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Beyond budgeting or budgeting reconsidered? A survey of North-American budgeting practice

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ABSTRACT

Budgets have historically played a key role in management control; however, recently they have become the subject of considerable criticism and debate. Some argue that the problems with budgeting stem from the way budgets are used (Horngren et al., 2004) while others argue that budgeting processes are fundamentally flawed (Hope and Fraser, 2003a). Hansen et al. (2003), among others, have called for a systematic examination of these issues against empirical evidence. In this paper, we present the results of two surveys of mid- to large-sized North-American organizations to 1) update the literature on North-American budgeting practices, 2) collect empirical evidence to assess the criticisms, and 3) begin to identify strong tendencies or patterns in budgeting practice to inform future academic research. Overall, we find for the majority of firms that budgets continue to be used for control purposes and are perceived to be value-added. While problems exist with budgets, organizations are adapting their use to account for these problems rather than abandoning budgets altogether.

I believe that budgeting provides managers with a wonderful opportunity to rejuvenate their organizations. There is no other managerial process I am aware of that translates qualitative mission statements and corporate strategies into action plans, links the short term with the long term, brings together managers from different hierarchical levels and from different functional areas, and at the same time provides continuity by the sheer regularity of the process (S. Umapathy, Current Budgeting Practices in US Industry, 1987, xxii).

Not to beat around the bush, but the budgeting process at most companies has to be the most ineffective practice in management. It sucks the energy, time, fun and big dreams out of an organization. It hides opportunity and stunts growth. It brings out the most unproductive behaviors in an organization, from sandbagging to settling for mediocrity. In fact, when most companies win, it is in spite of their budgets, not because of them (Jack Welch, Winning, 2005, 189).

1. Introduction

The budget has historically played center stage in most organizations' systems of management control (Otley, 1994). However, recently it has been the subject of considerable criticism (Hansen et al., 2003). Budgeting has been deemed "broken" (Jensen, 2001), "a thing of the past" (Gurton, 1999), or an "unnecessary evil" (Wallander, 1999). European surveys also report a growing dissatisfaction among organizations with their budgeting systems (Neely et al., 2003; Eckholm and Wallin, 2000).

The case against traditional budgeting has been argued most forcefully by Hope and Fraser (2003b) as part of the Beyond Budgeting Roundtable (BBRT).[1] The authors argue

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[1] Members of the Beyond Budgeting Roundtable (BBRT) are individuals and organizations who are interested in managing without budgets. Membership in the BBRT is worldwide with the largest membership base in Europe.

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that budgeting systems often result in dysfunctional behavior and consume large amounts of management time.[2] Additionally, they often impede firms from being flexible and adaptive in the increasingly unpredictable environments facing contemporary organizations; and they are disconnected from strategy and thus out of sync with competitive requirements.[3]

Of course, this is not the first time budgeting practices have been criticized. However, there is a difference this time. In the past, criticisms of "traditional budgeting" were typically made by academics and were often exaggerations of "current worst practice" that had long been singled out for criticism. Improvements could be made or problems avoided (Horngren et al., 2004). On the other hand, the Beyond Budgeting message originates from practice and the BBRT does not believe the solution lies in improving traditional budgeting; instead, their view is that the budget should be eliminated as it is fundamentally flawed (Hope and Fraser, 2003a,b).

Three points are noteworthy about this turn of events. First, the overwhelming thrust of academic research into budgeting has been in the areas of participative budgeting and reliance on budgetary targets for performance evaluation (Hartmann, 2000). This research has arguably become disconnected from the concerns raised by practitioners (Hansen et al., 2003). The fact that such academic research has found mixed results (Kren and Liao, 1988; Shields and Young, 1993; Hartmann, 2000) and appears to have stalled suggests it may be useful to consider practitioner views to generate new research perspectives on budgeting.

Second, Hope and Fraser's argument is presented as a *universal* prescription. It seems difficult to accept that so many organizations would continue to use budgeting for control purposes (i.e., for managerial motivation and performance evaluation) if it was fundamentally flawed (Hannan and Freeman, 1989). Either previous research indicating extensive use of budgeting in practice (e.g., Umapathy, 1987) is no longer accurate and/or budgeting practices have evolved. However, other than Epstein and Manzoni's (2002) working paper, there is very little recent evidence regarding whether and how firms are adapting their budgeting systems. Further, there *are* examples in the literature in which highly successful firms utilize budgeting extensively for both planning and control (Knight, 1992, Simons, 1987, Knight and Dyer, 2005). One can only wonder why these firms have been so successful and innovative if budgeting is inherently flawed.

Third, too much emphasis may have been placed by Hope and Fraser (2003b) on the assertion that budgeting systems are inherently antithetical to successful adaptation in uncertain or unpredictable environments (see Hansen et al., 2003). For example, the BBRT's exemplar case – Handelsbanken (see Lindsay and Libby, 2007) – was not located in an industry (banking) that needed to adapt quickly or where revolutionary change was occurring. On the other hand, Simons' (1987) Codman & Shurtleff case depicts a Johnson & Johnson subsidiary placing extensive reliance on budgeting in a highly innovative industry. Considerations other than environmental uncertainty or unpredictability would seem to be involved.

Taken together, these points suggest that we do not possess a robust understanding of budgeting that is capable of explaining the *mechanisms or processes* giving rise to satisfactory or unsatisfactory consequences of budgeting systems. Yet, it is such knowledge that underlies the acquisition of deep theory (Bunge, 1997, 2003). The purpose of this paper is therefore to undertake a step forward in the development of such understanding. It presents the results of two largely descriptive surveys of budgeting practices in North-American companies for the purpose of determining whether any strong tendencies or patterns exist in budgeting practices, manager beliefs about budgeting, and key outcomes associated with budgeting systems. Discovering such 'facts' or patterns is a necessary first step because they often enable doubts to be raised concerning conventional wisdom (Mintzberg, 1979, 1983). In addition, their discovery provides a reliable basis for theorizing efforts aimed at understanding how and why those facts came to be (Fiske, 1986; Kaplan, 1998; Haig, 2005; Hambrick, 2007).

Within this overall aim, the paper has four specific objectives. First, we update the literature in terms of current budgeting practices in North America. The most recent extensive study of North-American budgeting practices was conducted over twenty years ago by Umapathy (1987). Given the changes in the competitive environment since then, Umapathy's results may no longer represent budgeting practices utilized by contemporary North-American organizations. Second, we investigate budget managers' overall perceptions, views and control uses of budgeting as well as their plans for budgeting in the future. Third, we examine the extent to which practitioners identify with some of the key criticisms that have been levied at budgeting as summarized by Hansen et al. (2003) and determine how firms might be using budgets in ways that may overcome them. Finally, in attempting to identify avenues for future research, we examine factors associated with assessments of overall budget value and other key outcomes.

In the next section we outline our research method, describe the sample and provide basic sample statistics. Section 3 of the paper presents the survey results. Section 4 follows with a discussion of the study's major findings and conclusions.

2. Method

2.1. Sample selection and survey design

We gathered data via a web-based survey of managers holding senior positions in medium to large-sized organizations. The sample came from the 2003 membership directory of CMA Canada and the 2004 membership directory of the Institute of Management Accountants

[2] The dysfunctional effects of using budgetary targets for performance evaluation have been discussed extensively in the accounting literature. Examples include Jensen (2001) on the problems with budget-based incentive contracts, Van der Stede (2000) on budgetary slack and manager short-termism, and Merchant (1990) on budgets and earnings management.

[3] See Libby and Lindsay (2003a,b) for an outline of the BBRT's case against traditional budgeting and the suggested replacement management model.

(IMA). To be included in the sample, individuals must have been employed in a for-profit organization employing at least 100 people located in the United States or Canada (but outside of Quebec).[4] In addition, we selected potential respondents based on holding the positions of Vice President, Chief Financial Officer, Controller, Director of Budgeting or Division Manager. We chose these criteria to ensure that the target group of organizations was large enough to have formal budgeting systems and so that managers we contacted would have considerable experience in establishing and using budgets. The final target sample consisted of 2583 CMA Canada members and 13,712 IMA members.

We distributed the survey to CMA Canada members following Dillman's (2000) recommendations. We contacted individuals first via a pre-notice letter signed by the president of CMA Canada and sent by post. This letter described the survey's objectives and encouraged members to participate. It also provided a web address for the survey and a password. The purpose of the password was to limit access to only those in the target group. This letter was followed by two dedicated email reminders sent by the CMA organization at two-week intervals to all individuals included in the target sample.

We used a different method to distribute the IMA survey due to constraints imposed by the IMA. We first contacted targeted respondents via a dedicated pre-notice email signed by the Executive Director of the IMA. This email described the survey objectives and encouraged members to participate. It also provided a web address for the survey and a password. This email was followed by one reminder email sent after two weeks to all individuals included in the sample. The reminder email was included as a component of the regular weekly emails that the IMA sends to all of its members.

The Canadian survey took approximately 30 min to complete. The welcome page explained the survey objectives, provided a link to definitions of all variables used in the survey and provided contact information for possible assistance. Respondents selected a user name and entered the password provided by the researchers to access the survey. Responses could be saved, which allowed respondents to leave the survey as required and return to the section where they had left off.

