The influence of voice and explanation on performance in a participative budgeting setting

Theresa Libby *

School of Business and Economics, Wilfrid Laurier University, Waterloo, Ontario, Canada N2L 3C5

Abstract

This paper examines the relationship between the use of a fair budgeting process and subordinate performance. Organizational justice theory is used to define a fair budgeting process as having two components: the subordinate’s involvement in the budgeting process, voice; and the communication of a rationale for the subordinate’s lack of influence over the final budget target the superior sets, explanation. Results indicate significant performance improvements when voice and explanation are combined as compared to voice alone. © 1999 Elsevier Science Ltd. All rights reserved.

Keywords: Participative budgeting; Organizational justice; Fairness; Voice; Procedural justice; Interactional justice

Over the past twenty years, accounting researchers have extensively studied the relationship between subordinate participation in budgeting and subsequent performance. Although the proposition that participation in budgeting leads to improved individual and organizational performance is both theoretically and intuitively appealing, empirical results supporting this hypothesis are inconsistent both with theory and with one another (Shields & Young, 1993). In a recent review of the participative budgeting literature, Shields and Shields (1998) attribute these inconsistent results to inter-study variation in theoretical and empirical models and inadequate recognition of antecedents of participative budgeting. The present study adds to this list the assumption made in many experimental participative budgeting studies that organizations exist in a world of infinite resources and all individuals and organizational subunits can be allocated the amount of resources they request. Consequently, subordinates unilaterally determine the budget target to be set within the context of the particular budget-based incentive contract under which they will be paid1.

In fact, managers today are pressured by shareholders and competitors to downsize and do more with less. When faced with scarce resources and multiple conflicting goals, managers must make resource allocation tradeoffs. A fully participative budgeting process in which the subordinate unilaterally determines the final budget may be impractical under these conditions. The present study, then, differs from traditional participative

---

budgeting studies in that it considers the use of a consultative budgeting process, defined by Vroom (1983) as a decision process in which subordinates are involved, but the superior makes the final decision.

The challenge to the manager using a consultative budgeting process is that subordinates may view the process as pseudo-participative. A pseudo-participative process is defined as a budgeting process that leads subordinates to believe that they will have some influence on the budget that is set, but in reality, their input is ignored (Argyris, 1952). Avoiding the perception that the budgeting process is pseudo-participative is important because pseudo-participation can have demotivating effects on subordinates (Pasewark & Welker, 1990).

While the superior may wish to consult subordinates to make better informed resource allocation decisions, to better co-ordinate interdivisional activities, and to motivate subordinate performance, competing demands on resources under the superior’s control result in the inability to act upon the information subordinates provide in ways that subordinates prefer. The present study suggests that the perception of pseudo-participation can be avoided through the communication of a rationale for subordinates’ apparent lack of influence over the final budget. This study therefore extends what is already known about the effect of a participative budgeting process as traditionally described in the participative budgeting literature (i.e. involvement with influence) to the effect of a consultative budgeting process (i.e. involvement without influence) on performance.

The consultative budgeting process used in this study includes the elements of voice and explanation as defined by organizational justice theory, a theory with a long history in social psychology (Greenberg, 1993b). Voice is defined as the ability of subordinates to be involved in a decision process by communicating their views to their superiors (Leventhal, 1980). Examples of voice mechanisms used in organizations include job involvement efforts, participative management, employee involvement plans, some types of performance appraisal techniques, and grievance procedures (Feuille & Chachere, 1995).

Explanation is defined as a causal account or justification provided by the superior when the outcome of the decision process is not affected by subordinates’ communicated preferences (Bies, 1987). Types of explanations include claims of incompetence, budgetary constraints, controls imposed at higher levels of management, limitations due to organizational politics, restrictions due to company policy, and inconsistent company norms (Bies, Shapiro, & Cummings, 1988).

