

**Does Organization-Mandated Budgetary Involvement Enhance
Managers' Budgetary Communication with Their Supervisor?**

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Abstract: Large organizations typically mandate that managers attend budget meetings and exchange budget reports with their immediate supervisor and budget staff. We explored whether such organization-mandated budgetary involvement is related to managers' budgetary communication with their supervisor in terms of budgetary participation, budgetary explanation, and budgetary feedback. Questionnaire data from 148 managers employed by 94 different companies were analyzed with regression. Mandatory budget meetings with supervisor had a positive relationship with all three forms of budgetary communication with supervisor, and mandatory budget reports from supervisor had a positive relationship with budgetary explanation from supervisor. Mandatory budget meetings with budget staff had a positive relationship with both budgetary participation with supervisor and budgetary feedback from supervisor. Mandatory budget reports from budget staff had a negative relationship with all three forms of budgetary communication with supervisor. The results failed to support proposed relationships between mandatory budget reports to supervisor and budgetary participation with supervisor, and between mandatory budget reports from supervisor and budgetary explanation from supervisor. Implications of the results for future research and budgetary system design are discussed.

INTRODUCTION

Budgeting is an integral part of short-range planning and control in most organizations (Merchant 1981). Perhaps the most important factor in the functioning of an organization's budgetary system is the communication that occurs between unit managers who have budget responsibility and their immediate supervisor (Hofstede 1967). Budgetary communication between a manager and supervisor exists when the manager conveys budget-relevant information to, or receives it from, the supervisor. The budgeting literature has examined several variables that address a manager's budgetary communication with the immediate supervisor and other budget actors, including budgetary participation, budgetary explanation, and budgetary feedback. Budgetary participation is the extent to which a manager has an opportunity to voice opinions about and have influence on his or her budget (cf. Brownell 1982a). Budgetary explanation is the extent to which a manager receives clear and adequate reasons for decisions pertaining to his or her budget (cf. Tyler and Bies 1990). Budgetary feedback is the extent to which a manager receives information about his or her achievement of budget goals (cf. Kenis 1979).

Large organizations typically force managers to become involved in the budgetary process through attendance at mandatory budget meetings and the exchange of mandatory budget reports (Anthony and Govindarajan 2001). This paper reports the results of a study that explored the extent to which such mandatory budgetary involvement is related to managers' budgetary communication with their immediate supervisor in terms of budgetary participation, budgetary explanation, and budgetary feedback. Mandatory budgetary involvement was addressed in terms of budget meetings that managers must attend with, and budget reports they must prepare for and receive from, the supervisor

and budget staff in order to conform to the organization's formal written policies. While a primary purpose of organization-mandated budget meetings and reports is to foster the exchange of budget-relevant information, and thus to enhance budgetary communication, between budget actors such as managers and their immediate supervisor, little empirical research to date has addressed the extent to which mandatory budgetary involvement serves this intended purpose. Shields and Shields (1998, 66) recently proposed that future budgeting research should explicitly recognize a "forced (e.g., corporate policy)" dimension of budgetary participation, a recommendation that we believe is also relevant to other budgetary communication variables such as budgetary explanation and budgetary feedback. The current study addresses this recommendation in that it examines whether organizational policies that force managers to become involved in the budgetary process via budget meetings and reports are antecedents of budgetary participation, budgetary explanation, and budgetary feedback.

The remainder of this paper is organized as follows. The next section offers theoretical justification for the relationships examined in the study, as well as hypotheses and research questions. The following two sections present the research method and results of the data analyses, respectively. In the final section, we discuss the results and their implications, future research directions, and limitations of the study.