We organized the survey into several sections and each section dealt with a specific theme. Once respondents completed a section, they could not return to it. Where possible, we drew or adapted measures from prior studies. We also developed new measures as required. Ten individuals with a similar profile to potential survey respondents pretested a preliminary version of the survey. Based on the pretest feedback, we shortened the survey, clarified some questions and changed the terminology to better reflect usage of some terms by practitioners. In addition, we tested the integrity of the process used to assign participants to one of the three different versions of the survey.

The assignment process requires some explanation. After answering a few questions at the start of the survey, the software assigned participants to one of two groups depending upon whether they reported using the budget for control purposes (i.e., for managerial motivation and performance evaluation) or not. If the respondent indicated that budgets were used for control in his/her organization, an automated algorithm built into the web site randomly assigned the respondent to one of two different versions of the survey.[5] While containing some overlapping questions, the two different versions contained version-specific questions so that we could collect a considerable amount of data concerning budgeting practices while limiting the time required for any one respondent to complete the survey to no more than 30 min. Consequently, reported sample sizes will not always add to the total number of respondents.

We conducted the US survey several months after the Canadian survey. The US survey instrument was modified based on an analysis of the Canadian data. Modifications were made to eliminate non-discriminating questions, to improve some measures, and to add new questions based on what we learned from analyzing the Canadian data. Appendix A lists, in the order that they are discussed in the paper, the survey questions and their related scales as well as any differences between the Canadian and US surveys.

2.2. Sample statistics

Respondents submitted 558 surveys through the web-based system. CMA Canada members completed 346 of these surveys (response rate = 13.6%) while IMA members submitted 212 of these surveys (response rate = 1.5%). Table 1 shows that respondents had been employed on average 4.8 years in their current position and 7.9 years with their current company. Job titles spanned the list provided with the most frequent titles being Controller (44.6%) and CFO (26.6%). Approximately 51% of responding organizations were from the manufacturing sector and 49% were from the service sector. In addition, 46% of responding organizations were stand-alone companies while 55% were divisions of larger organizations. These statistics were similar across the Canadian and US samples. However, differences existed with respect to size. The average Canadian respondent had divisional revenue in the $10–$50 million range while the average US respondent was larger with mean divisional revenues in the $50–$100 million range.

Although we can only speculate why the response rate was lower in the US sample, we believe the following differences in conducting the Canadian and US surveys may have played a role: (i) we used different methods to contact potential respondents in the pre-notification stage (postal mail vs. email); (ii) we found it difficult to spec-

[4] Due to financial and time constraints the survey was not translated into French making it unfeasible to survey CMA members located in Quebec.

[5] In total, 21% of respondents indicated that the budget was not used for control purposes. These respondents were assigned to a third version of the survey. This paper reports results only for respondents indicating budgets were used for control in their business units.

Table 1
Descriptive statistics for survey respondents.

	Canada	US	Combined sample
Number of respondents	346	212	558
Mean years of employment:			
In current position	4.4 yrs	5.3 yrs	4.8 yrs
With current company	7.6 yrs	8.5 yrs	7.9 yrs
Job titles (frequency):			
Chief Financial Officer (CFO)	30.0%	22.0%	26.6%
Managing executive	5.2%	5.1%	5.2%
Business controller	48.4%	39.6%	44.6%
Director of budgeting	5.6%	13.8%	9.1%
Other	10.8%	19.5%	14.5%
	100.0%	100.0%	100.0%
Economic sector (frequency):			
Manufacturing	50.9%	50.6%	50.8%
Service	49.1%	49.4%	49.2%
	100.0%	100.0%	100.0%
Corporate structure (STRUCTURE) (frequency):			
Stand-alone unit	46.6%	44.1%	45.5%
Division of a larger organization	53.4%	55.9%	54.5%
	100.0%	100.0%	100.0%
Business Unit Revenues (SIZE) (frequency):			
Less than $1 million	5.4%	1.9%	3.8%
$1–10 million	21.0%	12.6%	17.1%
$10–50 million	34.4%	28.3%	31.6%
$50–100 million	16.1%	13.6%	14.5%
$100–500 million	14.5%	22.6%	18.3%
$500 million–$1 billion	4.8%	7.5%	6.1%
$1–5 billion	3.2%	10.1%	6.4%
Greater than $5 billion	0.6%	4.3%	2.2%
	100.0%	100.0%	100.0%
Mean Business Unit Revenues	$10–50 million	$50–100 million	

ify as meaningful a target group of respondents in the US study as in the Canadian study since the categorizations in the Canadian population databases were much more homogenous and fewer in number; and (iii) we sent a different number of follow-up reminders (two in the Canadian study vs. one in the US study) and we used different types of reminders in each case (dedicated in the Canadian study vs. part of a routine communication in the US study). We find this last difference to be particularly noteworthy. Unlike the Canadian survey where the bulk of responses occurred *after* the two follow-up reminders, the one reminder that occurred in the US survey did not generate *any* new responses. It is important to note that the IMA members received reminder as part of the regular weekly email sent to all members containing several items of news and announcements; consequently, respondents might have deleted the email without reading its contents, or the item might have been "lost" in the larger message.

We report the results separately for each country whenever possible. Since there is no reason *a priori* to expect the results to differ, agreement across the two surveys can be taken as an important measure of their replicability and generalization across North-American firms. Nonetheless, the possibility that a common non-response bias factor influencing both samples cannot be ruled out. In all cases, when comparable country data are not reported, it is because the specific data was collected in one country only.

3. Results

3.1. North-American practitioners' perceptions of budgeting

3.1.1. Should budgets be abandoned or improved?

In a recent review, Hansen et al. (2003) observe that the dissatisfaction with budgeting in practice is occurring on two fronts: those that wish to abandon budgeting altogether and those that wish to improve it. For example, Hope and Fraser (2003b) report several case studies of European companies that have successfully abandoned budgets for control purposes. On the other hand, Eckholm and Wallin (2000) report that only 15% of the Finnish companies they surveyed indicated they planned to abandon traditional budgeting whereas 61% aimed to improve the current budgeting system and 24% reported they would continue to use their current budgeting system without changes. This divergence motivated us to investigate the situation that exists in North-American firms.

To examine this issue, we asked respondents to report whether they continue to use budgets for "control" purposes, where control was defined in the survey as "the use of budgets for managerial motivation and as a standard for performance evaluation." Table 2 shows that 277 of respondents (80%) in the Canadian sample and 163 of respondents (77%) in the US sample indicated that budgets were used for control purposes in their organizations. This result is comparable to Umapathy (1987) who

Table 2
Use of budgets for control*.

	Canada		US		Total	
	Freq	%	Freq	%	Freq	%
Are budgets used for control?						
Yes	277	80%	163	77%	440	79%
No	69	20%	49	23%	118	21%
Total	346	100%	212	100	558	100%
If use budgets for control: Do you plan to abandon the use of budgets for control?						
Yes	2	1%	2	1%	4	1%
Possibly	18	6%	4	2%	22	5%
No	257	93%	157	97%	414	94%
Total	277	100%	163	100	440	100%

* "Control" was defined in the survey as "the use of budgets for managerial motivation and as a standard for performance evaluation purposes."

reported that 83% of his sample used budgets for control purposes.

Within the group using budgets for control, 94% indicated they were not planning to abandon the use of budgets for control in the near future while 5% indicated they were possibly considering doing so, and only 1% indicated that they were definitely planning to do so within the next two years. Results were similar across the Canadian and US samples.

Additionally, we asked the Canadian respondents within this group whether they planned to make changes to their budgeting systems over the next two years. We found that 46% of respondents planned to change or adapt their budgeting systems within the next two years. The most important reasons cited for making changes are consistent with those reported in other surveys of practice (e.g., Ekholm and Wallin, 2000; Neely et al., 2003):

- preparing budgets is time consuming and the benefit may not be worth the cost;
- the lack of flexibility inherent in budgeting does not fit well with a constantly changing environment;
- budgets can be manipulated and provide incentives for the "wrong" (i.e., self-interested) behavior on the part of managers;
- budgetary reporting is not meaningful to front-line employees;
- budgeting eliminates the drive for constant improvement; and
- the budget is not aligned with strategy.

We also asked these respondents to indicate the types of changes they might make in open-ended response boxes. The following main categories of responses were obtained:

- incorporate a bottom-up orientation and gather more information from front-line managers;
- use rolling forecasts;
- better align strategic planning with budgeting;
- prepare less detailed budgets initially and update them regularly using ongoing forecasts.

In conclusion, these results suggest that the traditional use of budgets for control purposes will not soon be eliminated. As well, most firms in our sample planned to improve their budgeting systems, not abandon them. The US respondents provided further evidence on this issue by indicating their degree of agreement with the following statement: "The problems with budgeting are more to do with how they are used and some of the roles they are asked to play; budgets have the potential to be extremely useful if used appropriately." The median level of agreement was 5 (agree) on a 6-point scale, with 88% of respondents agreeing or strongly agreeing with this statement ($n = 78$).

3.1.2. Are budgets value-added?

Notwithstanding recent criticisms, the vast majority of companies in this study reported that they will continue to use budgets for control purposes, presumably because the benefits of doing so outweigh the costs. That is, they believe budgets and the budgeting process are value-added. In this subsection, we specifically examine this conjecture.

We asked respondents to evaluate the degree to which the overall budgeting system was value-added by assigning a "grade" between 0 and 100 to their budgeting system. In assigning the grade, we asked respondents to consider "the amount of management time spent on the budgeting process, as well as the budget system's effectiveness in assisting the business unit to achieve its various objectives and any dysfunctional behavior that it may have caused."[6] Fig. 1 presents the results for the two samples.

