

Budget participation and budget emphasis in low uncertainty conditions – considering alternative reasons to budget

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Abstract

This case study investigates how lower budget participation may be better suited to firms with a high budget emphasis, in lower uncertainty conditions. The organisation studied generates *greater* benefits when budget participation is low, though it has a high budget emphasis. This result is opposite to that found in Lau, et.al. (1995). The reason for this difference is shown to arise because budget emphasis in the case firm is not primarily related to performance evaluation as defined in prior budget research (Hopwood, 1972). Instead, the main reason for budgeting is operational planning (Hansen and Van der Stede, 2003), and this difference is shown to lead to the opposing findings. When budgets are used primarily for operational planning, their relationships to organisational antecedents appear to be different than when used for performance evaluation.

Results from this study broaden the relevance of participative budgeting to firms that use budgets for reasons other than performance evaluation. It also emphasises that established budget relationships with commonly studied organisational and budgetary characteristics should be re-assessed, when budget reasons other than performance evaluation are considered.

Introduction

Management accounting research has focused significantly on the role of budgeting in organisations (Shields & Shields, 1998). This has led to specific directional relationships being observed between the relevance of budgets to key organisational and budgetary characteristics (Chenhall, 2003; Shields & Shields, 1998; Hartmann, 2000; Langfield-Smith, 1997). A dominant stream of budget research is participative budgeting (Shields & Shields, 1998; Shields and Young, 1993), and one of the most investigated antecedent organisational characteristics in management accounting research is environmental uncertainty (Chenhall, 2003; Luft and Shields, 2003).

Most participative budgeting studies focus on the positive relation between participation and its effects, such as its impact on better budgets and decision making (Parker and Kyj, 2006; Magner, et.al. 1996; Shields and Shields, 1998; Nouri and Parker, 1998). The few studies that have studied the relationship between causal antecedents such as uncertainty and budget participation have been survey based and find different relationships, depending on the level of uncertainty.

Lau, et.al. (1995) built upon a stream of inter-connected studies by Brownell (1982), Hirst (1983), Brownell and Hirst (1986) and Brownell and Dunk (1992) in studying the relationship between participative budgeting and budget emphasis. Considering uncertainty as a possible explanatory factor affecting this relationship, they find that when uncertainty is low, high budget emphasis must be accompanied by high budget participation for superior outcomes. However, when uncertainty is high, regardless of budget emphasis, a higher budget participation style is needed. Lau, et.al. (1995)

argued that budget participation must be high in higher uncertainty environments, but only needs to be high in low uncertainty environments if budget emphasis is high.

These findings infer that a low budget participation/high budget emphasis combination is not plausible when environmental uncertainty is low. Using the case of a public utilities firm, this study investigates how this combination may still benefit an organisation, due to the focus of the organisation on budget reasons other than performance evaluation.

The key factor limiting the analysis of prior studies has been their reliance on the performance evaluation reason to budget. This is not surprising, as the pioneering studies of this stream of research (Brownell, 1982 and Hirst, 1983), sought to explain the difference in findings between two budgeting studies; Hopwood (1972) and Otley (1978). Both these studies viewed budgeting as a source of job related tension to employees, arising from its role as a performance evaluation device. Studies that have since attempted to explain the opposing findings of these two articles have led to the development of two large areas of budget research, participative budgeting (Shields and Shields, 1998) and the “Reliance on Accounting Performance Measures” (RAPM) (Hartmann, 2000). Therefore, the focus of the majority of budget emphasis/participation studies since has been on its impact on budgets for performance evaluation reasons.

An observation of prior research shows that budget emphasis measures used in prior management accounting studies have focused on budget evaluative style (Van der Stede, 2001; Ross, 1995; Brownell and Dunk, 1992; Brownell and Hirst, 1986),

originally developed by Hopwood (1972). When prior research has investigated budget emphasis, the use of budgets for performance evaluation is used to proxy for budget emphasis (Hansen and Van der Stede, 2004; Hopwood, 1972). This definition excludes emphasis on budgets for reasons other than performance evaluation. However, what occurs if organisations budget for reasons other than performance evaluation?

