

BUDGETARY PARTICIPATION AND PROCEDURAL JUSTICE: EVIDENCE FROM STRETCH BUDGET CONDITION

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ABSTRACT

This study examines the role of group value element of procedural fairness in explaining how individuals take into account fairness conditions in making judgment regarding budgeting process. Furthermore, the study extends prior research in procedural fairness by observing the individual behavior in a stretch budget condition. College students serve as subjects in an experiment. Manipulations of control and group value are randomly assigned to the participants. Two dependent variables, procedural justice judgments and budget commitment, are measured. The results show that supplying subordinates with information regarding group value enhances procedural justice judgments and budget commitment. Using a stretch budget condition, the study shows that procedural justice has a mediating effect in the relations between group value and budget commitment. Moreover, the study finds that in the stretch budget condition, group value has a negative relation with budget commitment, suggesting that budgetary participation creates a behavioral problem. The study provides empirical evidence that group value along with control element of procedural fairness improve procedural justice judgments to the level beyond that produced by each variable alone. The inclusion of group value judgments fills the gap that previous budgetary participation research produces.

JEL: M20

KEYWORDS: Budgetary Participation, Stretch Budget, Group Value, Procedural Justice, Budget Commitment

INTRODUCTION

Budget is probably the most widely used management tool in the functioning of an organization. Researchers have been spending a great deal of attention in the research area of budget and budgeting. As a subset of the area, budgetary participation in the budgeting process has been a fascinating research topic for behavioral accounting researchers in the past half of a century (for examples, Leach-Lopez, Stammerjohan, and McNair 2007; Breaux, Finn, and Jones III, 2011). Research has found negative as well as positive elements associated with the presence of participative budgeting and the empirical literature has also demonstrated its effects as being either advantageous or dysfunctional to organizations (e.g. Krishnan, Marinich, and Shields, 2012).

Brown, Evans, and Moser (2009) assert that most of experiments in participative budgeting area rely on agency theory for their predictions. They argue that economic models, that assume purely rational, self-interested behavior of individuals, can serve as benchmarks against which to measure actual behavior in budgeting. Moreover, the general findings of the experimental research are, at least potentially, consistent with agency theory. Nevertheless, they point out that previous studies note instances for which the experimental results are inconsistent with the agency theory predictions.

Body of literature documents that studies in participative budgeting require alternative theories and models to further explain how actual behavior deviate from what agency theory predicts. Research shows that the inconsistencies with the agency theories expectations are the results of aspects other than economic reasons that come into play in participative budgeting settings (Shields and Shields, 1998). Psychological variables, such as motivational factors (Chong and Johnson, 2007; Wong-On-Wing, Guo,

and Lui, 2010), attitude (Yuen, 2007), and moral judgments (Hobson, Mellon, and Stevens, 2011) have provided a significant contribution and insight into managerial behavior. Therefore, continuous effort to combine different perspectives to further explore the research area is worthwhile and constitutes a challenging endeavor.

Research has recognized the importance of procedural justice in budgetary participation setting (e.g. Magner et al., 2006; Libby, 1999; Lindquist, 1995). Procedural justice theory suggests that people are concerned with how fair the procedures are, both in terms of formal budgetary procedures fairness as well as budgetary procedures implementation fairness. Research indicates that managers often have a stronger reaction toward the fairness of the organization's budgetary procedures than that toward the favorability or fairness of their unit's budget (Konovsky, 2000). One way to create a fair environment is to provide people the opportunity to participate in a budgeting decision process. Participative budgeting is more likely to result in favorable behavior since people perceive the budgeting process as just (Libby, 1999).

While studies reporting reactions to fair budgetary procedures has demonstrated solid results, the literature has not yet provided conclusive evidence whether the reactions are the results of antecedents explained by self-interest theory or by other model of procedural justice theory. Hence, the present study investigates further managerial behavior deviations from economic models. Specifically, the study examines the role of procedural fairness, particularly the "soft side" (i.e. group value) of procedural justice elements, in explaining how individuals take into account fairness conditions in making judgment regarding budgeting process. Moreover, this study extends prior research in procedural fairness by observing the individual behavior in a stretch budget condition. Stretch budget is an exceptionally ambitious budget not likely to be achieved without making fundamental changes in the way a job is done. Stretch budget overlaps unfair budget to a considerable extent. People are much more likely to view stretch budget as unfair. Research suggests that stretch budget may create behavioral problems that can affect budget commitment (Marginson and Ogden, 2005).

