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The relationship between two consequences of budgetary controls: budgetary slack creation and managerial short-term orientation[☆]

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Abstract

Previous studies have provided contradictory evidence with respect to the effect of rigid budgetary controls on slack and other dysfunctional behaviors. One motivation for the current study was to test whether spillover effects exist between two alleged dysfunctional consequences of a rigid budgetary control style: budget slack creation and managerial short-term orientation. The data support this contention: reducing one form of dysfunctional behavior (slack creation) through rigid controls seems to spill over into another form (stronger management focus on business matters that affect short-term results). However, the budgetary control styles that organizations implement, as well as the behaviors that they encourage, may be affected by two important antecedents: business unit past performance and competitive strategy. The results indicate that business units that either pursue a differentiation strategy or have been more profitable are subject to less rigid budgetary controls, which augment the propensity to build slack as well as the tendency for managers to think long-term. These relationships are tested in a structural equation model on survey data obtained from 153 business unit general managers. © 2000 Elsevier Science Ltd. All rights reserved.

Since Hopwood's (1972) seminal paper, the budgeting literature has shown great interest in understanding possible effects of budgetary control styles. It is generally maintained that the incidence of so-called dysfunctional behavior is affected by the rigidity of budgetary controls. A rigid budgetary control style is one in which employees, mostly at management organization levels, are evaluated primarily on whether or not they achieved their budget. When evaluated in this way, managers are held fully accountable for their performance as

measured by the budget. This implies that salary, resources, and career prospects become highly, if not fully, dependent on the managers' ability to meet the budget. Managers who miss the targets face the prospect of interventions by upper management, the loss of organizational resources, the loss of annual bonuses, and ultimately the loss of their job (Merchant & Manzoni, 1989). Under these circumstances, managers may look for ways to protect themselves from the downside risk of missing budget targets and the stigma normally attached to underachievers (Lukka, 1988; Onsi, 1973; Schiff & Lewin, 1970). Possible ways of protection can be obtained by negotiating for highly achievable targets (i.e. slack creation) or by focusing on business matters that improve current

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period performance while sometimes causing harm to the long-term effectiveness of the firm (i.e. managerial short-term orientation).¹

However, empirical evidence regarding alleged dysfunctional consequences of a rigid budgetary control style has been equivocal. In contrast to Hopwood (1972), Otley (1978) found that rigid budgetary controls did not lead to increased levels of budget-related tensions and found only mixed support for its associated dysfunctional behaviors (obtaining easy budget targets and having a short-term view of the job). Instead, Otley (1978) found that a high emphasis placed on meeting the budget lead to budgets being more closely met (i.e. higher budget accuracy). One important variable in this puzzle was past performance, which seemed to affect both the rigidity of budgetary controls as well as the incidence of dysfunctional budget-related behaviors (budget target manipulation). Otley (1978) also pointed out that the above relationships are dependent on the organizational context in which the budgetary control style is used, such as an organization's operating environment and size.

Equally to their surprise, Dunk (1993) and Merchant (1985b) found that budget slack was low when budget emphasis was high. From their behavioral priors, they expected budget slack to be high under a rigid budgetary control style. Organization economists, however, would argue that the purpose of rigid budgetary controls is to increase the likelihood that dysfunctional behaviors get detected, and therefore, reduced (Merchant, 1985b; Williamson, 1964).

The current paper maintains that arguments for a positive and negative relationship between budget emphasis and slack, or other dysfunctional behaviors, may both contain a grain of truth. Being able to detect and reduce one form of so-called dysfunctional behavior might re-emerge elsewhere in another type, which is not as closely metered or as easily discernable (Ghoshal & Moran, 1996). Although unexpected, the above-mentioned budgeting studies did find empirically that rigid

budgetary controls appear to be negatively related with slack (Dunk, 1993; Merchant, 1985b) and resulted in apparently improved *real* budgeting performance, as opposed to performance due to manipulated budget standards (Otley, 1978). At the same time, the managers did not seem to experience increased stress from the rigid budgetary control system (Otley, 1978). However, these findings do not rule out that managers protect themselves from missing budget targets in other ways than slack creation, such as by limiting their exposure to risky, long-term projects. This argument is consistent with Otley's (1978) finding that managers who are subject to rigid budgetary controls tend to spend a smaller proportion of their time to long-term planning. But, most studies have considered only one form of budget-related behavior, which makes an investigation of potential spillover effects impossible. One contribution of the current study to the management accounting literature, and the RAPM-literature in particular, is the inclusion of two types of budget-related behavior — budget slack and managerial short-term orientation — which appear to be negatively related.

However, the budgetary control styles that organizations implement and the behaviors that they encourage may be affected by contextual variables, such as business unit past performance and competitive strategy. First, past performance is included in the current study as an *independent* variable due to its expected effect on both the rigidity of budgetary controls as well as the likelihood that managers engage in potentially dysfunctional behaviors (Otley, 1978). In line with these expectations, the results show that business units that have been more profitable enjoy more budget flexibility, which provides more leeway for slack creation which, in turn, tends to reduce the pressure for short-term results. Second, this study incorporates competitive strategy as an important element of an organization's context. The findings suggest that differentiators are subject to less rigid budgetary controls from upper management allowing them to build slack, which seems in line with the flexibility required by their strategy to respond effectively to changes in their environment.

