

Budget Participation's Influence on Budget Slack: The Role of Fairness Perceptions, Trust and Goal Commitment

Adam S. Maiga*
Fred A. Jacobs**

Abstract

This research uses structural equation modelling to investigate a comprehensive model of the relationships between budget participation, procedural fairness, distributive fairness, trust, goal commitment and managers' propensity to create slack. To this end, data from 163 U.S. individual managers were used for the study. The results show that budget participation impacts both procedural fairness and distributive fairness which, in turn, affect trust. Also, both procedural fairness and trust are found to have a significant impact on budget goal commitment which, in turn, negatively influences managers' propensity to create slack. Further analyses indicate that the direct relationship between budget participation and manager's propensity to create slack was insignificant, which suggests that fairness and goal commitment mediate the relationship between budget participation and manager's propensity to create slack. The applied implications of this study, especially in relation to individual reactions to being 'laid-off', are also discussed.

Keywords

Budget
Distributive Fairness
Procedural Fairness
Trust
Goal Commitment
Budget Slack

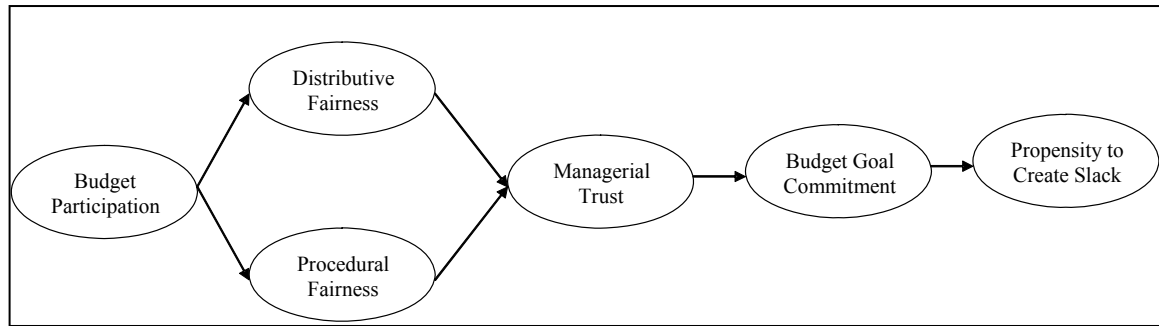
Introduction

Participative budgeting is one of the most exhaustively researched area of management accounting. More recent studies (Sharma, et al, 2006; Lau and Buckland, 2000; Perez and Robson, 1999) continue to explore participative budgeting variables. Yet the cumulative results of these (not inconsiderable) efforts have been decidedly mixed. Budget participation has been found to be positively associated with performance outcomes as often as not (Dunk and Nouri, 1998; Shields and Shields, 1998), suggesting that budget participation does not have a direct effect on performance, but rather is conditioned on other intervening variables (Sharma, et al, 2006; Shields and Shields, 1998). The joint consideration of fairness perceptions, trust and goal commitment therefore provides a more complete model of performance during budgeting and contributes to the existing literature by offering insight into the process by which fairness perceptions, trust and goal commitment might translate into enhanced performance. However, although empirical findings support a positive relationship between perceptions of fairness, trust and commitment and individuals' attitudes in budget settings to affect performance (Wentzel, 2002; Lindquist, 1995; Magner and Johnson, 1995; Magner and Welker, 1994), the methodological approaches by which the integration of these perceptions translate into budgetary slack reduction has not been directly addressed.

The purpose of this study is to integrate prior studies on budget participation, using *structural equation modelling* to investigate whether fairness perceptions (i.e. distributive and procedural fairness) increase managers' trust and commitment to budgetary goals. The joint consideration of fairness perceptions, trust and goal commitment therefore provides a more complete model during budgeting and contributes to the existing literature by offering insight into the process by which budget participation might translate into lower propensity to create slack.

* Florida International University, USA

** Luleå University of Technology, Sweden

Figure One: Theoretical Model

Such insight is useful based on reviews of the budgeting literature that consistently emphasize the need for richer theoretical models to better explain how participation is effective (Shields and Shields, 1998; Greenberg et al., 1994; Shields and Young, 1993; Brownell, 1982). The findings of this study therefore are directly applicable and practically significant to managers involved in scarce resource allocation decisions.

The remainder of this paper is organised as follows. In the next section, the relevant literature is reviewed and the hypotheses are developed. The methodology and statistical results are discussed in the third and fourth sections, respectively. The paper concludes with a discussion of the findings and suggestions for future research.

Literature Review and Hypothesis Development

A model (see Figure One) is proposed in which fairness perceptions, trust and goal commitment mediate the relationships between budget participation and managers' propensity to create slack. Specifically, the model contends that more participation during budgeting fosters a higher sense of procedural and distributive fairness, which, in turn, increase managers' trust in the budgeting process. Managers' trust in the budgeting process, in turn, is expected to affect managers' propensity to create slack through budget goal commitment.

Budget Participation and Distributive Fairness

Distributive fairness is a proportionality concept grounded in equity theory (Gilliland, 1993; Cohen, 1987). In the

budgeting literature, the concept of distributive fairness is related to the concept of "fair share." In an organisational context, a fair share is an expectation concerning the size of the resource distribution that a manager should receive relative to other managers. It reflects the "base" distribution that managers receive in the previous budget period adjusted for a proportion of any increase (decrease) in the firm's total distribution in the forthcoming budget period. This notion is in accordance with equity theory which suggests that individuals may perceive distributive fairness as the ratio of their outputs to inputs. Distributive fairness occurs when inputs and outputs are balanced; in other words, when this ratio is perceived to equal one, i.e., one gets what "they deserve."

In participative budgeting, if budget attainability is viewed as the output from a relationship then an individual's ability and effort to achieve budget can be viewed as inputs. When ability and effort are matched to budget attainability, distributive fairness ensues. When effort and ability are unequal to budget attainability, however, distributive unfairness exists (Wentzel, 2002).

While there is little empirical evidence on the relationship between participation in the budgeting process and distributive fairness, this study contends that involvement in budgetary processes provides managers with opportunities to influence allocative decisions. Perceptions of distributive fairness therefore should increase as opportunities to procure more favourable budget allocations increase. The following

hypothesis tests for this positive association:

H₁: *Managers' perceptions of budgetary participation and distributive fairness are positively related.*

Budget Participation and Procedural Fairness

Procedural fairness theory is concerned with the impact of the fairness of decision-making procedures on the attitudes and behaviour of the people involved in and affected by those decisions (Lind and Tyler, 1988; Leventhal, 1980). In a budget setting, managers may view the fair enactment of budgetary procedures as a necessary, but not sufficient condition, for overall procedural fairness in budgeting. If this necessary condition is not met, managers may care little about the fairness of the formal budgetary procedures themselves (with which they are less familiar and whose personal impact is less direct). If, on the other hand, the superior enacts budgetary procedures fairly and thereby fulfils the necessary condition for overall procedural fairness in budgeting, then managers may look beyond how the procedures were enacted to focus on the fairness of the formal procedures themselves. In the case where managers perceive that budget procedures were enacted fairly, managers may seek information that will allow them to assess whether the formal budgetary procedures present threats to overall procedural fairness in budgeting that their superior will be unable to fully neutralize through his or her budget-related behaviour (Wentzel, 2002). For example, if formal budgetary procedures are not structured to ensure that budgetary decisions reflect accurate information or to allow for the appeal of budgetary decisions, managers are unlikely to view the budgetary process as entirely fair regardless of how their superior carries out the procedures.