The study described in this paper experimentally investigates the effect of combining voice and explanation on performance. Subjects are compensated under a budget-based incentive contract. While subjects are involved in setting the budget target, this involvement does not result in influence over the final budget that was set. The results of this study indicate that the opportunity for voice combined with an explanation for subject’s lack of influence over the final budget that is set motivates performance beyond the level of performance motivated by voice alone.

The rest of this paper is organized as follows. In the next section, the organizational justice and participative budgeting literatures are briefly reviewed followed by a discussion of the hypotheses to be tested. The third section includes a discussion of the experimental method. The fourth section includes results of the statistical analyses. The paper concludes with a discussion of the experimental findings and implications for future research.

1. Literature review and hypothesis development

Research in organizational justice theory has demonstrated that decisions made about the allocation of scarce organizational resources cause recipients to make fairness judgments when all requests for resources cannot be fully met (Barrett-Howard & Tyler, 1986; Greenberg, 1986; Tyler, 1987). In making fairness judgments,
individuals consider the fairness of the size of the allocation (known as distributive justice), the fairness of the allocative process (known as procedural justice), and the fairness of the interpersonal treatment that they receive as part of the allocative process (a subset of procedural justice known as interactional justice) (Leventhal, 1980; Greenberg, 1993b; Brockner and Wiesenfeld, 1996).

The specific theoretical model linking fairness judgments to performance tested in this paper is the two-component model of justice developed by Cropanzano and Folger (1991). According to the two-component model, if the subordinate perceives the budget allocation to be fair, no further action will be taken and the process by which the budget was set will be ignored. On the other hand, if the budget allocation is perceived to be unfair or negative, subordinates act to correct the perceived injustice. Consequently, the subordinate considers the fairness of the process used to decide upon the allocated amount. If the process that was used to decide on the budget allocation is perceived to be fair, the model suggests that the subordinate’s actions will be constructive (i.e. performance will improve or at least not decline). If the process is perceived to be unfair, subordinates will become demotivated and destructive actions may be taken. Destructive actions lead to negative organizational consequences including reduced commitment to the organization and/or the goal, increased turnover, and lowered work efficiency and effectiveness (Brockner et al., 1994).

In the present study, subordinates are faced with an unfair budget defined as a budget that is more difficult to achieve than the one they request. Subordinates should therefore focus on the fairness of the budgeting process in making their overall fairness judgments. Organizational justice research has demonstrated that once individuals are asked to be involved in a particular decision through the voice process, they expect the superior’s decision to reflect the views they expressed or to receive a reasonable explanation for their lack of influence (Bies & Shapiro, 1988; Greenberg, 1991). A process that includes voice and explanation is therefore used in the present study to define a fair budgeting process.

Following from the two-component model of justice described above, the combination of a budget allocation subordinates perceive as unfair and an allocation process subordinates perceive as fair (i.e. voice plus explanation) should result in higher performance than the combination of a budget allocation subordinates perceive as unfair and an allocation process subordinates perceive as unfair (i.e. voice without explanation). This hypothesis is formally stated as follows:

H1. When subordinates are given a voice in the budgeting process, but voice does not lead to influence over the final budget allocation that is made, those subordinates who also receive an explanation for their lack of influence over the budget will have higher performance than those who do not receive such an explanation.

The form of the predicted interaction is represented graphically in Fig. 1

Six specific point predictions are made based on the form of the predicted interaction between voice and explanation. These predictions are presented in Table 1.

The predictions in Table 1 assume a setting where subordinates are involved in the budgeting process, but their involvement does not lead to influence over the final budget set by the superior. In general, the predictions in Table 1 suggest that settings where subordinates have voice and receive explanation will dominate settings in which subordinates have either voice or explanation alone or neither voice nor explanation in terms of positive effects on subordinate performance.