The remainder of the paper is structured as follows. Section 1 builds on the literature to formulate

¹ Research on the organizational and behavioral effects of budgeting, and the *reliance on accounting performance measures* (RAPM) for evaluating subordinate managers in particular, is also known as the RAPM-literature. For a recent review and critique of this literature, see Hartmann (in press).

the hypotheses. Section 2 presents the survey data collected from 153 business units and develops the measures. The results obtained by means of a structural equation model are discussed in Section 3. The final sections conclude, discuss the limitations of the present study, and provide directions for future research.

1. Hypotheses

1.1. Budgetary control style and its consequences

This paper considers two types of potentially dysfunctional consequences of a rigid budgetary control style: budget slack creation and managerial short-term orientation. Slack is generally defined as resources and effort toward activities that cannot be justified easily in terms of their immediate contribution to organizational objectives (March, 1988, p. 4). If the slack is created during the budgeting process, then it is commonly called budget slack. Managerial short-term orientation is defined as the extent to which managers focus on business matters that will affect their performance within the current budgeting period (1 year).

It is important to emphasize at this point that there is much disagreement in the literature about whether slack creation and managerial short-term orientation are always dysfunctional. As discussed below, slack sometimes has beneficial effects (e.g. in strategies that require innovation and experimentation) and some seemingly short-term management actions can help both short-term and long-term results simultaneously (e.g. scrapping developmental projects with little promise).

When business unit managers create slack, they exploit their position of superior knowledge about business possibilities vis-à-vis corporate management to get performance targets that are deliberately lower than their best guess forecast about the future (Lukka, 1988). Business unit managers may benefit from creating budget slack in one or more ways. Slack protects them against unforeseen contingencies and improves the probability that the budget target will be met, thus increasing the likelihood of receiving a favorable evaluation (and associated performance-dependent rewards).

Slack creation, as a means of protection from the downside potential of an uncertain future, is particularly valuable in firms that treat the budget as a strong commitment from the manager to the corporation and use the budget as a primary, if not exclusive, tool to evaluate management performance. Indeed, rigid budgetary controls imply that salary, resources, and career prospects become highly dependent on the ability to meet the budget. Therefore, a positive relationship between emphasis on meeting the budget (a rigid budgetary control style) and the propensity of managers to build slack is expected. Slack increases the chances of making the budget, and thus avoids interventions by upper management, reduces the risk of being fired, etc. (Merchant & Manzoni, 1989).

However, the literature has not produced conclusive evidence with respect to the effect of budgetary control style on slack. As aforementioned, Dunk (1993)² and Merchant (1985b)³ generally found that slack was low when budget emphasis was high. This finding is in line with economic, as opposed to behavioral, theory which maintains that rigid budgetary controls should increase the likelihood that slack gets detected and, therefore, curtailed (Williamson, 1964). A reduction in managerial opportunism should, in turn, be associated with superior performance (Williamson, 1975) since economists generally view slack as an inefficiency that detracts from the value of the firm (Leibenstein, 1966). But, organizational economists have not reached agreement on this, as some studies found that profitability actually deteriorates as corporate management puts more emphasis on

² Dunk's (1993) findings involved a three-way interaction of budget emphasis, budget participation, and information asymmetry on slack. His results showed that slack is low when participation, information asymmetry and budget emphasis are all high, contrary to the expectation from the literature. From a three-way interaction it is difficult to infer anything about the main effect of budget emphasis on slack in isolation. However, across all levels of information asymmetry (from low to high) and across all levels of budget participation (from low to high), slack was lower when budget emphasis was high rather than low.

³ Specifically, Merchant (1985b) found that two out of three components that measure the importance placed on meeting the budget were significantly and *negatively* related to the propensity to create budgetary slack. Only one component of budget emphasis, "reactions to budget overruns," was positively related to budgetary slack.

bottom-line financial performance (Hill, 1988). To explain this result, Hill speculated that rigid accounting performance-based controls might encourage short-run profit maximization at the expense of long-run profitability, which is the issue of managerial short-term orientation.

Several studies in the management literature have indeed documented how an exclusive focus on accounting-based controls may encourage the worst practices of management aiming for short-run profit maximization at the expense of long-term effectiveness and competitive strength (Hayes & Abernathy, 1980; Laverty, 1996; Merchant, 1990; Merchant & Bruns, 1986). Pressures on management to perform in the present reduce the probability of initiating and funding new projects (Jaeger & Baliga, 1985), stifle creativity (Miller, 1986), and undermine commitment to innovation (Hitt, Hoskisson, Johnson & Moesel, 1996; Hoskisson & Hitt, 1988; Hoskisson, Hitt & Hill, 1991). In short, if budgetary controls are too rigid and business unit managers have too little discretion, corporate management may choke all initiatives that promise long-term or less certain payoffs, as reported by Merchant (1990).

This discussion indicates that while rigid budgetary controls may reduce slack, as empirically supported by Dunk (1993) and Merchant (1985b), it also may drive managers to become concerned primarily about short-term results. This leads to the expectation that:

H1: Rigid budgetary controls are:

- a. Negatively related to budgetary slack;
- b. Positively related to managerial short-term orientation.

