Participative Budgeting, Budget Evaluation, and Organizational Trust in Post-Secondary Educational Institutions in Canada

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ABSTRACT

The purpose of this research was to investigate the relationship between a participative budgeting system, the attitudes toward the budget, and levels of organizational trust held by administrators in post-secondary institutions. A 50-item questionnaire was distributed to college and university administrators across Canada. A series of regression analyses were carried out to determine the relationships between the variables of interest. Perceived levels of participation in developing the operational budget were found to be positively related to budget usefulness, overall budget grade, and organizational trust levels. Participation was found to be negatively related to the perceived levels of budget gaming taking place.

This study provides confirmatory evidence of the positive benefits of a participative approach to budget development in a post-secondary environment. The usefulness of the budgeting process as a management tool to convey information, to give voice and context to membership within the organization, and to build organizational trust is supported.

Keywords: *Participative Budgeting, Organizational Trust, Higher Education, Organizational Context of Accounting*

"budgetary fairness works – namely, by enhancing trust..."

(Staley and Magner, 2007)

INTRODUCTION

Budgeting, the development of a financial plan showing planned revenues and expenditures, is a common management practice within colleges and universities. In the last decade the focus on budgeting and how it relates to more accurate cost determination and performance incentives has received increased attention as post-secondary institutions across the globe deal with strains on funding (see the ies National Center for Education Statistics; Blumenstyk, 2010; Goetzmann *et al*., 2010 for information on university funding levels). Supporters of budgeting argue that there are a number of benefits to this practice. A budget quantifies an organization's expectations regarding financial flows. It provides a medium for increased understanding and communication of the strategic aspects confronting the organization including allocation of resources, changing product lines, and the current and projected demands for its products/services. In addition, a budget can provide a framework for judging performance. A recent survey of North American for profit companies found 79% of sample respondents used budgets for control and 94% of these had no plan to abandon this practice (Libby and Lindsay, 2010). In response to financial pressures colleges and universities have changed the way they produce and use budgets, increasing their focus on cost control and the application of formula-based costing approaches (Thomas,

2000) as well as the use of incentive based budgeting systems (Priest *et al*.,2002).

Colleges and universities are complex institutions however and their missions include multiple objectives. In these institutions the estimation of costs, the allocation of resources, and the monitoring of performance can be influenced by factors whose goals are not strictly efficient financial practice. Studies have shown resource allocation processes and models to be historically and culturally situated within the context of each university, with the models in use being more a matter of internal fit than of best practice (Goddard and Ooi, 1998; Jarzabkowski, 2002). Empirical findings indicate that the existence of models in universities provided a sense of objectivity, but that the strong collegial culture proved unwilling to accept a strongly centralized organization of the resources allocation processes (Jones, 1994; Scapens *et al*., 1994). And although the use of computer-based models for planning is seen as being more transparent, knowledge of how universities allocate resources appears to be largely restricted to those involved in the process (Angluin and Scapens, 2000). Even formula based approaches to resource/cost allocation have been found to be influenced by patterns of micro-political activity, the influence of sub-unit power, and the priorities and preferences of key individuals (Thomas, 2000). Clearly political, social, and group effects influence the development and utilization of budgets in a university context.

In this politically charged environment, the budget and the process of its development may influence or be influenced by the level of organizational trust held by participants in the process. Trust can be thought of as expectations regarding "the future contingent actions of others" (Sztompk, 1999). Trust in a business context, is the expectation that the other party will be honest, considerate, accountable and transparent (Tapsocott, 2003). Trust is seen to provide an advantage to an organization. It leads to more effective communication, increased co-operation, and a diminished resistance to change. Given the unique nature of the university—their knowledge based outcomes and politically charged environment—together with their increased focus on cost structure and control, the relationship between budgeting practices and organizational trust is worthy of further investigation.

This study focuses on Canadian college and university administrator's views of the budget process at their institutions. It asks them for their level of perceived involvement in setting the budget—participation, their views on the degree that the budget helps predict the financial impact of changing circumstances—usefulness, their views on the level of manipulation that takes place in determining the resource allocations and performance standards–gaming, and the overall value they give to the budget process—in the form of a grade. They are also asked a series of questions that provide a measure of their level of organizational trust. The results of the study indicate there is a relationship between the way the budgeting process is carried out at their institution, their perceived value of the budget, and their level of organizational trust.