In both samples, the median score was 70 out of 100 corresponding to the scale anchor of "good value." Budgeting systems were rated as providing positive value (i.e., score greater than 50) in approximately 90% of the firms across the two samples. Moreover, "good value" or greater was reported in 50 and 64% of the Canadian and US firms, respectively, and 25% reported at least "very good value." These results would seem to be supported by the degree of agreement by American respondents to the question "Budgets are indispensable; we could not manage without them." The average response on a six point Likert scale was 4.2 ("somewhat agree"). Fifty percent of respondents agreed or strongly agreed with the statement; only 15% disagreed or strongly disagreed.

In conclusion, it appears that the majority of firms in our sample are finding ways to obtain considerable value from their budgeting systems. This supports the earlier finding that the bulk of firms are not considering abandoning the use of budgeting for control purposes.

3.2. The criticisms of budgeting

Hansen et al. (2003) summarized several criticisms of budgets and/or assumptions underlying the use of budgets identified from the academic and practitioner literatures. The key criticisms were:

1. Budgeting consumes a lot of managerial *time* which makes it a costly process and the benefits may not be worth the cost.

[6] Respondents considered each of these issues in some depth in earlier sections of the survey before being asked the value-added question in an attempt to get them to fully reflect on their response.

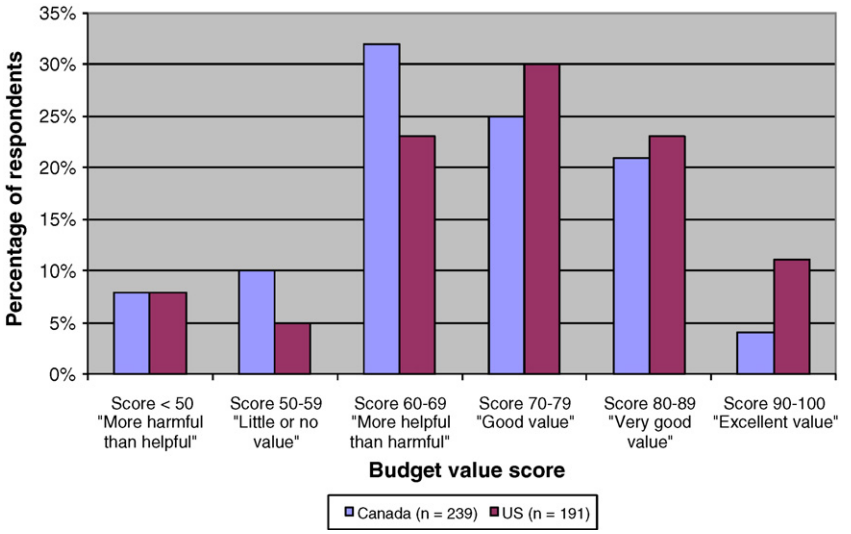


Fig. 1. Are budgets value-added? *Budget value measure*: "Taking into account the management time spent on the budgeting process, as well as the budget, system's effectiveness in assisting the business unit to achieve its various objectives and any, dysfunctional behavior it may or may not cause, what overall grade would you assign to the, budgeting system/process?" Grade (from 0 to 100).

2. Budgets inhibit firms from *adapting* to changes in a timely manner due to their fixed nature.
3. The budgeting process is disconnected with *strategy* thereby putting it out of kilter with the competitive demands facing firms.
4. The use of the budget as a *fixed performance contract* leads to unreliable performance evaluation and promotes budget gaming.

In this section, we examine the extent to which such criticisms are shared by respondents in our North-American sample of firms using budgets for control purposes. We also examine whether firms are taking steps to mitigate some of these criticisms.

3.2.1. Criticism 1: budgets take too much time to prepare

We asked respondents to indicate how many weeks the annual formalized budgeting process takes to complete in their business unit (FIRM WEEKS). Table 3 (Panel A) shows that the median response in the Canadian sample for FIRM WEEKS was 6 weeks (std. dev. = 4.7; $n = 102$). About 30% of firms took 4 weeks or less to prepare the budget while 31% took 9–16 weeks and about 5% took more than 16 weeks. In the US sample, median firm weeks to budget were somewhat higher at about 10 weeks (std. dev. = 6.6; $n = 77$).[7]

Survey respondents were also asked to indicate the amount of time the average manager spent on budget-related tasks in a year (e.g., developing the budget, revisions, reports, variance analysis). Table 3 (Panel A) shows the median amount of manager time spent on budgeting-related tasks (MANAGER TIME) was three to four weeks in both samples (std. dev. 1.4 in the Canadian sample, $n = 235$; std. dev. = 1.5 in the US sample, $n = 80$). Assuming the average manager works 48 weeks per year, this represents approximately six to eight percent of the average manager's time.

The time spent on budgeting may be driven by the extent of detail required and the number and level of people involved in preparing the budget. We describe this construct as "touch" in budgeting and measure it by asking respondents to indicate the extent of effort and involvement managers in their business unit devote to developing budgets (TOUCH). The scale was anchored from 1 (light) to 5 (heavy).[8] Table 3 (Panel A) shows that the median score in the Canadian sample was 4.0 (std. dev. = 1.4, $n = 110$), near the 'heavy' end of the scale. Results are similar in the US sample (median score = 4.0, std. dev. = 1.1, $n = 83$). A reasonably heavy degree of touch in developing budgets appears to be the norm.

We correlated the degree of touch in budgeting (TOUCH) with the time managers spend on budgeting (MANAGER TIME) as well as the total number of weeks it takes the business unit to prepare the budget (FIRM WEEKS). As one might expect, the correlation was positive in the Canadian sample for MANAGER TIME ($r = 0.19$, $p < .01$, $n = 104$) and FIRM WEEKS ($r = 0.39$, $p < .01$, $n = 104$).[9] The results are qualitatively similar in the US sample.

Overall, we find that the total number of weeks taken to complete the budget and the time spent by the managers in preparing the budget are significantly less for this sample

[7] We further explored the discrepancy between FIRM WEEKS in the two samples by dividing firms into two size categories (small vs. large) using $50 million or less as "small" and greater than $50 million as "large." The correlation between business unit size and firm weeks to budget is $r = 0.17$ in the Canadian sample ($p < .06$, one-tailed) and $r = 0.29$ in the US sample ($p < .01$, one-tailed) providing some evidence that differences in business unit size may be driving this result.

[8] We reverse coded the question appearing in Appendix A for analysis purposes.

[9] All significance tests reported in this paper are one-tailed unless otherwise noted. One-tailed tests are used when *a priori* reasons exist for specifying the direction of a relationship.

Table 3
Criticisms of budgeting*.

	Median	Std. dev.	Observed Min	Observed Max	N
Panel A: "Budgets take too much time to prepare"					
FIRM WEEKS					
Canadian sample (in weeks)	6.0	4.7	1	20	102
US sample (in weeks)	10.0	6.6	2	36	77
MANAGER TIME					
Canadian sample (in weeks)	3–4	1.4	<1	> 16	235
US sample (in weeks)	3–4	1.5	<1	>16	80
TOUCH in budgeting (1 = light to 5 = heavy)					
Canadian sample	4.0	1.4	1	5	110
US sample	4.0	1.1	1	5	83

	Median	Std. dev.	Observed Min	Observed Max	N
Panel B: "Budgets impede adaptability"					
PREDICTABILITY of external environment (1 = easy to predict; 3 = somewhat predictable; 6 = impossible to predict)					
Canadian sample	2.8	0.7	1.3	4.8	110
US sample	3.0	0.6	1.5	5.0	78
RELIANCE on budget to adapt relative to other approaches (1 = no reliance; 3 = moderate reliance; 5 = exclusive reliance)					
Canadian sample	3.0	1.1	1.0	5.0	121
EFFECTIVENESS of budget in adapting to change (−3 = highly ineffective; 0 = neither effective nor ineffective; +3 = highly effective)					
Canadian sample	1.0	1.4	−3.0	+3.0	98

Canadian sample Methods of Adaptation (frequency of response)	Strongly disagree (1)	Moderately Disagree (2)	Some what disagree (3)	Neutral (4)	Some what agree (5)	Agree (6)	Strongly agree (7)	N
Panel B – continued – "Budgets impede adaptability"								
It is somewhat easy to obtain new resources outside of the budgeting process to deal with market changes	9.3%	14.8%	11.0%	6.5%	18.5%	22.2%	17.6%	108
"Fast-track" approval processes exist to ensure resources are available on a timely basis for important initiatives not incorporated in the approved budget.	8.3%	6.4%	11.0%	10.1%	26.6%	21.1%	16.5%	109

	Canadian sample (*N* = 109)	US sample (*N* = 87)
Method of updating operating budget		
Budgets are fixed. No changes made to them	44.0%	51.2%
Budgets are revised during the year	56.0%	48.8%
a. At next formal budget review	47.6%	27.5%
b. On an ad-hoc basis	32.7%	52.5%
c. When next rolling budget prepared	19.7%	20.0%

