
Explaining the functional orientation of the budget: a survey of Swedish organisations

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Abstract: The paper presents a congruence model where factors belonging to the environment, to the corporation, and to the management control system of the corporation are expected to influence the functional emphasis put on the budget, i.e., the function of coordination, responsibility and evaluation. Through a test performed on 111 Swedish corporations, we find indications that the budget is very much alive; it appears to focus more on dealing with external situations than with internal characteristics; and it appears to be part of the formalisation of the organisation. We draw these conclusions based on our findings that suggest that the budget is being used mainly as a coordinative device, and less as an instrument for evaluating actions.

Keywords: budget; Sweden; functional emphasis; congruence model.

Reference to this paper should be made as follows: Collin, S-O.Y., Umans, T., Lindqvist, K. and Tjörnebrant, K. (2019) 'Explaining the functional orientation of the budget: a survey of Swedish organisations', *Int. J. Accounting and Finance*, Vol. 9, No. 1, pp.28–46.

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1 Introduction

“Folks in the village say that Jeppe drinks, but they don’t say why Jeppe drinks.” (Holberg, 1722). Today, the budget appears to be like Jeppe’s drinking: it is not good for the health of the corporation. It is time-consuming, costly, unresponsive to a turbulent environment, and invites gaming and horse-trading tactics (Neely et al., 2003). Yet corporations still appear to use budgets, for example 86% of a sample of Finnish corporations did not want to abandon their budget in the year 1999 (Ekholm and Wallin, 2000). More recent papers in the same context are reporting that the budget is still ‘alive’ (e.g., Henttu-Aho, 2016) yet more innovations concerning how budgets are used are being continuously introduced (Henttu-Aho and Järvinen, 2013). In the present paper we ask the question Jeppe wanted the folks to ask: why do corporations use budgets?

Few studies in the field of management accounting have explored the reasons or/and factors that explain the use of budgeting, and according to Hansen and Van der Stede (2004, p.419) “The prior literature typically has not tested the existence of different reasons-to-budget...” Some other studies, as Shields and Shields (1998), Sharma (2002) and King et al. (2010) could be mentioned as exceptions, offering models explaining budget participation and usage of budgets, by considering factors of influence such as environmental characteristics, including uncertainty and competition, and organisational characteristics including size, strategy and structure. We continue the effort to explain the usage of budgets through identifying the functions of the budget. In this paper we suggest that the usage of a budget can be understood in terms of three functions of the budget – coordination, responsibility assignment, and evaluation – and the emphasis put on these functions.

The problems of the budget have produced a significant budget ‘whining’ literature, where all the miseries of budgets and the budgeting process have been presented. In the Scandinavian institutional school, the budget has been presented as symbolic performance and a container of conflicts in a consensus culture (Czarniawska-Joerges and Jacobsson, 1989) and as a producer of hypocrisy (Brunsson, 1989). The solutions suggested to the problems of budgets have been either ‘better budgeting’ or ‘beyond

budgeting' (Libby and Lindsay, 2007; Henttu-Aho and Järvinen, 2013). In distinguished cases, Scandinavian corporations, and especially Swedish corporations, such as Svenska Handelsbanken and Skandia, have been presented as leaders of the beyond budgeting approach (cf. Cäker and Siverbo, 2014). Other researchers have found that the budget is alive and well in Swedish listed corporations (Arwidi and Jönsson, 2010; Sarwary and Umans, 2017), evolving from a mere device with mainly coordinative functions, to a method of dealing with the flat organisational structures of Swedish corporations that are '...penetrated by goals.' (Arwidi and Samuelson, 1993). We have therefore conveniently selected Swedish corporations to answer the question of why they use budgets.

Our paper is of an explorative nature and its contribution is mainly empirical. We find that the budget is well established, that it is used in order to deal with uncertainties and turbulence and thereby to achieve coordination, and that it is supported by other management system components. This can be interpreted to indicate that Swedish corporations are oriented towards better budgeting, which is in accordance with findings from Finland (Ekholm and Wallin, 2000; Henttu-Aho and Järvinen, 2013), the USA and Canada (Libby and Lindsay, 2010).