Procedural fairness recognizes the positive benefits of allowing employees to participate in decision-making (Lind and Tyler, 1988). For example, empirical research by Shapiro and Brett (1993) found

that a decision maker's behaviour, including the extent to which he or she showed consideration of input, was significantly related to perceptions of procedural fairness. Also, other research has shown that even if outcomes are not favourable to an individual, they are less likely to be dissatisfied with those unfavourable outcomes if they believe that the procedures used to derive them are fair (Lind and Tyler, 1988, Folger and Bies, 1989). A positive relationship between budget participation and manager's perception of procedural fairness is stated in H₂.

H₂: *Managers' perceptions of budgetary participation and procedural fairness are positively related.*

Fairness and Trust

Strategic decisions will not always be made by consensus, nor will a superior's decisions always equally favour all managers. Consequently, the superior needs the trust of managers to maintain direction over the process of making and implementing strategic decisions.

Procedures involving meaningful participation are likely to affect managers' feelings of trust in their superiors. Brockner and Siegel (1995) argue that individuals may view the structural (e.g., decision/process control) and interpersonal components of procedural fairness in the organisation as indicative of how they will be treated by the organisation and managers' superiors. Procedures that are structurally and interactionally fair will "engender trust in the system and in the implementers of decisions, whereas a lack of structural and/or interactional fairness will elicit low levels of trust" (Brockner and Siegel, 1995). We would extend this same logic to distributive fairness. That is, when distributions of organisational outcomes are seen as fair, higher levels of trust ensue although it is likely that if the methods or procedures by which outcomes are determined are perceived to be fair, the fairness of the outcomes may not be as significant in eliciting trust (Pillai et al., 1999).

Several studies have demonstrated that perceptions of procedural fairness are positively related to trust in the superior or decision maker (Alexander and Ruderman, 1987; Folger and Konovsky, 1989; McFarlin and Sweeney, 1992; Pillai et al., 1999). For example, Alexander and Ruderman (1987) found a positive relationship between perceptions of both procedural fairness and distributive fairness and trust in upper-level management. Similar results were obtained by Lind and Tyler (1988). This suggests that managers' perceptions of fairness may be important in the process of building trust (Folger and Konovsky, 1989; Lind and Tyler, 1988). Also, as human resource practices, distributive and procedural fairness have been empirically shown to be related to trust (Pearce et al., 1998).

The research model depicted in Figure One suggests that perceptions of both procedural and distributive fairness may be related to trust. Thus, the following hypotheses are posited:

- H₃:** *Distributive fairness is positively related to managerial trust*
H₄: *Procedural fairness is positively related to managerial trust*

Managerial Trust and Budget Goal Commitment

Trust is so important to relational exchanges that Spekman (1988) postulates it to be the cornerstone of the strategic partnership. Bass (1985) suggests that trust may be important to superiors because of the need to mobilize follower commitment towards the superior's vision. Thus, it is very unlikely that a superior who is not trusted by his/her followers can successfully achieve commitment to a vision because a lack of confidence in the superior will reduce the appeal of the vision. This argument is supported by Achrol (1991), and Moorman et al. (1992) who posit that trust is a major determinant of commitment. Liou (1995) found that trust in the superior and the organisation was predictive of commitment to the organisation. Inferentially then, trust in superior-manager relations will influence

manager budget goal commitment. Hence, consistent with the above arguments, it is proposed that, in a budget setting, the higher the managers' trust in the superior, the higher the commitment to the budget goal. Therefore, we hypothesize as follows:

- H₅:** *Managerial trust is positively related to budget goal commitment*

Budget Goal Commitment and Managers' Propensity to Create Slack

Budget goal commitment is defined in this study as the determination to seek to attain a budget goal and the persistence or determination in pursuing it over time (Locke et al., 1981). Commitment to budget goals is particularly important since the productivity of the managers determines, to a large extent, whether the organisation is able to achieve its objectives (Wentzel, 2002). Locke et al. (1988) contend that it is virtually axiomatic that if there is no commitment to goals, the goal setting does not work. Numerous studies demonstrate that individuals perform better when they accept and commit to attain a particular goal (Locke and Latham, 1990; Locke et al., 1988). For example, Kren (1990) found that it is commitment to goal which acts to mobilize effort and increase persistence and thus is the most direct determinant of performance. Also, Magner et al. (1996) argued that managers who are highly committed to their budget goals seek to "interact with people who can provide insight into their work environment, performance goals, task strategies, and other issues that have an important impact on their performance." Hence, the above argument leads to the following hypothesis:

- H₆:** *Budget goal commitment is negatively associated with managers' propensity to create slack.*

Research Method

Sample and Procedure

The objective of this study is to investigate whether budget participation decreases managers' propensity to create slack in the presence of procedural and distributive fairness, trust and commitment to budgetary

goals. To this end, a survey questionnaire was used as a cost-effective method to collect data from a cross-section of manufacturing business units (SBUs) listed in Dunn and Bradstreet. A total of 517 managers' names were randomly selected.¹ A self-addressed, postage paid envelope was attached for returning the completed questionnaire directly to the researcher. The survey cover letter promised anonymity and described the objectives of the study. As an inducement to reply, respondents were promised summarized results of the study (respondents were asked to include a business card). A follow-up letter and another copy of the questionnaire were sent after four weeks in order to increase the response rate and to test for non-response bias.

The initial mailing was made to 517 SBUs of which 159 returned questionnaires. The second mailing was carried out four weeks later yielding an additional 85 questionnaires for a 47% overall response rate. The following criteria were used for inclusion of the responses in the data analysis: (1) each participant had budget responsibility in the sub-unit; (2) each sub-unit was an investment centre, and (3) each manager held the position for at least two years with the business unit. This led to the exclusion of 45 responses. An additional 36 responses were excluded from the study for incomplete responses.² This process

¹ This sampling design enables each of the listed companies in the directory an equal chance of being selected to ensure as far as possible that the sample was representative of the population of manufacturing companies (Kerlinger 1986; Lal et al. 1996). Manufacturing companies were selected because budgets played important roles in the manufacturing industry (Umpathy 1987) and the sample enabled the hypotheses to be tested. In addition, the choice of industry is consistent with other budget participation studies (e.g. Brownell 1985; Brownell and McInnes 1986; Chenhall and Brownell 1988; Kren 1992). Hence, the results of this study can be compared with these studies.

² Because of contravening company policy, some preferred not to participate.

resulted in 163 usable responses or a 31.53% usable response rate.³

Measurement and Validation of Variables

The variables used to test the hypotheses are budget participation, procedural fairness, distributive fairness, trust, budget goal commitment and managers' propensity to create slack. The data on these variables are obtained from the questionnaire (see appendix for an abbreviated questionnaire).

Budget Participation. This variable is measured using the Milani (1975) six-item measure: (1) "I am involved in setting all of my budget," (2) "My superior clearly explains budget revisions," (3) "I have frequent budget-related discussions with my superior," (4) "I have a great deal of influence on my final budget," (5) "My contribution to the budget is very important," and (6) "My superior initiates frequent budget discussions when the budget is being prepared." The response scale is a seven-point Likert-type scale ranging from (1) "strongly disagree" to (7) "strongly agree."