	Median	Std. dev.	Observed Min	ObservedMax	N
Panel C: "Budgets are rarely linked to strategy"					
LINKAGE (The budget is linked to strategic objectives)					
Canadian sample 1 = Strongly disagree to 7 = Strongly agree (includes a neutral point of 4 = neither agree nor disagree)	5.0	1.6	1.0	7.0	133
US sample 1 = Strongly disagree to 6 = Strongly agree (respondents forced to take a position as no neutral point included in this scale)	5.0	1.1	2.0	6.0	81
Budget is linked to strategy implementation					
Canadian sample 1 = Strongly disagree to 7 = Strongly agree (includes a neutral point of 4 = neither agree nor disagree)	5.7	1.4	1.0	7.0	133
US sample 1 = Strongly disagree to 6 = Strongly agree (respondents forced to take a position as no neutral point included in this scale)	5.0	0.9	1.0	6.0	83

Budget emphasis	Canadian sample (*N* = 109)	US sample (*N* = 87)
Panel D: "Use of fixed performance contract"		
Budget emphasis low	48.3%	29.8%
Budget emphasis high	51.7%	70.2%
Performance evaluation in the high-budget-emphasis group:		
Actual financial performance rigidly compared to budget	12.2%	16.9%
Budget target adjusted subjectively at the end of the year	33.8%	23.7%
Both budget target and other subjective factors used	23.0%	20.3%
Budget target adjusted for uncontrollable budget variances	25.7%	32.2%
Budget target adjusted at year-end using formula established at beginning of the year	5.4%	6.8%

*Appendix A includes the full measures for all of these scale items.

of firms than those reported by Hope and Fraser (2003b) (i.e., 12–20 weeks and 20–30% of managers' time) or by Umapathy (1987) (i.e., 21–40% of managements' time). Increased time for both samples is associated with the size of the business unit and the level of "touch" in preparing the budget. This begs the question whether "touch" adds organizational value. We explore this issue further at the end of this section.

3.2.2. Criticism 2: budgets impede adaptability

Hope and Fraser (2003a) assert that the new competitive environment is characterized by unpredictability; prices and margins are constantly under pressure, product life cycles are shorter and customer tastes are fickle. This situation leads to the importance of becoming adaptable and flexible. They argue that budgeting is antagonistic to these requirements because, once set, budgets are not typically changed resulting in plans and targets that quickly become out of date.

To explore this assertion, we asked respondents how easy it is when setting the budget to anticipate or predict changes in the external environment for the budget period. We adapted this measure from Govindarajan (1984) and Umapathy (1987). The scale ranged from 1 (easy to predict) to 6 (impossible to predict). Table 3 (Panel B) shows that the median response for this scale, called PREDICTABILITY, was 2.8 in the Canadian sample (std. dev. = 0.7; $n = 110$) and 3.0 in the US sample (std. dev. = 0.6; $n = 78$). These scores fall at the "somewhat" predictable anchor on the scale.

We explored this matter further in the US survey by asking respondents to indicate their degree of agreement with the statement "It is difficult to set accurate budgets because of the unpredictability of factors influencing the business." Fifty-four percent of respondents at least 'somewhat agreed' with this statement and 24% "agreed" or "strongly agreed" with it. The correlation between responses to this statement and PREDICTABILITY was .34 ($p < 0.01$). Second, we asked whether "Budgets quickly become obsolete or outdated as the year goes by." Sixty-five percent of respondents at least "somewhat agreed" with this statement and 40% "agreed" or "strongly agreed" with it. The correlation between responses to this statement and PREDICTABILITY was .23 ($p < .05$). These findings suggest that Hope and Fraser's (2003) assumption that the business environment is unpredictable, resulting in budgets quickly becoming out of date, seems valid for a significant number of firms, but it would be a mistake to generalize it to the majority.

Next, we asked respondents in the Canadian sample to indicate the degree to which they rely on the budget to adapt to market changes relative to other measures. Presumably, if the budget is ill-suited to this task we should not find a lot of reliance on it. The RELIANCE scale ranged from 1 (no reliance) through 5 (exclusive reliance). Table 3 (Panel B) shows the median score for RELIANCE is 3 (std. dev. = 1.1; $n = 121$) indicating a "moderate" degree of reliance is placed on the budget for adapting to market changes relative to other methods. For the 81% of Canadian respondents placing at least some reliance on the budget for adapting to market changes, i.e., those selecting a score of 2 (some reliance) or higher, we also examined the degree to which the budget was perceived as effective in achieving adaptation to market changes. The EFFECTIVENESS scale ranged from −3 (highly ineffective) through +3 (highly effective). We found a median effectiveness rating of +1 (std. dev. = 1.4; $n = 98$) reflecting that the budget is perceived to be "somewhat effective." This rating does not reflect an overwhelming positive endorsement but neither does it suggest that the budget is totally ill-suited to the task of facilitating adaptation.

Taken together, these results imply that while the majority of respondents utilize budgets to help them adapt to market changes, there is recognition that budgets are only somewhat effective in this role, perhaps because they become quickly out of date for a non-trivial number of firms; consequently, firms need to augment the budget process with other approaches. Table 3 (Panel B) presents the results of further questions examining this issue that were identified in the literature. We examined whether Canadian respondent firms make it easy to obtain new resources outside of the budgeting process to deal with unforeseen opportunities designed to accomplish strategic initiatives (58% report at least "somewhat agree")[10] and utilize fast track processes to do so (64% report at least "somewhat agree"). In addition, 56% of the Canadian sample and 49% of the US sample allow some type of budget revision during the year. In Canada, the most common method of revising the budget was at the next formal budget review (48%) which typically occurred at the end of the month or the end of the next quarter. In the US sample, adjustments occur most frequently on an ad-hoc basis (52.5%). Finally, approximately 20% of respondents in both samples report using rolling budgets-the approach recommended by the Hope and Fraser (2003b). This finding is similar to Umapathy's (1987, 85) result of 21%.

In conclusion, Hope and Fraser's (2003b) assumption that firms' competitive environment is characterized by unpredictability is valid for many firms in our sample, although the claim is over-generalized. Additionally, our results lend support to their assertion that the budgeting process is potentially weak in helping firms deal with adapting to change; however, firms appear to adjust budget targets in various ways to mitigate this concern and adopt processes to obtain new resources outside of the budget process when necessary.

3.2.3. Criticism 3: budgets are disconnected from firm strategy

Kaplan and Norton (2001) observe that the majority of firms they have worked with fail to link their budgeting systems to achieving strategic objectives. Hope and Fraser (2003b) also share the view that budgets are typically prepared in isolation from, and not aligned with strategy. To investigate this issue, we asked survey respondents whether "The budgeting process is explicitly linked to achieving strategic objectives/targets." We designate this variable LINKAGE. Table 3 (Panel C) shows the median score for LINKAGE was 5 (somewhat agree) in the Canadian sample (std. dev. = 1.6; $n = 133$). Untabulated results

[10] We reverse coded this question for the purpose of interpreting the results.

suggest that approximately 11% of the sample disagrees that the budget process is explicitly linked to achieving strategic objectives (a rating of 1 or 2 on the LINKAGE scale) while 48% agree (a rating of 6 or 7 on the LINKAGE scale). We observed qualitatively similar results in the US sample.

Second, we asked respondents to indicate their degree of agreement with three statements drawn from Kaplan and Norton (2001) concerning the degree to which budgets are linked to strategy implementation within their business unit. These statements consisted of: (i) "Setting the budget causes us to talk about and reflect upon our strategy"; (ii) "We sometimes change our strategy/tactics based on the feedback derived from going through the budgeting process"; and (iii) "Within the budget process, managers are expected to identify tactical initiatives to close the gap between current performance and the desired level of performance." We averaged respondents' agreement scores on these three items to create a measure of the degree to which budgets were linked to strategy implementation. Table 3 (Panel C) shows the median score on this measure was 5.7 (std. dev. = 1.4; $n = 133$) in the Canadian sample. This median score falls between the anchors "somewhat agree" and "agree" using a seven point scale. Untabulated results indicate that approximately 67% of the Canadian sample reported at least "somewhat agreeing" that concrete steps were being taken to link the budgeting process to strategy implementation.[11] We observed similar results in the US sample.

Third, we examined the importance of the budget *relative to other means* for implementing business unit strategy. We asked respondents to allocate 100 points across the following means that could be used to implement strategy: budgeting process, performance measurement and evaluation system, hierarchical authority structure, business unit culture and boundary systems.[12]

Fig. 2 indicates that organizations in both countries placed the greatest degree of reliance on the budgeting process, the performance measurement and evaluation system, and the hierarchical authority structure in implementing strategy (between 22 and 25 points out of 100). US companies rely on culture next (18 points) followed by boundary systems (12 points), whereas companies in Canada rely on these two mechanisms to a fairly equal amount (12 and 15 points, respectively). These results suggest that companies utilize a number of mechanisms for implementing strategy, all of which are important, although greater weight is placed on a subset of them, including the budgeting process. The importance attached to the budget in implementing strategy is reflected by respondents' perception of its usefulness. The budgeting process was rated by 64% of Canadian respondents as a somewhat effective (46.3%) or effective (17.7%) method for implementing strategy.

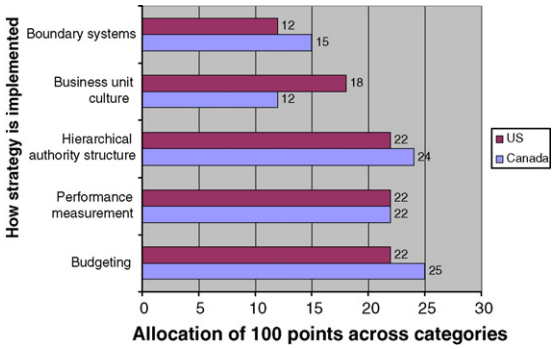


Fig. 2. How Strategy is implemented in responding organizations. *Strategy implementation measure*: "Please allocate a total of 100 points across the following elements of management control to reflect their relative importance in implementing strategy in your business unit".