One would expect from H1 that budgetary slack and managerial short-term orientation are negatively related. This is in line with Merchant (1985b) who suggested that slack provides a cushion in response to uncertainty through the provision of resources free from short-term commitment. As such, slack resources permit managers to more safely experiment with, for example, new product introductions and other uncertain innovative projects (Hambrick & Snow, 1977; Nohria & Gulati, 1996). More direct evidence for a negative relationship between slack and managerial short-term

orientation was provided by Merchant and Manzoni (1989) who found that corporate managers sometimes allow slack in the budget to reduce the incentives for business managers to engage in other dysfunctional behaviors, such as short-term earnings management. Hence, it is expected that:

H2: Budgetary slack and managerial short-term orientation are negatively related.

1.2. Impact of business unit competitive strategy

It is generally maintained in the management accounting literature that the way in which a business unit competes in its market — that is, its competitive strategy — influences the design of the management control system (Langfield-Smith, 1997). Moreover, organization theory has suggested that (some) slack may be needed to successfully pursue strategies that require a high degree of flexibility to respond effectively to changes in the environment (Bourgeois, 1981). Hence, competitive strategy is expected to be an important antecedent of both the budgetary control style implemented and the occurrence of, or need for, slack.

Porter's (1980) *low cost vs. differentiation* and Miles and Snow's (1978) *defender vs. prospector* strategy-typologies have been used most often in management control research. Although both typologies have their own nuances, I assume a certain degree of isomorphism and comparability between both typologies — as documented in the management and strategy literatures (Segev, 1989) — in the discussion of the literature below.

Generally speaking, cost leaders/defenders have a narrow product range and undertake little product or market development (Miles & Snow, 1978). They focus primarily on achieving a low cost position relative to competitors and therefore pursue cost reduction, exploit economies of scale, standardize the task environment, and produce standard, undifferentiated products (Porter, 1980). Differentiators/prospectors, in contrast, actively engage in market and product development (Miles & Snow). They strive to create something that is perceived by the customer as unique by pursuing superior product features, product innovation, customer service, brand image, etc. (Porter).

Porter (1980) argues that the key to effectively implementing strategy is to explicitly recognize that different competitive strategies require different organizational arrangements. Management control is one important organizational arrangement. The focus of the current paper is on accounting-based budgetary controls, which are an integral part of the management control system in most for-profit firms (Merchant, 1998).

Prior research has not produced conclusive evidence on the relationship between management control systems and competitive strategy, however (Langfield-Smith, 1997). Simons (1987, 1988), for instance, found that prospectors emphasize rigid budgetary controls to a greater extent than defenders. This finding conflicts with the widely held view that innovation and differentiation is best achieved in organizations that minimize formal controls. Other studies usually support this view, however, and the balance of evidence for superior performance is generally against the combination of differentiation/pro prospector strategies with rigid formal (budgetary) controls (Govindarajan, 1988; Govindarajan & Fisher, 1990). Hence, evidence seems to suggest that differentiators/prospectors put less emphasis on budgetary controls or apply them less rigidly.

In the above studies, uncertainty is the main mechanism through which management control systems are hypothesized to vary across competitive strategies. Differentiators/prospectors face much uncertainty because they have broad product lines, engage in product innovation, deal with products that have not yet crystallized, etc. Cost leaders/defenders, in contrast, keep their essentially undifferentiated product offerings relatively stable over time (Fisher & Govindarajan, 1993; Govindarajan, 1986, 1988). In sum, the critical success factors associated with differentiation/pro prospector strategies, such as new product development and innovation, are of a long-term nature and difficult to quantify (Langfield-Smith, 1997), which makes reliance on formal accounting-based budgetary controls less suitable (Merchant, 1985b; Simons, 1988).

Besides the bounded ability for differentiators/prospectors to rely heavily on accounting-based budgetary controls, the uncertainty surrounding their strategy also requires a higher degree of flexibility to respond effectively to changes in the

environment. One important way to hedge against uncertainty is the creation of slack resources, which provide a cushion to support the exploitation of market opportunities and a source of funds to experiment with product innovations (Bourgeois, 1981; Cyert & March, 1963). Thus, differentiators/prospectors may need some slack to pursue the critical success factors on which their strategies are build.⁴

In a budgeting context, slack is built by setting budget targets so that they become easier to achieve (Lukka, 1988). For most divisionalized organizations, slack is embodied in the budget (Schiff & Lewin, 1970). Merchant (1985b) argued that the ability to set accurate budget targets and to measure performance precisely, which is likely to be the case for low cost/defender business units, provides the opportunity to prevent the introduction of slack. The environments in which differentiators/prospectors operate, on the other hand, make it more difficult for corporate management to detect slack. Furthermore, Williamson (1964) maintained that slack creation is potentially restricted as cost cutting, standardization, economies of scale, etc., are emphasized, which is again the case for low cost/defender business units. For differentiation/pro prospector business units, on the other hand, corporate management simply may not wish to reduce slack to the point where it chokes innovation or prevents managers from exploring new market opportunities. Thus, for low cost/defender business units there is both a lesser need for slack and a higher chance of detecting it. The opposite holds for differentiation/pro prospector business units. This discussion leads to the following hypotheses:

- H3: Relative to cost leadership strategies, differentiation strategies are:
- a. Negatively associated with rigid budgetary controls;
 - b. Positively associated with budgetary slack.