This paper reports the results of an experiment that examines the effects of group value and control elements of procedural justice on procedural justice judgments and budget commitment in a stretch budget condition. The use of an experimental design is necessary to provide the clarity of causal inference gained by being able to manipulate antecedents to procedural justice. It is important since the study attempts to highlight a critical link between the budgetary participation and procedural justice literature.

The results show that supplying subjects with information regarding group value enhances the control effects. Nevertheless, the study still portrays the role of outcome justice judgments in a particular condition. Using a stretch budget condition, the study offers some empirical evidence regarding behavioral problems that stretch budget principle carries. The study focuses on investigating the impact of unmet expectation of a perceived fair budgeting process.

The research is important in several substances. The study provides empirical evidence that group value along with economic elements of procedural fairness enhance procedural justice judgments to the level beyond that produced by each variable alone. The study presents insight into the relationship between budgetary participation and procedural justice judgments by adding some explanations about the role of group value. The inclusion of group value judgments fills the gap that previous budgetary participation research produces.

The remainder of this paper is organized as follows. In the next section I provide theoretical background of procedural justice and budgetary participation. Based on the synthesis, I propose research hypotheses, followed by a discussion of my experimental method for testing the research hypotheses. Next, the results of the study are presented, discussed, and interpreted. In the final section, I draw conclusions and introduce an avenue for future research.

LITERATURE REVIEW

Procedural Justice Judgments

In this study, procedural justice is defined as the extent to which the participative budgeting process, which includes the distribution of control and social relationships, is judged to be fair by subordinates. The study is intended to test two existing theories in procedural justice: self-interest theory or control (Thibaut and Walker, 1975) and group value theory (Lind and Tyler, 1988).

Self-interest theory of procedural justice (Thibaut and Walker, 1975) asserts that procedures that vest process and decision control in those affected by the outcome of the procedures are more likely to generate favorable outcomes. The theory also posits that people may be willing to take a long-term focus when evaluating their economic gains and forego immediate, short-term benefits from an exchange relationship if they believe that advantageous outcomes will be forthcoming in the future. On the other hand, if the procedure is perceived as unfair, individuals will not have assurance about their long-term benefits. This may lead people to believe that the outcome is negative and to care mostly about short-term outcomes.

Lind and Tyler (1988) argue that self-interest theory does not capture the full dimension of procedural justice. They posit that even when individuals do not have direct control over procedures in a process, giving them information that can confirm their high status and self-respect in the process can lead to their higher judgments of procedural justice. Their theory, the group value model, postulates that in addition to economic benefits, individuals value psychological rewards in an economic relationship. The basic assumption of the model is that people are predisposed to belong to social groups and that they are very attentive to signs and symbols that communicate information about their position within groups.

A serious limitation of Thibaut and Walker's theory is that even when it is about procedural justice, the theory evaluates procedures in terms of the outcomes they produce. Also, the theory assumes that human needs consist mainly of material or economic needs. While the prediction that possession of control leads to fairer outcome perception is valid, the perception of procedural justice should not depend on the outcome (distributive) justice judgment (Lind and Tyler, 1988). Further, human needs also include factors beyond short-term and long-term economic benefits.

The group value model assumes that people are concerned about their long-term social relationship and do not view the relationship as a one-shot deal (Tyler, 1994). This leads the people to be concerned with three factors: the neutrality of the decision-making procedure, trust in the groups, and evidence about social standing or status. If neutrality exists, then the decision-maker is free from bias. People perceive the decision-makers as neutral if they create a level playing field for all. Trust refers to the degree to which people believe that the decision-maker intends to act in a fair manner. Standing is the position that individuals possess in a group as the result of how the group treats them. Being treated with respect and dignity implicitly informs one that she is a valued organizational member and furnishes a source of self-validation. Conversely, failing to treat employees fairly suggests that the employee is not supported by the organization and its representatives.

Participation in Budgeting

Budgetary participation generally refers to the extent to which subordinates participate in preparing the budget and influencing the budget goals (Milani, 1975). Shields and Shields (1998, p. 49) define the construct as "the process in which a manager is involved with and has influence on the determination of his or her budget". Both definitions involve two dimensions of participation: the opportunity to provide input in budgeting (i.e. voice) and the ability to influence the final budget (i.e. choice). Voice, which

relates to process control, and choice, which entails decision control, have positive effects on subordinates' attitude and behavior (Lindquist, 1995; Libby, 1999). Moreover, theoretical models and empirical research in participation in decision-making suggest that more participation is preferable to less (Leach-Lopez, et al., 2007).