In conclusion, these results indicate that that the criticism that budgets are not linked to strategy is unfounded for the majority of firms in our two samples. The budgeting process is used in many firms to promote strategically focused behavior and is recognized as being an important mechanism for doing so.

3.2.4. Criticism 4: the use of budgets as fixed performance contracts

Hope and Fraser's (2003b) most strident criticism is that budgets often serve as a "fixed performance contract." Implicitly or explicitly, the nature of this contract is that if actual performance meets or exceeds a pre-specified budget target, performance will be deemed satisfactory (or better) and this will likely result in rewards. Hope and Fraser (2003a,b) argue that a fixed target represents a poor standard for performance evaluation when factors underlying the budget may have changed during the budget period. Further, this inevitably leads to budgetary gaming by subordinates to increase the probability of receiving positive performance evaluations and associated pay increases (see also Welch, 2005)—a process Jensen (2003) refers to as "paying people to lie." We undertook a number of analyses to investigate this criticism.

Performance evaluation. We asked respondents to rate the degree of emphasis placed on meeting budget targets in the performance evaluation process using a scale adapted from Van der Stede (2001). Table 3 (Panel D) shows that 52% of Canadian respondents and 71% of US respondents indicate that budget emphasis is high.[13] For this group of respondents, we examined the prevalence of the use of fixed performance contracts. Our results indicate that only 12% of respondents in the Canadian high-budget-emphasis group and 17% of respondents in the US high-budget-emphasis group report that actual financial performance is rigidly compared against the pre-established budget target with no allowance for changes occurring in the competitive environment during the year.

[11] We performed a validity check on this result by correlating LINKAGE and the degree to which budgets were linked with strategy implementation. The correlations were $r = .64$ ($p < .001$, $n = 133$) and $r = .64$ ($p < .001$, $n = 83$) for the Canadian and US samples.

[12] The survey stipulated that boundary systems "give people the freedom to act within clearly delineated bounds as established by codes of conduct, mission statements, 'stop-doing' lists, and the communication of strategic themes" (Simons, 1995).

[13] Appendix A lists the items making up the budget emphasis scale.

This analysis suggests that the fixed performance contract is *much* less prevalent than what the BBRT would have us believe. If one combines these two findings with the earlier result that only 80% of Canadian respondents and 77% of American respondents use budgets for control purposes (see Table 2), then one can extrapolate that only 5% of Canadian firms (.80 * .52 * .12) and approximately 9% of American firms (.77 * .71 * .17) use a fixed performance contract.

Table 3 (Panel D) shows 33.8% of firms in the Canadian high-budget-emphasis group and 23.7% of firms in the US high-budget-emphasis group adjust the budget target subjectively at the end of the year to account for unexpected changes in the external environment. In addition, 23.0% of firms in the Canadian high-budget-emphasis group and 20.3% of firms in the US high-budget-emphasis group use both the budget target and other subjective factors to evaluate performance at the end of the year. The remaining respondents indicate they either adjust the budget target for the amount of any uncontrollable budget variances determined at the end of the year (25.7% of the Canadian high-budget-emphasis group and 32.2% in the US high-budget-emphasis group) or adjust the budget target at the end of the year for unexpected events using a formula established at the beginning of the year (5.4% of the Canadian high-budget-emphasis group and 6.8% of the US high-budget-emphasis group).

In conclusion, the evidence does not support the BBRT's key assumption of the prevalence of the fixed performance contract in practice. In fact, it is remarkable how few firms use the budget in this way for performance evaluation. Instead, we find that subjectivity in performance evaluation or making allowances for non-controllable events is relatively widespread.

Budget gaming. The analysis now turns to determining the extent to which certain budgetary games occur in our sample organizations. The list of gaming behaviors shown in Appendix A were drawn from Merchant (1985), Umapathy (1987), and Bart (1988). We asked respondents to use the previous two years as a point of reference and to indicate how often each of the identified gaming behaviors occurred in their business unit.

In Canada (Fig. 3, Panel A), the most frequently occurring games were deferring necessary expenditures to future periods (80% report that this occurs "occasionally" or "frequently") and negotiating easier targets by "sandbagging" (77% indicate that this occurs "occasionally" or "frequently"). The other listed games occurred, but when they did it was more often "occasionally" than "frequently" and over 50% of the firms reported that they "never occurred."

In the US (Fig. 3, Panel B), a greater proportion of respondents report that gaming behaviors occur and that these behaviors occur more often than in the Canadian sample. A Mann–Whitney test finds this difference to be statistically significant ($p < .001, n = 211$).[14] Similar to the Canadian sample, deferring necessary expenditures (91% indicate "occasionally" or "frequently") and sandbagging (86% indicate "occasionally" or "frequently") were the two most prevalent gaming activities. The other three gaming activities all occur (either occasionally or frequently) more often than they do not occur.

These results indicate that budgetary gaming is prevalent, consistent with the writings of Bart (1988), Jensen (2001) and Hope and Fraser (2003a,b). In fact, only 5 and 1% of the respondents in the Canadian and US samples, respectively, reported no incidences across the five gaming activities examined. However, what is not so well known is whether such behaviors actually impair long-run organizational performance. To examine this issue, we correlated the degree of budget GAMING with its perceived negative effect on long-run performance of the business unit (NEGLRP). The observed correlation is $r = .28$ ($p < .001$; $n = 133$) in Canada and $r = .56$ ($p < .001$; $n = 78$) for the US respondents. These results suggest that increases in gaming are perceived to negatively impact long-run business unit performance.

3.3. Factors and outcomes associated with perceptions of budget value

We now undertake some additional analyses to better understand what factors and outcomes might be associated with perceptions of increased budget value. We begin by correlating overall BUDGET VALUE with PERFORMANCE measured as the mean rating over several items on a scale of −2 (considerably below direct competitors) through +2 (considerably above direct competitors). The specific performance items are listed in Appendix A. Table 4 indicates that the correlation between BUDGET VALUE and PERFORMANCE is positive and significant in both the Canadian ($r = 0.16$, $p < 0.01$) and US ($r = 0.36$, $p < 0.001$) samples. This result is consistent with the intuitive notion that a good budgeting system can lead to higher levels of firm performance, but it needs to be recognized that the design of this study does not permit statements of causation to be made.

Following this, we examined the association of several contextual factors (size, strategy, structure and predictability of the environment) identified by Umapathy (1987) with BUDGET VALUE (see Table 4). We find that neither the SIZE of the business unit (as measured by business unit revenues) nor the divisional STRATEGY (cost leader vs. differentiator [Porter, 1980]) were significantly correlated with BUDGET VALUE in either the Canadian or US samples. In the US (but not the Canadian) sample, the business unit STRUCTURE (stand-alone unit or division of a larger organization) was significantly correlated with BUDGET VALUE ($r = -0.16$, $p < 0.05$, two-tailed) indicating that stand-alone business units derived greater value from the budget than did business units that were divisions of larger organizations. Finally, the correlation between PREDICTABILITY and BUDGET VALUE was negative in both samples. However, only the US sample result is statistically significant ($r = -0.27$, $p < 0.05$, two-tailed).

We also considered whether differences in perceived BUDGET VALUE might be associated with the way budgets are developed and used within firms. The first analysis examined the correlation between TOUCH and BUDGET

[14] See Appendix A for how the GAMING score for each company was calculated.

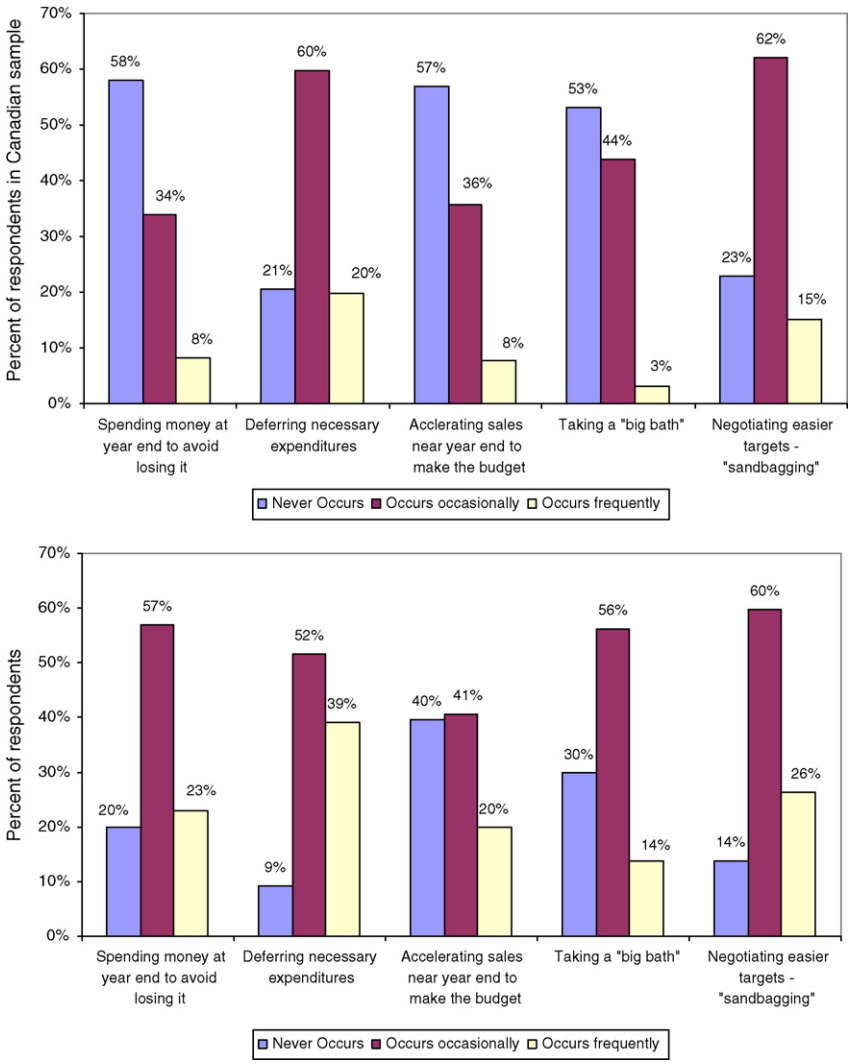


Fig. 3. Budgetary gaming. *Gaming measure*: "Using the last two years as a point of reference, how often do you think the, following practices have occurred in your business unit?"