There is no theory that relates competitive strategy to managerial time-orientation (short-term vs.

⁴ It has been suggested that there may be an *optimal* level of slack and that either *too little* or *too much* slack is dysfunctional only. The literature remains troubled about this issue (Nohria & Gulati, 1996).

long-term). A crucial argument in Porter's theory of competitive strategy is that both cost leadership and differentiation should result in a "sustainable" competitive advantage (Porter, 1980). Due to lack of theory, no formal hypothesis is formulated.

1.3. Relationship with performance

The control–performance link has been notoriously problematic in the management control literature (Merchant & Simons, 1986; Otley, 1980). Moreover, it is not always clear to what extent the so-called control dysfunctions are truly undesirable or harmful for performance (Jaworski & Young, 1992; Nohria & Gulati, 1996).

Otley (1978) and Merchant (1985a) have called for using performance as an independent variable because the adoption of certain controls is likely to be in response to low or high past performance. As such, it is expected that business units that have been more profitable may be less affected by rigid budgetary controls and enjoy more flexibility in the expenditures they make (Merchant, 1985a).

Similarly, organization theorists have called for using slack as a dependent variable and discovering its antecedents rather than being preoccupied with eliminating it based on theories of organizational efficiency (Bourgeois, 1981). Past performance is one such antecedent of slack. Empirical studies have shown that good performance increases slack and bad performance decreases it (Onsi, 1973; Schiff & Lewin, 1970).

Moreover, Merchant and Manzoni (1989) found that managers who have demonstrated good performance over an extended period enjoy the largest amounts of budgetary slack. Alternatively, they found that an urgent need for immediate profits is an important reason for corporate management to reduce slack, even if it comes with short-term management actions that may be harmful in the long-run (e.g. slashing developmental expenditures). Overall, in their field study, the inverse relationship between slack and pressure for short-run profit is manifest, as well as the tolerance for slack in good times and the attenuation of slack during bad times, even when it encourages potentially harmful short-term management actions. This trade-off is also mentioned

by Simons (1988, p. 278) who argues that successfully eliminating slack may improve performance, at least "on a short-term basis." This discussion translates into the following hypotheses:

- H4: Past business unit performance is
- a. Negatively related to rigid budgetary controls;
 - b. Positively related to budgetary slack; and,
 - c. Negatively related to managerial short-term orientation.

2. Data, questionnaire, and measures

2.1. Sample and data

Data were collected as part of a larger study that investigates management control issues in large, diversified firms headquartered in Belgium.⁵ A questionnaire was developed following the *Total Design Method*, the details of which are given in Dillman (1978). Respondents are business unit general managers with a direct reporting line to corporate (i.e. the level immediate below corporate with strategic business unit responsibility). Prior to mailing it, the survey was submitted to the scrutiny of three faculty colleagues, eight business unit managers, and three controllers for pre-testing. Two follow-ups were administered to non-respondents: 2 weeks (reminder only) and 4 weeks (replacement questionnaire) after the original mail-out. In total, 341 surveys were mailed to business unit managers in May 1996.⁶ Response to

⁵ The corporate sample consists of 37 independent companies headquartered in Belgium with average corporate consolidated sales of 65.5 billion Belgian francs (≈2.2 billion US dollars). "Independent" means that no other company holds a stake in the firm equal to or greater than 50%.

⁶ Geographical coverage of the business units was as follows: 238 (70%) in Belgium; 95 (28%) in other European countries; and 8 (2%) in the rest of the world (mainly USA and Canada). The high English literacy rate among the target managers enabled the survey to be conducted in English. Indeed, 134 respondents (88%) indicated that they use English in business-related communication at least occasionally (91 managers or 60% use English at least frequently). Moreover, 112 respondents (74%) have a college degree or higher. The use of English as the common language of the research overcomes interpretation problems associated with the translation of questionnaires into other languages.

the questionnaire was acceptable: 190 managers replied (56%). Of these replies, 37 were not valid (usable response is 153 or 45%).

On average, respondents have been employed by their current corporation for about 13.7 years and have been head of their business unit for 5.7 years. The business units represent a variety of industries,⁷ have average sales of 4.8 billion Belgian francs (\approx 160 million US dollars); and employ an average of 427 employees.

2.2. Development of measures

2.2.1. Budgetary control style

A rigid budgetary control style is one in which managers are evaluated primarily on whether or not they achieved their budget. The rigidity of budgetary control is measured by the emphasis placed on meeting the budget. The scale has seven items:

- I am constantly reminded by the corporate parent of the need to meet budget targets;
- Corporate superiors judge my performance predominantly on the basis of attaining budget goals;
- Control over my business is achieved by the corporate parent principally by monitoring how well my budget is on target;
- In the eyes of my corporate superiors, achieving the budget is an accurate reflection of whether I am succeeding in my business;
- Not achieving my budget has a strong impact on how my performance is rated by my corporate superiors;
- My promotion prospects depend heavily on my ability to meet the budget;
- In the eyes of my corporate superiors, not achieving the budget reflects poor performance.