A number of studies have examined the antecedents and consequences of participative budgeting. Task uncertainty (Chong and Johnson, 2007), work attitude and need for the value of achievement (Yuen, 2007) are among the antecedents, while job-relevant information (Chong and Johnson, 2007; Leach-Lopez, et al., 2007), budget goal commitment (Breux et al., 2011; Sandalgaard, Bukh, and Poulsen, 2011; Chong and Johnson, 2007), job satisfaction (Leach-Lopez, et al., 2007), job performance (Breux, et al., 2011; Yuen, 2007; Leach-Lopez, et al., 2007; Leach-Lopez, Stammerjohan, and Lee, 2009) are among the consequences. Virtually, all of the studies agree on the positive effects of participative budgeting.

Recent research in budgeting shows that the effectiveness of budgetary participation is also influenced by the perception of justice regarding the budgeting process (e.g. Magner et al., 2006; Zainuddin and Isa, 2011). Hence, procedural justice theory and research have the ability to explain some of the complexity seen in participation effects by offering a finer understanding of the psychology of different types of participation. However, none of the research investigates the effects of group value judgments.

Budget Commitment

Task goal theory (Locke and Latham, 1990) holds that human action is directed by conscious goals and intentions. The theory posits that individuals commit to the specific goals. Budget commitment, defined here as subordinates' attachment to or determination to attain the budget, is a motivational force that can energize subordinates to exert their best effort. Since budget commitment has important consequences, then attention must also be directed at factors that affect budget commitment.

Justice and budgeting research demonstrate that procedural justice judgments have strong effects on attitudes about institutions and authorities, such as organizational commitment (Sholihin and Pike, 2009). In this context, budget commitment can be likened to organizational commitment since both constructs represent an institutional evaluation. Folger and Konovsky (1989) find that procedural justice sustains employees' commitment that goes beyond the simple exchange of labor for salary. Cobb and Frey (1996) find that subordinates of supervisors who enact procedurally fair behavior are more satisfied with and committed to their supervisors.

However, what would happen if people, who were previously given the experience of a just budgeting process, eventually faced with an unfair budget? The current study measures procedural justice judgments before a stretch budget decision takes effect. Acting as subordinates in the budgeting process, the individuals are expected to exhibit dissatisfaction of the process when the stretch budget is enacted. The study expects an adverse effect of the stretch budget on budget commitment once the subordinates realize that the budgeting process does not produce satisfactory outcomes.

As suggested by referent cognition theory (RCT), when the final budget turns out to be difficult to achieve, the subordinates will not value the participation opportunity and they will reevaluate their group value. RCT predicts resentment as a form of hostile feelings toward a party responsible for one's own unfavorable outcomes (Folger and Martin, 1986). The person receiving the unfavorable outcomes believes that the responsible party has acted inappropriately and that the party should have behaved otherwise so that the outcomes would have been more favorable. Referent cognition theory suggests that the decision of administering a stretch budget will lower procedural justice judgments which were initially high. Additionally, prior research suggests that when subordinates learn that their initial

procedural justice judgments do not positively relate to favorable outcomes, they will be frustrated and disappointed (Lindquist, 1995).

Effects of Self-Interest and Group Value

The extant literature in budgeting that considers procedural justice (Lindquist, 1995; Libby, 1999; Fisher, Frederickson, and Pfeffer, 2002) agrees on the importance of voice and choice. Self-interest theory suggests that providing voice and choice opportunity provides individuals with a sense of control of the budgeting process and/or the final decision. In turn, higher process and decision control perceptions lead to higher levels of procedural justice judgments.

Procedural justice theory predicts that individuals will be more satisfied with a decision outcome as well as the decision procedures when given the opportunity to present information to the decision maker because the opportunity promotes their self-interest. Voice has the power to convey the reasons behind the choice and choice can increase the individuals' sense of power. Based on this line of reasoning, the following hypothesis is offered.

Hypothesis 1: Control treatment will have a positive effect on procedural justice judgments.

In this study, I test the relation between group value judgments and procedural justice perceptions. As discussed, the group value model emphasizes a human psychological need for a sense of membership to a group and the decision maker's recognition of one's group membership. Concern about group membership leads individuals to attend to three non-control issues: the trust in the decision maker, the neutrality of the decision-making procedures, and the individuals' status in the group.