Table 4
Factors associated with budget value.

	Canadian sample			US Sample		
	Correlation with BUDGET VALUE	*p* value	*n*	Correlation with BUDGET VALUE	*p* value	*n*
PERFORMANCE	0.16	$p < 0.01^{*}$	211	0.36	$p < .001^{*}$	162
SIZE	0.03	ns	205	−0.03	ns	159
STRATEGY	−0.08	ns	217	−0.08	ns	158
STRUCTURE	−0.06	ns	215	−0.16	$p < 0.05^{**}$	161
PREDICTABILITY	−0.10	ns	104	−0.27	$p < 0.05^{**}$	78
TOUCH	0.21	$p < 0.05^{**}$	104	0.20	$p < 0.08^{**}$	82
Budget linked to strategy implementation	0.43	$p < 0.001^{*}$	106	0.60	$p < 0.001^{*}$	83
GAMING	−0.22	$p < 0.01^{*}$	133	−0.33	$p < 0.002^{*}$	78

Variables were defined as follows (see Appendix A for questions and scales): BUDGET VALUE measured as 0 = disaster through 100 = outstanding value, PERFORMANCE measured as −2 = considerably below most direct competitors through +2 = considerably above most direct competitors, SIZE measured as 1 = Business unit revenues less than $1 million through 8 = Business unit revenues greater than $5 billion, STRATEGY measured as 0 = cost leader and 1 = differentiator, STRUCTURE measured as 0 = stand-alone unit and 1 = division of a larger organization, PREDICTABILITY measured as 1 = easy to predict through 6 = impossible to predict, TOUCH measured as 1 = light through 5 = heavy. Budget linked to strategy implementation measured on a scale of 1 = strongly disagree through 7 = strongly agree (6 point scale used in US sample as neutral point was removed), GAMING measured on a scale of 0 = never to 2 = frequently.

[*] One-tailed.
[**] Two-tailed.

VALUE. A positive, significant correlation was found in both samples ($r = 0.21$, $p < 0.05$, two-tailed in the Canadian sample and $r = 0.20$, $p < .08$, two-tailed in the US sample), suggesting that involvement by many levels of managers and detailed budgeting is perceived to be value-added.

Next, we observed large, positive correlations in both samples between the degree to which budgets are linked to strategy implementation and BUDGET VALUE ($r = 0.43$, $p < .001$ in the Canadian sample; $r = 0.60$, $p < .001$ in the US sample). These results provide strong support for Kaplan and Norton's (2001) recommendation that the budgeting process should be linked to strategy implementation.

Finally, budget GAMING was correlated with BUDGET VALUE. The correlation was negative and significant in both the Canadian ($r = -0.22$, $p < .01$) and US ($r = -0.33$, $p < .01$) samples. This result suggests that firms need to prevent budgetary gaming in order to reap a higher level of value from their budgeting system. Combined with the earlier finding of the negative impact of gaming on long-run firm performance, our analysis suggests that firms need to treat the gaming issue seriously.

4. Discussion and conclusion

It is undeniable that Hope and Fraser (2003b) have made a valuable contribution to the discipline. They have provided a cogent and insightful analysis documenting the weaknesses of budgeting and have caused us to think deeply about how to improve the entire management process. However, our findings suggest that budgeting systems continue to play a key role in firms' control systems and that most companies have no plans to abandon this practice, although many are planning to take steps to improve their budgeting systems to overcome some of the common criticisms. Further, given these findings (and in further support of them), it is not surprising that the average firm in our sample rates its budgeting system as providing good or better value. That said, 18 and 13% of Canadian and US firms, respectively, report little or no value or negative value from their budgeting systems (a score below 60), and approximately 20% of responding firms in both countries do not use budgets for control. Thus there *are* some firms that may be receptive to the Beyond Budgeting message.

Moreover, based on our findings, it would appear that many (but not all) of the assumptions and criticisms underlying Hope and Fraser's argument are over-generalized in terms of their applicability to the average firm. In particular, this study found that:

- Use of the fixed performance contract is *much* less prevalent than what is suggested by the BBRT or the Reliance on Accounting Performance Measures (RAPM) literature. In fact, our data suggests that it is only used in a very small percentage of firms (5 and 9% of firms in Canada and the US, respectively).
- Subjective considerations or allowances for non-controllable events are frequently observed in firms using the budget to evaluate performance. Superiors would appear to be more sophisticated than what is acknowledged in textbooks and some prior academic work.
- Time spent on budgeting in the average sampled North-American firm is considerably less than what critics suggest and does not appear excessive.
- The majority of sample firms do not operate in unpredictable environments to the point where budgets become quickly outdated, although a good number of firms do face unpredictable environments. However, many firms utilize adaptive processes to mitigate this concern (e.g., fast track processes to obtain new resources). As well, budgets are revised much more often than expected. This may explain the result that such a small percentage of firms sampled in this study rigidly evaluate a manager's performance against the fixed budget.
- In the majority of firms surveyed, the budget process is explicitly linked to strategy implementation. In fact, budgeting is reported by respondents to be an important means for implementing strategy and the majority of respondents report that it plays a useful role in doing so.
- Finally, budgetary gaming behaviors are a problem in our sample firms in both countries, although it appears more pronounced in the sampled US firms.

In attempting to move the budgeting research agenda forward, we believe that one should not take an "either/or" focus (i.e., Beyond Budgeting vs. traditional). There are examples of very successful companies utilizing both approaches. Instead, it would appear to be more fruitful to develop the possibilities for each model by seeking deeper understanding as to the mechanisms and processes which underlie the application of each model in highly successful companies. Given this, future research in this area is unlikely to be facilitated by the use of representative samples. Instead, in-depth study of a set of carefully chosen companies focusing on key issues will be required. It will also require examining the total package of controls in use (Fisher, 1995; Otley, 2001; Chenhall, 2003; Merchant and Van der Stede, 2006).

The types of questions to consider are many and varied. For example, Hope and Fraser (2003b) outline the principles underlying highly successful Beyond Budgeting companies. A similar activity needs to be performed within highly successful 'traditional' budgeting companies in line with respondents' views in this study that the problem with budgeting lies in how it is used rather than any inherent flaws. To delve into this point further, we consider the example of Johnson & Johnson described in Simons' (1987) Codman & Shurtleff case. J&J makes extensive use of budgets (budgets *are* the heart of their control system) in an extremely unpredictable business environment and places considerable emphasis on meeting or exceeding budget targets. However, their control system utilizes a number of elements that would seem to mitigate the concerns of utilizing a high-budget-emphasis style in an unpredictable environment (see Govindarajan, 1984; Hirst, 1987; Hope and Fraser, 2003b). In particular, they use:

- A contingency fund to help deal with uncertainty;
- Subjective evaluations and a strong HR system;

- Highly detailed budgets across responsibility centers and the involvement of lower to senior levels of management (our TOUCH variable);
- A strong culture for managing for the long term;
- A long-term planning system that is strategically oriented;
- Operational (budgetary) plans that are linked to the long-term (strategic) plan;
- Multiple revisions (mainly of tactics);
- A budget system that is managed interactively, not diagnostically (Simons, 1995);
- A culture of information sharing; and
- A strongly decentralized management structure.

Other questions include examining whether other high performing 'traditional' budgeting firms utilize similar elements as Johnson & Johnson (i.e., determining key elements within the traditional model)? Does an unpredictable environment impact the use of some of these elements (i.e., contrasting successful companies operating in predictable and unpredictable environments)? What specific practices underlie the ability for successful firms to innovate in highly unpredictable environments? Also, are there any patterns to the *kinds* of successful firms that adopt the Beyond Budgeting approach? What explanations underlie such patterns? Lastly, can successful firms mitigate or eliminate the use of budgetary gaming. If so, how is this achieved?

Another suggestion focuses on examining whether there are consistent factors *across* the two models. For example, Handelsbanken, the exemplar case in Beyond Budgeting (Lindsay and Libby, 2007) shares the following characteristics with Johnson & Johnson, a company exhibiting extensive use of budgeting for control: a strongly decentralized management system; a strong culture, including a culture of information sharing, subjective evaluations and the use of interactive control systems. In this regard, it is important to recognize that the Handelsbanken story is much more about promoting and controlling for radically decentralized employees than it is about managing without budgets.