Distributive Fairness. Following Magner and Johnson (1995) and Greenberg (1993), distributive fairness was measured using managers' responses to five items. Four of these items were adapted from Magner and Johnson's (1995) distributive fairness scale. Magner and Johnson's (1995) scale was developed for use in a budgeting environment and assesses various comparative bases (needs, expectations, and what is deserved) that managers may use when judging the fairness of distributions.

³ To investigate the possibility of nonresponse bias in the data, the surveys were tested for statistically significant differences in the responses between the early and late waves of returned surveys, with the last wave of surveys received considered to be representative of nonrespondents (Armstrong and Overton 1977). T-tests were performed to compare the mean scores of the early and late responses. The t-tests yielded no statistically significant differences among the survey items, suggesting that nonresponse bias was not a problem in this study.

Additionally, an item was added to address the interpersonal facet of distributive fairness (Greenberg, 1993). Hence, the following were used to assess distributive fairness using a seven-point Likert scale, with possible responses ranging from (1) “strongly disagree” to (7) “strongly agree.”: (1) “My responsibility area received the budget that it deserved,” (2) “The budget allocated to my responsibility area adequately reflects my needs,” (3) “My responsibility area's budget was what I expected it to be,” (4) “I consider my responsibility area's budget to be fair,” and (5) “My supervisor expresses concern and sensitivity when discussing budget restrictions placed on my area of responsibility.”

Procedural Fairness. This variable was assessed using responses to eight procedural fairness statements on a seven-point Likert-scale ranging from (1) “strongly disagree” to (7) “strongly agree.” Six items were adapted from Magner and Johnson's (1995) scale, which pertains to five of Leventhal's (1980) six rules for determining the fairness of allocation procedures: (1) “Budgeting procedures are applied consistently across all responsibility areas,” (2) “Budgeting procedures are applied consistently across time,” (3) “Budgetary decisions for my area of responsibility are based on accurate information and well-informed opinions,” (4) “The current budgeting procedures contain provisions that allow me to appeal the budget set for my area of responsibility,” (5) “The current budgeting procedures conform to my own standards of ethics and moral,” and (6) “Budgetary decision makers try hard not to favour one responsibility area over another.” Additionally, two items were developed to address Leventhal's (1980) representativeness rule and the informational facet of procedural fairness (Greenberg, 1993): (7) “The current budgeting procedures adequately represent the concerns of all responsibility areas,” and (8) “Budgetary decision makers adequately explain how budget allocations for my responsibility area are determined.”

Managerial Trust. Trust was measured by a four-item seven-point instrument developed by Zand (1972).⁴ The items included in the measurement of trust were: (1) “You have learned from your experience during the past two years that you can trust the other members of top management.” (2) “You and other top managers openly express your differences and your feelings of encouragement or disappointment,” (3) “You and the others share all relevant information and freely explore ideas and feelings that may be in or out of your defined responsibility,” and (4) “The result has been a high level of give and take and mutual confidence in each other's support and ability.” The possible responses ranged from (1) “strongly disagree” to (7) “strongly agree.”

Budget Goal Commitment. This variable was measured using a three-item scale based on Latham and Steele (1983) (also see Erez and Arad, 1986). Respondents were asked to indicate on a seven-point Likert-scale the following: (1) “Commitment to a goal means acceptance of it as your own personal goal and your determination to attain it. How committed are you to attaining your responsibility area's budget?” (1 = not at all committed, 7 = very committed), (2) “How important is it to you to at least attain your responsibility area's budget?” (1 = very unimportant, 7 = very important), and (3) “To what extent are you striving to attain your responsibility area's budget?” (1 = “to no extent”, 7 = “to a great extent”).

Propensity to Create Slack. Propensity to create slack is operationalised using the three-item scale used in Hughes and Kwon

⁴ Zand (1972) developed this four item instrument to induce a mental set toward high trust among his respondents comprising managers. According to Zand (1972), trust, in relation to this instrument, is regarded ‘not [as] a personality variable, that is, an element of individual character, but as an induced attitude, one that the individual could alter in a situation in which he/she was led to intend and to expect trust (or mistrust) of others.’ This instrument was appropriate here, as trust was also not regarded as a personality variable but an induced mental state.

(1990) and Kren (1993) and adapted from Merchant (1985). Merchant’s original four-item scale was examined by Hughes and Kwon (1990) who suggested deleting one item to improve the scale’s reliability. Thus this study uses the three items suggested by Hughes and Kwon (1990): (1) “To protect himself, a manager submits a budget that can safely be attained,” (2) “In good business times, your superior is willing to accept a reasonable level of slack in the budget,” and (3) “Slack in the budget is good to do things that cannot be officially approved.” The response scale is a seven point Likert-type scale ranging from (1) “strongly disagree” to (7) “strongly agree.”

Results

Descriptive Statistics

The responding business units included manufacturers of textile mill products, apparel and other fabricated textile products, furniture, paper, chemical and allied products, rubber and plastics, primary

metals, fabricated metals, industrial equipment, electronic and other electric equipment, motor vehicles, instruments and related products, and other manufacturing. Table One, Panel A provides a more detailed classification of the businesses in this study.

Additional information on respondents’ characteristics is provided in Table One, Panel B. Respondents to the question regarding number of years with the division have a mean of 5.57 years in their current position. To the number of years in management question, respondents indicated a mean of 16.70 years. The results also show that the average number of employees equals 194. For the 109 divisions that provided sales figures, the mean was \$69.16 million. Given their tenure with the business sub-unit and their management experience, the respondents are well qualified to provide the information requested.

Table One: Descriptive Statistics

PANEL A: Distribution of Two-Digit Industry Classifications				
SIC Industry Code	Organisation Type	Number of Business Units Used in the Study		%
22	Textile mill products	9		5.55
23	Apparel and other fabricated textile products	7		4.29
25	Furniture	6		3.68
26	Paper	3		1.84
28	Chemical and allied products	18		11.10
30	Rubber and plastics	11		6.74
33	Primary metals	9		5.52
34	Fabricated metals	10		6.13
35	Industrial equipment	34		14.72
36	Electronic and other electric equipment	31		19.01
37	Motor vehicles	13		7.97
38	Instruments and related products	15		9.20
39	Other manufacturing	7		4.29
		163		
PANEL B: Respondents’ Characteristics				
	Minimum	Maximum	Mean	Standard Deviation
Firm size (number of employees)	251	1247	194.416	162.43
Length at present position (in years)	4	19	5.57	42.18
Total sales (in millions)	3.14	506	69.16	266.34
Length in management (in years)	3.00	29	16.70	9.73

Analysis of Measurement Model

The measurement model was evaluated by confirmatory factor analysis which assessed whether all items in a given scale represented the same latent factor. The measurement model of this study consists of six factors (budget participation, distributive fairness, procedural fairness, managerial trust, budget goal commitment and propensity to create slack). The content validity of the current instrument is assured by an extensive review of the literature.