THEORY, HYPOTHESES, AND RESEARCH QUESTIONS

Organizations seek enhanced budgetary communication between managers and their superiors (e.g., the immediate supervisor) for at least two general reasons. First, enhanced budgetary communication has the potential to reduce information asymmetry within the organization. Economic models of budgeting have emphasized the flow of information up the hierarchy from subordinate

managers to their superiors and agents of the superiors such as budget staff (e.g., Baiman and Evans 1983; Kirby et al. 1991). Subordinate managers generally hold private information regarding their task and task environment which, if acquired by superiors, may allow the superiors to allocate budgetary resources in a more effective manner and to design incentive contracts that better motivate the subordinates to achieve their budgets (Shields and Young 1993; Shields and Shields 1998). The budgeting literature has also addressed, albeit to a lesser extent, the flow of information down the hierarchy from superiors to subordinates (e.g., Kren 1992; Magner et al. 1996). Superiors hold private information regarding budget goals and strategies for achieving budget goals that, if conveyed to subordinates, may facilitate the subordinates' achievement of those goals.

A second general reason that organizations seek enhanced budgetary communication between managers and their superiors is its potential positive effect on the managers' work-related attitudes, morale, and motivation, and, in turn, on behaviors such as job performance (Shields and Young 1993; Shields and Shields 1998). Budgetary communication in terms of budgetary participation, budgetary explanation, or budgetary feedback has been found to be related to a variety of work-related affective and behavioral reactions. These reactions include increased job satisfaction, greater perceived fairness of the budgetary process and its outcomes, a more favorable attitude toward and greater trust in superiors, a more favorable attitude and greater commitment toward the budget and the organization, a reduced propensity to create budgetary slack, and improved job performance (e.g., Milani 1975; Kenis 1979; Brownell 1982b; Merchant 1985; Govindarajan 1986; Bies and Shapiro 1988; Hirst and Lowy 1990; Dunk 1993; Magner et al. 1995; Libby 1999; Chong and Chong 2002; Wentzel 2002).

Mandatory budget meetings and mandatory budget reports are two basic types of structural procedures that an organization might implement to promote budgetary communication. Mandatory budget meetings provide for a two-way flow of budget-relevant information between the budget actors involved in the meeting. Mandatory budget reports promote a one-way flow of budget-relevant information, with the direction of the flow depending upon which of the budget actors generated the report and which is (are) the recipient(s) of the report. Our focus in the current study is budgetary communication between two specific budget actors, a unit manager and his or her immediate supervisor. We next discuss how a manager's mandatory budgetary involvement in terms of attending budget meetings and exchanging budget reports not only with the immediate supervisor but also with another category of budget actor, budget staff, might be related to the manager's budgetary communication with the supervisor in terms of budgetary participation, budgetary explanation, and budgetary feedback.

Mandatory Budgetary Involvement with Supervisor

When managers attend mandatory budget meetings with their immediate supervisor, they have a face-to-face forum to voice views and opinions regarding their budget directly to the supervisor. Furthermore, these meetings provide opportunities for supervisors to explain the reasons for their budget decisions directly to the subordinate manager and to provide direct feedback regarding the manager's achievement of budget goals. For these reasons, we propose that as managers have greater mandatory involvement in the budgetary process in terms of budget meetings with their supervisor, they will have greater budgetary participation with, and greater budgetary explanation and budgetary feedback from, the supervisor.

H1a: Mandatory budget meetings with the immediate supervisor will have a positive relationship with a manager's budgetary participation with the supervisor.

H1b: Mandatory budget meetings with the immediate supervisor will have a positive relationship with the budgetary explanation a manager receives from the supervisor.

H1c: Mandatory budget meetings with the immediate supervisor will have a positive relationship with the budgetary feedback a manager receives from the supervisor.

Mandatory budget reports to the immediate supervisor are another avenue by which managers might proffer their budgetary views and opinions directly to the supervisor. Thus, we propose that as a manager has greater mandatory involvement in the budgetary process in terms of budget reports to the supervisor, the manager will participate more fully with the supervisor in budgetary decision making. Because mandatory budget reports from a manager to a supervisor promote a flow of information only up (but not down) the organizational hierarchy, we do not propose a relationship between mandatory budget reports to the supervisor and either the budgetary explanation or the budgetary feedback that a manager receives from the supervisor.

H2: Mandatory budget reports to the immediate supervisor will have a positive relationship with a manager's budgetary participation with the supervisor.