LITERATURE REVIEW

Budgets

Accounting textbooks define a budget as a formal, quantitative expression of an organization's strategic plans (see Horngren *et al*., 2012). The budget process translates "qualitative mission statements and corporate strategies into action plans, link(ing) the short term with the long term, bring(ing) together managers from different hierarchical levels and from different functional areas, and at the same time provid(ing) continuity by the sheer regularity of the process" (Umapathy, 1987, pg. xxii). A budget translates an institution's plan into priorities (Whalen, 2002). Complications can arise however from a long list of considerations: when organization goals are not clear or are conflicting; when there is a lack of agreement regarding priorities; when there is inconsistency between stated priorities and subsequent resource allocations; when the methods for achieving outcomes are unclear; when there are limited resources; or when individuals determining resource allocations and/or performance benchmarks have a conflict of interest. In other words, the nature of complex organizations such as universities can result in a budget that is a reflection of these complexities as opposed to strict economic considerations.

The budget, together with the process used to create it, can be seen to be something far differ-

ent than a rational statement of resource allocation based on agreed upon strategic goals. In one example, the budget can be seen to be the product of a negotiation exercise (Wildavsky, 1984). Given a finite level of resources, a commitment of resources to a specific unit or activity within an organization necessitates that other units or activities will do with less. The planning aspect of the budget process can thus be viewed as less a division of resources to achieve an agreed upon result, and more of a political exercise where competing organizational interests vie for recognition and support. The budget projections can also be affected by budget gaming (Jensen, 2003), where resource allocations are set at levels designed to force increased efficiencies (low), or resource needs requested at levels designed to allow for slack (high). In neither case would the budget figure be an amount representing actual need. This "gaming" of the budget is especially problematic when budget values are used as part of an organization's performance evaluation/control system. Going back as far as the 1950's (Argyris, 1952) it has been shown that the value of budgets to the function of an organization is related to managements leadership style in the development and utilization of this tool.

As institutions of higher learning whose focus is on teaching, research, and service, resource distribution decisions within universities can be subject to a high level of political influence. The goals of research and teaching are understood, but the exactness of what is to be learned is not agreed upon nor is the relationship between effort (resources) and outcome determinable. Reputation plays a key role, allowing for the impact of authority, power and influence in the development of goals and the distribution of resources. Social attributes such as the non-profit character of the universities goals (Gross, 1968), strong attachments to traditional academic values (Paterson, 2003; Lapsley and Miller, 2004), and the unique nature of contemporary academic work as both a public service and creative knowledge work (Deem, 2004), support the unique nature of the university as an organization. It is this uniqueness that can make the allocation and evaluation of resource usage especially problematic.

It has been argued that the use of participative budgeting—involving subordinates in the process of setting the budget—can lead to improved individual and organizational performance. A review of the empirical literature has, however, shown inconsistent results (Shield and Young, 1993). In their review of participative budgeting literature Shields and Shields (1998) attribute these inconsistent results in part to the inadequate recognition of antecedents of participative budgeting. Building on this, Libby (1999) looked at the impact of voice and explanation and found that the inclusion of both led to significant performance improvements. Voice is defined as the ability of subordinates to be involved in a decision process by communicating their views to their superiors (Leventhal, 1980). Explanation is defined as a causal account or justification provided by the superior when the outcome of the decision process is not affected by the subordinates' communication preferences (Bies, 1987). In other words, performance went up when participants felt they were listened to or, when their recommendations could not be implemented, they were given an explanation as to why. These are characteristics of human interaction that can build trust.