Scores range from 1 to 7 (definitely false to true). The higher the score, the more achieving the budget is emphasized. Cronbach α for the 7-item scale is 0.83. The 7-item scale was computed by the

⁷ The business units represent a variety of industries that include both manufacturing (steel, lumber, paper, plastics, chemicals, machinery, electronics, textiles, cement, construction, and food) and service [transportation, (non)durable goods wholesale, merchandise and food stores, auto dealers and gas stations, and hotels and lodging].

equally weighted average of the standardized item scores (zero mean and unit variance) associated with each of the seven items. This standardized composite variable ranges from -2.10 to $+1.29$ with $\mu = 0.00$ and $\sigma = 0.71$. A positive score indicates a budgetary control style that is “rigid,” i.e. one in which managerial performance is evaluated predominantly based on meeting the budget. A negative score indicates a budgetary control style that is more “flexible,” i.e. one in which budgeting information is less relied upon and used only in conjunction with other sources of information to evaluate managerial performance.

2.2.2. Budgetary slack

Budget slack has been referred to in the literature under a variety of labels (Merchant, 1985b). A budget contains slack if the business unit managers have intentionally set their budget targets lower than their best guess forecast about the future so that the budget becomes easier to achieve (Lukka, 1988). Stated differently, there is slack in the budget if the business unit managers have been able to negotiate easy budget targets. Conversely, a budget has little slack if the probability that it will be met is low (Merchant & Manzoni, 1989) or if it requires serious effort and a high degree of efficiency in accomplishment (Simons, 1988). Based on these definitions, budgetary slack was measured by five items:

- I succeed to submit budgets that are easily attainable;
- Budget targets induce high productivity in my business unit (reverse coded);
- Budget targets require costs to be managed carefully in my business unit (reverse coded);
- Budget targets have not caused me to be particularly concerned with improving efficiency in my business unit. [Scores range from 1 (definitely false) to 7 (definitely true).]
- The fifth item is a fully-anchored question asking whether the budget is (1) very easy to attain; (2) attainable with reasonable effort; (3) attainable with considerable effort; (4) practically unattainable; or (5) impossible to attain.

Cronbach α for the 5-item scale is 0.68, which is acceptable for scales with relatively few items (Hinkin, 1995; Nunnally, 1978). The scale for

budget slack was computed by the equally weighted average of the standardized item scores (zero mean and unit variance) associated with each of the five items. This standardized composite variable ranges from -1.32 to $+2.12$ with $\mu = 0.00$ and $\sigma = 0.69$.

As a matter of construct validation, a factor analysis was performed on all items representing emphasis on meeting the budget and budget slack to ensure that both variables cover separate constructs. This analysis resulted in two factors. All items representing emphasis on meeting the budget loaded on factor 1 and all items representing budget slack loaded on factor 2 (all above 0.50). This confirms that the two variables measured by these items clearly represent two different constructs.

2.2.3. Managerial time-orientation

This scale asks managers to indicate the time spent on matters that will appear in the profit and loss statement within 1 month or less, 1 month to 1 quarter, 1 quarter to 1 year, and 1 year to 5 years. Merchant (1990) and Otley (1978) previously used this instrument also. As in Merchant (1990), the sum of the percentages of the first three categories (effect within one year) was used as an indicator of the managers' short-term orientation ($\mu = 78.31$, $\sigma = 16.65$).

2.2.4. Competitive strategy

Business unit competitive strategy was operationalized as in Govindarajan and Fisher (1990), using Porter's (1980) low cost vs. differentiation typology. A cost leader aims to achieve low cost relative to competitors and vigorously pursues cost reduction, exploits economies of scale, standardizes the task environment, and produces standard undifferentiated products. A differentiator, on the other hand, creates something that is perceived by customers as unique and pays more attention to superior product features, customer service, brand image, etc. (Porter). Respondents were asked to indicate the percentage of their business unit's current sales accounted for by either of these strategies. In addition, the business unit managers were asked to position their business relative to competitors in terms of (i) product selling price; (ii) R&D expenditures; (iii) product quality; (iv)

brand image; and (v) product features. The scale ranged from 1 (my business unit is positioned significantly lower) to 7 (significantly higher). Each of these five items is individually correlated with the percentage differentiation (two-tail $P < 0.05$). Given these significant correlations, the answer to the overall strategy question — i.e. the percentage of current sales accounted for by differentiation — will be used as the strategy measure ($\mu = 50.33$, $\sigma = 28.45$).

2.2.5. Performance

Business unit performance was measured by return on sales (ROS) in 1993 (ROS_{t-2}), 1994 (ROS_{t-1}), and 1995 (ROS_t).⁸ Two additional self-typing performance measures were obtained from the questionnaire. First, respondents were asked to rate their overall business unit performance (relative to the industry average) on a 7-point scale ranging from "well below average" to "well above average". Second, respondents were asked which of the following best describes their business unit performance in the past year: (i) losing money; (ii) about break-even; (iii) profitable, but less so than most of the direct competitors; and (iv) more profitable than most of the direct competitors. All performance measures are significantly correlated (2-tail $P < 0.000$). Therefore, return on sales is used as the main measure of business unit performance in this study ($\mu = 9.60$, $\sigma = 8.08$ for average return of sales over the last 3 years).