While mandatory budget reports from managers to their immediate supervisor promote a one-way flow of budget-relevant information up the organizational hierarchy, mandatory budget reports from supervisors to subordinate managers promote a one-way flow of budgetary information in the opposite direction. For this reason, we propose that as a manager has greater mandatory involvement in the budgetary process in terms of mandatory reports from the supervisor, the manager will receive

greater budgetary explanation and budgetary feedback from the supervisor. However, we do not propose a relationship between mandatory budget reports from the supervisor and a manager's budgetary participation with the supervisor, because the concept of budgetary participation generally relates to a subordinate manager conveying budgetary views and opinions up the hierarchy.

H3a: Mandatory budget reports from the immediate supervisor will have a positive relationship with the budgetary explanation a manager receives from the supervisor.

H3b: Mandatory budget reports from the immediate supervisor will have a positive relationship with the budgetary feedback a manager receives from the supervisor.

Mandatory Budgetary Involvement with Budget Staff

Managers in large organizations typically must interact with the organization's budget staff during the budgetary process. For example, staff members provide assistance to managers in preparing their unit's initial budget, review the budget to determine whether or not it is consistent with organizational objectives and the budgets of other units, and work with managers to make appropriate changes to the budget when inconsistencies are found. Some of this interaction between managers and budget staff is likely to occur by means of organization-mandated budget meetings and reports.

From one perspective, increased mandatory budgetary involvement with budget staff might enhance a manager's budgetary communication with the immediate supervisor if staff members serve as intermediaries in an indirect transfer of budget-relevant information between the two parties. For example, when attending mandatory budget meetings with or submitting mandatory budget reports to budget staff, managers may voice views and opinions regarding their budget that staff members, in turn, transmit in some form and through some medium to the supervisor. Also, the supervisor may through

some medium convey explanations or feedback regarding a manager's budget to budget staff that they, in turn, transmit in some form to the manager during mandatory budget meetings or in mandatory budget reports.

From another perspective, increased mandatory budgetary involvement with budget staff may reduce a manager's budgetary communication with the supervisor if it signifies a top-down, bureaucratic budgetary environment in which the supervisor plays a trivial role in establishing the final budget for the manager's unit. In this environment, managers may be less inclined to express their budgetary views and opinions to the supervisor because they do not think their input will have much influence on the final budget. The supervisor, for his or her part, may be less inclined to provide the manager with explanations or feedback regarding the manager's budget both because the supervisor may know little about the rationale used in establishing the budget figures and because he or she feels little responsibility for the budget.

Because the theoretical support is equivocal and prior empirical evidence is lacking, we did not formulate specific hypotheses regarding relationships between mandatory budgetary involvement with budget staff in terms of budget meetings and reports and a manager's budgetary communication with the immediate supervisor in terms of budgetary participation, budgetary explanation, and budgetary feedback. Instead, we examined these relationships in the context of the following research questions.

RQ1: Are mandatory budgetary meetings with budget staff related to a manager's budgetary participation with the immediate supervisor, budgetary explanation from the immediate supervisor, and budgetary feedback from the immediate supervisor?

RQ2: Are mandatory budgetary reports to budget staff related to a manager's budgetary participation with the immediate supervisor, budgetary explanation from the immediate supervisor, and budgetary feedback from the immediate supervisor?

RQ3: Are mandatory budgetary reports from budget staff related to a manager's budgetary participation with the immediate supervisor, budgetary explanation from the immediate supervisor, and budgetary feedback from the immediate supervisor?

RESEARCH METHOD

Sample and Procedures

An initial sample of 766 business operating locations with annual sales exceeding \$50 million, each from a unique company, was drawn from a database of over 10,000 operating locations maintained by a large utility for marketing purposes. The minimum of \$50 million in sales was applied as large organizations are more likely to have formal budgetary procedures in place (Bruns and Waterhouse 1975; Merchant 1981). Two questionnaires were sent to each location's chief accounting officer for distribution to two different managers with significant budget responsibility.