The paper proceeds with our theory by creating a model consisting of expectations on how different drivers influence the budget's functional emphasis. Then we present the method of selecting and surveying 111 Swedish corporations. The results are presented through four regression models. Conclusions and suggestions for research finalise the paper.

2 Theory

We present a congruence model (cf. McGuire, 1999) explaining the functional emphasis of budget use. We start by defining the budget, after which we present the three sets of independent factors that influence the functional emphasis of the budget. Since the stringency and rigour of the theory of the budget is still low (Luft and Shields, 2003), we cannot produce logical derivations of hypotheses. Thus, we refrain from presenting formal hypotheses, but confine ourselves to explaining expectations. We also restrain ourselves from more advanced expectations than linear relationships, thus disregarding possible concave or convex relationships (cf. Luft and Shield, 2003). Finally, we assume theoretically defined categories, and not practitioners' categories (cf. Hansen and Van der Stede, 2004).

Defining a budget implies considering the many facets of the budget, making it hard to define in one single sentence. It can be regarded as a description in quantitative terms of the organisational strategy and how to accomplish the goals of the strategy. With this definition we focus on the budget as a tool both for coordinating resources within the organisation and the environment (cf. Collier and Berry, 2002), and for creating guidance in the organisation on how to deal with the resources and how to act. A budget can therefore be considered as an enactment of the organisation, and it includes participation and negotiations between different levels of the organisation (Covaleski and Dirsmith, 1983; Abernethy and Brownell, 1999; Perez and Robson, 1999), creating feelings of mutual togetherness (Millians, 1947).

The budget fulfils two overarching functions, that of directing action, i.e., planning, and that of incentivising action, i.e., incentives [disregarding the passive roles (Arwidi and Samuelson (1993), for example ritual and habit (Samuelson, 1986)]. The former

function implies efforts of coordination between organisational units and processes, and coordination with the environment, termed ‘strategy formation’ (Hansen and Van der Stede, 2004). The latter function can more readily be separated into the ex ante function of responsibility assignment and the ex post function of evaluation. Responsibility assignment implies the distribution of responsibility for decision-making and for action within the organisation, thus being part of the construction of the organisational structure (Millians, 1947; Perez and Robson, 1999). This resembles what Ronen and Livingstone (1975, p.671) termed ‘motivation’, i.e., “the budget conveys information to the subordinate about expectations of superiors regarding what constitutes successful task performance”. But we would like to add that the budget could be as much a device for showing the employees expectations of their superiors, i.e., it has a character of mutual control (Cyert and March, 1963) and contract. The ex post function of evaluation consists of evaluation of organisational units and actors linked to the compensation and sanction system, thus influencing behaviour indirectly.

In order to understand usage of a budget, the different functions of the budget have to be treated separately. Our model presented below, attempts to show that a budget can be used with different emphases on three functions, dependent on congruence factors.

Different approaches have been presented concerning the subject of participative budgets (Shields and Shields, 1998), using environmental and task uncertainty, task independence, and the need to overcome superior-subordinate information asymmetry. Hansen and Van der Stede (2004) presented antecedents to reasons-to-budget, namely: degree of competition, production task and resource flow characteristics, organisation strategy, structure and size. King et al. (2010) suggested size, structure, strategy and environmental uncertainty. Sharma (2002) suggested perceived environmental uncertainty, size and structure.

These studies use an underlying logic that is inspired by Ginzberg’s (1980) original structure of influential factors as being that of environment, technology, and organisation (formal and informal). We join this approach by proposing three factors influencing the functional emphasis put on the budget: environmental characteristics, corporate characteristics, and management control system characteristics. Our claim is that a budget’s functional emphasis will be influenced by

- a environmental turbulence and competitive intensity
- b the corporation’s strategy, complexity and size
- c the management control system including the information system, level of formalisation, organisational structure concerning responsibility centres, and the culture of the firm.