Trust

Levels of trust, together with perceptions of accountability and power have been found to influence budgetary practice (Goddard, 2004). Trust can occur between individuals or between individuals and groups. It is recognized as an important factor in determining organizational success, organizational stability and the well-being of employees (Albrecht and Travaglione, 2003; Cook and Wall, 1980; Shaw, 1997; Kramer and Tyler, 1996). High levels of trust between senior management and employees strengthen an organization's ability to remain competitive (Davis *et al*., 2000). This competitive advantage is assumed to come about from the reduced transactions costs (Cummings and Bromiley, 1996), more effective communication, increased co-operation among organization members and diminished resistance to change (Kramer, 1999)—factors important in a university as well as business context. In terms of budgeting, it has been argued that trust between the resource allocation process members plays an important role since it facilitates better management of the process and supports structures of accountability between participants

(Manochin, 2008). In his investigation of local governments, Goddard (2004) found that organizations characterized by a high degree of trust had open participative budget processes. The converse also being true with "distrustful" organizations adopting closed budgetary practices. In universities where resource pressures are high; where tradition, micro-political activity, and differential sub-unit power exists; and where there is limited knowledge of resource allocation practices; an understanding of the relationship between an administrator's level of organizational trust and their views and perception of the budget could lead to improved functionality.

Researchers have defined trust in a number of ways (Dietz and Hartog, 2006). Mayer *et al*. (1995) characterized trust as a willingness to be vulnerable. Cook and Wall refer to trust as the extent to which one is willing to ascribe good intentions to and have confidence in the words and actions of other people (1980). Albrecht and Travaglione define trust in senior management as "an employee's willingness to act on the basis of the words, actions, and decisions of senior management under conditions of uncertainty or risk" (2003, pg 78). The definition of trust used in this study is the one articulated by Cummings and Bromiley (1996). Trust being a belief that "another individual or group (a) makes good-faith efforts to behave in accordance with any commitments both explicit or implicit, (b) is honest in whatever negotiations preceded such commitments, and (c) does not take excessive advantage of another even when the opportunity is available" (pg 303). This definition of trust was designed specifically to address three assertions underlying transaction cost economics, where actors are said to "lie in negotiations, cheat on deals if it is profitable to do so, and exploit opportunities for renegotiation to their utmost" (pg. 303). Given the use of budgets as an instrument for resource allocations and performance evaluations, together with its multiplicity of understood definitions, selecting an approach to trust specifically designed to address prominent assumptions underlying management practice was deemed appropriate. The Instrument subsequently developed set out to specifically measure each of the three components of their definition, assessing both how individuals felt (their affective state) and thought (their cognitive state) about each.

HYPOTHESES

This study set out to investigate three main hypotheses. The first is that there will be a positive relationship between an individual's perceived level of participation in setting the budget at their college/university and the overall value (grade) that they give to the budgeting process at their institution. Participation in setting the budget would increase an individual's understanding of the process, it would help them understand the constraints facing the institution, and it would give them a voice. This increased understanding and increased opportunity to exercise influence should increase an individual's perception of the value of the budget process.

Hypothesis 1A considers how useful individuals find the budget when needing to determine the financial impact of different event scenarios. Given that participation in setting the budget increases an individuals understanding of the process, the resources available, and the factors that influence their distribution, it is hypothesized that there will be a significant positive relationship between budgetary participation and budget usefulness. It is expected that perceived budget usefulness will be positively related to the grade assigned the budget.

The second hypothesis is that there will be a negative relationship between the level of perceived budget participation and the level of perceived budget gaming. Budget gaming, where organizational personnel develop budget information based not on true expectations of availability and need, but rather on an amount designed to improve apparent performance against budget, is considered a significant drawback to participation. If budget levels and targets are set exclusively by higher-level personnel, lower-level personnel would not have the opportunity to inflate their stated needs and costs and gaming cannot take place. Gaming can also be understood to occur, however, when higher-level personnel manipulate the budget in order to drive down costs over the short term or to move resources into areas that benefit upper management. With increased participation, all personnel should have a clearer understanding of the budgeting process as well as the needs and resources available in the organization. The increased transparency brought on by participation should reduce the perception that

others are, or have the opportunity to, game the system.

The third hypothesis is that there will be a positive relationship between an individual's perceived level of participation in setting the budget at their college/university and their level of organizational trust. Expanding the number and level of individuals included in determining the activities and priorities of the institution, as well as the level of resources required to carry out these activities, would indicate a more open and transparent approach to managing the working of the organization. This increased interaction resulting from the participation, the openness and transparency of upper level administration, together with an increased voice from lower levels in the organization should increase individuals' views regarding the good efforts and honesty of others in the organization, i.e. their level of trust in these others.