Composite reliability measures the internal consistency of the construct's indicators, similar to Cronbach alpha coefficient (Fornell and Larcker, 1984). Table 2 shows that composite reliability measures were .915 for budget participation, .929 for distributive fairness, .923 for procedural fairness, .794 for trust, .902 for budget goal commitment, and .715 for propensity to create slack. Hence, all measures demonstrated acceptable reliabilities, with coefficients above .70. Nunnally (1967), among others, has noted that this is an acceptable standard for the reliability of measures.

Also, Table Two shows the variances extracted⁵ were 91.55% for budget participation, 78.14% for distributive fairness, 80.58% for procedural fairness, 75.14% for trust, 84.99% for budget goal commitment, and 77.29% for propensity to create slack. This finding supports the convergent validity of the indicators (Anderson and Gerbing, 1988). Taken together, the above results support the use of the full measurement model and its constructs and indicator variables for testing the study's hypotheses.

Analysis of the Structural Model

In this section, the measures of fit are assessed using structural equation modelling. At present, there is no consensus on a single or even a set of measures of fit

⁵ Variance extracted estimates assess the amount of variance that is captured by and underlying factor in relation to the amount of variance due to measurement error (Fornell and Larcker 1981).

(Maruyana, 1998). Thus, it is standard practice to report several measures. We outline below some of the most common measures used in the literature.

- (1) The ratio Chi-square test statistic over the degrees of freedom (χ^2/df). Good fitting models evidence a ratio of 2.0 or less (Wheaton et al., 1977).
- (2) Goodness-of-Fit Index (GFI) (Bentler and Bonett, 1980) is based on a χ^2 likelihood test of the hypothesized model with a null model (no relationships among constructs). Typically, GFI numbers greater than 0.8 indicate a good fit.
- (3) Comparative Fit Index (CFI) and Normed Fit Index (NFI) (Bentler and Bonett, 1980). Both these measures compare the research model specified with the null model (no relationships). The NFI can be viewed as a percent improvement over the null model but does not adjust for the number of parameters in the model. The CFI is based on the χ^2 distribution and ranges from 0 to 1 with values exceeding 0.9 considered good.
- (4) Root Mean Square Error of Approximation (RMSEA) (Steiger, 1990) is computed as the difference between the residuals in the estimated and specified models. A value less than 0.08 is considered a good fit⁶. This value indicates that the difference between reproduced and observed covariances are small.

Furthermore, to evaluate the condition for mediation, between-model comparisons were undertaken using the χ^2 difference test recommended by Bollen (1989) and others (e.g., Hayduk, 1987; Joreskog and Sorbom, 1993; Medsker et al., 1994), along with differences in the fit indices (Gerbing and Anderson, 1992; Medsker et al, 1994; Tanaka, 1993).

⁶ Browne and Cudeck (1993) recommend using models with RMSEA scores of .08 or below.

Table Two: Measurement Characteristics of Study Constructs

Variable	Item Loading	Composite Reliability	Variance Extracted Estimate
<i>Participation</i>		.915	91.55%
1. I am involved in setting all of my budget	.755		
2. My superior clearly explains budget revisions	.977		
3. I have frequent budget-related discussions with my superior	.956		
4. I have a great deal of influence on my final budget	.973		
5. My contribution to the budget is very important	.953		
6. My superior initiates frequent budget discussions when the budget is being prepared	.879		
<i>Distributive Fairness</i>		.939	78.14%
1. My responsibility area received the budget that it deserved	.941		
2. The budget allocated to my responsibility area adequately reflects my needs	.932		
3. My responsibility area's budget was what I expected it to be	.763		
4. I consider my responsibility area's budget to be fair	.864		
5. My supervisor expresses concern and sensitivity when discussing budget restrictions placed on my area of responsibility	.902		
<i>Procedural Fairness</i>		.923	80.58%
1. Budgeting procedures are applied consistently across all responsibility areas	.976		
2. Budgeting procedures are applied consistently across time	.834		
3. Budgetary decisions for my area of responsibility are based on accurate information and well-informed opinions	.721		
4. The current budgeting procedures contain provisions that allow me to appeal the budget set for my area of responsibility	.778		
5. The current budgeting procedures conform to my own standards of ethics and morality	.869		
6. Budgetary decision makers try hard not to favour one responsibility area over another	.884		
7. The current budgeting procedures adequately represent the concerns of all responsibility areas	.761		
8. Budgetary decision makers adequately explain how budget allocations for my responsibility	.723		
<i>Managerial Trust</i>		.794	75.14%
1. You have learned from your experience during the past two years that you can trust the other members of top management	.736		
2. You and other top managers openly express your differences and your feelings of encouragement or disappointment	.843		
3. You and the others share all relevant information and freely explore ideas and feeling that may be in or out of your defined responsibility	.864		
4. The result has been a high level of give and take and mutual confidence in each other's support and ability	.785		

Table Two (continued)

Goal Commitment		.715	77.29%
1. Commitment to a goal means acceptance of it as your own personal goal and your determination to attain it. How committed are you to attaining your responsibility area's budget?	.803		
2. How important is it to you at least attain your responsibility area's budget?	.737		
3. To what extent are you striving to attain your responsibility area's budget?	.733		
Propensity to Create Slack		.715	77.29%
1. To protect himself, a manager submits a budget that can safely be attained	.749		
2. In good business times, your superior is willing accept a reasonable level of slack in the budget	.737		
3. Slack in the budget is good to do things that cannot be officially approved	.733		

The Akaike's (1987) information criterion (AIC) was also used to evaluate the relative fit of our best fitting model and the non-nested alternative model. The model with the smaller AIC value is considered the better fitting model (Joreskog and Sorbom, 1993).

The following models were tested and compared to the theoretical Model (model 1) presented in Figure One: Model 2 tests the relationships between budget participation and trust, Model 3 tests the relationship between budgetary participation and budget goal commitment, Model 4 tests the relationship between budget participation and budgetary slack, Model 5 tests the relationships between distributive fairness with budget goal commitment, model 6 tests the relationship between distributive fairness and budget slack, Model 7 tests the relationship between procedural fairness and budget goal commitment, and model 8 tests the relationship between procedural fairness and budgetary slack, and Model 9 tests the relationship between trust and budget slack.

The overall fit statistics for the theoretical model are reported in Table 3. The results reveal that the proposed theoretical model

fits the data. First, the Chi-square is 337.773 with 302 degrees of freedom resulting in a ratio of 1.118 which is less than 2.0 suggesting a good fit (Wheaton et al., 1977). Second, all measures of relative and absolute fit indices, including the goodness-of-fit (GFI), the comparative fit (CFI) and the normed fit (NFI) indices exceed .90. Noting that different fit indices have different strengths and weaknesses, the consistency in exceeding the target value of 0.90 for good-fitting models is encouraging. Third, the difference between reproduced and observed covariances are small as evidenced by the root mean square error of approximation (RMSEA) of .023.

Table Four shows that when each of the models (Model 2 through 9) are compared to the theoretical model (Model 1), Model 7 is the only one that yields a χ^2 -change that is statistically significant ($\Delta \chi^2 = 2.738$, $\Delta df = 1$, $p < .05$). Therefore, on the basis of fit indices, Model 7 provides the best fit. Additionally, the AIC values show that Model 7 has a smaller AIC (663.035) than the theoretical model (663.773), therefore reinforcing our finding that Model 7 is a best fitting model than the model originally theorized in Figure One.