Although a literature search found no prior studies considering the effect of combining voice and explanation elements on performance, several studies in the organizational justice literature indicate that a significant positive relationship between voice alone and performance may exist. Specifically, Lind, Kanfer, and Earley (1990) allowed subjects a voice in the process of setting a production goal. Subjects perceived the goal-setting process to be fairer when voice was allowed than when no voice was allowed and, holding the performance goal constant across conditions,
subjects in the voice condition produced significantly more products of higher quality than subjects in the no voice condition. Kim and Mauborgne (1993) considered whether subsidiary top managers’ perceptions that head office procedures were fair resulted in greater willingness to comply with head office requests. They found, in a longitudinal study of multi-national organizations, that divisional managers’ perceptions of head office procedural justice led to higher levels of organizational commitment, trust in head office managers, and compliance with head office requests.

Two experimental studies in the budgeting and control literature in accounting have also considered the effect of voice alone on performance. In Lindquist (1995), subjects were given no voice in setting their budget, a voice, a vote, or both a voice and a vote. Subjects had influence over the budget and the budget was categorized as either attainable (defined as fair) or unattainable (defined as unfair). Those subjects allowed some form of voice in setting their budgets were more satisfied with the budget and the task than those subjects with no opportunity for voice, especially when the budget was unattainable. Hypothesized increases in performance when subjects had a voice, a vote, or both, however, were not observed.

Chow, Lindquist, and Wu (1996) studied the relationship between procedural justice, national culture, and the use of stretch targets as performance standards. Subjects were allowed no voice, voice only, or voice and vote in setting the stretch target used to evaluate their performance. Allowing subjects to have a voice in setting the stretch target (voice alone or voice and vote) resulted in performance closer to standard than subjects who were not allowed a voice in the process.
Although a literature search failed to identify any prior studies linking explanation alone to improved performance, several prior studies indicated a positive effect of explanation on subordinates’ perceptions of fairness. Bies (1987), for example, found that voice, explanation, and decision-maker sincerity all had independent positive effects on perceptions of procedural fairness. Bies and Shapiro (1988) also found that providing an explanation for an unfavorable decision had a positive effect on subordinates’ perceptions of procedural fairness. It is unclear, however, whether the effect of explanation alone on perceptions of fairness would be significant enough to translate into effects on subsequent performance.

The results reviewed above provide a basis for the following predictions. First, it is predicted that performance will be higher for those individuals given both a voice and an explanation for their lack of influence over the final budget decision (represented as point B in Fig. 1) than those individuals having voice alone (point C). In addition, it is predicted that the voice/explanation group (point B) will have higher performance than either the no voice/no explanation group (point A) or the group receiving an explanation, but having no opportunity for voice (point D). Finally, it is predicted that those subordinates who do not have the opportunity for voice, but do receive an explanation (represented as point A in Fig. 1) should perform no better than those who have neither the opportunity for voice, nor receive an explanation for their lack of influence over the final budget that is set (point D).

The studies reviewed above indicating a significant positive relationship between voice and performance (Kim & Mauborgne, 1993; Lind et al., 1990) differ from the present study in that subordinates’ voiced preferences were influential. It is unclear, in a situation in which voice does not lead to influence, that voice alone will lead to increased perceptions of justice and consequently improved performance. In fact, in the accounting literature, Pasewark and Welker (1990) find that participation without influence is worse than no participation because it is demotivating to subordinates. Consequently, it is predicted here that individuals who are involved in budgeting through the voice process, but who do not receive an explanation for their lack of influence on the final budget (point C in Fig. 1) will have lower performance than those individuals who did not have voice at all (points D and A).

1.1. Covariates

Two variables with the potential to influence subject’s performance independently of the effect of voice and explanation are performance capability (Chow, 1983; Chow, Cooper, & Haddad, 1991; Waller & Chow, 1985) and locus of control (Brownell, 1982; Sweeney, McFarlin, & Cotton, 1991). Performance capability is defined as subjects’ skill at the task multiplied by their motivation to perform (Waller & Chow, 1985).3

The second covariate of interest is a personality variable known as locus of control. Locus of control is defined as individuals’ perception of the degree of control they have over events in their lives (Rotter, 1966). Internally-oriented individuals believe that they have some control over events in their lives while externally-oriented individuals believe that events are controlled by fate, luck or powerful others. From the organizational justice point of view, Sweeney et al. (1991) found that internally-oriented individuals given the opportunity for voice judged the level of procedural justice in their organization to be higher than a corresponding sample of externally-oriented individuals. These results are supported in the accounting literature by Frucot and Shearon (1991) and Brownell (1982). In these studies, internally-oriented subjects performed better in budgeting situations requiring a high degree of participation than did externally-oriented subjects. Involvement in the budgeting process, or voice, then may result in higher perceptions of procedural justice and higher performance for internals than for externals.