Research is beginning to consider that the use of budgets for performance evaluation is only one of many reasons for budgeting in organisations. Additionally, existing research acknowledges the difficulty in observing systematic relationships between organisational characteristics and budgetary variables, due to findings of different studies not being consistent (Chenhall, 2003), and therefore unclear. This study puts forth the argument that one of the reasons for inconsistent findings may be attributed to existing budget research focusing on budgets only as performance evaluation devices (Hansen and Van der Stede, 2004) without considering its role for other reasons, such as operational planning (Hansen and Van der Stede, 2004; Hansen, et.al. 2003)

The budget reason predominantly investigated in budgetary research appears to be performance evaluation (Hansen and Van der Stede, 2004). If non-evaluation reasons to budget such as operational planning are regarded more importantly than performance evaluation reasons, then how do they relate to other accepted budgetary characteristics in the management accounting literature, such as budget emphasis and budget participation? How do commonly held relationships between these factors differ, and how may we improve our understanding of the contingent relationships

involving these factors in current research? This leads to the main research question used for this paper:

RQ: How does a consideration of different reasons to budget alter observed contingency relationships between environmental uncertainty, budget participation and budget emphasis?

Budget research has advocated that in low uncertainty conditions, organisations with high budget emphasis require high budget participation (Lau, et.al. 1995). Budget participation impacts the sharing of information between superiors and subordinates, and greater information sharing is generally assumed to positively affect job performance (Parker and Kyj, 2006), which leads to greater firm outcomes. This is argued to be especially so in low uncertainty situations, as stability is greater, and the likelihood of budgets being accurate and relevant are higher (Lau, et.al., 1995).

However, the possibility that *lower* budget participation could be *beneficial* to firms with a high budget emphasis is not investigated, in low uncertainty conditions. This is not surprising, as research has generally acknowledged that very few studies focus on the causal antecedents of budget participation (Poon, et.al. 2001; Shields and Shields, 1998; Magner, et.al. 1996), and low uncertainty environments have never been linked to low budget participation (Lau, et.al. 1995).

By considering a case where the predominant reason budget is not staff evaluation but primarily resource coordination and to a lesser extent, business unit evaluation, established relationships between participative budgeting and budget emphasis in

prior studies (Lau. et.al. 1995) are refined. Specifically, in low uncertainty organisations, high budget participation may not be more beneficial even if firms have a high budget emphasis, especially if their primary reason to budget is resource coordination. The difference between these findings and Lau, et.al.(1995) is that this case investigates a scenario where greatest importance is placed on a non-performance evaluation reason to budget.

Literature Review and Theory Development

Uncertainty and budget emphasis – inverse direct relationship

Uncertainty has been one of the most explored causal antecedent variables in management accounting research. This variable forms an important basis for theorising in management control related contingency research (Luft and Shields, 2003; Chapman, 1997). Many studies relating uncertainty to formal management control systems such as budgets have been conducted in prior research. Generally, a negative relationship is observed between the level of uncertainty in an organisation, and the importance/use of formal financial reporting control systems, defined as budget emphasis. (Tymon. Jr, et.al. 1998). Govindarajan (1984) specifically found that managers apply more formal financial management controls in situations where the perceived environmental uncertainty of an organisation is low. In high uncertainty firms, the use of more subjective appraisal controls was found to be more appropriate. Govindarajan (1984) went on to argue that higher performance is aligned to an appropriate fit between firm uncertainty and use of controls. There is a strong argument in prior research for an inverse relationship between formal financial management reporting controls and an organisation's perceived uncertainty. Kren

and Kerr (1993) similarly find the use of performance based compensation to be negatively related to the level of uncertainty in monitoring firms.

Chenhall (2003) shows that the link between uncertainty and the relevance of budgetary control systems is marginally in favour of a negative relationship. In the presence of high uncertainty, budget emphasis must be mixed with more interpersonal and flexible controls. These results, as argued in Chenhall (2003) are supported by Ezzamel (1990). From another perspective, Merchant (1990) argued that there was a higher probability of information manipulation in the construction of budgets in higher uncertainty environments. In times of high uncertainty, the impact of incentive based pay is also less, and therefore negatively related to uncertainty (Bloom, 1998). Given that incentive based pay is often based on a pre-determined financial standard, the weaker relationship of budgets to high uncertainty environments is again evident in Bloom (1998).