METHOD

A 50-item questionnaire was developed and distributed electronically using the Qualtrics web survey tool. The survey was based on preliminary research, where the author carried out a series of semi-structured interviews with a small sample (12) of university administrative personnel across Canada. The preliminary research found a relationship between the way budgets are developed, the individual's assessment of these budgets, and their level of organizational trust.

The current study's survey questionnaire asked subjects to identify the type of institution they worked at (College or Primary, Comprehensive, or Medical/Doctoral University); the Province the institution was located in, the Faculty/or Area they worked, and the highest administrative job title they had held. Participation was determined by asking participants to indicated on a 7-point scale their level of agreement/disagreement with statements designed to determine the degree that budgets were set exclusively by central administration as opposed to an iterative process were both lower and upper levels of administration contributed equally. Usefulness was determined by asked for their agreement with the statement that the budget was a useful tool in determining the financial impact of different event scenarios—for what if analysis. Gaming too was determined by a series of 7-point likert style questions where subjects were asked their level of agreement or disagreement with questions on levels of inflated costs, understated revenues, and the propensity of individuals to use the budget to promote their own unique interests. Associated with the questions on budgeting and the budget process, additional information was collected on the manner in which costs were and should be determined and allocated across the different functional units of their various institutions, and the value of this cost information to their decision-making. The overall budget evaluation measure (Grade) was based on that developed by Libby & Lindsay, 2010. It asks individuals to assign an overall grade to the budgeting system/process at their institution considering time spent, overall effectiveness and any dysfunctional behavior it might cause. Individual trust levels were determined using a modified version of the Cummings and Bromiley short-form organizational trust inventory (1996). The entire questionnaire took between 15-20 minutes to complete.

SAMPLE

A stratified sample of nine hundred and thirty-two college/university administrators from sixty-five post-secondary institutions was selected. The institutions varied in size and included Colleges, Primarily Undergraduate Universities, Comprehensive Universities, and Medical/Doctoral Universities. Individuals were drawn from each of three tiers of administration. The tiers were defined as: 1- Subject Level Department/Area Heads; 2- Faculty/School level Deans, Assistant/Associate Deans, and Financial Services Directors, and 3—University level Provosts, Assistant/Associate Vice Presidents, and Program Level Directors. These selected participants should all have familiarity developing and/or working within a budget as part of their administrative responsibilities. At the smaller institutions all individuals working in a specific tier may have been selected. For larger institutions having more than 5 individuals working in each tier, participants within each tier were selected at random.

RESPONDANT DEMOGRAPHICS

One hundred and seventy usable responses to the survey were obtained–a response rate of 18%.

Some respondents failed to answer all of the questions on the survey, in these instances their responses are excluded from the relevant analysis. Individuals responded from every Province in Canada with the largest number coming from Ontario (79). As no individual identifying information was collected, respondents were asked to identify the type of Post-secondary institution they worked at, as well as their administrative job title. The most frequent type of post-secondary institution of respondents were those from Comprehensive Universities (73) and the most common administrative job title given was in the category of Provost, Vice President or Assistant/ Associate V.P. (65). In some instances parts of the questionnaire were left blank. More detailed information regarding the administrative level, institutional type work at, and Provincial location is provided in Table 1.

Table 1

Provinces	Responses
Alberta	20
British Columbia	28
Manitoba	7
New Brunswick	7
Newfoundland & Labrador	1
Nova Scotia	12
Ontario	79
Prince Edward Island	3
Quebec	7
Saskatchewan	6
Institutional Type	**Responses**
College	19
Primarily Undergraduate Univ.	45
Comprehensive University	73
Medical/Doctoral University	33
Administrative Role	**Responses**
Academic Dept/Area Head	31
Dean, Asst/Assoc Dean	60
Faculty level Director	2
Provost, Vice Pres., Asst/Assoc VP	65
University level Director	9
Other	3

FINDINGS

Participation

To solicit their views on the level of budgetary participation at their institutions, participants were asked to indicated their level of agreement with two statements:

P1) the operating budget at my college/university is largely set by upper level administration, and

P2) the operating budget at my college/university is set through an iterative process with both lower and upper level administrative units contributing more or less equally.