Perhaps most importantly, the finding of the frequent use of subjective considerations and allowances for non-controllable events within a budget paradigm would seem to cast doubt on the validity of the RAPM paradigm that has dominated management accounting research (Hartmann, 2000). At a minimum, there is a need to better understand how subjective considerations and other allowances are used in performance evaluation.

Finally, the results of this study must be interpreted in light of its limitations. The paper's low response rates and method of company selection makes generalizing these results to all North-American firms problematic. However, some comfort can be taken in the fact that results were remarkably consistent between the two samples, providing a strong indication of their replicability. Nonetheless, a common bias impacting both samples cannot be ruled out. Also, the standard limitation that surveys can be affected by unreliable responses or that the measures utilized may not be a valid surrogate for the constructs of interest needs to be acknowledged. However, the severity of this threat is weakened in the present study because many of the questions are low level constructs (e.g., how long does budgeting take in your firm?). Further, we pre-tested the surveys, performed numerous validity checks, obtained reasonably consistent results across the two samples and within samples, and respondents could not go back and change their answers once a section was completed.

Notwithstanding these limitations, we believe this study has made an initial contribution towards further developing our understanding of what remains an important and widespread organizational practice – budgeting – and for setting direction for future research in this area.

Appendix A. Survey questions

Use of budgets for control

We are interested in knowing whether the budget is used as a tool for control in your business unit? By "control" we mean the use of budgets for managerial motivation and as a standard for performance evaluation purposes. Please note: If a budget is not used for control purpose it may still be used for resources allocation, planning and coordination purposes.

Do you currently use budgets as a tool for control in your business unit? No___ Yes____

Planning to abandon?

Within the next two years, will your business unit abandon the use of budgets as a tool for control?

___ No. It is likely that we will continue to use the budget for control purposes
___ Possibly. We are considering abandoning the use of budgets for control purposes.
___ Yes. We are planning to abandon the use of budgets for control purposes.

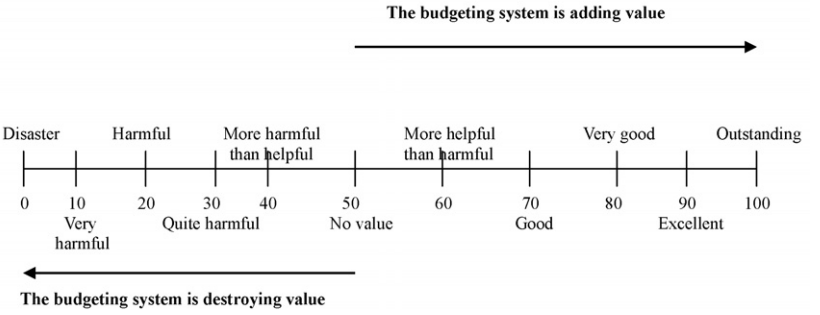
Planning to change?

Do you intend to make any changes to your budgeting system over the next two years?
No___ Yes___

BUDGET VALUE

We wish to know how much VALUE the budgeting system adds to the management of your business unit. Taking into account the management time spent on the budgeting process, as well as the budget system's effectiveness in assisting the business unit to achieve its various objectives and any dysfunctional behavior it may or may not cause, what overall grade would you assign to the budgeting system/process. Use the scale below to help you assign a grade:

Grade (from 0 to 100) ___



FIRM WEEKS TO BUDGET

On average, how many weeks does the annual, formalized budgeting process take to complete in your company (from the time managers are asked to start the process)

a. State the number of weeks ___
b. Not applicable because we use a rolling budget ___

MANAGER TIME TO BUDGET

Please provide a rough estimate of the total time the average manager spends on budget-related tasks in the typical budget year (including management time to develop the initial budget, revisions, prepare budget reports, analyze budget variances, answer queries connected to the budget, etc.)

a. less than 1 week
b. 1 to 2 weeks
c. 3 to 4 weeks
d. 5 to 8 weeks
e. 9 to 12 weeks
f. 13 to 16 weeks
g. greater than 16 weeks
h. don't know

TOUCH

Please rate the extent of effort and involvement managers in your business unit expend on developing budgets using the following scale:

Scale from 1 through 5 with the following anchors:
1 = Heavy (Detailed budget is prepared. Takes weeks to prepare. Involves all responsibility centers and their managers)
5 = Light (Broad brush picture of key financial results. Takes hours not weeks to prepare. Only involves finance staff and higher level managers.)

PREDICTABILITY (adapted from Govindarajan 1984 and Umapathy 1987)

When constructing the budget (or forecast), how easy is it to predict that the following factors will change during the period covered by the budget?

a. Market actions by key competitors (e.g. pricing, new product/service introductions, marketing programs etc.)
b. The business unit's revenues (i.e., customer demand and prices)
c. The business unit's costs
d. Customer preferences and tastes
e. Technical developments or advancements in the industry impacting the design of new products
f. Availability of required input materials purchased from suppliers

1 = Easy to predict
2 = Mostly predictable
3 = Somewhat predictable
4 = Fairly difficult to predict
5 = Difficult to predict
6 = Impossible to predict

PREDICTABILITY - continued

(US sample only) Please indicate below the extent to which you agree with the following statements:

a. It is difficult to set accurate budgets because of the unpredictability of factors influencing the business.
b. Budgets quickly become obsolete or outdated as the year goes by.

1 = strongly disagree
2 = disagree
3 = somewhat disagree
4 = somewhat agree
5 = agree
6 = strongly agree

RELIANCE on the budget to adapt to market changes

How much reliance does your business unit place on the budget process to adapt to market changes relative to other tools or approaches?

Scale:

1 = no reliance
2 = some reliance
3 = moderate reliance
4 = considerable reliance
5 = exclusive reliance

EFFECTIVENESS of the budget in adapting to market changes

Rate the effectiveness of the budgetary process in adapting to market changes

Scale:

-3 = highly ineffective
-2 = ineffective
-1 = somewhat effective
0 = neither effective nor ineffective
+1 = somewhat effective
+2 = effective
+3 = highly effective

Methods for adapting to market changes

Please indicate the degree to which you agree with each of the following statements as they apply to resource allocation in your business unit:

a. Outside of the budget process, it is difficult to obtain new resources to support unforeseen opportunities designed to accomplish strategic initiatives.
b. "Fast-track" approval processes exist to ensure timely availability for initiatives requiring significant resources that were not incorporated in the approved budget

Scale:

1 = strongly disagree
2 = moderately disagree
3 = somewhat disagree
4 = neither agree nor disagree
5 = somewhat agree
6 = moderately agree
7 = strongly agree

Methods for adapting to market changes (continued)

Please select the response that BEST describes how the operating budget gets updated within your business unit.

a. Once accepted, budgets are fixed. There are no changes made to them.
b. The budget is revised on an ad hoc basis.
c. Revisions occur when the next formalized budgetary review takes place
d. Revisions occur when the next rolling budget is prepared

LINKAGE

Please indicate the degree to which you agree with the following statements as they apply to strategy implementation within your business unit?

"The budget process is explicitly linked to strategic objectives/ targets."

1 = strongly disagree
2 = moderately disagree
3 = somewhat disagree
4 = neither agree nor disagree
5 = somewhat agree
6 = moderately agree
7 = strongly agree

Note: US scale did not have a neutral point (neither agree or disagree) to force respondents to take a position

Budgets linked to strategy implementation

Please indicate the degree to which you agree with the following statements as they apply to strategy implementation within your business unit?

a. Setting the budget causes us to talk about and reflect upon our strategy.
b. We sometimes change our strategy/tactics based on the feedback derived from going through the budgeting process.
c. Within the budget process, managers are expected to identify tactical initiatives to close the gap between current performance and the desired level of performance.

1 = strongly disagree
2 = moderately disagree
3 = somewhat disagree
4 = neither agree nor disagree
5 = somewhat agree
6 = moderately agree
7 = strongly agree

Note: US scale did not have a neutral point (neither agree or disagree) to force respondents to take a position

Budget relative to other means for implementing strategy

Please allocate a total of 100 points across the following elements of control to reflect their relative importance in implementing strategy in your business unit.

a. The process of developing the budget
b. Performance measurement and evaluation system
c. The hierarchical authority structure (e.g., directives and communication from superiors)
d. The culture of the business unit
e. Boundary systems (giving people freedom to act within clearly delineated bounds as established by codes of conduct, mission statements, "stop-doing" lists, and the communication of strategic themes)

Budget Emphasis (adapted from Van der Stede 2001)

Please indicate the degree to which you agree with the following statements as they apply to your business unit:

1 = strongly disagree
2 = moderately disagree
3 = somewhat disagree
4 = neither agree nor disagree
5 = somewhat agree
6 = moderately agree
7 = strongly agree

Note: US scale did not have a neutral point (neither agree or disagree) to force respondents to take a position

a. A manager's performance is judged by his/her superiors predominately on the basis of attaining budget goals
b. In the eyes of one's superiors, achieving the budget is an accurate reflection of whether one is succeeding in business.
c. A manager's promotion prospects depend heavily on his/her ability to meet the budget.
d. In the eyes of upper management, not achieving the budget reflects poor performance.

HIGH budget emphasis = total score of 20 or greater on these four items in the Canadian sample and 16 or greater on these four items in the US sample as the scale ranged from 1 to 6.