For task uncertainty within firms, prior research suggests that uncertainty is negatively related to budget emphasis (Brownell and Dunk, 1991). Brownell and Merchant (1990) showed that the lower the knowledge of relations between input and output units (task uncertainty proxy), the more difficult for budget numbers maintain relevance. Lau, et.al. (1995) found that in low task difficulty/uncertainty environments, high budget emphasis enhanced performance.

Overall, the results from prior literature appear to suggest that budgets are easier to generate in low uncertainty environments as future numbers are easier to predict and relied upon, whereas in high uncertainty environment, the relevance of budgets is

conditional upon greater budget participation, as budgets are intrinsically more difficult to generate. A key factor influencing these results is that budget emphasis is defined as being budget “evaluative style” (Hopwood, 1972), and this approach has been used by a majority of budget emphasis studies. What if an organisation has a high budget emphasis, but which is related to other budget reasons, such as resource coordination, as discussed in this study? If budgets are not used for evaluation, the directional relationships between budget emphasis, budget participation and uncertainty need to be re-examined.

Budget participation effect on link between uncertainty and budget emphasis

From an evaluation perspective, prior research has argued that the inverse relationship between budget emphasis and uncertainty can be altered by managing the level of budget participation in organisations. Budget participation is defined as the extent to which relevant staff is involved in, and has influence on the determination of his or her own budget (Poon, et.al. 2001; Shields and Shields, 1998). If organisations wish to exert budget emphasis when uncertainty is high, budget systems require greater participation amongst staff (Lau, et.al. 1995, Govindarajan, 1986). This is because greater staff involvement and information sharing that characterises higher budget participation (Parker and Kyj, 2006) allows for information to be provided that reduces role ambiguity, which consequently makes a budget more relevant (Chenhall and Brownell, 1988).

When uncertainty is low, prior research argues that organisations only need high budget participation if budget emphasis is high (Lau, et.al. 1995). If budget emphasis is low, then budgets are not used or regarded as importantly, and therefore budget

participation is not necessary. If budget emphasis is high, higher participation is necessary, as it assists employees to contribute to the budget setting process and also understand the numbers being set, as they will be evaluated on the budget numbers.

However, and with the exception of Lau, et.al. (1995), evidence regarding how higher participation actually positively benefits in low uncertainty environments is not as evident in the literature. What is known, is that the underpinning arguments for these rationales stem from the implicit assumption that budgets are used for evaluating staff (Brownell, 1982; Hirst, 1983), and if staffs are involved in the generation of these budgets, then they are more inclined to accept evaluations using budgets post period. But, what if an organisation does not use budgets to evaluate staff? Does higher budget participation still assist firms with a high budget emphasis in low uncertainty environments?

Budget participation itself is regarded as an exercise that first affects planning and control (Shields and Shields, 1998), prior to affecting evaluation. It is because budget numbers are more accurate when participation is high, that these higher quality budget numbers arising from greater participation positively benefits budget emphasis and performance in higher uncertainty environments (Kren, 1992).

However, when uncertainty is low, budget numbers are more easily determined, and the importance and use of budgets to plan may not be as necessary. If budgets are used for evaluation under such conditions, budget participation only allows managers and staff to better understand the budget numbers used for their evaluation. If budgets are not used for evaluation, or for reasons other than evaluation, then the need for budget participation in low uncertainty environments may be questioned. Even if

budget emphasis is high for non-evaluation reasons, why would organisations direct staff to participate and invest their limited time to determine budget numbers, when they are not as actively evaluated on them, and budget numbers are easily predicted, as uncertainty is low?

From this perspective, the relevance of high budget participation in high budget emphasis and low uncertainty conditions is questioned, and argued to be contrary to the findings of Lau et.al. (1995). This difference is a direct result of this study broadening the definition of budget emphasis to included emphasis on budget reasons other than performance evaluation.

Research design & case description

The case method attempts to provide a richness of interpretation in findings usually more difficult to obtain in other forms of research (Yin, 2002). This study uses a case methodology as most budget participation research to date has been conducted via survey research (Shields and Shields, 1998), and research that investigates individual firm situations in greater depth should help clarify or update existing relationships in organisational research (Yin, 2002).