3 Note that performance capability captures both skill and effort when a measure of skill alone would be preferred. Waller and Chow (1985) argue that the use of performance capability as a proxy for skill alone can be justified based on the nature of the task under consideration. For tasks such as the one used in this study in which workers can compensate for low skill by exerting a higher level of effort in order to achieve a satisfactory level of performance, a measure of skill alone is not necessarily required.
2. Method

2.1. Subjects and compensation

Subjects were drawn from a group of two hundred first-year undergraduate business students taking an introductory business course. A total of one hundred and seventy-four subjects volunteered to participate in this experiment (eighty-six males, eighty-eight females). Three subjects failed to complete one or more of the necessary scales leaving a final usable sample of one hundred and seventy-one subjects. Subjects reported an average of thirty-three months of part-time work experience.

Subjects worked to earn raffle tickets that entitled them to a chance to win one of eight $150 prizes. The incentive structure was designed so that the more symbols subjects decoded, the more tickets they earned. Subjects were expected to exert greater effort on the experimental task when they were given the opportunity to win the relatively large $150 prize in a lottery than if they had been able to earn only the expected value of the prize of approximately $7.50 each (Gajraj, Faria, & Dickinson, 1990). Evidence of the lottery’s effectiveness in motivating subjects to participate was provided by the response rate of eighty-seven percent to the request for voluntary participation in the study.

Subjects performed an experimental production task over two periods labeled the practice period and the work period. Subjects were paid a piece rate of one ticket for every group of twenty symbols correctly decoded in the practice period. The incentive contract that was used in the work period was taken from Waller and Chow (1985) and was operationalized as follows:

\[
\text{If } \text{actual} > \text{budget:} \\
\text{Payment} = 3 \text{ tickets} + 2 \text{ tickets} \times (\text{actual symbols decoded} - 200 \text{ symbol budget}) \\
\text{If } \text{actual} < \text{budget:} \\
\text{Payment} = 3 \text{ tickets}
\]

After pre-testing the experimental task, the budget of two hundred symbols for the work period was selected to be difficult but attainable. Indirect evidence that subjects viewed the budget as attainable is provided by the observation that none of the subjects chose to conserve energy by not working while still receiving the three ticket fixed portion of their payment.4

2.2. Experimental task

Subjects performed a production task involving the translation of symbols into alphabetic characters using a decoding key. The task was a variation of that used by Chow (1983). Subjects took part in the experiment in eight small groups over a one week period. The experiment took approximately forty minutes to complete. To control for leakage of information, subjects were asked to avoid discussion of the experiment with their classmates. Subjects were debriefed and received feedback about their performance only after the experiment had been completed by all subjects.

2.3. Independent variables and covariates

The experiment involved a 2 × 2 between-subjects factorial design. The independent variables of interest were the opportunity for involvement in the budgeting process, known as voice, and the communication of a rationale for subordinates’ lack of influence over the budget that was set, known as explanation. In the voice conditions, subjects were told that the budget had been tentatively set at two hundred symbols, but they were given the opportunity to communicate their preferred budget to the superior. In the no voice conditions, no opportunity for communication with the superior was given.