They indicated their level of agreement on a 7 point scale ranging from strongly disagree to strongly agree. P1 was reversed scored and P1 and P2 were added together to derive a participation index. Scores could range from 2 for agreement that the budget was set Centrally to 14 for agreement that the budget was set in a participative manner. An average score of 6.16 indicates a sight tendency toward centralize budget setting process (See Table 2)

Budget Usefulness

Budget usefulness was determined by asking the respondents to indicated their agreement, on a seven point scale, with the statement: "I find my unit's operating budget to be a useful tool in determining the financial impact of different event scenarios, i.e. it is useful for 'what if' analysis." The mean score of 4.19 indicates that on average the respondents neither agreed nor disagreed with this statement. (See Table 2)

Budget Gaming

The perceived level of budget gaming carried out at the participants' institution was determined by constructing an index of responses to four statements. As with the budgetary participation measure, respondents were asked to indicate their level of agreement on a 7 point Likert-type scale. The statements were:

Table 2
Descriptive Statistics for Measures

	Minimum	Maximum	Mean	Std. Dev.
Participation	2	14	6.16	2.78
Trust	24	83	58.33	12.897
Budget Grade	1 (F)	13 (A+)	8.22 (B-)	2.773
Budget Gaming	5	26	15.39	4.11
Budget Usefulness	1	7	4.19	1.72

G1) during our budgeting process it is expected that operating units will inflate their projected costs,

G2) during our budgeting process it is expected that central administration will understate their projected revenues,

G3) the budgeting process at my institution is designed to provide a validating mechanism for the incremental reduction of expenditures, and

G4) individuals at my college/university use the budgeting process to promote their own unique interests.

The mean score of 15.39 indicates that on average overall respondents neither agreed nor disagreed that budgeting gaming was occurring at their institution. (See Table 2)

Budget Grade

The overall budget evaluation measure (Grade) was based on that developed by Libby & Lindsay, 2010. It asks individuals to assign an overall grade to the budgeting system/process at their institution considering time spent, overall effectiveness and any dysfunctional behavior it might cause. The grade indicator in Qualtrics allowed the respondent to choose a grade ranging from an F (which would be given a value of 1) through D-, D, D+, C-, C, C+, B-, B, B+, A-, A, and A+ (which would be given a value of 13). The grades assigned by participants to their institution's budgeting process ranged from a 1 (F) to a 13 (A+) with the average grade assigned being an 8.22 (B-). (See Table 2)

Trust

Individual trust levels were determined using a modified version of the Cummings and Bromiley short-form organizational trust inventory (1996)—see Appendix A. Subject were asked to indicate their level of agreement/disagreement with the statements on a 7-point scale. Slight editorial modifications to the questionnaire were made to have it fit the academic setting. The short-form (12-item) questionnaire was selected because it provided a parsimonious measure with almost identical explanatory power to their long-form (62 item) inventory (item to factor correlation of .522 vs. .530 for the long-form), giving room and time for other measures.

An index measure was developed by reverse scoring questions 4, 5, 6, 10, and 12 and then adding the items together. An average (mean) trust score of 58.33 was determined from the responses, indicating an overall positive, albeit sight, level of organizational trust. (See Table 2)

Administrative Level

An ANOVA was carried out to determine if there was a significant difference in perceived budgetary participation, levels of organizational trust, the budget grade, budget usefulness, and the perceived level of budget gaming between administrative groups. It is reasonable to assume that individuals at different administrative levels within university will have different views on the practices and functioning of the organization. Their level of knowledge regarding the budgetary practices and their level of influence in setting the budget and influencing the culture of the institution is likely to rise as an individual moves up the organizational hierarchy. It is hypothesized that the perceived level of budgetary participation

will be significantly related to organizational trust, the budget grade, budget usefulness, and the perceived level of budget gaming that is taking place. Since three levels of university administration were surveyed, it is important to consider the impact of administrative level. Table 3 shows the results of this analysis indicating that in fact administrative level is significantly related to all the variables of interest with the exception of Budget Usefulness.

Table 3
ANOVA of Measures of Interest by Administrative Type

	F	Sig.
Participation	7.902	.001
Trust	5.883	.003
Budget Grade	10.829	.000
Budget Gaming	7.703	.001
Budget Usefulness	1.814	.167

Participation and Budget Grade

The first hypothesis stated that there would be a positive relationship between an individual's perceived level of participation in setting the budget at their college/university and the overall value (grade) that they give to the budgeting process at their institution. Linear regression analysis was carried out with budget grade as the dependent variable and participation as the independent. The results indicated a significant positive relationship between these two measures (t 3.739, sig of .000) supporting the hypothesis.