The explanation put forth in this case was not originally intended when considering the case as a research setting. Initially, the financial controller of the asset management division of the case firm commented that his firm had stopped budgeting and had yielded greater benefits from doing so. This led the authors to believe that this case involved the elimination of budget emphasis, and akin to a “beyond budgeting” scenario (Hansen, et.al. 2003). However, upon studying the case, it

became apparent that the firm still maintained a high budget emphasis. What really occurred was a significant reduction in budget participation amongst staff. Given that the firm operated in a low uncertainty environment, this eventuality was thought to be unusual, as it was contrary to the findings of Lau, et.al. (1995). Lau, et.al (1995) had argued that in a low uncertainty environment, high budget participation and high budget emphasis was necessary.

The case setting investigated was highly appropriate, as it observed a change in a budget system, from high to low participation, and was not merely an analysis of a low budget participation firm. Therefore, incremental changes are highlighted and actual differences in effects considered. If an existing low budget participation scenario had been examined, it could always be challenged by the question “what if they had high participation? Budget outcomes could have been better”. By observing the change process from high to low and noting the differences, the robustness of the results are greater.

Typically, case based research is conducted using face-to-face, telephone interviews and site visits to key staff in the setting investigated (Yin, 2002). For this study, site visits and other interactions over a 2 year period had resulted in information being gathered from five key staff in the firm studied. 12 site visits were conducted to both the operating plants (3) and organisational headquarters (9) of the firm investigated.

Of the five personnel – two provided information explicitly, i.e. via the conduct of formal face-to-face and telephone interviews. The other three provided information through unstructured discussions which were documented by the researcher upon

returning from the site visit. The five individuals are also from both financial and operating arms of Firm A. This is conducted to obtain a balanced perspective of the change in budget systems. The five individuals are:

Financial

- Asset management controller: driver of budget change (Mr FC)
- Accounts administrator: headquarters (Mr AA)

Operational

- Plant level senior officer: administration (Mr BM)
- Operating plant manager (Mr PM)
- Operations project manager: special projects (Mr SP)

While direct quotes are sourced and paraphrased for Mr FC and Mr BM, the informal discussions and commentaries of Mr AA, Mr PM and Mr SP are not explicitly outlined, but instead, integrated into the description of the case, as their informal discussions better informed the researcher about the background of the firm, the description of the firm's characteristics, and change in the budget system, that is explained below.

The focus of the case is on the Asset Management Division, as the industry research liaison was a senior manager from this Division. Also, this Division was primarily responsible for measuring and valuing the high value fixed assets of this public utility, and all related operations involving these fixed assets. Therefore, from an operational budgeting perspective, this Division was highly appropriate for investigating the operational budgeting activities of the broader organisation.

Background

The firm to be discussed in this study is anonymously titled Firm A for confidentiality reasons. Firm A is a large public utilities firm based in Australia, supplying an essential public resource to a general populace of approximately 4.5 million. The firm is very large, and operates as a state owned monopoly. There exists no other competitor in the delivery of this firm's core product. The firm manages assets of AUD \$11 billion, with approximately 3,500 staff employed and is responsible for annual capital works programs in excess of AUD \$500 million. Its assets are mainly comprised of 41 operating plants and an extensive infrastructure network linking the delivery and disposal of its core product from source points to consumers.

Though the firm is state owned, its focus on efficiency and profitability is clear, and quite akin to a commercial organisation. As mentioned by the Financial Controller of its Asset Management Division (Mr. FC), one of its three equal primary aims is "to be a successful business". Furthermore, the firm is effectively structured as a private organisation, with its presiding state government being the sole shareholder. Annually, the firm is expected to generate "dividends" that are returned to shareholders (state government).

Being a large, government owned corporation, it is not surprising to note that Firm A is highly structured. Specifically, the management of 3,500 staff across operating plants and administrative headquarters requires the many divisions and business units. At a macro level, the organisation is headed by the board of directors, with the managing director responsible for the functioning of the firm. Eight broad divisions are managed by the managing director, with each division containing multiple sub-

divisions. Specifically, the Asset Management Division is very strong structurally. 41 operating plants are pooled under this Division, and each plant is classed as a sub-division/unit. The presence of organisational structure is strong in Firm A, and this also explains the *high budget emphasis* placed in Firm A. This link is not surprising - the positive relationship between organisational structure and the use of formal MCS such as budgetary controls has been shown in prior budget research (Donaldson, 2001; Kalagnanam and Lindsay, 1998), and noted in this study.