Usable questionnaires were returned by 148 responsibility center managers (a 9.7 percent response rate) from 94 different companies (representing 12.3 percent of the companies to which questionnaires were sent). The average respondent was male (92.9 percent) and 44.5 years old (S.D. = 7.9), had been with the company for 15 years (S.D. = 8.7) and in his current position for 6.1 years (S.D. = 5.7), and had authority over 34 subordinates (S.D. = 70.1). The operating locations for which the respondents worked were principally in manufacturing (87.8 percent) and their Standard Industry Code (SIC) major group numbers spanned a diverse group of industries, including food, textiles, paper,

chemicals, fabricated metal products, industrial machinery, electrical equipment, transportation equipment, and measuring equipment.

Because of the relatively low response rate, we conducted two tests of non-response bias. First, the 94 company operating locations for which the respondents worked were compared to a separately drawn sample with respect to industry composition (SIC major group numbers) and size (\$50 - \$100 million in sales, \$100 - \$500 million in sales, \$500 million and over in sales). No significant differences ($p < .05$) were detected for industry composition or size. In addition, the first 30 and last 30 respondents were compared on the basis of gender, age, tenure with company, tenure in current position, and number of subordinates. No significant differences emerged between the two groups on any of these demographic variables. These tests provide some assurance that the sample is representative of the population from which it was drawn.

Measures of Mandatory Budgetary Involvement

Six items were developed to measure the respondents' mandatory budgetary involvement with the supervisor and budget staff in terms of meetings and reports. Budget meetings with supervisor and budget meetings with budget staff, respectively, were measured with the following two items: "In the budget preparation process, what is the minimum number of times that you have to meet (1) with your immediate supervisor (with or without budget officials and/or other managers being present), and (2) with budget officials (with your immediate supervisor not present)?" Budget reports to supervisor and budget reports to budget staff, respectively, were measured with the following two items: "In the budget preparation process, what is the minimum number of budget reports that you have to prepare specifically for: (1) your immediate supervisor, and (2) budget officials?" Budget reports from

supervisor and budget reports from budget staff, respectively, were measured with the following two items: “In the budget preparation process, what is the minimum number of budget reports sent to you that have to be prepared primarily by: (1) your immediate supervisor, and (2) budget officials?” To emphasize the request for mandatory meetings and reports, the instructions expressly stated that the respondents should only consider “budget meetings and reports that are necessary under a LITERAL or STRICT INTERPRETATION of written policies (i.e., that are necessary to conform to the LETTER OF THE LAW).” Respondents were also instructed to “assume a ONE YEAR time frame.” Budget officials were defined as “company employees, other than your immediate supervisor, who have a role in the budgeting process.” Budget reports were defined as including “any formal, written dissemination of financial or non-financial data through paper or electronic media.”

Skewness and kurtosis statistics for the six measures of mandatory budgetary involvement indicated serious deviations from normality, with the ratio of the absolute value of the statistic relative to its standard error greater than 9 in each case. Also, we were concerned that the relationships between the measures of mandatory budgetary involvement and the criterion variables in the study would be subject to diminishing returns and therefore nonlinear. For these reasons, we applied a log transformation to the six variables so that their distributions more closely approximated a normal one and to place the variables on a geometric scale to restore linearity.

Measures of Budgetary Communication with Supervisor

Budgetary participation with supervisor was measured with eight items based on those used in previous budgeting studies (Swieringa and Moncur 1975; Bruns and Waterhouse 1975; Milani 1975; Merchant 1981; Brownell and Merchant 1990; Kren 1992; Shields and Young 1993). The items were

phrased to reflect a behavior of the supervisor and so that they were stated in an active voice. Sample items include: “My supervisor seeks my opinions and suggestions when my budget is being set,” “My supervisor initiates budget-relevant discussions with me,” “My supervisor finalizes my budget only when I am satisfied with it,” and “My supervisor includes changes I have suggested in new budgets.” Each item had a seven-point scale with the endpoints 1 (“strongly disagree”) and 7 (“strongly agree”). Cronbach’s alpha reliability coefficient for the measure was .92, which exceeds the minimum .70 value recommended by Nunnally (1978). Item responses were summed and averaged into a composite score.