Table Three: Overall Fit Summary of the Theoretical Model

	Result	Acceptable Fit Standard
Statistical Tests		
Chi-Square	337.773	N/A
Df	302	N/A
p-value	.089	>.05
Ch-Square/df	1.118	<2.0
Fit Indices		
GFI	.915	>.90
CFI	.997	>.90
NFI	.958	>.90
Residual Analysis		
RMSEA (95% Confidence Level)	.023 (.000-.039)	<.05

GFI = Goodness of Fit Index. Higher values indicate better fit
 CFI = Comparative Fit Index
 NFI = Normed Fit Index
 RMSEA = Root Mean Square Error for Approximation. Lower values indicate better fit

Table Four: Results of Model Comparisons

Models	χ^2	df	$\Delta \chi^2$	Δdf	GFI	CFI	NFI	TLI	RMSEA	AIC
1. Theoretical Model	337.773	302	–	–	.883	.995	.956	.993	.027	663.773
2. Model 2	337.545	301	.228**	1	.883	.995	.956	.993	.027	665.545
3. Model 3	336.206	301	1.567*	1	.884	.995	.956	.993	.027	664.206
4. Model 4	337.147	301	.626*	1	.883	.995	.956	.993	.027	665.147
5. Model 5	336.140	301	1.633*	1	.884	.995	.957	.993	.027	664.140
6. Model 6	337.558	301	.215*	1	.883	.995	.956	.993	.027	665.518
7. Model 7	335.035	301	2.738**	1	.884	.995	.957	.993	.026	663.035
8. Model 8	336.384	301	1.389*	1	.884	.995	.957	.993	.027	664.386

Notes:
 * p-value > .05, ** p-value < .05
 Model 2 adds path from Budget Participation to Trust
 Model 3 adds path from Budget Participation to Budget Goal Commitment
 Model 4 adds path from Budget Participation to Managers' Propensity to Create Slack
 Model 5 adds path from Distributive Fairness to Budget Goal Commitment
 Model 6 adds path from Distributive Fairness to Managers' Propensity to Create Slack
 Model 7 adds path from Procedural Fairness to Budget Goal Commitment
 Model 8 adds path from Procedural Fairness to Managers' Propensity to Create Slack
 Model 9 adds path from Trust to Managers' Propensity to Create Slack

Next, we examine the standardized parameter estimates for Model 7 (see Table Five and Figure Two). The standardized parameter estimate between budget participation and distributive fairness is positive and significant ($z = .231, p < .001$).

Thus, H_1 is supported. Furthermore, the standardized parameter estimate between budget participation and procedural fairness is positive and statistically significant ($z = .225, p < .001$), supporting H_2 . Consistent

with H_3 and H_4 , both distributive fairness and procedural fairness have a significant positive impact on trust ($z = .681, p < .005$ and $z = .555, p < .001$, respectively). Trust, in turn, is positively related to budget goal commitment ($z = .245, p < .05$), supporting H_5 . Budget goal commitment has a significant negative impact on managers' propensity to create slack ($z = -.689, p < .001$). Thus, H_6 is supported. Further analysis of the theoretical model led to a (non-hypothesized) marginally significant

positive relationship between procedural fairness and budget goal commitment ($z = .401, p < .10$).

The squared multiple correlations (R^2) (see Table Five) of the endogenous constructs indicate that budget participation explains a small amount of variance in both distributive fairness and procedural fairness

($R^2 = 15.10\%$ and 15.30 , respectively), while both distributive fairness and procedural fairness explain a high variance in trust (95.70%). Trust and procedural fairness explain 29.90% of the variance in budget goal commitment which, in turn, explains 37.20% of the variance in managers' propensity to create slack.

Table Five: Estimated Measurement Coefficients

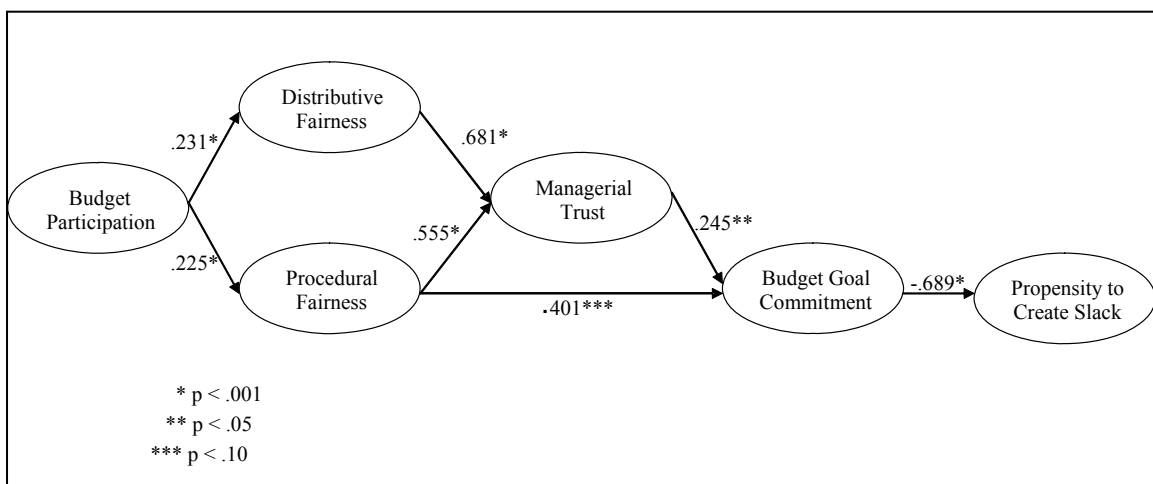
	Standardised Coefficient	P=value
H1: Budget Participation – Distributive Fairness	.231	= .000
H2: Budget Participation – Procedural Fairness	.225	= .005
H3: Distributive Fairness – Managerial Trust	.681	= .000
H4: Procedural Fairness – Managerial Trust	.555	= .000
H5: Trust – Budget Goal Commitment	.245	= .027
* Procedural Fairness – Budget Goal Commitment	.401	= .061
H6: Budget Foal Commitment – Propensity to Create Slack	-.689	= .000

* Non hypothesized path

Explained Variances

R^2 for Distributive Fairness	.151
R^2 for Procedural Fairness	.153
R^2 for Trust	.957
R^2 for Budget Goal Commitment	.299
R^2 for Propensity to Create Slack	.372

Figure Two: Model Path Significance Results and Explained Variance



Summary and Discussion

As argued by Brownell (1982), the impact of budget participation on budget slack might be contingent on other groups of variables such as cultural, organisational, and interpersonal. Hence, drawing on previous research, the primary aim of this study is to provide empirical evidence about the mediating effects of fairness, trust, and budget goal commitment on the relationship between budget participation and managers' propensity to create slack. To this end, a random sample of 163 managers was obtained through a survey questionnaire.

The results from our initial analysis (Table Four) indicate that the theoretical model provides only a limited explanation of the structural relationships among the variables. The inclusion of the relationship between procedural fairness and budget goal commitment substantially improved model fit. Using guidelines suggested by Anderson and Gerbing (1988), we found Model 7 to be the most preferred model (for the reasons explained earlier). Using this model, the finding of a significant positive relationship between procedural fairness and commitment is consistent with research by Wentzel (2002) and Moorman et al. (1992), while the lack of a significant relationship between distributive fairness and commitment is consistent with other research (Konovsky and Pugh, 1994; Moorman et al., 1992).