Uncertainty

The level of uncertainty impacting Firm A is identified by taking a stakeholder and technology approach. Uncertainty relating to transactions involving three external stakeholders are gauged, namely competitors, suppliers, customers, as used in Govindarajan (1984). The fourth measure of uncertainty focuses on the internal nature of process technology used by the firm, as discussed in Perrow (1967) and Gordon and Narayanan (1984).

The firm operates as a monopoly within its jurisdiction, and has no competitors to the supply of its core product. It also operates within an environment where the volume of its demand is strongly predictable, as population growth is easy to ascertain and is correlated to demand for Firm A's core product. The resource offered by Firm A is used by all members within its jurisdiction. Given the above, uncertainty relating to market competition and consumer demand is very low.

The availability of supply for Firm A's core product is determined by environmental factors, and outside the control of discretionary human actions. However, in the

history of the firm, demand has never led to nil supply. In times of low supply, the firm undertakes extensive marketing activities to limit the population's use of its essential resource, thus driving down demand and ensuring supply always exceeds demand. Firm A even has the power to implement restrictions on the use of its product, which if breached, attract severe financial penalties possible prosecution. For this reason, supplies of the firm's core product has never fallen below 25% of Firm A's capacity, when observing levels over the last five decades. Given the high level of control over population use of its resource limiting supply side shortage, the availability of supply is almost certainly guaranteed, and therefore of low uncertainty.

The definition of technology uncertainty is often misunderstood (Donaldson, 2001). Perrow (1967) was a pioneering theorist of technology uncertainty and referred to technology not only as a hardware or layout of fixed assets, but to the cognitive processing involved in completing a task (Donaldson, 2001). In Firm A, the majority of operational tasks and processes undertaken are standardised, using a highly automated approach with standardised processes having remained unchanged for many years. These are therefore regarded to be of low uncertainty. There is also a lower probability for shocks in the process, due to the highly automated processes of the firm limiting the impact of human resource error in processes (Merchant and Van der Stede, 2003). From an operational process perspective therefore, as described by Perrow (1967), the level of technology uncertainty in the organisation is low.

Overall, all 4 uncertainty types considered in the study are low. There is a low uncertainty of business environments (competitors, demand and supply) and tasks (technology uncertainty).

Budget emphasis

Budgeting in Firm A is primarily conducted to coordinate resources for a coming year, and to monitor a business units' adherence to monthly cost targets. Annually, the State Government provides a fixed amount to Firm A, and this aggregate amount is distributed to all departments, and operating plants. As mentioned by Mr BM:

“In here we budget to make sure that corporate provides plants with their desired amounts. Without a budget, you know, we won't know how much each plant gets to spend next year.”

Furthermore, and typically characteristic of a government owned public utility firm, the use of budgets for performance evaluation is not high, especially for staff. Mr FC stated that bonuses based on budgets were only paid to the highest levels of staff, and even then, bonus percentages were quite low (approximately 6% of base salary). The majority of staffs are not evaluated by budgets and even senior staffs are not impacted by budgets materially.

The analysis of budget reasons reveals that budget emphasis in Firm A is very high, but for non-evaluation reasons. Governmental approval of funds distribution requires budgets to be used as a controlling device, and therefore, budgets have always been regarded very importantly by Firm A and are actively used to report to senior management, who annually approve funding co-ordination distributions to administrative departments and operating plants.

Importantly, the change in budget system adopted by Firm A does not relate to budget emphasis. As will be noted, the change in budget system is not a reflection of a change in reasons or emphasis on budgets, but a belief that budgets could be prepared to the same quality, with less staff input and effort expended (Mr AA). This relates to a reduction in budget participation (Poon, et.al., 2001).

This case does not attempt to produce a measure for identifying non-evaluation budget emphasis. The aim of the study is to show that when a non-evaluation emphasis exists, the relationship between budget participation and budget emphasis is different in low uncertainty environments, when compared to prior studies focusing on evaluation as their criteria for budget emphasis.