2.3. Non-response analysis

Non-response analysis was performed to check potential bias in the sample. It is generally accepted that the profile of non-respondents is likely to be more similar to that of late respondents than early respondents (Fowler, 1993). A two-sample *t*-test (not reported) shows that the means for budgetary control, budget slack, time-orientation, and

⁸ Return on sales of 1995 is treated as *current* performance (ROS_t) as it nearly coincides with the time the survey was conducted (spring 1996). In other words, ROS_t closely matches the time frame of the survey constructs (e.g. budgetary control style and budgetary slack) as it is likely that respondents refer to the budgetary process of the last period (1995) when asked about it in early 1996.

competitive strategy are not significantly different ($P > 0.10$) for early ($n = 50$; i.e. immediate reply) vs. late respondents ($n = 47$; i.e., reply after 4 weeks). Late respondents, however, have marginally significant lower average 3-year performance than early respondents ($P = 0.07$). Hence, other than covering potentially better performing business units, it can be assumed that there is no significant non-response bias in this sample.

3. Results

The following observations can be made from Table 1, which reports the correlations among the variables in this study. First, there is a significant negative relationship between budget CONTROL rigidity and budgetary SLACK (H_{1a} , two-tail $P = 0.000$). The relationship between CONTROL rigidity and managerial short-term TIME-orientation is insignificant (H_{1b} , two-tail $P = 0.109$). Budget SLACK and managerial short-term TIME-orientation are significantly and negatively related (H_2 , two-tail $P = 0.002$).

These correlations suggest that rigid budgetary controls reduce budget slack. Reduced slack makes short-term budget targets more difficult to achieve, which may drive managers to become concerned primarily about actions that affect short-term results. Put differently, slack may be a necessary condition for managers to think long-term.

Second, a STRATEGY of differentiation is associated with less rigid budgetary CONTROL

(H_{3a} , two-tail $P = 0.038$) and more SLACK (H_{3b} , two-tail $P = 0.068$). Hence, differentiation business units seem less constrained by rigid budgetary controls and restricted resources, which allow them to pursue the critical success factors on which their strategies are built (e.g. to pursue innovation or to respond flexibly to changes in the environment).

Third, past performance (AVG2ROS) is negatively related to rigid budgetary CONTROL (H_{4a} , two-tail $P = 0.047$); positively related to SLACK (H_{4b} , two-tail $P = 0.000$); and negatively related to managerial TIME-orientation (H_{4c} , two-tail $P = 0.043$). This suggests that managers of poorly performing business units are more affected by rigid budgetary controls; have less leeway to build slack; and are concerned primarily about issues that affect their short-term results.

In sum, the correlations seem to be in line with the relationships formulated in H_{1ab} , H_2 , H_{3ab} , and H_{4abc} at conventional levels of significance (two-tail $P < 0.10$), except H_{1b} (two-tail $P = 0.109$). Correlations, however, do not provide insight into the direction of the relationships. Therefore, path analyses as part of a structural equation model were performed to dissect these relationships further. The structural equation model is depicted in Fig. 1 and the corresponding results are reported in Table 2. The purpose of this analysis is to test whether the one-to-one correlations hold significant in the presence of other intervening variables. In other words, it tests whether past performance and strategy, respectively, have a direct effect on budgetary slack and managerial

Table 1
Pearson correlations among variables in study^{ab}

	AVG2ROS				
STRATEGY	0.069	STRATEGY			
CONTROL	-0.161	-0.168**	CONTROL		
SLACK	0.360***	0.148*	-0.402***	SLACK	
TIME	-0.164**	0.087	0.130§	-0.246***	TIME

^a $N = 153$; *** $P < 0.01$, ** $P < 0.05$, * $P < 0.10$, § $P < 0.15$ (2-tail).

^b AVG2ROS is *past* performance measured as the average percentage return on sales over 1993 (ROS_{t-2}) and 1994 (ROS_{t-1}). STRATEGY is the percentage of the business unit's sales accounted for by a strategy of differentiation. CONTROL is measured as the emphasis placed on meeting the budget, which is a seven-item scale computed by the equally weighted average of the standardized item scores associated with each of the seven items. SLACK represents a five-item budgetary slack scale, which was computed by the equally weighted average of the standardized item scores associated with each of the five items. TIME-orientation is measured as the percentage of their time managers spend on matters that will appear in the profit and loss statement within 1 year.

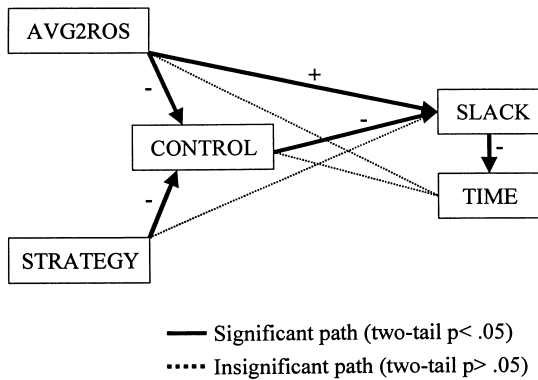


Fig. 1. Summary graph of empirical model.

short-term orientation or whether this effect is (in part) attributable to how rigidly the control system is implemented.