Overall, our results support the invariance of model parameters, except for the need to add one additional relationship in the theoretical model--the link between procedural fairness-budget goal commitment. This suggests that all of the hypothesized relationships are supported and that some "situational" or "context-specific" effects were present as well.

More specifically, this study extends our understanding of the link between budget participation and budget slack and contributes to the accounting literature by testing a more complex model of the budgetary participation-budget slack relationship. The proposed model suggests that budget participation impacts both

procedural fairness and distributive fairness which, in turn, affect trust. Also, both procedural fairness and trust are found to have a significant impact on budget goal commitment which, in turn, influences managers' propensity to create slack. Therefore, superiors should work toward fostering managers' budget goal commitment through fairness perceptions and trust. This is an important finding as prior studies relating budget participation and budget slack have not considered these variables simultaneously.

These findings are both intuitively and practically significant because they demonstrate the process by which fairness perceptions, trust and commitment translate into reduced budgetary slack. Our understanding of the complex budgetary process is thus enhanced by the joint recognition of fairness, trust and goal commitment as mediating variables between the level of participation and budgetary slack. Furthermore, the findings provide practical guidance to managers involved in scarce resource allocation decisions.

Our results have practical implications for officials who are involved in designing their organisation's budgetary system. For example, the results of this study may assist top management to better understand the importance of budget participation in enhancing fairness that, in turn, is expected to create trust that leads to budget goal commitment that is finally translated into reduced propensity to create slack. This will assist them to select the appropriate level of budgetary participation that is associated with the enhancement of fairness that leads to trust that leads to lower propensity to create slack through budget goal commitment.

There are a number of limitations in this study. First, this study used two measures of fairness (Magner and Johnson, 1975; Greenberg, 1993; Levanthal, 1980), one measure of trust (Zand, 1972) and goal commitment (Latham and Steele, 1983; Erez and Arad, 1986) as mediating variables. Future research should focus on other measures of the same variables and

other contingent variables in order to develop a comprehensive and integrated model specifying the conditions under which budgetary participation will produce favourable outcomes. Second, since this study was undertaken with a sample of managers drawn from the manufacturing sector, the results may not be generalized to managers at other sectors. Third, even though the survey method is a well-documented research methodology, the results of this study may, nevertheless, be affected by the usual limitations associated with this research method. Hence, future research could go well beyond the specific suggestions made here. Fourth, field evidence of these issues, and well-designed experimental and archival tests are needed to distinguish among different explanations for observed behaviour to support the predictions being tested. Finally, in the context of the current trend of layoffs in American business, there is another very practical implication of these results.

A study by Brockner et al. (1994) provided support for an interaction between procedural and distributive justice in the context of layoffs. Specifically, their study demonstrated that when procedural justice was perceived to be low, individuals who were laid off or survived layoffs reacted more negatively when outcomes were also perceived to be negative. However, when procedural justice was high, outcome negativity was not related to individuals' reactions. Based on this line of research and the findings of this study, it is proposed that managers are probably likely to re-evaluate their psychological contract with the organisation in a negative light, based on their perceptions of procedural justice. These negative perceptions also serve to diminish trust between superior and manager. It is, therefore, possible that commitment to budget goal may decrease as a result of such distrust. Given that companies are increasingly relying on the exceptional efforts of fewer and fewer people ("doing more with less"), the individuals who run these companies may have to balance the need for reduced staffing (to increase productivity) with preserving and communicating a concern

for the human capital of the organisation (Pillai et al., 1999).

Notwithstanding these limitations, the results help to reconcile the results reported by previous research in this area and thereby improve our understanding of the effect of participation on managers' propensity to create slack in a budgetary context. On the basis of the present findings it would appear that an organisation is likely to be better off following a budgeting style that is congruent with its managers' perceptions of fairness, trust, and goal commitment.

Appendix One

The Survey Instrument

Part I.

1. Is your division an investment centre?
_____ Yes _____ No
2. Do you have a budget responsibility in your division? _____ Yes _____ No

Part II.

If your answer to Part I is **yes**, please answer the remaining parts of the questionnaire, otherwise stop at Part IV and return the questionnaire.

Participation (Milani, 1975)

(1 = strongly disagree, 2 = moderately disagree, 3 = mildly disagree, 4 = neutral, 5 = mildly agree, 6 = moderately agree, 7 = strongly agree)

1. I am involved in setting all of my budget
2. My superior clearly explains budget revisions
3. I have frequent budget-related discussions with my superior
4. I have a great deal of influence on my final budget
5. My contribution to the budget is very important
6. My superior initiates frequent budget discussions when the budget is being prepared

Distributive Fairness (Magner and Johnson, 1975; Greenberg, 1993)

(1 = strongly disagree, 2 = moderately disagree, 3 = mildly disagree, 4 = neutral, 5 = mildly agree, 6 = moderately agree, 7 = strongly agree)

1. My responsibility area received the budget that it deserved.
2. The budget allocated to my responsibility area adequately reflects my needs.
3. My responsibility area's budget was what I expected it to be.
4. I consider my responsibility area's budget to be fair.
5. My supervisor expresses concern and sensitivity when discussing budget restrictions placed on my area of responsibility.

Procedural Fairness (Levanthal, 1980; Magner and Johnson, 1975; Greenberg, 1993)

(1 = strongly disagree, 2 = moderately disagree, 3 = mildly disagree, 4 = neutral, 5 = mildly agree, 6 = moderately agree, 7 = strongly agree)

1. Budgeting procedures are applied consistently across all responsibility areas.
2. Budgeting procedures are applied consistently across time.
3. Budgetary decisions for my area of responsibility are based on accurate information and well-informed opinions.
4. The current budgeting procedures contain provisions that allow me to appeal the budget set for my area of responsibility.
5. The current budgeting procedures conform to my own standards of ethics and morality
6. Budgetary decision makers try hard not to favour one responsibility area over another.
7. The current budgeting procedures adequately represent the concerns of all responsibility areas.
8. Budgetary decision makers adequately explain how budget allocations for my responsibility area are determined.

Managerial Trust (Zand, 1972)

(response anchors: 1 = strongly disagree, 2 = moderately disagree, 3 = mildly disagree, 4 = neutral, 5 = mildly agree, 6 = moderately agree, 7 = strongly agree)

1. You have learned from your experience during the past two years that you can trust the other members of top management,
2. You and other top managers openly express your differences and your feelings of encouragement or disappointment,
3. You and the others share all relevant information and freely explore ideas and feeling that may be in or out of your defined responsibility,
4. The result has been a high level of give and take and mutual confidence in each other's support and ability.