Because administrative type was determined to be significantly related to the constructs of interest, an additional analysis was carried out to determine if level of perceived budgetary participation would remain a significant determent of the grade assigned the budget when administrative level was added as an additional explanatory variable. The results of the multiple regression indicated that both participation and administrative level were positively related to the budget grade. Participation showed a standardized coefficient of .239, with a t of 2.783, sig .006 and administrative level a standardized coefficient of .292 with a t of 3.409, and significance of .001.

Participation and Budget Usefulness

As shown in Table 4, multiple linear regression found that the perceived level of participation is significantly related to the usefulness of the budget when determining the impact of different event scenarios. Participation showed a standardized coefficient of .303, with a t of 3.621 and a significance level of .000. The level of administration held by the individual was not related to their responses concerning the usefulness of the budget.

Participation and Budget Gaming

As described earlier, budget gaming has been presented in the literature as a downside to increased budgetary participation. Individuals when given a voice to influence the flow of resources or the standards used to evaluate their performance are expected to try and set a budget that will benefit them individually and not necessarily that of the organization as a whole. I hypothesized however that the positive benefits of budgetary participation—the improved understanding of the budget process and increased level of trust between members of the organization—will be such that the perception that others are "gaming the process" will decrease with increased participation. The impact being that there will be a negative relationship between perceived level budgetary participation and the perceived level of budget gaming. With Gaming as the dependent variable, regression was used once again to determine the direction and significance of budgetary participation. A significant negative relationship was found. The higher the level of perceived participation in the budget process, the lower the level gaming that was perceived to take place. The standardized coefficient was -.253, with a t of -3.153, and a significance level of .002. With the addition of administrative level as an explanatory variable the standardized coefficient of perceived participation dropped to -.194 with a t of -2.332 and a significance level of .021. The administrative level standardized coefficient was -.189, with a t of -2.278, and a significance of .024. So, as with the earlier findings, while administrative level of the respondents is related to their perceived level of budget gaming (the higher the administrative level the less budget gaming is seen to exist in the system), those respondents who perceived a more

Table 4
Results of Multiple Linear Regression

Dependent Variable	Independent Variables	Standardized Coefficients	t	Sig.
Budget Grade	Participation	.239	2.783	.006
	Admin. level	.292	3.409	.001
Budget Usefulness	Participation	.303	3.621	.000
	Admin. level	.033	0.397	.692
Budget Gaming	Participation	-.194	-2.332	.021
	Admin. level	-.189	-2.278	.024
Organizational Trust	Participation	.202	2.483	.014
	Admin. level	.268	3.294	.001

participative budget process at their institution also perceived a lower level of budget gaming taking place.

Participation and Organizational Trust

The second hypothesis stated that there would be a positive relationship between an individual's perceived level of participation in setting the budget at their college/university and their level of organizational trust. Multiple linear regression was once again used to test the relationship between participation and organizational trust with administrative level added as an additional explanatory variable. As in the case of the Budget Grade, participation and was found to be positively related to Organizational Trust supporting the hypothesis. With the addition of administrative level as an additional explanatory variable, participation remained significantly and positively related to Trust. Participation showed a standardized coefficient of .202, t of 2.483, and sig. of .014 and administrative level a coefficient of .268, a t of 3.294, and sig. of .001.

CONCLUSION

The results of this survey of academic administrators in Colleges and Universities across Canada indicate that there is a strong relationship between these individuals' views of the participative nature of the budget process on their campus and their attitudes toward the budget and the broader organization. Individuals who saw the budget setting process as being set through an iterative process with both lower and upper administrative units contributing more or less equally (a participative approach), considered the budget process to be more effective, they found the budget more useful, they felt that less gaming (manipulation of the numbers to optimize personal/individual unit performance) took place, and scored higher on their level of organizational trust. The differences in the scores on these measures were significantly different than those who indicated that the operating budget was non-participative, i.e. predominately set by upper administration.