The group value model posits that psychological factors beyond those determinants suggested by self-interest theory (i.e. control) should have effects on procedural justice perceptions (Lind and Tyler, 1988). Group value theory suggests that individuals appreciate psychological (and not only economic) rewards of their exchange relationships.

The theory suggests that even when subordinates do not have process and decision control, the budgetary participation process may convey to the subordinates that their involvement and membership in the work group are recognized. The process that delivers such information to the subordinates can confirm their high status and self-respect. The fulfillment of the individuals' psychological needs lead to their higher judgments of procedural justice. Based upon the argument of the group value model, the following hypothesis is offered:

Hypothesis 2: Group value treatment in the budgeting process will lead to higher procedural justice judgments.

A contingency view that considers psychological uncertainty might help to provide a better explanation regarding the role of self-interest. Such a view would argue that, in order to induce higher procedural fairness judgments, self-interest should be contingent upon the levels of group value perception. The group value model suggests that voice and choice have value regardless of their ability to influence the outcome. Specifically, subordinates value the opportunity to give input and vote because they perceive the opportunity as recognition of group membership.

The group value model suggests that members of a group subordinate their self-interest to ensure the viability of their group and their relationship with the decision maker. As stated earlier, they emphasize trust in the decision maker, the neutrality of budgeting procedures, and their status in the group. The psychological need fulfillment along with the possession of control resulted from voice and choice will

enhance the budgeting procedural justice judgments. Based on the line of arguments, I proposed the following hypothesis.

Hypothesis 3: There is a significant interaction effect of control and group value on procedural justice judgments.

Stretch Budget and Budget Commitment

Prior research suggests that providing a participation opportunity to subordinates in a decision process benefits an organization as a means of lowering subordinates' dissatisfaction and increasing organizational commitment (Fisher et al., 2002). When participation is solicited from the subordinates in the budgeting process, the subordinates will expect that the final budget will benefit them. If the budget turns out to be too difficult to achieve, then the subordinates will not value the participation opportunity as much as they did. This situation will lead to a frustration effect in the case of an unfavorable decision outcome. The effect occurs when the subordinates eventually learn that their participation does not affect the decision outcome. The subordinates are disappointed and frustrated because their expectation regarding the decision outcome is not met. The frustration and disappointment can hurt their commitment with the decision outcome (i.e. the final budget). The line of reasoning leads to the following hypothesis.

Hypothesis 4: In a stretch budget condition, control treatment in the budgeting process will have a negative relation with budget commitment.

The group value model posits that individuals always seek information regarding their status in a group. The information that confirms their high status in the group creates the subordinates' feelings of pride in their group and perceived respect by the group. These feelings of respect and pride should in turn lead to greater internalization of the group's value, norms, and decisions. In the stretch budget case, however, the fact that the organization or the supervisor administering the impossible-to-achieve budget may create subordinate frustration that, in turn, can make them question their status in the organization as well as the trustworthiness of the superior. When the subordinates perceive that their status is lower than they thought and that they can no longer trust their supervisor, their commitment to the final budget deteriorates. Based on the previous argument, I propose the following hypothesis:

Hypothesis 5: In a stretch budget condition, a group value treatment in the budgeting process will have a negative relation with budget commitment.

Fairness heuristic theory (Lind, Kray, and Thompson, 2001) suggests that the subordinates will use their procedural justice judgments as cognitive shortcuts to arriving at decisions about the extent to which they commit to the final budget. The theory predicts that when subordinates perceive fairness in budgeting procedures as the result of having control and high group value, they will perceive themselves as having more investment in the organization. Being confident that in the long run their interests will be recognized through the budgeting process motivates the subordinates to comply with the final budget.

In the stretch budget condition, the subordinates face the reality that their initial procedural fairness judgments do not positively correlate with the outcome favorability. Given that the subordinates are goal-seeking individuals, the receipt of the stretch budget decision threatens their goal attainment. When making sense of the unfair budget, the subordinates seek to understand the causes. Lindquist (1995) find that when unfair budgets are imposed to subjects who previously have a choice opportunity, the subjects are less satisfied with the budgets and tasks.

An important implication of this reasoning is that the receipt of the unfair budget elicits the adjustment process of procedural justice judgments. The final budget will not receive as much commitment as it used to when the procedural fairness judgments decline.

Hypothesis 6: In a stretch budget condition, procedural justice judgments will have a negative relation with budget commitment.