Budget participation

To define budget participation in this case, responses relating to the six elements of participation as proposed by Milani (1975) and adopted in Parker and Kyj (2006) are used. The Milani (1975) framework for budget participation is selected as it is one of the more widely used techniques for identifying budget participation (Parker and Kyj, 2006; Kren, 1992; Brownell and Dunk, 1991). All respondent comments that related to the following six Milani (1975) elements of participation, were noted:

1. Portion of budget set by subordinate
2. Provision of reasoning by superior in budget revisions
3. Frequency of subordinate driven budget discussion with superior
4. Subordinate influence on final budget
5. Importance of subordinate contribution to final budget

6. Frequency of budget discussions initiated by superior when budgets are set

Pre-1999: High budget participation system

Prior to the introduction of the new budgeting system in 2000, Firm A adopted a very detailed and highly labour intensive zero based budgeting process which required high levels of participation. As identified by the plant level accountant Mr BM, each of the operating plants submitted a detailed budget, providing forecasted numbers for 270 accounts which required detailed justifications. These budget numbers were sent to a corporate committee which would then decide on the appropriateness of budget requests and confirm the budgets, or suggest revisions. There were two components to the operating budget, as explained by Mr. BM – a routine operational budget based on “normal expected operations” and a non-routine request for funds, usually related to miscellaneous low-value infrastructure maintenance. Overall, plant managers were expected to annually prepare an operating budget, based on routine and non-routine operating expenditures.

This process appeared sound enough. However, Mr BM stated that the level of justification for budget numbers required much staff effort and participation, which he argued to be detrimental and time consuming. Key operational staff spent large amounts of time with plant level accountants to determine accounting numbers. Furthermore, the majority of these tasks were related to justifications that were immaterial. As noted in the quote below, by Mr BM:

“Basically, we had to justify every single budget number that went to corporate. This applied to ridiculous levels of detail, for example I once saw this budget where we

had to research an umbrella's price, can you believe it? An umbrella's cost! I had to work out the number of umbrellas requested by a plant to come up with a budget number that made up a "miscellaneous cost" item. For a company with an annual budget in the billions, why are we expected to justify such a small amount? It's time wasting and frustrating for all staff involved in the setting process."

The lack of materiality in justifying the majority of the budget numbers is accentuated by the fact that the majority of Firm A's costs were in their twenty largest accounts. Approximately ninety percent of every plant's budget related to these twenty accounts, with the remaining two hundred and fifty accounts sharing the final 10% of the budget. This led to a large volume of justification, on accounting values that were primarily small and of little relevance to the overall budget of a plant. Therefore, while budgeting was very detailed and accurate, the majority of budget related work was non-value adding as it was immaterial. A frustrating aspect for Mr BM in the budget participation process was that manager justifications were often not considered on a plant by plant basis by corporate. When requesting budget revisions, the corporate committee would often recommend mass and similar percentage drops for budgets across all plants, irrespective of operational manager needs and the unique individual situations facing managers of operating plants. Plant managers would therefore submit revised requests based on these often inappropriate constraints.

The frequency of discussion between accounting representatives of corporate and operational plant managers was usually quite high, as accounting representatives would continually liaise with managers to determine the appropriateness of budget values and had to provide a high volume of justifications, on a line by line basis.

Therefore, operational manager influence and contribution to the budget was usually welcomed and regarded as being very important. Overall, an observation of participation in the old system may be summarised as follows:

Milani (1975) elements	Level of participation
1. Portion of subordinate budget setting involvement	Strong - operational staff needed to justify all 270 accounts
2. Provision of reasoning by superior to subordinate in budget revisions	Weak – Corporate committee simply recommends a fixed percentage reduction for department, little rationale given
3. Frequency of subordinate driven budget discussions with superiors	Strong – subordinates usually argue for more during budget revisions, repeatedly citing specific justifications as rationale for more budget funds.
4. Subordinate perceived influence on final budget	Moderate – Subordinates provide first iteration, then corporate committee identifies spending constraints and only allows a certain amount.
5. Importance of subordinate contribution to budget	Strong – Without subordinate assumptions and explanation of justifications, budgets not possible.
6. Superior driven budget discussions in setting process	Strong – Accounting representatives of corporate actively engage with plant managers in order to set budget numbers.