In the explanation condition, a verbal explanation was given for subordinates’ lack of influence over the final budget the superior set. In developing this explanation, the elements of an adequate explanation developed by Greenberg (1993a) were used as a guide. According to Greenberg (1993a), an adequate explanation is defined as an

---

4 Each subject’s odds of winning the lottery decreased as the performance of all subjects in the group increased. Consequently, each subject’s probability of winning the prize was dependent not just on their own performance, but on the performance of other subjects in the group. Due to the one-period nature of the experiment and the setting in which the experiment took place, subjects had no opportunity to collude or act in any strategic way.
explanation that is logical, sincere, and informationally valid. The level of the budget was considered to be logical because it was based on subjects’ performance in the practice period. Sincerity was implied in the statement that the manager understood that the two hundred symbol budget would be difficult to achieve. The informational validity requirement was also met because the information about subjects’ practice period performance on which the explanation was based was acquired directly from the subjects. Subjects observed the researcher checking the calculation of average practice period performance and were told that these calculations had been double-checked for accuracy. The script of the verbal explanation given to subjects in the explanation condition is included in the Appendix to this paper.

Performance capability was measured as subject’s practice period performance. The mean performance capability score was one hundred and thirty symbols decoded (S.D. = 30.33). Locus of control was measured using the twenty-three item scale developed by Rotter (1966). Subjects’ scores were the sum of the externally-oriented items they selected. The mean locus of control score was 12.30 (S.D. = 3.11, Cronbach’s \( \alpha = 0.64 \)).

2.4. Dependent variable

The dependent variable of interest was subjects’ performance in the work period. Performance was measured as the number of symbols correctly decoded during the work period. The mean number of symbols decoded in the work period was 175.63 (S.D. = 46.71).

2.5. Experimental procedures

A flowchart detailing the experimental procedures is included in Fig. 2. Subjects were given three booklets corresponding to the three parts of the experiment: practice period, work period, and the questionnaire. The first booklet included a description of the task with examples, a decoding sheet, and a practice worksheet. Subjects were

---

5 Note that subjects’ locus of control was measured after they had been exposed to the experimental treatment and consequently, may be confounded with the treatment. To test this possibility, a contingency table was prepared with two levels of locus of control (high/low split at the median of 12) and four categories corresponding to the four cells of the experiment. Locus of control was found to be independent of the experimental treatment, \( \chi^2 (3) = 7.80, p > 0.05 \).
asked to read the descriptive materials and then completed a five minute practice period.

At the end of the five minute practice period, subjects were given an answer key that they used to check their work and to calculate the number of symbols correctly decoded in the practice period. These numbers were recorded on a tally sheet and reviewed by the researcher who played the role of the manager in each group. The subjects then opened the second workbook that included a description of the incentive scheme under which they were to work with examples, a new set of worksheets, and a decoding key for the work period. While the subjects read the instructions, the researcher reviewed the entries on the tally sheet and calculated average performance for the practice period.

In the no voice/no explanation condition, the budget goal of two hundred symbols for the five minute work period was assigned. In the no voice/explanation condition, the same budget was assigned, but a verbal explanation of the choice of two hundred symbols for the budget was provided to the subjects. In the voice conditions, subjects were asked to complete a response card from the experimental booklet where they were able to communicate their preferred budget to the superior. The response cards were collected and reviewed by the manager. An announcement was made by the manager that the budget would remain at two hundred symbols. Subjects in the voice/no explanation condition received no further information. Subjects in the voice/explanation condition received the same verbal explanation for the final budget used in the no voice/explanation condition. Subjects then completed the five minute work period.6

After completing the work period, subjects completed a questionnaire measuring fairness and locus of control. One week after, subjects received a performance report and the tickets that they had earned. Tickets were collected and placed in a container from which one of the subjects in each group drew the winning $150 ticket.