The current study investigates whether procedural justice judgments mediate the effects of subordinates' possession of control and group value condition on budget commitment. The study examines not only differences in budget commitment means resulting from manipulations of control and group value, but also the covariance structure of perceived procedural justice and budget commitment measures. The study proposes a finer explanation to the relation between budgetary participation and budget commitment beyond prior research findings.

The self-interest theory (Thibaut and Walker, 1975) posits that procedural justice judgments are enhanced by decision-making procedures that allow those affected by a decision the opportunity to participate in the decision-making. Prior studies show that providing a participation opportunity (i.e. voice and choice) in a budgeting process gives individuals a sense of control of the process and the final decision, which leads to higher perceived procedural fairness (e.g. Lindquist, 1995).

The group value model (Lind and Tyler, 1988) suggests that budgeting procedures can be seen as just for reasons that have nothing to do with control possession. Subordinates who value their group membership, high status, and self-respect will judge the budgeting process as fair as long as the procedures fulfill their psychological needs.

Subjects who are exposed to control and group value conditions should judge the budgeting process fairness as high. They will expect the final budget to be able to provide them with the highest benefit possible. However, if the final budget determined by the superior is likely to be unachievable or unfair (i.e. stretch budget), the subordinates will scrutinize the budgeting procedures. The subordinates will perceive that the budgeting process fails to fulfill their expectations. In this situation, they begin to realize that they do not really have the control power in the budgeting process, and thus, their process and decision control become unrealistic. Moreover, as suggested by the group value theory, the subordinates will question whether the superiors care about their psychological needs and whether their relationship still matters.

Referent cognition theory (Folger and Martin, 1986) suggests that the unmet expectation can transform subordinates' initial high procedural justice judgments into negative effects on their commitment to the final budget. The subordinates will believe that the superior should have acted differently in the process so that the budget would have been more favorable to the subordinates. Stated differently, subordinates who have control and group value conditions are the ones who suffer the most when the stretch budget is set. Based on the arguments, I offer the following hypotheses.

Hypothesis 7a: Given the stretch budget decision, the procedural justice judgments will mediate the negative effect of control on budget commitment.

Hypothesis 7b : Given the stretch budget decision, the procedural justice judgments will mediate the negative effect of group value condition on budget commitment.

DATA AND METHODOLOGY

Subjects

The experiment was conducted in the second semester of 2002. Sixty-one college students participated in the study. Their participation was solicited through the Research Experience Program (REP) administered

by Gatton College of Business and Economics, University of Kentucky. The students were offered a partial credit in courses and an opportunity to win one of four two-hundred-dollar cash prizes. The use of the student subjects was considered appropriate since the experimental task involves symbol-decoding activities and basic budgeting decisions, which the students could learn in a few minutes.

Design

The study employs a 2 X 2 between-subjects experimental design. The independent variables are the types of procedural justice: control and group value conditions. Control is manipulated by giving the participants an opportunity to express their thoughts (voice) about the initial (150-symbol) final budget that the supervisor wanted to assign and by providing the participants a right to vote (choice) for the final budget. The group value condition is manipulated by supplying the participants with information regarding (1) the importance of integrity and honor to the supervisor, (2) the supervisor's assertion on the neutrality of the budgeting process, and (3) the high status that the participants have in the budgeting process and overall study.

Two dependent variables are measured in the study. I measure procedural justice judgments using a 5-point scale for which the participants respond to a question asking how fair the procedure is used to determine the final budget (Libby, 1999). The subjects' commitment to the budget is measured by a measure (in 5-point scale) developed by Klein et al. (2001).

Materials and Procedures

The participants signed up to the study at a website maintained by the Research Experience Program. The website informed the participants regarding appointment date and time, the study location, as well as general instructions. There were multiple appointment dates available.

After a brief introduction, I distributed a participation consent form and a set of study materials and instructed the participants to read them. Four versions of study material were randomly distributed to the participants. The subjects were to complete the experiment in the presence of the researcher and returned the specific forms to the researcher upon completion. The experiment required approximately 45 minutes to complete.

The case study was developed based on that of Libby (1999). I did two pilot tests with two different types of audiences: faculty and students. In the case study, the participants acted as subordinates in a budgeting process and the researcher acts as their superior. The subjects' main job was to decode a number of symbols under the supervision of the superior. The superior told the subordinates that they got paid in raffle tickets. The tickets were used to determine four \$200 cash prize winners.

