	2	3	4	5	6	7	
How fair are the procedures used to determine promotions?	1	2	3	4	5	6	7	
How fair are the procedures used to communicate performance feedback?	1	2	3	4	5	6	7	
How fair are the procedures used to determine pay increases?	1	2	3	4	5	6	7	

**Propensity to Create Budgetary Slack**

Please respond by circling a number from 1 to 7 for each of the following statements.

	<b>Strongly Disagree</b>							<b>Strongly Agree</b>
1. To protect myself, I submit a budget that can safely be attained.	1	2	3	4	5	6	7	
2. I set two levels of standards to be safe: one between myself and my immediate superior, and another between myself and top management.	1	2	3	4	5	6	7	
3. In good business times, my superior is willing to accept a reasonable level of slack in the budget.	1	2	3	4	5	6	7	
4. Slack in the budget is good to do things that cannot be officially approved.	1	2	3	4	5	6	7	