3. Results

3.1. Manipulation checks

Subjects' perceptions of the fairness of the voice and explanation experimental manipulations were tested. A 2 (voice/no voice) × 2 (explanation/no explanation) between-subjects analysis of covariance was performed on subjects' perceptions of fairness with performance capability and locus of control entered as covariates.7 Subjects' perceptions of the fairness of the budgeting process were measured as the average score on a scale of one (completely unfair) to five (completely fair). The scale was composed of the following questions: “How fair would you judge the procedures used to set the budget assigned to you?” and “How fair would you judge the final budget itself?” These questions were based on measures reported in Tyler and Lind (1992). The mean score on this scale before adjustment for covariates was 3.45 (S.D. = 1.17, Cronbach’s α = 0.83).8

---

6 Although subjects in the voice conditions were not told specifically that their budget preferences would influence the budget to be set, there is a possibility that some subjects may have assumed that their budget preferences would influence the budget. In order to contend with this possibility, subjects received both a written and verbal debriefing when the experiment was complete. They were given a full explanation of the goals of the study and the theoretical justification for their inability to influence the budget. They were then provided the opportunity to ask questions and gave written permission to allow the data generated to be included in the statistical analysis. These procedures were reviewed and received full approval of the Research Ethics Committee of both the researcher’s home university and the university at which the experiment took place.

7 The variance due to these variables could also have been controlled using a more direct method. Specifically, subjects' performance capability and locus of control could have been measured before assigning them to experimental groups and then the experiment could have been conducted using a randomized block technique. Due to the demands of the experimental setting (i.e. subjects' schedules dictated that all data was to be collected and treatments administered during the same block of time), subjects were randomly assigned to groups before measures of performance capability and locus of control were taken.

8 Note that as fairness was defined for the purposes of this study as subjects' subjective perceptions of the fairness of the situation, the subjects were not provided with any specific definition of a fair budget or budgeting process.
Subjects, on average, perceived the voice/explanation process to be the fairest (adjusted mean = 3.70, S.D. = 0.17) and the voice/no explanation process to be the least fair (adjusted mean = 3.18, S.D. = 0.16) with the mean for the no voice/no explanation process (adjusted mean = 3.54, S.D. = 0.16) and the no voice/explanation process (adjusted mean = 3.41, S.D. = 0.15) falling between these two extremes.

After adjustment for the performance capability and locus of control covariates, perceived fairness varied significantly with the interaction between voice and explanation, $F(1,165)=4.23, p<0.05$, indicating that the combination of the voice and explanation treatments had a positive impact on subjects’ perceptions of fairness. The main effects of voice, $F(1,165)=0.06$, and explanation, $F(1,165)=1.43$, were not significant.

3.2. Tests of hypotheses

To test hypothesis H1, a 2 (voice/no voice)× 2 (explanation/no explanation) between-subjects analysis of covariance was carried out with performance as the dependent variable and performance capability and locus of control as covariates. Cell means for performance adjusted for covariates are presented in Table 2 and Fig. 3.9

The pattern of adjusted means presented in Fig. 3 indicated that subjects in the voice/explanation condition (mean = 184.98 symbols, S.D. = 4.28) decoded the greatest number of symbols and subjects in the voice/no explanation condition (mean = 171.30 symbols, S.D. = 4.04) decoded the smallest number of symbols with the mean number of symbols decoded by subjects in the no voice conditions falling between the means of the other two groups.10

An analysis of covariance with adjustment for nonorthogonality (regression approach) was used to test the significance of the differences in means.11 The full one hundred and seventy-one usable observations were included in the analysis. Results of the evaluation of the assumptions of normality, linearity, homogeneity of variance, and homogeneity of regression were satisfactory.12 Results of the analysis of covariance are presented in Table 3.

After adjustment for covariates, performance varied significantly with the voice by explanation interaction, $F(1,165)=4.41, p<0.05$, providing support for hypothesis H1. A simple effects analysis was performed to test four of the six specific predictions made in Table 1. This analysis indicated that, given voice, those subjects who also received an explanation for their lack of influence over the budget that was set (represented by point B in Fig. 3) decoded significantly more symbols in the work period than those who received no explanation (point C), $F(1,165)=5.82, p<0.05$. The voice/explanation group (point B) also decoded significantly more symbols in the work period than those who received an explanation, but had no voice (point A), $F(1,165)=4.90, p<0.05$.