The structural equation model was set up in AMOS-3.61. Because of sample size limitations, all variables in the model were treated as *observed* variables (by using the aggregate scale for each construct) and not as *latent* variables with multiple indicators. This is common practice in many studies in accounting (e.g. De Ruyter & Wetzels, 1999). The number of observations per parameter (153:18) exceeds the conventional recommendation of 5:1. Model-fit is adequate: χ^2 is insignificant ($P=0.169$); the root mean square error of approximation (RMSEA = 0.072) is lower than 0.08; and the comparative fit index (CFI = 0.998) has a value close to 1 (Browne & Cudeck, 1993). Univariate tests of skewness and kurtosis found the variables to be non-normal. Non-normality of the data does not affect maximum likelihood estimates, but can inflate standard errors rendering significance tests invalid (Bollen, 1989). However, standard errors obtained from bootstrap resampling (500 samples) were very close to the standard errors obtained by maximum likelihood. This justifies that the impact of non-normality on the significance tests is essentially harmless and has not altered the results.^{9,10}

Table 2 indicates that the negative relationship between budget CONTROL rigidity and budget SLACK (H_{1a}) remains strongly supported ($P < 0.01$). The relationship between budget CONTROL rigidity and managerial short-term TIME-orientation (H_{1b}) is insignificant. Hence, the data only support an *indirect* relationship between

Table 2
 Multivariate structural equation model^a

	Path from to:	β^b	t
$H_{4b}(+)$	AVG2ROS...	...SLACK ^c	0.301	4.242***
$H_{1a}(-)$	CONTROL...	...SLACK	-0.342	-4.758***
$H_{3b}(+)$	STRATEGY...	...SLACK	0.070	0.988
$H_{4c}(-)$	AVG2ROS...	...TIME ^d	-0.086	-1.030
$H_{1b}(+)$	CONTROL...	...TIME	0.036	0.416
$H_2(-)$	SLACK...	...TIME	-0.200	-2.217**
$H_{4a}(-)$	AVG2ROS...	...CONTROL ^c	-0.151	-1.902**
$H_{3a}(-)$	STRATEGY...	...CONTROL	-0.158	-1.997**

^a $N=153$; *** $P < 0.01$, ** $P < 0.05$, * $P < 0.10$ (2-tail). SLACK is computed by the equally weighted average of the standardized item scores associated with its five Likert-scale items. TIME-orientation is measured as the percentage of their time managers spend on matters that will appear in the profit and loss statement within 1 year. CONTROL is measured as the emphasis placed on meeting the budget, which is a seven-item scale computed by the equally weighted average of the standardized item scores associated with each of its seven items. STRATEGY is the percentage of the business unit's sales accounted for by a strategy of differentiation. AVG2ROS is *past* performance measured as the average percentage return on sales over 1993 (ROS_{t-2}) and 1994 (ROS_{t-1}).

^b Standardized estimate of the path coefficients.

^c The proportion of variance (R^2) in SLACK that is accounted for by the predictors AVG2ROS, CONTROL and STRATEGY is 25.1%.

^d The proportion of variance (R^2) in TIME that is accounted for by the predictors AVG2ROS, CONTROL, and SLACK is 6.7%.

^e The proportion of variance (R^2) in CONTROL that is accounted for by the predictors AVG2ROS and STRATEGY is 4.8%.

⁹ The difference between the bootstrap standard error (i.e. the standard deviation of the parameter estimates computed across the 500 bootstrap samples) and the standard error obtained by maximum likelihood is largest for the relationship between *managerial short-term orientation* and *budgetary control style* (H_{1b}) and the relationship *between managerial short-term orientation* and *slack* (H_2). However, the bootstrap standard error is greater than the standard error obtained by maximum likelihood (2.118 vs. 2.017 and 2.611 vs. 2.193, respectively). Hence, the significance tests in Table 2 are not inflated.

¹⁰ An earlier version of the paper performed separate path analyses for each triad of variables (e.g. performance-control-slack, strategy-control-slack, etc.) using simple regression logic. It resulted in qualitatively identical results.

budgetary control and managerial short-term orientation through budget slack (see Fig. 1 for a graphical representation). The significant negative association between budgetary SLACK and managerial short-term TIME-orientation (H_2) found in Table 1 ($P < 0.01$) remains significant in Table 2 ($P < 0.05$).

The structural model in Table 2 does not provide support for a direct significant path between STRATEGY and SLACK (H_{3b}) in the presence of the budgetary CONTROL variable. However, a significant negative path goes from STRATEGY to budgetary CONTROL (H_{3a} , $P < 0.05$) onto slack. This suggests that differentiation business units may receive less rigid controls which, in turn, seem to augment the propensity of business unit managers to create slack.

Table 2 also shows that SLACK is positively related to past performance (AVG2ROS) directly (H_{4b} , $P < 0.01$) as well as indirectly by a negative path through rigid budgetary CONTROL (H_{4a} , $P < 0.05$). The initial significant negative correlation in Table 1 between past performance (AVG2ROS) and managerial short-term TIME-orientation (H_{4c} , $P < 0.05$) goes away in Table 2. Hence, the results only support an indirect path between past performance and managerial short-term orientation through budgetary slack (see Fig. 1), suggesting that better past performance provides leeway for slack creation which, in turn, reduces pressure for the short-term.