The superior explained the reward scheme and conducted two three-minute practice sessions. Then, the manipulations were administered. Following this, manipulation checks for control and group value conditions were made and the participants' procedural justice judgments were measured. Then, the superior set the final budget (stretch budget condition). After measuring subjects' budget commitment, I had the subjects completed a demographic questionnaire. Finally, the compensation was distributed after a debriefing session.

RESULTS AND DISCUSSION

Manipulation Checks and Descriptive Statistics

To check the control manipulation, I ask participants to provide judgments about the extent to which "they are able to give their thoughts about the final budget" and "they are given the opportunity to express

their opinion about the budget that the manager wanted to assign” (for voice element) and “the manager depends on them in making the final budget decision” and “the participants have an influence over the final budget decision” (for choice element). In the group value condition, the study measures the participants’ responses to the manipulation by asking the participants the extent to which “the manager deals in a truthful manner, the manager is aware of participants’ rights, and the participants realize their position in the study.”

Participants who receive the control condition indicate a mean (standard deviation) control of 4.10 (0.66), compared with 1.77 (0.77) for no-control condition. The difference in mean is statistically significant ($p < 0.00$). Subjects in group value conditions indicate group value judgments of 3.70 (0.70) while those in no-group value conditions indicate 2.50 (0.73). The difference in mean is statistically significant ($p < 0.00$).

The participants consist of 26 female and 35 male students, with the age average of 21.0 years. They had worked, on average, 25.1 and 6.4 months of part-time and full-time jobs, respectively. Table 1 below presents descriptive statistics for every experimental treatment condition.

Table 1: Mean (Standard Deviation) of Procedural Justice Judgment and *Budget Commitment* by Experimental Condition

		Control Element		
		Control	No Control	Marginal
Group Value Element	Group Value	4.33 (0.62)	2.67 (0.62)	3.5 (1.04)
		1.33 (0.33)	2.38 (0.77)	1.85 (0.79)
		n=15	n=15	n=30
	No Group Value	2.73 (0.80)	1.81 (0.54)	2.26 (0.82)
		2.39 (0.81)	2.83 (0.45)	2.62 (0.68)
		n=15	n=16	n=31
Marginal	3.53 (1.07)	2.23 (0.72)	2.87 (1.12)	
	1.86 (0.81)	2.38 (0.75)	2.24 (0.82)	
		n=30	n=31	n=61

Hypotheses Tests: Procedural Justice Judgments

I expect that individuals’ procedural justice judgments (PJJ) will be significantly affected by control (H1) and group value condition (H1), and by the interaction between the two conditions (H3). Table 1 presents the cell means and standard deviations for the participants’ PJJ. On the basis of both self-interest theory and the group value model, I predict that the highest level of PJJ is produced by the interaction of control and group value while the control group produces the lowest PJJ level. As seen in Table 1, the pattern of means confirms the predictions. The control/group value cell produces the PJJ level of 4.33 while the no control/no group value cell produces 1.81. The control-only and group value-only conditions produce the levels of PJJ of 2.73 and 2.67, respectively. The main effects of the independent variables also suggest that providing control and group value conditions creates higher PJJ than denying the conditions (3.53 vs. 2.23 for control vs. no-control and 3.5 vs. 2.26 for group value vs. no-group value).

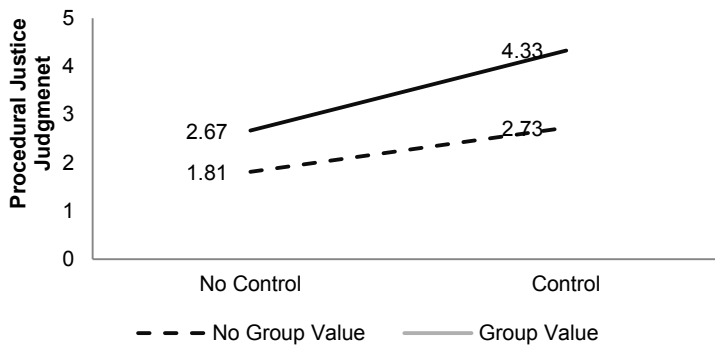
Table 2 presents the results of analysis of variance for PJJ. The analysis reveals significant main effects of control ($F = 60.48, p < 0.00$) and group value ($F = 54.41, p < 0.00$) on the measure of procedural justice, supporting Hypotheses 1 and 2. The results show significant interaction effects of control and group value ($F = 5.03, p < 0.05$), providing support for Hypothesis 3. Figure 1 displays the interaction effects of control and group value on procedural justice judgments.