Further, the simple effects analysis indicated no significant difference in the performance of

---

9 The adjusted means were calculated by estimating a regression model with performance as the dependent variable and dummy coding of the main effects of voice and explanation and the voice by explanation interaction. The resulting regression equation was used to calculate adjusted means in each cell after substituting the mean of one hundred and thirty symbols for skill and the mean of 12.30 for locus of control into the equation. The adjusted means represent the group means as if subjects’ performance capability and locus of control scores had been equal to the group mean.

10 The unadjusted means were as follows: mean for voice/explanation = 178.12 symbols (S.D. = 50.76), mean for voice/no explanation = 175.09 symbols (S.D. = 44.32), mean for no voice/explanation = 170.58 symbols (S.D. = 42.34), and mean for no voice/no explanation = 178.16 symbols (S.D. = 50.68).

11 An unequal number of observations in each cell results in ambiguity of assignment of overlapping sums of squares to sources of variation and the hypotheses tested for main and interaction effects become nonorthogonal (i.e. no longer independent). The regression approach utilized here allows for appropriate assignment of the variance due to each main and interaction effect through standard multiple regression where each main and interaction effect is assessed after adjusting for all other main and interaction effects and any covariates.

12 The Bartlett–Box $F(3,49639)=0.72, p>0.05$, confirms homogeneity of variance. Homogeneity of regression was tested by comparing the full model including the interaction between the covariates and the treatment to the reduced model in which these interaction terms were removed. The resulting $F(6,159)=0.10, p>0.05$, confirms that there is no basis to assume that there is not homogeneity of regression.
subjects who received an explanation, but had no voice (point A) and subjects who received neither an explanation nor a voice in the budgeting process (point D), $F(1, 165) = 1.10$. In addition, although the adjusted mean performance for the voice/no explanation group (point C) was lower than for the no voice/no explanation group (point D), this difference was not significant, $F(1, 165) = 0.34$.

$T$-tests were used to compare adjusted means across experimental conditions. The results indicated that subjects receiving both a voice and an explanation (represented as point B in Fig. 3) decoded significantly more symbols than those subjects who had neither a voice nor an explanation (point D), $t = 10.44$, $p < 0.01$. Finally, no difference was found between the performance of the voice/no explanation group (point C) and the no voice/explanation group (point D), $t = 1.20$. These analyses indicate that neither voice nor explanation alone had a significant effect on performance, but when combined, performance was significantly improved.

4. Discussion

This study was designed to provide some insight into the incentive effects of a fair budgeting process. A fair budgeting process was defined as the involvement of subordinates in the budgeting process through a voice mechanism and the provision of an explanation for their lack of influence over the budget that was finally set. By design, subjects in all conditions in this study faced the same budget and the same incentive contract.

![Fig. 3. Mean performance within experimental conditions adjusted for performance capability and locus control](image-url)
Differences in performance between conditions can therefore be explained by the different processes under which subjects' budgets were set.

This study differed from traditional participation in budgeting studies in that, while subordinates were involved in the budgeting process, their involvement did not influence the final budget that was set. The results indicated no significant effects of voice or explanation alone on performance, although voice when combined with an explanation for subordinates' lack of influence over the final budget that was set led to significant performance improvements.

Specifically, this study demonstrated that the combination of the opportunity for voice, and the receipt of an explanation for subordinates' lack of influence over the final budget that was set had the greatest positive effect on performance. Those subjects who received both a voice and an explanation for the budget that was set perceived the budget and budgeting process to be significantly fairer and had higher performance than those who had a voice, but received no explanation, those who received an explanation alone, or those who received neither a voice nor an explanation. Consequently, one may conclude that in situations where voice does not lead to influence over the budget that is set, the receipt of an explanation for this lack of influence plays a significant role in motivating performance. In fact, the receipt of an explanation may counteract the negative effect of the perception that one's voice was ignored.

While pseudo-participative budgeting arguments led to the prediction that individuals allowed a voice with no influence would have lower performance than those having no opportunity for voice at all, results indicated no statistically significant difference in the performance of these two groups. These results imply that offering voice or explanation alone in settings where subordinates' preferences do not influence the budget that is set may be somewhat costly and may have little effect on subordinate performance.