Budget Goal Commitment (Latham and Steele, 1983; Erez and Arad, 1986)

1. Commitment to a goal means acceptance of it as your own personal goal and your determination to attain it. How committed are you to attaining your responsibility area's budget? (1 = not at all committed, 2 = moderately non committed, 3 = mildly non committed, 4 = neutral, 5 = mildly committed, 6 = moderately committed, 7 = very committed)
2. How important is it to you to at least attain your responsibility area's budget? (1 = very unimportant, 2 = moderately unimportant, 3 = mildly unimportant, 4 = neutral, 5 = mildly important, 6 = moderately important, 7 = very important)
3. To what extent are you striving to attain your responsibility area's budget? (1 = to no extent, 2 = moderately to no extent, 3 = mildly to no extent, 4 = neutral, 5 = mildly to a great extent, 6 = moderately to a great extent, 7 = to a great extent)

Propensity to Create Slack (Kren, 1993; Merchant, 1985; Hughes and Kwon, 1990) (response anchors: 1 = strongly disagree, 2 = moderately disagree, 3 = mildly disagree, 4 = neutral, 5 = mildly agree, 6 = moderately agree, 7 = strongly agree)

1. To protect himself, a manager submits a budget that can safely be attained
2. In good business times, your superior is willing to accept a reasonable level of slack in the budget
3. Slack in the budget is good to do things that cannot be officially approved

Part III.

Please answer the following:

1. What is the number of employees at your company? _____
2. What is your approximate dollar volume of sales? _____
2. Number of years at this position? _____
3. _____
Number of years in management

References

- Achrol, R. (1991), "Evolution of the Marketing Organization: New Forms for Turbulent Environments", *Journal of Marketing*, Vol. 55 (4), pp. 77-93.
- Akaike, H. (1987), "Factor Analysis and AIC", *Psychometrika*, Vol. 52, 317-332.
- Alexander, S. and Ruderman, M. (1987), "The Role of Procedural and Distributive Justice in Organizational Behaviors", *Social Justice Research*, pp. 177-198.
- Anderson, J. C. and Gerbing, D. W. (1988), "Structural Equation Modelling in Practice: A Review and Recommended Two-step Approach", *Psychological Bulletin*, Vol. 103 (3), pp. 411-423.
- Armstrong, J. S. and Overton, T. S. (1977), "Estimating Nonresponse Bias in Mail Survey", *Journal of Marketing Research*, Vol. 14 (3), pp. 396-421.
- Bass, B. (1985), *Leadership and Performance Beyond Expectations*. New York: Free Press
- Bentler, P. M. and Bonnet, D. G. (1980), "Significance Tests and Goodness-of-fit in the Analysis of Covariance Structures", *Psychological Bulletin*, Vol. 88, pp. 588-600.
- Bollen, K. A. (1989), *Structural Equations with Latent Variables*. New York, NY: Wiley.
- Brocker, J., Konovsky, M., Cooper-Schneider, Folger, R. and Bies, R. (1994), "Interactive Effects of Procedural Justice and Outcome Negativity on Victims and Survivors of Job Loss", *Academy of Management Journal*, Vol. 37 (2), pp. 397-409.
- Brockner, J. and Siegel, P. (1995), *Understanding the Interaction Between Procedural and Distributive Justice: The Role of Trust*. In R. M. Kramer and T. R. Tyler eds., *Trust in Organizations: Frontiers of Theory, and Research*: pp. 391-413. Thousand Oaks, CA: Sage. Burns, J. M. (1978), *Leadership*. New York: Harper & Row.
- Browne, M. and R Cudeck. (1993), *Alternative Ways of Assessing Model Fit*. In Testing Structural Equation Models, edited by K. A. Bollen and J. S. Long, pp. 136-162. Newbury Park, CA: Sage.
- Brownell, P. (1982), "The Role of Accounting Data in Performance Evaluation, Budgetary Participation, and Organizational Effectiveness", *Journal of Accounting Research*, Vol. 20, pp. 12-27.
- Brownell, P. (1985), "Budgetary Systems and the Control of Functionally Differentiated Organizational Activities", *Journal of Accounting Research* (Autumn), pp. 502-512.
- Brownell, P. and McInnes, M. (1986), "Budgetary Participation, Motivation, and Managerial Performance", *The Accounting Review*, pp. 587-600.
- Chenhall, R. H. and Brownell, P. (1988), "The Effect of Participative Budgeting on Job Satisfaction and Performance: Role Ambiguity as an Intervening Variable", *Accounting, Organizations and Society*, Vol. 13 (3), pp. 225-233.
- Cohen, R. L. (1987), "Distributive Justice: Theory and Research", *Social Justice Research*, Vol. 1, pp. 19-40.
- Dunk, A. and Nouri, H. (1998), "Antecedents of Budgetary Slack: A Literature Review and Synthesis", *Journal of Accounting Literature* Vol. 17, pp. 72-96.
- Erez, M. and Arad, R. (1986), "Participative Goal Setting: Social, Motivational, and Cognitive Factors", *Journal of Applied Psychology* Vol. 71 (4), pp. 591-597.
- Folger, R. and Bies, R. J. (1989), "Managerial Responsibilities and Procedural Justice", *Employee responsibilities and Rights Journal* Vol. 2, pp. 79-90.

- Folger, R. and Konovsky, M. (1989), "Effects of Procedural and Distributive Justice on Reactions to Pay Raise Decisions", *Academy of Management Journal*, Vol. 32, pp. 115-130.
- Fornell, C. and Larcker, D. F. (1984), "Misapplications of Simulations in Structural Equation Models: Reply to Acito and Anderson", *Journal of Marketing Research*, Vol. 21 (1), pp. 113-117.
- Fornell, C. and Larcker, D. F. (1981), "Evaluating Structural Equation Models with Observable Variables and Measurement Error", *Journal of Marketing Research*, pp. 39-50.
- Gerbing, D. W. and Anderson, J. C. (1992), "Monte Carlo Evaluations of Goodness-of-fit Indices for Structural Equation Models", *Sociological Methods and Research*, 21, pp. 132-160.
- Gilliland, S. W. (1993), "The Perceived Fairness of Selection Systems: An Organizational Justice Perspective," *Academy of Management Review* Vol. 18 (4), pp. 694-734.
- Greenberg, J. (1993), *The Social Side of Fairness: Interpersonal and Informational Classes of Organizational Justice*. In *Justice in the Workplace: Approaching Fairness in Human Resource Management*, edited by R. Cropanzano, pp. 79-103. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Greenberg, P., Greenberg, R. H. and Nouri, H. (1994), "Participative Budgeting: A Meta-analytic Examination of Methodological Moderators", *Journal of Accounting Literature* Vol. 13, pp. 117-141.
- Hayduk, L. A. (1987), *Structural Equation Modelling with LISREL: Essentials and Advances*. Baltimore, MD: John Hopkins Press.
- Hughes, M. A. and Kwon, S. Y. (1990), "An Integrative Framework for Theory Construction and Testing", *Accounting, Organizations and Society*, Vol. 15, pp. 179-191.
- Joreskog, K. G. and Sorbom, D. (1993), *LISREL 8: User's Reference Guide*. Scientific Software. Chicago, IL.
- Kerlinger, F. N. (1986), *Foundations of Behavioral Research*. New York, NY.
- Konovsky, M. A. and Pugh, S. D. (1994), "Citizenship Behaviour and Social Exchange", *Academy of Management Journal*, Vol. 37 (3), pp. 656-669.
- Kren, L. (1990), "Performance-based Control System: An Extended Expectancy Theory Model Approach", *Journal of Management Accounting Research*, Vol. 2, pp. 100-112.
- Kren (1992), "Budgetary Participation and Managerial Performance: The Impact of Information and Environmental Volatility", *The Accounting Review*, pp. 511-526.
- Kren, L. (1993), "Control system effects on budget slack", *Advances in Management Accounting*, Vol. 2, pp. 109-118.
- Lal, M., A. S. Dunk and G. D. Smith. (1996), "The Propensity of Managers to Create Budgetary Slack: A Cross-national Re-examination Using Random Sampling", *The International Journal of Accounting*, pp. 483-496.
- Latham, G. P. and Steele, T. P. (1983), "The Motivational Effects of Participation Versus Goal-setting on Performance", *Academy of Management*, Vol. 26, pp. 406-417.
- Lau, C. M. and Buckland, C. (2000), "Budget Emphasis, Participation, Task Difficulty and Performance: The Effect of Diversity within Culture", *Accounting and Business Research* Vol. 31 (1), pp. 37-55.
- Levanthal, G. S. (1980), *What Should be Done with Equity Theory?* In K. J. Gergen, M. S. Greenberg and R. H. Willis (Eds), *Social exchange: Advances in theory and research*, pp. 27-55. New York: Plenum Press.