Budgetary explanation from supervisor was measured with the following three items that we developed: “My supervisor provides adequate explanations for budget decisions that affect me,” “My supervisor gives sufficient justification for important budgetary decisions that affect my unit,” and “My supervisor attempts to see that I have a clear understanding of the rationale for budgeting decisions that he/she makes.” The endpoints of each item were 1 (“strongly disagree”) and 7 (“strongly agree”). Cronbach’s alpha was .90. Item responses were summed and averaged into a composite score.

Budgetary feedback from supervisor was measured with three-items used by Kenis (1979). The items were: “My supervisor gives a considerable amount of feedback about my achievement concerning my budget goals,” “My supervisor provides a great deal of feedback and guidance about my budget variance,” and “My supervisor lets me know how well I am doing in terms of achieving my budget goals.” Each item had a seven-point scale with the endpoints 1 (“strongly disagree”) and 7 (“strongly agree”). Cronbach’s alpha in the current study was .87. Item responses were summed and averaged into a composite score.

RESULTS

Table 1 contains means, standard deviations, and Pearson bivariate correlations for the variables. Correlations among the mandatory budgetary involvement variables were generally low-to-moderate, ranging from .04 to .54. Correlations among the budgetary communication variables were moderate-to-high, ranging from .45 to .69. Correlations between the mandatory budgetary involvement variables and the budgetary communication variables were low-to-moderate, with absolute values ranging from .01 to .30.

[INSERT TABLE 1 ABOUT HERE]

The primary analytical technique was ordinary least-squares regression. Budgetary participation with supervisor, budgetary explanation from supervisor, and budgetary feedback from supervisor were each regressed separately on the six mandatory budgetary involvement variables. Hypothesized relationships between the mandatory budgetary involvement variables and the budgetary communication variables were examined using a one-tailed test of significance, while a two-tailed test of significance was used for examining all other relationships. Table 2 contains the results of the regression analysis. The betas (standardized regression coefficients), which represent the relationship between a given mandatory budgetary involvement variable and a budgetary communication variable after controlling for the other mandatory budgetary involvement variables, were the basis for addressing the hypotheses and research questions of the study.

[INSERT TABLE 2 ABOUT HERE]

The hypotheses pertain to relationships between the mandatory budgetary involvement with supervisor variables and the budgetary communication variables. Hypothesis 1a, which proposes a

positive relationship between budget meetings with supervisor and budgetary participation with supervisor, was supported at $p < .10$. Hypotheses 1b and 1c, which propose that budget meetings with supervisor has positive relationships with budgetary explanation from supervisor and budgetary feedback from supervisor, respectively, were supported at $p < .05$. Hypothesis 2 proposes a positive relationship between budget reports to supervisor and budgetary participation with supervisor. It was not supported, as the relationship between the two variables was not statistically significant ($p > .10$). Hypothesis 3a, which proposes a positive relationship between budget reports from supervisor and budgetary explanation from supervisor, was supported at $p < .05$. Hypothesis 3b proposes that budget reports from supervisor has a positive relationship with budgetary feedback from supervisor. It was not supported as the relationship between these variables was not significant.

The research questions pertain to relationships between the mandatory budgetary involvement with budget staff variables and the budgetary communication variables. Regarding RQ1, budget meetings with budget staff had a positive relationship with both budgetary participation with supervisor and budgetary feedback from supervisor at $p < .10$, but did not have a significant relationship with budgetary explanation from supervisor. Regarding RQ2, budget reports to budget staff did not have a significant relationship with any of the budgetary communication variables. Regarding RQ3, budget reports from budget staff had a significant negative relationship with budgetary participation with supervisor ($p < .01$), budgetary explanation from supervisor ($p < .01$), and budgetary feedback from supervisor ($p < .05$).