This study was designed to simulate the situation in which a superior is truly interested in subordinates' budget preferences, but due to factors or constraints beyond his or her control, is unable to revise the budget allocation based on the preferences expressed. The results imply that while voice alone may be no better or worse than allowing no voice at all, the combination of voice and explanation can lead to improved performance.

These results may be important from a practical perspective. The current business environment is characterized by high levels of competition and budget restraints. Resources are scarce and all budget requests cannot be fully met. While managers can benefit greatly from subordinate input in making difficult allocation decisions, they may not be able to act on them in all cases. Subordinates may become resentful and their productivity may suffer. The results of the current study imply that providing subordinates with an adequate explanation for their apparent lack of influence over the final budget the manager sets may lessen resentment and improve performance.

This study contributes to the participative budgeting literature in several ways. First, unlike many prior studies, a participatory process that does not necessarily lead to influence over the budget is explored. This setting may better represent budgeting in real organizations than would a setting in which all subordinate budget requests are easily met. In addition, this study sheds light on the ability of a fair budgeting process to motivate subordinate performance. Prior studies have considered the influence of fairness on the budgeting process, but were unable to link increased perceptions of fairness to increased performance. This study also introduces new variable, explanation, to the accounting literature and provides insight into the effect of combining voice and explanation in the process of making budget allocation decisions.

As in any experimental study of this type, there are a number of limitations to take into account when interpreting the results. First, while the use of student subjects is a threat to external validity that cannot be completely ruled out, the effect of voice and explanation on perceptions of fairness are not manager-specific, but have been found to apply equally well across individuals and organizational settings. Second, although subjects were not debriefed until all groups had completed the experiment, there may have been communication between subjects in the earlier sessions with
subjects in the later sessions. A review of means for the dependent variables within groups revealed no large variations between groups that took part in the experiment during different times of the particular day or week.

The experiment described in this paper suggests two potential avenues for future research. First, this experiment occurred in a single-period setting. Expansion to multiple periods would shed light on the ability of the voice plus explanation process to continue to motivate fairness judgments and performance over multiple periods in which subordinates are denied the budget they ask for. This type of study would further address the issue of pseudo-participation discussed in the participation in budgeting literature.

Second, this experiment provides only preliminary evidence regarding the role of the fairness of the budgeting process as a motivating factor within the procedural justice/performance framework. While the pattern of mean fairness perceptions within each experimental condition mirrored the pattern of mean performance, it is unclear whether fairness leads to performance directly or through some intervening or moderator variable. Other variables, for example organizational commitment, have been suggested in the organizational justice literature as potential moderators of the relationship between fairness judgments and increased motivation to perform (Cropanzano & Folger, 1991). Further work allowing for causal analysis of the data collected in field settings is required in order to further explore the process by which perceptions of fairness translate into improved performance.

Acknowledgements

The author would like to thank my dissertation committee: John Waterhouse (Chair), Bill Scott, Duane Kennedy, and Jane Webster as well as Joseph Fisher and Kevin Kelloway and two anonymous reviewers for their many helpful comments and suggestions. A previous version of this paper was presented at the 1997 Canadian Academic Accounting Association Annual Conference. I gratefully acknowledge the School of Accountancy at the University of Waterloo and CGA-Canada for their financial support of this project.

References


**Appendix**

Script of verbal explanation given to subjects in the explanation condition:

The manager has carefully considered your opinion about the budget of 200 symbols and has decided that the budget will be finalized at 200 symbols. The manager would like to provide you with the following explanation for leaving the budget at 200 symbols. Although the manager is aware that this final budget of 200 symbols may be difficult to reach, this budget was set based on a review of performance during the practice period and on performance of previous groups of workers. This budget has been assigned in order to challenge even the most skilled person in the group. The calculations made to arrive at this number have been reviewed and were double checked for accuracy against the information about the practice period results recorded on the Manager’s Report. No errors were detected.