Table 2: Analysis of Variance for Procedural Justice Judgments

Effect	DF	Type III SS	Mean Square	F-Value	Prob
Control	1	25.505	25.505	60.481	0.000***
Group Value	1	22.945	22.945	54.408	0.000***
Control*Group Value	1	2.119	2.119	5.025	0.029**
Error	57	24.037	0.422	-	-

**significant at $\alpha = 5\%$
 ***significant at $\alpha = 1\%$

Figure 1: Interactions of Control and Group Value on Procedural Justice Judgments



Hypotheses Tests: Budget Commitment

The remaining hypotheses in the stretch budget condition predict that control (H4), group value (H5), and procedural justice judgment (H6) will be negatively related to budget commitment (BC). The subsequent hypotheses predict that PJJ will mediate the relationships between control (H7a) and group value (H7b) and BC. Table 1 above presents the cell means and standard deviations for the participants' BC.

Based on the study's two main theories, I predict that the lowest level of BC is produced by the interaction of control and group value while the no control/no group value cell has the highest BC level. As seen in Table 1, the pattern of means confirms the predictions. The control/group value cell produces the BC level of 1.33 while the no control/no group value cell produces 2.83. The control-only and group value-only conditions produce the levels of BC of 2.39 and 2.38, respectively. The main effects of the independent variables also suggest that providing control and group value conditions creates lower BC than denying the conditions (1.86 vs. 2.38 for control vs. no-control and 1.85 vs. 2.62 for group value vs. no-group value).

Path analysis is used to test the remaining hypotheses. Path analysis entails the use of multiple regressions in relation to explicitly formulated causal models (see Table 3). The analysis provides the tests of linkages in the models (Baron and Kenny, 1986). Figure 2 presents the path model that makes explicit the likely causal linkages among variables in this study.

Table 3: Regression on Procedural Justice Judgments

	B	S.E	T	Sig
Control	1.288	0.172	7.487	0.000***
Group Value	1.221	0.172	7.099	0.000***

***significant at $\alpha = 1\%$

Values for path coefficients are estimated using regression and correlation analysis. The path coefficient is the standardized regression coefficient. The complete structural equations for the two endogenous variables are:

$$PJJ = 0.1228 C + 0.1221G \times 30C + 0.591 \tag{1}$$

$$BC = -0.404C - 0.437G - 0.262PJJ + 0.727 \tag{2}$$

Figure 2: Path Coefficients – Stretch Budget Condition

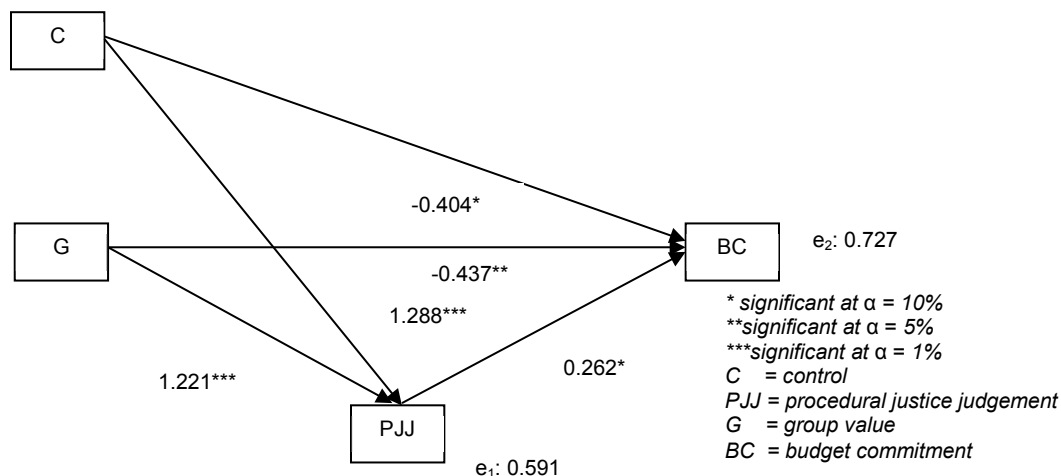


Figure 2 above illustrates the path coefficients in the path model with significant path coefficients shown in bold. Path coefficients of PJJ/C and PJJ/G are significant at $p < 0.01$. Path coefficients of BC/G and BC/PJJ are significant at $p < 0.05$ while path BC/C is moderately significant ($p < 0.1$). The results show control and group value affects PJJ directly. This is consistent with the findings of the previous analysis of variance (for Hypotheses 1 & 2). The results demonstrate that path BC/C has a moderately significant coefficient and therefore Hypothesis 4 is partially supported. Path coefficients of BC/G and BC/PJJ are significant and, thus, providing support for Hypotheses 5 and 6.