DISCUSSION

Large organizations typically mandate that unit managers attend budget meetings and exchange budget reports with their immediate supervisor and budget staff in order to promote a flow of budget-relevant information up and down the organizational hierarchy and thus to enhance budgetary communication within the organization. However, few, if any, prior studies have examined the extent to which organization-mandated budgetary involvement is actually related to budgetary communication between the manager and other actors in the budgetary process such as the immediate supervisor. Our study, which addresses this gap in the budgeting literature, indicates that some organization-mandates requiring managers to be involved in the budgetary process enhance communication between the manager and immediate supervisor in terms of budgetary participation, budgetary explanation, and budgetary feedback. As we proposed, mandatory budget meetings with the supervisor, which have the potential for two-way exchanges of budget-relevant information, were found to promote both upward-flowing (budgetary participation with supervisor) and downward-flowing (budgetary explanation and feedback from supervisor) budgetary communication. The face-to-face interaction that occurs during mandatory budget meetings likely provides opportunities for managers and their supervisors to express budget-related facts, views, and opinions directly to each other.

Our findings regarding the effects of exchanging mandatory budget reports with the supervisor were equivocal. As we proposed, mandatory budget reports from the supervisor improved the level of budgetary explanation that a manager received. Mandatory budget reports may be a principal vehicle through which supervisors convey the reasons for their budget decisions to subordinates. Contrary to our expectations, however, mandatory budget reports to the supervisor were not associated with a

manager's level of budgetary participation with the supervisor. Moreover, and again contrary to our expectations, mandatory budget reports from the supervisor were not associated with the level of budgetary feedback that a manager received from the supervisor. Organizations may place formal restrictions on the timing and content of mandatory budget reports that limit the degree to which managers can voice their budgetary views and opinions to supervisors and the degree to which supervisors can provide feedback to subordinates regarding their achievement of budget goals. The richer, face-to-face setting offered by budget meetings may be a more conducive environment for managers and their supervisors to exchange these types of information.

The current study also examined whether managers' mandatory budgetary involvement with budget staff was related to their budgetary communication with the supervisor. Budget staff may intermediate the informational exchanges between a manager and supervisor and thereby provide a useful service that enhances budgetary communication. Consistent with this perspective, mandatory budget meetings with budget staff were found to enhance a manager's budgetary communication with the supervisor in terms of budgetary participation and budgetary feedback. However, these benefits of mandatory budgetary involvement with budget staff seem confined to the medium of budget meetings and do not extend to budget reports. In fact, mandatory budget reports from budget staff to the manager were associated with *less* upward- and downward-flowing budgetary communication between the manager and supervisor. This finding may be an artifact of the budgetary environment of organizations where budget staff issue a large number of reports. A large number of staff budget reports suggests a rigid budgetary bureaucracy and an autocratic style of budgeting (Seiler and Bartlett 1982). A bureaucratic and autocratic budgetary process may allow supervisors little or no role in

establishing the final budgets for their subordinates. In this kind of budgetary environment, subordinate managers may feel there is little to be gained by expressing their budgetary views to the supervisor, and the supervisor may either lack enough background information, or instead feel no responsibility, to provide budgetary explanation and feedback to the subordinate.

While we believe the explanations that we have offered for our findings are viable, the study was not designed to identify the actual psychological processes that underlie these phenomena. Future budgeting studies should first test whether the findings generalize beyond the current group of managers and, if so, then investigate the specific processes that account for the findings. Future research might also examine the relationships tested in the study from the perspective of the supervisor, rather than the subordinate manager, to assess whether the supervisor makes similar judgments regarding the degree to which mandatory budget meetings and reports foster budgetary communication between the two parties. Furthermore, future budgeting studies should examine the relative contributions that voluntary versus mandatory budgetary involvement make to budgetary communication between managers and their supervisors. Voluntary budget meetings and reports may promote relatively more budgetary communication than mandatory budget meetings and reports because they likely have fewer organizational restrictions regarding their timing and content and because formal supervisor-subordinate roles are likely to be de-emphasized.