Use of budgets in performance evaluation (answered by those in HIGH budget emphasis category only):

Which of the following statements BEST describes how the manager's performance evaluation takes place?

a. Actual performance is rigidly compared against the pre-established budget target. No adjustments are made.
b. The manager is evaluated on the basis of controllable budget variances, but not uncontrollable budget variances.
c. Actual performance is compared against the budget. The budget may be adjusted for actual values of key contingency variables using a formula established *at the beginning* of the budget period.
d. Actual performance is compared against budget. The subordinate manager's explanations and known changes in circumstances are subjectively incorporated by the superior manager into the evaluation.
e. The evaluating manager incorporates the manager's budgetary performance along with other considerations together on a subjective basis.

GAMING (adapted from Merchant 1985, Umapathy 1987 and Bart 1988):

Using the last two years as a point of reference, how often do you think the following practices occur in your business unit?

0 = never occurs *1 = occurs occasionally* *2 = occurs frequently*

a. "Spending" unspent money at the end of the budget period so as not to lose it in the next budget period;
b. Deferring necessary expenditures (e.g. maintenance, advertising, R&D, employee training) to assist in meeting budget targets;
c. "Accelerating" sales near the end of the reporting period in order to make the budget. These sales would normally have been made in the next budget period;
d. When a manager knows the target is not going to be attained, taking a "big bath" by incurring expenditures in the current period that normally would be incurred in the next budget period so as to make it easier to attain the budget next year; and
e. Negotiating easier targets than one actually thinks can be accomplished to make the budget easier to attain and increase the odds of receiving a favorable evaluation and/or bonus. Some people might call this behavior "gaming" or "sandbagging."

The GAMING score for each company was calculated by summing the scores across the five items.

NEGLRP (perceived negative effect of GAMING on long-run performance)

Taken collectively, to what extent have the gaming behaviors noted above impaired the long-run performance of your business unit?

1 = not at all
2 = a little
3 = to a moderate extent
4 = to a considerable extent
5 = to a very high extent

PERFORMANCE (measured as the mean score on the following items)

Please rate your business unit's performance relative to your most direct competitors on the following dimensions, taking the past 2 years as a point of reference:

a. Profit
b. Innovation
c. Customer satisfaction

-2 = considerably below
-1 = somewhat below
0 = about the same
1 = somewhat above
2 = considerably above

SIZE (measured by business unit revenues)

Please estimate the total revenues (in millions of $) based on last year's figures for your business unit.

a. Less than $1 million
b. $1 - $10 million
c. $10-$50 million
d. $100 - $500 million
e.$500 million - $1 billion
f. $1 billion - $5 billion
g. Greater than $5 billion

STRATEGY (adapted from Porter 1980)

Please indicate the percentage of your business unit's total sales that is best accounted for by products representing the use of each of the following strategies.

a. Overall cost leadership: the primary focus is to achieve a low cost relative to competitors for production of a standardized product.
b. Differentiation: the primary focus is to create something that is perceived as unique through superior product features, customer service, brand image and/or performance

Respondents were designated cost leaders (0) if the percentage choosing item a above was >50% and as a differentiator (1) otherwise.

STRUCTURE

Your business unit is (check one as applicable):

a. A stand alone unit representing the entire business (coded 0)
b. A division of a larger organization (coded 1)

References

Bart, C., 1988. Budgeting gamesmanship. Academy of Management Executive, 285–294.

Bunge, M., 1997. Mechanism and explanation. Philosophy of the Social Sciences 27 (4), 410–465.

Bunge, M., 2003. How does it work? The search for explanatory mechanisms. Philosophy of the Social Sciences 34 (2), 182–210.

Chenhall, R.H., 2003. Management control systems design within its organizational context: findings from contingency-based research and directions for the future. Accounting, Organizations and Society 28, 127–168.

Dillman, D.A., 2000. Mail and Internet Surveys: The Tailored Design Method. Wiley, New York.

Eckholm, B.G., Wallin, J., 2000. Is the annual budget really dead? The European Accounting Review 9 (4), 519–539.

Epstein, M.J., Manzoni, J.F., 2002. Reconciling conflicting roles of budgets: review and survey of corporate practices. Working paper, Rice University and INSEAD.

Fisher, J., 1995. Contingency-based research on management control systems: categorization by level of complexity. Journal of Accounting Literature 14, 24–53.

Fiske, D.W., 1986. Specificity of method and knowledge in social science. In: Fiske, D.W., Shweder, R.A. (Eds.), Metatheory in Social Science. University of Chicago Press, Chicago, pp. 61–82.

Govindarajan, V., 1984. Appropriateness of accounting data in performance evaluation: an empirical examination of environmental uncertainty as an intervening variable. Accounting, Organizations and Society 9 (2), 125–135.

Gurton, A., 1999. Bye-bye budget. Accountancy International (March).

Haig, B.D., 2005. The abductive theory of scientific method. Psychological Methods 10 (4), 371–388.

Hambrick, D.C., 2007. The field of management's devotion to theory: too much of a good thing? Academy of Management Journal 50 (6), 1346–1352.

Hannan, M.T., Freeman, J., 1989. Organizational Ecology. Harvard University Press, Boston.

Hansen, S.C., Otley, D.T., Van der Stede, W.A., 2003. Practice developments in budgeting: an overview and research perspective. Journal of Management Accounting Research 15, 95–116.

Hartmann, F., 2000. The appropriateness of RAPM: toward the further development of theory. Accounting, Organizations and Society 25, 451–482.

Hirst, M.K., 1987. The effects of setting budget goals and task uncertainty on performance: a theoretical analysis. The Accounting Review 62 (4), 774–784.

Hope, J., Fraser, R., 2003a. Who needs budgets? Harvard Business Review 81 (2), 108–115.

Hope, J., Fraser, R., 2003b. Beyond Budgeting: How Managers Can Break Free from the Annual Performance Trap. Harvard Business School Press, Boston.

Horngren, C.T., Stratton, G.L., Sutton, W.O., Teall, H.D., 2004. Management Accounting, 4th ed. Prentice Hall, Toronto.

Jensen, M.C., 2003. Paying people to lie: the truth about the budgeting process. European Financial Management 9 (3), 379–406.

Jensen, M.C., 2001. Corporate budgeting is broken—let's fix it. In: Harvard Business Review, Vol.79, No. 10, pp. 94–101.

Kaplan, R.S., Norton, D., 2001. The Strategy-Focused Organization. Harvard Business School Press, Cambridge, MA.

Knight, C.F. 1992. Emerson Electric: Consistent Profits, Consistently. Harvard Business Review, 57:70.

Knight, C.F., Dyer, D., 2005. Performance without compromise. Harvard Business School Press, Boston, MA.

Kren, L., Liao, W.M., 1988. The role of accounting information in the control of organizations: a review of the evidence. Journal of Accounting Literature 7, 280–309.

Libby, T., Lindsay, R.M., 2003a. Budgeting—the unnecessary evil? CMA Management Magazine (March), 30–33.

Libby, T., Lindsay, R.M., 2003b. Booting the budget: how the BBRT envisions a world without budgets. CMA Management Magazine (April), 28–31.

Lindsay, R.M., Libby, T., 2007. Svenska Handelsbanken—controlling a radically decentralized organization without budgets. Issues in Accounting Education 22 (4), 53–71.

Merchant, K., 1990. The effects of financial controls on data manipulation and management myopia. Accounting, Organizations and Society, 297–313.

Merchant, K., 1985. Budgeting and the propensity to create budgetary slack. Accounting, Organizations and Society 10, 201–210.

Merchant, K., Van der Stede, W., 2006. Field based research in accounting: accomplishment and prospects. Behavioral Research in Accounting 18, 117–134.

Mintzberg, H. 1979. The Structuring of Organizations. Prentice Hall.

Mintzberg, H. 1983. Power in and Around Organizations. Prentice Hall.

Neely, A., Bourne, M., Adams, C., 2003. Better budgeting or beyond budgeting? Measuring Business Excellence 7 (3), 22.28.

Otley, D.T., 1994. Management control in contemporary organizations: towards a wider framework. Management Accounting Research 5, 289–299.

Otley, D., 2001. Extending the boundaries of management accounting research: developing systems for performance management. British Accounting Review 33, 243–261.

Porter, M., 1980. Competitive strategy: techniques for analyzing industries and competitors. Free Press, New York.

Shields, M.D., Young, S.M., 1993. Antecedents and consequences of participative budgeting: evidence on the effects of asymmetrical information. Journal of Management Accounting Research 5, 265–280.

Simons, R., 1987. Codman & Shurtleff, Inc. Planning and Control System. Case study # 9-187-081. Harvard Business School, Boston, MA.

Simons, R., 1995. Control in the age of empowerment. Harvard Business Review 73 (2), 80–86.

Umapathy, S., 1987. Current Budgeting Practices in US Industry. Quorum Books, New York.

Van der Stede, W.A., 2000. The relationship between two consequences of budgetary controls: budgetary slack creation and managerial short-term orientation. Accounting Organizations and Society 25 (6), 609–622.

Van der Stede, W.A., 2001. Measuring 'tight budgetary control'. Management Accounting Research 12 (1), 119–137.

Wallander, J., 1999. Budgeting—an unnecessary evil. Scandinavian Journal of Management 15, 402–421.

Welch, J., 2005. Winning. Harper Collins, New York, NY.