In sum, there is an effect on slack from past performance both directly as well as indirectly through budgetary control; there is only an indirect effect on slack from strategy through budgetary control; and the effects on managerial short-term orientation from budgetary control and past performance are only indirect through slack. Slack and managerial short-term orientation are negatively related. These findings are summarized in Fig. 1.

4. Discussion

The data suggest that reducing one form of so-called dysfunctional behavior might re-emerge elsewhere in another form (Ghoshal & Moran, 1996). The negative relationship between budgetary

slack and managerial short-term orientation is an example of such spillover effects. Question is which is truly dysfunctional? The answer probably depends on the circumstances.

The data suggest that differentiation business units generally undergo less rigid budgetary controls, which are associated with more budgetary slack, and presumably allow a higher degree of flexibility to respond to changes in the environment. Hence, budgetary slack is not exactly counterproductive for differentiators given their focus on product innovation with long-term and less certain payoffs. Simons (1988), however, contended that differentiation coupled with environmental uncertainty should actually lead to more, rather than less, formal controls because uncertainty increases the need for information processing. Regardless of the amount of information processing, the findings here suggest that corporate management puts less emphasis on the budget for differentiation business units, and by doing so, indirectly “mandates” more slack. Although slack can be a form of inefficiency, it is also essential for innovation (Nohria & Gulati, 1996). For strategies that are not built on innovation, such as low cost strategies, slack is probably waste.

Moreover, past performance seems an important predictor of both budgetary control rigidity and slack. Business units that have been more profitable seem less affected by budgetary controls and enjoy more budget slack. Taken as a whole, this leaves an open question of whether slack is really a strategic necessity (e.g. to successfully pursue differentiation — see above), or rather a consequence of complacency in good times.

Managerial short-term orientation is usually considered to be dysfunctional, but again, it probably depends on the situation. Short-term actions may be necessary to bring about an urgent recovery of poor performance (Merchant & Manzoni, 1989). The findings here suggest that the budgetary control style does not directly affect the business unit managers’ time-orientation. However, when past performance has been poor, upper management seems to pursue more rigid controls that, through reduced slack, indirectly affect the business managers’ concern about short-term results. The long-term effects of short-term

management actions are unclear and could not be investigated with the data on hand. But again, without recovery in the short-term through rigid controls and slack reduction, among other measures, there may never be a long-term.

5. Limitations and extensions

Several limitations to this study need to be mentioned. First, the data used here seem valid, but it remains problematic to question managers about their engagement in dysfunctional behaviors because they may want to keep their gaming strategies private. In order to encourage truthful revelation, respondents were assured that their responses would be treated with the strictest confidence and would in no way be made available to their corporate managers. Moreover, the notion of managerial short-term orientation is difficult to conceptualize and measure. For example, a manager may focus mainly on business matters that will affect performance within the current budget year (which is the measure used in this study), but perhaps not at the exclusion of the occasional, but strategically important, concern with the long-term. That is, focus may not pick up on importance. Also, a manager may have focused on the long-term last year and is able to restrict attention to short term matters this year.

Second, the current study is limited by its focus on budgetary controls. Even though budgetary controls are a very important control system at managerial levels, they are only a subset of the overall control system available to an organization. There are many other ways to affect control and each of these control mechanisms may engender different (dysfunctional) behaviors by the managers being controlled (Merchant, 1998). Moreover, many organizations have separate strategic planning processes designed to encourage long-term thinking.

Third, the use of ROS as the measure of performance is rather coarse and may have built in the study a potential bias towards short-termism. There is indeed anecdotal evidence on how managers sometimes accelerate sales at year-end for the purpose of meeting the budget. These practices

are typically short-term oriented (e.g. shipping unordered or faulty products).

Fourth, this study is limited in the number of contextual variables it considers. Budgetary slack alone is a complex and many-sided phenomenon and the result of a combination of many different factors (Lukka, 1988). Equally complex is the design of management control systems. Different contextual variables can take on characteristics that may cause tensions in designing formal control systems. This study only considered competitive strategy. But, strategic responses to changing environments may clash with size and structure, for instance. Organizational size may call for formal accounting-based controls, whereas strategy may require organic, fluid arrangements (Dent, 1987). There is little insight into how organizations deal with such tensions. Similarly, there is no evidence about how different managerial characteristics, elements of control systems, and elements of structure could be used as substitutes for one another to effectively implement any given strategy (Govindarajan, 1989).

Finally, this study is also restricted in that it has considered only two types of so-called dysfunctional behavior. Therefore, some spillover effects with other forms of dysfunctional behavior (e.g. earnings management) may have remained undetected. Despite these limitations, this study has provided some evidence that two dysfunctional behaviors may be negatively related, which implies that both cannot be truly dysfunctional or harmful. Judgments regarding the harmfulness of these consequences of control should be made with respect to the circumstances in which they take place (e.g. the type of competitive strategy pursued).

One possible extension is to study the relationships among control, slack, managerial short-term orientation, and performance longitudinally. This paper used past performance as a predictor variable for slack and managerial short-term orientation. It would be interesting though to explore the impact of current slack creation and managerial short-term orientation on future performance. This, however, requires longitudinal data without which, for example, it is difficult to infer whether seemingly short-term management actions are truly “dysfunctional” in the long-term.

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