Our results have practical implications for officials who are involved in designing their organization's budgetary system. For example, they suggest that mandatory budget meetings may be a particularly important structural procedure for enhancing budgetary communication between a manager and supervisor, even if the manager is meeting with budget staff rather than the supervisor. On the

other hand, the results also suggest that structural procedures mandating the exchange of budget reports between the manager and supervisor may not always promote the intended flow of budgetary information between the two parties. Moreover, procedures that mandate budget reports from budget staff to managers may even have an unintended negative impact on budgetary communication between the manager and supervisor. The future research that we have suggested aimed at identifying the processes that underlie our results may provide officials with insight as to how to better design mandatory budgetary involvement procedures that will be effective in enhancing budgetary communication within the organization without unintended negative consequences.

The results of the current study must be assessed in light of several limitations. Of greatest concern, the questionnaire had a low response rate. Although we provided evidence suggesting that non-response bias did not seriously undermine the results, the respondents may still have differed in relevant ways from those who did not return a questionnaire. Also, mandatory budget meetings and reports were measured only in terms of frequency of occurrence, which may not fully reflect the extent to which these procedures allowed the respondents to become involved in the budgetary process. Moreover, the budgetary communication with supervisor variables were measured with perceptions and may not adequately capture the objective amount of budgetary participation, budgetary explanation, and budgetary feedback that occurred between the manager and the supervisor. Finally, we have implied a causal sequence from mandatory budget meetings and reports to budgetary communication with the supervisor that cannot be proved with the cross-sectional data used in the study. These limitations notwithstanding, we believe the study provides some of the first empirical

evidence regarding how organization-mandated budget meetings and reports are (or are not) related to budgetary communication within organizations.

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TABLE 1**Means, Standard Deviations, and Pearson Correlations**

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9
1. Budget Meetings with Supervisor ^a	1.26	0.68	1.00								
2. Budget Reports to Supervisor ^a	1.20	0.73	.54**	1.00							
3. Budget Reports from Supervisor ^a	0.69	0.69	.25**	.34**	1.00						
4. Budget Meetings with Budget Staff ^a	0.91	0.71	.45**	.19*	.23**	1.00					
5. Budget Reports to Budget Staff ^a	1.19	0.69	.19*	.38**	.14	.34**	1.00				
6. Budget Reports from Budget Staff ^a	0.97	0.71	.10	.04	.37**	.26**	.47**	1.00			
7. Budgetary Participation with Supervisor ^b	5.10	1.26	.21*	.09	.01	.19*	-.03	-.18*	1.00		
8. Budgetary Explanation from Supervisor ^b	4.76	1.34	.23**	.13	.11	.18*	.08	-.12	.69**	1.00	
9. Budgetary Feedback from Supervisor ^b	4.70	1.32	.30**	.23**	.08	.23**	.10	-.10	.45**	.58**	1.00

^a A log transformation was applied to these variables prior to analysis.

^b The theoretical range of these variables is 1 - 7.

*, ** Significant at the $p < .05$ and $p < .01$ levels (two-tailed test), respectively.

TABLE 2
Regression Results

Mandatory Budgetary Involvement Variable^{a,b}	Budgetary Communication Variable		
	Budgetary Participation with Supervisor	Budgetary Explanation from Supervisor	Budgetary Feedback from Supervisor
<u>With Supervisor:</u>			
Budget Meetings with Supervisor	.17[†]	.19*	.19*
Budget Reports to Supervisor	-.04	-.09	.06
Budget Reports from Supervisor	.04	.16*	.05
<u>With Budget Staff:</u>			
Budget Meetings with Budget Staff	.17 [†]	.11	.16 [†]
Budget Reports to Budget Staff	.02	.15	.08
Budget Reports from Budget Staff	-.26**	-.30**	-.22*
R ²	.11**	.12**	.14**

^a A log transformation was applied to these variables prior to analysis.

^b Betas (standardized regression coefficients) are displayed for these variables.

[†], *, ** Significant at the $p < .10$, $p < .05$, and $p < .01$ levels, respectively. Boldface coefficients address relationships that were hypothesized to be positive and thus were evaluated with a one-tailed test of significance. Other coefficients were evaluated with a two-tailed test of significance.