Table 1: Pre-budget change participation summary

The role of this budget process was seriously questioned by staffs from multiple levels of operations, leading to a review of the budgeting process in 1999. This led to the introduction of a new budgeting system in 2000.

Post – 1999: Low budget participation system

In 1999, the value-add of the high level of staff participation in the budget setting process was questioned. As argued by Mr FC:

“We are an organisation that operates as a monopoly, in a market where our customer base is largely predictable. Why do we need to think about our budgets? What really, could happen to cause our budgeting system to be incorrect? If you look at our budget numbers over the last decade or so, nothing’s changed, really – so why do we work so hard to make these predictions, these budget numbers every year? You know, why do we go through this whole budget setting process in such a detailed and labour intensive way, when nothing really changes?”

The new budgeting system attempted to accomplish three primary objectives, according to Mr FC. First, it attempted to aggregate accounts and reduce the number of accounts reported from 270 in the old system to 120 accounts. Second, the new budgeting system attempted to reduce the amount of justifications required to be made by operational staff, for all budget items, only the top twenty accounts. Therefore, the zero based budgeting system was limited to the top 20 accounts, with the remaining accounts being developed incrementally, from prior period numbers. The remaining accounts representing 10% of the budget’s value were therefore only loosely controlled, and did not require detailed justifications as was the case in the old system.

Thirdly, with the exception of the largest 20 accounts that still need to be justified, the remaining numbers in the budget itself are not actually forecasted, but “benchmarked” from a previous year’s value, and surprisingly adjusted downwards by a set percentage (usually 2-3%) in order to provide plant managers an incentive to pursue lower costs for the coming period. Therefore, the effort that traditionally accompanied the creation of a future budget number was replaced by a commitment to make costs lower than in previous years by using prior year benchmarks as

budgets. This approach, which departs from traditional budgeting, is only made possible by the fact that the firm operates in a low uncertainty environment. Mr FC argued that his firm was perfectly placed to take a benchmarking approach as their numbers did not change from period to period, making prior numbers more relevant to future periods.

In the event that prior year numbers are expected by a plant manager to change, they may request for a change to a benchmark – however, Mr. FC argued that this occurred very sporadically, and when it did occur, the process was more easily facilitated as these deviations were small in number and easily addressed promptly by corporate.

The new budgeting system places more focus on plant managers to lower and not just maintain costs, and reduces the detrimental effects of the gaming process which leads to dysfunctional behaviour, in budget setting (Jensen, 2003; Wallander, 1999). This is done by establishing fixed benchmarks based on prior period figures. What is particularly interesting is that this change has actually achieved more organisational goals, but significantly lessened the forecasting participation of staff involved in budget preparation. Though a budget document is still produced for corporate to approve, all numbers but the largest 20 accounts in the document are benchmarks from previous periods, as opposed to being forecasted numbers in the traditional sense of a budget.

Overall, therefore, budget participation in the new system is significantly reduced. The key reason for this lies in the lower justification expected by corporate, from operational budgets provided by plants. The need for operational managers to be

actively involved in the budget process is now less. Though staff influence on the final budget and the importance of their input is less, this does not appear to concern staff, as the low uncertainty impacting the organisations does not require staff involvement in the budget setting process. Prior period values are seen as an appropriate proxy for future period values. A summary of the participation elements as used by Milani (1975) is given below, for the new budget system:

Milani (1975) elements	Level of staff participation
1. Portion of subordinate budget setting involvement	Moderate – <i>Less</i> than before, as most staff justification only occur if deviations expected from prior period, and if so, only on the largest 20 accounts
2. Provision of reasoning by superior to subordinate in budget revisions	Weak – <i>Same</i> as for old system - corporate committee simply recommends a fixed percentage budget reduction for department, little rationale given
3. Frequency of subordinate driven budget discussions with superiors	Moderate – <i>Less</i> budget revisions than before, as requirement for justifications is less.
4. Subordinate perceived influence on final budget	Weak – <i>Less</i> subordinate input than before, as most budget numbers kept to prior period benchmarks
5. Importance of subordinate contribution to budget	Moderate – <i>Less</i> importance than before, subordinate assumptions and explanation of justifications only required on exceptions and for largest 20 accounts,
6. Superior driven budget discussions in setting process	Moderate – <i>Less</i> engagement than before due to benchmarking approach.