A participative budgeting system allows individuals working in various levels of administration to have more input into resource distribution decisions. They have a voice in these decisions. They also have a level of knowledge on the nature of the budgeting process at their School—the way the system works, the categories and level of demand on the resources. As a result of their involvement and increased knowledge they have a greater understanding of the reasons why specific desired resource distributions may not be forthcoming. This increased voice and understanding can also occur as a result of moving up the hierarchy of university administration from Department Head, to Dean, to Provost for example. Because individuals at various levels within the university administrative hierarchy took the survey, it was important to control for administrative level when looking at the impact

of participation on the measures of interest. The survey data was analyzed using multiple linear regression with both participation and administrative level included as independent variables. The administrative level of the individual was in fact found to be significantly related to their evaluation of the budget process (the grade assigned), the measure of gaming taking place (a negative relationship), and their level of organizational trust, but the level of perceived budgetary participation remained a significant explanatory factor as well. Interestingly, while participation was significantly related to the perceived usefulness of the budget for carrying out what if analysis, administrative level was not. This would imply that those who worked at setting the budget were able to use it for determining the impact of various situational scenarios, independent of their administrative level.

DISCUSSION AND LIMITATIONS

Earlier preliminary research on the relationship between budget participation and organizational trust in Canadian Universities (Simmons, 2Ø12) found that university administrators possessing a higher level of organizational trust were those who felt their views on the budget were heard and considered, who saw a correspondence between the stated goal of the institution and the subsequent resource allocations, and who had available to them useful financial information. Those who did not witness this approach to university budgeting had low levels of organizational trust. This preliminary research was conducted using semi-structured interviews with 12 senior administrators across Canada and was limited by the small number of individuals interviewed. This current survey based research was designed to address the limitations of the previous study by expanding the number of individuals whose views could be considered, strengthening our confidence in the determined relationship. This study confirms and strengthens those earlier findings.

Colleges and Universities who utilize a more participative approach to resource allocation decisions benefit from this approach. The budget itself is seen to be more useful and effective, there is perceived to be less manipulation of the numbers, and the overall level of organizational trust is higher. These results should not be surprising when you consider that the university faculty and administration are highly educated knowledge workers who have chosen to work in organizations that have a history of collegial governance. These individuals are smart, well trained people who are accustomed to having a voice and who search out explanations when they are not forthcoming. And yet this survey found an average participation score of 6.16 out of a possible 14. This would indicate that more respondents viewed the budget at their institution as being set by central administration as opposed to being the result of a participative/interactive process across various administrative levels.

A university budget is more than a statement of resource allocations by operating area. It functions as a communications medium—a vehicle by which the goals, objectives, and constraints of participating agents are made clear. The broader the true participation in the budget process, the more voices are heard and the deeper the understanding of the conflicting demands on the institution and the necessary compromises that must be taken. The budgeting process is considered to be more effective and the level of organizational trust is higher. Institutions who fail to implement this practice are limiting the usefulness of the budget as a management tool.

The findings of this study indicate that individuals who perceive the budgeting process at their institution to be participative in nature find the budget to be more useful, give the budget a higher overall grade, believe that less budget gaming is taking place, and indicate a higher level of organizational trust. These relationships are all significant and independent of the influence of the administrative level of the individual respondents. While we are confident that these relationships exist, the study is limited in that it measures the variables over a brief (one month) period of time and the direction of causality cannot be verified. Our confidence in the directionality of these relationships would increase by conducting long-term case research in organizations considering the adoption of a participative budgeting approach. In this case based approach measures of organizational trust, budget grade, gaming, and budget usefulness could all be measured before the adoption of a participative system and again over a number of periods post adoption. Signifi-

cant changes to the variables of interest could then be analyzed for their relationship to the adoption of the participative model.

APPENDIX A

Organizational Trust Inventory—Short Form

1. We think the people in _____ tell the truth in negotiations.
2. We think that _____ meets its negotiated obligations to our department.
3. In our opinion _____ is reliable.
4. We think that the people in _____ succeed by stepping on other people.
5. We feel that _____ tries to get the upper hand.
6. We think that _____ takes advantage of our problems.
7. We feel that _____ negotiates with us honestly.
8. We feel that _____ will keep its word.
9. We think that _____ does not mislead us.
10. We feel that _____ tries to out of its commitments
11. We feel that _____ negotiates joint expectations fairly.
12. We feel that _____ takes advantage of people who are vulnerable.

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