PJJ will serve as a mediator in the relationships between control and BC (H7a) and between group value and BC (H7b). To examine the relative magnitude of each type of effects, the total effects are decomposed and Sobel tests are performed (Bollen and Stine, 1990). The tests reveal that the mediating effect of PJJ on the relationship between C and BC is significant at $p < 0.05$ (t value = -2.079). Thus, the result supports H7a. Hypothesis 7b is also supported since the tests demonstrate a significant result at $p < 0.05$ (t value = -2.068).

Discussion

The results of this study are relevant to the consideration of the importance of both control and non-control components of procedural justice judgments and the judgments' role in explaining the relation between budgetary participation and budget commitment. Specifically, the study examines (1) whether the effects of control on procedural justice judgments are influenced by group value, (2) and whether the procedural justice judgments mediates the relation between budgetary participation and budget commitment.

Overall, this study's results discussed above are as predicted by both self-interest theory and group value model. The findings indicate that self-interest theory and the group value model are reasonably accurate and that self-interest processes and group value processes happen at the same time to produce procedural

fairness judgments. These results are consistent with previous studies in budgeting that consider procedural justice (Lindquist, 1995; Libby, 1999; Fisher et al., 2002).

The results also support the existence of frustration effects when a stretch budget is administered. One possible explanation about why the frustration effects occur is because the individuals believe their participation is solicited only to attract them into accepting the manager's budget decision. In other words, the participants are disappointed because their participation does not affect the final budget. In addition, giving the individuals the group value scenario can increase the frustration effects. As suggested by the group value model, the individuals scrutinize the manager's concern about their psychological needs. The findings show that individuals perceiving high procedural justice are the ones who are resentful when they experience an undesirable outcome because they have higher expectations about the outcome. A less-than-expected outcome received by the individuals leads to their unfairness perceptions that can result in lower budget commitment.

Altogether, the findings have important implications. First, pseudo participation can lead to frustration and disappointment, which in turn, can decrease budget commitment and other types of organizational commitment. In addition, the frustration can carry over to other decision-making procedures.

Second, procedural justice is an important predictor of budget commitment. Fair procedures prevent budget commitment from deterioration due to frustration with unfair outcomes. However, the research findings do not imply that outcome fairness is unimportant. As both types of justice are related to each other (Lind and Tyler, 1988), a lack of attention to one type of fairness may negatively affect the other one.

Considering the implications above, managers should attend to procedural justice issues as early as possible in the decision-making process, especially in a stretch budget condition. Although research suggests that justification for an unfair outcome can act as a remedy (Libby, 1999), insufficient justification may further compound the damage of the stretch budget effects. In general, managing procedural justice perceptions effectively can decrease the economic costs and therefore, increase the efficiency and effectiveness of management accounting control systems.

CONCLUSION

This study investigates the role of group value in explaining how individuals perceive procedural justice in a budgeting process. The study extends prior research by introducing a stretch budget condition in the process. Since the study aims to provide a clear causal inference among variables, an experiment is deemed necessary. The experiment is able to shed light on the relationships between procedural justice and its antecedents and consequences.

The results show that control and group value elements provide interaction effects on procedural justice judgments. Other primary finding of the study is that stretch budget creates frustration effects. Altogether, the findings show that pseudo participation can lead to disappointment, and in turn, decrease budget commitment.

There are limitations associated with this study that should be identified. First, the subjects were homogenous college students, which may not be similar to those of organizations that differ significantly from the subject pool. In the future, research may address the effect of demographic variables. Second, this study did not examine the procedural justice judgments after introducing the stretch budget. Future research can be directed to refine the procedural justice effects from those of distributive justice. Third, this study did not examine the order of presentation of the two types of justice and their nature. In reality, people might be affected by primary or recency bias in perceiving fairness. This possibility warrants

future research that involves multi periods since individuals may learn different justice patterns when they are exposed to different justice information over a long period of time.

Finally, the study treats stretch budget as an unfair budget. It is possible that the subjects may see a stretch budget as a challenging goal that motivates them to perform better. Future research can be directed to investigate the effects of stretch budget on justice perception.

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