- Lind, E. A. and Tyler, T. R. (1988), *The Social Psychology of Procedural Justice*. New York: Plenum Press.
- Lindquist, T. M. (1995), "Fairness as an Antecedent to Participative Budgeting: Examining the Effects of Distributive Justice, Procedural Justice and Referent Cognitions on Satisfaction and Performance", *Journal of Management Accounting Research*, Vol. 7, pp. 122-147.
- Liou, T. K. (1995), "Understanding Employee Commitment in the Public Organization: A Study of the Juvenile Detention Centre", *International Journal of Public Administration*, Vol. 18, pp. 1269-1295.
- Locke, E. A., Latham, G. P. and Erez, M. (1988), "The Determinants of Goal Commitment", *Academy of Management Review*, Vol. 13 (1), pp. 23-39.
- Locke, E. and Latham, G. (1990), *A Theory of Goal Setting & Task Performance*. Englewood Cliffs, NJ: Prentice-Hall.
- Locke, E. A., Shaw .K. N., Saari. L. M. and Latham. G. P. (1981), "Goal Setting and Task Performance", *Psychological Bulletin*, pp. 125-152.
- Magner, N. and Johnson, G. G. (1995), "Municipal Officials' Reactions to Justice in Budgetary Resource Allocation", *Public Administrative Quarterly*, Vol. 18 (4), pp. 439-456.
- Magner, N. R. and Welker, R. B. (1994), "The Effects of Differential Perceptions of Formal Budgetary Procedures on Affective Employee Responses", *British Accounting Review*, Vol. 26, pp. 27-41.
- Magner, N., Welker, R. B. and Campbell, T. L. (1996), "Testing a Model of Cognitive Budgetary Participation Processes in a Latent Variable Structural Equations Framework", *Accounting and Business Research*, Vol. 27 (1), pp. 41-50
- Maruyana, G. M. (1998), *Basics of Structural Equation Modelling*. London. Sage Publications, Inc.
- McFarlin, D. B. and Sweeney, P. D. (1992), "Distributive and Procedural Justice as Predictors of Satisfaction with Personal and Organizational Outcomes", *Academy of Management Journal*, Vol. 35, pp. 626-637.
- Medsker, G. J., Williams. L. J. and Holahan. P. J. (1994), "A Review of Current Practice for Evaluating Causal Models in Organizational Behaviour and Human Resources management research", *Journal of Management*, Vol. 20, pp. 439-464.
- Merchant, K. A. (1985), "Budgeting and the Propensity to Create Budgetary Slack", *Accounting, Organizations and Society*, Vol. 10, pp. 201-210.
- Milani, K. (1975), "The Relationship of Participation in Budget-setting to Industrial Supervisor Performance and Attitudes: A Field Study", *The Accounting Review*, Vol. 50 (2), pp. 274-284.
- Moorman, C., Zaltman, G. and Deshpande, R. (1992), "Relationships between Providers and Users of Marketing Research: The Dynamics of Trust within and between Organizations", *Journal of Marketing Research*, Vol. 29, pp. 314-29.
- Nunnally, J. C. (1967), *Psychometric Theory*. 1st edition. New York: McGraw-Hill.
- Pearce, J. L. Bigley, G. A. and Branyiczki, I. (1998), "Procedural Justice as Modernism:
Placing Industrial/Organizational Psychology in Context", *Applied Psychology: An International Review*, Vol. 47, pp. 371-396.
- Perez, L. and Robson, K. (1999), "Ritual Legitimization, Decoupling and the Budgetary Process: Managing Organizational Hypocrisies in a Multinational Company", *Management Accounting Research* Vol. 10, pp. 383-407.

- Pillai, R., Schriesheim, C. A. and Williams, E. S. (1999), "Fairness Perceptions and Trust as Mediators for Transformational and Transactional Leadership: A Two-sample Study", *Journal of Management*, Vol. 25 (6), pp. 897-933.
- Sharma, R., Jones, S. and Ratnatunga, J. (2006) "The Relationships between Broad Scope MAS, Managerial Control, Performance and Job Relevant Information: A Concomitant Analysis", *Review of Accounting and Finance*, University of Illinois, Vol.5 (3), pp 228-250.
- Shapiro, D. L. and Brett, J. M. (1993), "Comparing Three Processes Underlying Judgments of Procedural Justice: A Field Study of Mediation and Arbitration", *Journal of Personality and Social Psychology*, Vol. 65, pp. 1167-1177.
- Shields, J. F. and Shields, M. D. (1998), "Antecedents of Participative Budgeting", *Accounting, Organizations and Society*, 49-76.
- Shields, M. and Young, S.M. (1993), "Antecedents and Consequences of Participative Budgeting: Evidence on the Effects of Information Asymmetry", *Journal of Management Accounting Research*, Vol. 5, pp. 265-280.
- Spekman, R.E. (1988), "Strategic Supplier Selection: Understanding Long-term Buyer Relationship", *Business Horizons*, July-August, pp. 75-81.
- Steiger, J. H. (1990), "Structural Model Evaluation and Modification: An Interval Estimation Approach", *Multivariate Behavioral Research*, Vol. 25, pp. 173-180.
- Tanaka, J. S. (1993), *Multifaceted conceptions of fit in structural equation models*. In K. A. Bollen & J. S. Long (Eds.), *Testing Structural Equation Models*. Newbury Park, CA: Sage.
- Umaphy, S. (1987), *Current Budgeting Practices in U.S. Industry*. New York, NY: Quorum Books, Greenwood Press, Inc.
- Wentzel, K. (2002), "The Influence of Fairness Perceptions and Goal Commitment on Managers' Performance in a Budget Setting", *Behavioral Research in Accounting*, Vol. 14, pp. 247-271.
- Wheaton, B., Muthen, B., Alwin, D. and Summers, G. (1977), *Assessing reliability and stability in panel models*. In D. Heise (Ed.), *Sociological Methodology*, 84-136. San Francisco, CA: Jossey-Bass.
- Zand, D. E. (1972), "Trust and Managerial Problem Solving", *Administrative Science Quarterly*, Vol. 17 (2), pp. 229-239.