Table 2: Post-budget change participation summary

Outcomes from budget system change

Firm A still places a high budget emphasis but now requires less budget participation from its staff, owing to its consolidation of immaterial account sizes and focusing on benchmarking as opposed to forecasting. As a result of this new approach,

administrative time and cost savings are generated due to lower budget participation, as mentioned by Mr. BM:

“It’s funny that we are actually now achieving more goals by doing less than before. Now, we don’t really make staff involve themselves in the budget, we just use last year’s numbers for most of our accounts, and we have had no problems with this new system”.

Financially, Mr FC stated that Firm A calculation estimates shows that 55% of the AUD \$60 million drop in operating costs of the firm from 1999 to 2000 can be attributed to the savings from the new budget system. This saving can be attributed to two areas, administration and operations. Administratively, the equivalent cost of preparing a budget in estimated time savings has been estimated to be approximately \$6.6 million, with the remaining AUD \$26.4 million relating to cost reductions caused by the new benchmarking system.

Results analysis and commentary

Contrary to Lau, et.al. (1995), the relevance of high budget participation in low uncertainty firms is questioned, even when firm budget emphasis is high. The key differentiating factor for a deviation from Lau, et.al. (1995) is the consideration of reasons to budget other than performance evaluation. In this study, the use of budgets to coordinate resources, an operational planning category of reasons to budget, was adopted by the case firm investigated.

Though the old budget system in Firm A was accurate, it was also time consuming, and in an environment where most operational factors were predictable, there was a lower perceived need by management to undertake the full forecasting process in its entirety. The need for budget participation was not as great, as most operational staff were not evaluated using a budget, and in a low uncertainty environment, budget numbers are easily predicted. Building upon this rationale, management approved the introduction of a new system that maintained the budget emphasis of the organisation, while reducing the need for budget participation, through the use of benchmarking. The majority of the accounting numbers reported in budget reports was not actually forecasted, but benchmarked from prior year figures.

The reasons to budget of Firm A strongly influenced the theoretical arguments for lower budget participation in this low uncertainty, high budget emphasis firm. Given that Hansen and Van der Stede (2004) argue that prior budget research bases its findings on studies that predominantly view budgets from a performance evaluation perspective, the detailed investigation of budgeting in firms that use it for other reasons reveals alternative relationships between budget variables and organisational characteristics, such as a plausible link between low uncertainty, low budget participation and high budget emphasis.

Firms that operate in low uncertainty environments, especially, may not need to “forecast”. As highlighted by Mr FC, there is no value-add in investing additional resources into predicting budget numbers in low uncertainty conditions, as budget numbers are highly predictable. This means that budget numbers don’t inform senior management of anything new, or which they do not already expect. This argument

was similarly put forth by Wallander (1999), when critiquing the usefulness of budgets in firms.

Prior research suggests budget participation to be high in low uncertainty environments (Lau, et.al, 1995), because staff evaluation is important in the budget setting process. Setting budget numbers allows for more equitable performance evaluation in the budgeting process, even in low uncertainty conditions. However, when an organisation does not use a budget to evaluate, but more for resource coordination, budget participation is not as necessary, even in firms with a high budget emphasis.

Conclusions and suggestions for further research

When the primary reason for budgeting changes focuses on operational planning, accepted relationships between variables in budgetary research may change. With the exception of Hansen and Van der Stede (2004), the nature of this difference has not been explicitly investigated in prior research. While the above two study used a survey based approach, this study uses a more case based method and highlights how this difference actually enacts. Results from existing research which has studied the relationship between uncertainty, budget participation and budget emphasis are shown to be different, when budget reasons other than performance evaluation are dominant (Hansen and Van der Stede, 2004).

Future research that focuses on the role of operations budgeting in organisations with consideration for the specific reasons to budget are recommended. Also, more case based research that investigates the impact of non-evaluation budget reasons will further inform the budgeting literatures of how various reasons differently relate to

commonly studied organisational and budgetary characteristics. Finally, more studies that investigate the impact of rolling budgets on the role of the traditional annual budget are required across the different budget reasons, as this will further expand our understanding of how different budget forms affect the relevance of budgeting in different environments.

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