2.1 Environmental turbulence and competitive intensity

In defining environmental turbulence we borrow a definition from Boyne and Meirer (2009) that was later adopted by Johansson and Siverbo (2014) who proposed that it represents a degree of change, be it market conditions, technology, etc., in the environment that organisation is resource-dependent on. Turning to the normative literature (Weber and Linder, 2005) we can observe it telling the story that budgets are reduced in importance when the environment becomes more turbulent and when competition becomes more hostile. Indeed, it has been found in the Australian healthcare

sector that dynamism, but not hostility reduces the usage of budgets (King et al., 2010). But it is quite possible to argue that turbulence of the environment does not reduce the importance of the budget since the budget offers stability and a frame of reference in a turbulent world. Simons (1988) found that Canadian firms tended to have tighter budgets when engaged in a strategy involving high product changes, and looser budgets when in a stable environment. However, turbulence imposes different functional demands and therefore the budget has a different emphasis. Since more turbulence demands more proactive than reactive actions, the budget function, absents management by exception (cf. Ronen and Livingstone, 1975; Boujelbene and Affes, 2015), is to support decision-making and to stimulate action. We would expect more emphasis to be put on the function of assuming responsibility for action, i.e., the evaluative function, and less on coordination since changes in the environment can demand other actions than those that are pre-planned.

Competitive intensity has been claimed (Sharma, 2002) to induce more extensive use of budgets since the organisation is in greater need of timely information about the environment, but even more important, the budget process can produce and transmit a feeling for the competitive environment. Thus, we would expect more emphasis in a competitive environment on the function of responsibility and evaluation, and less emphasis on coordination.

2.2 The corporation's strategy, complexity and size

The strategy of the corporation influences the budget According to Kald et al. (2000) scholars in management control have traditionally explored strategy in terms of the typology of Miles and Snow (1978) which represented the internal perspective of a strategic choice conceptualisation of strategy, or Porter's (1980) outward focused typology highlighting the competitive advantage conceptualisation. The two typologies have a number of aspects in common, yet Porter's (1980) typology, expressed in terms of cost leadership and differentiation, has an advantage given its two-dimensional nature, while Miles and Snow's (1978) typology is more complex because its four dimensions make it harder to theorise in relation to management control-related aspects. Focusing, which is another part of Porter's typology, has often been avoided by management control scholars since it does not represent an explicit strategy (Kald et al., 2000). In line with Porter (1980, 1996) and for the purpose of this paper we consider differentiation and cost leadership to be mutually exclusive strategies, thus arguments related to cost leadership are reversed if considering the differentiation strategy. It has been claimed that the cost leadership strategy is more inclined to stress the importance of a budget (King et al., 2010). Compared to flexibility when implementing the strategy of customer orientation, the level of slack in a budget can be presumed to be rather low in cost-oriented strategies (Davila and Wouters, 2005). On the other hand, it has been claimed that a differentiation strategy is more prone to using budget controls (cf. Simons, 1988). Hansen and Van der Stede (2004) found support for this hypothesis when the reason for the budget was strategy formation, but found no support when the reasons were coordination, evaluation and communication. Thus, we hypothesise that the strategy of cost leadership will affect the budget function emphasis, especially that of coordination, since lack of cost control in one division can easily be transmitted to other divisions. We also have reasons to believe that the evaluation function can be emphasised

since flexibility of action, which tends to reduce the importance of a budget in evaluation situations, has to be restrained.

Complexity concerns the number of relationships and interrelationships in the organisation and between the organisation and its environment. Weber and Linder (2005) operationalised complexity as the heterogeneity of the organisation, i.e., the number of manufacturing processes, and its entourage, i.e., the number of markets and customers served. An increased level of complexity, both within and outside an organisation, has been shown to be associated with an increasing degree of asymmetry of information (Bushman et al., 2004; Demirkan et al., 2012). Asymmetry of information makes managerial decision-making uncertain, which leads management to seek coordination tools to alleviate the asymmetry and uncertainty. An increase in the degree of diversification is closely associated with organisational complexity (Haveman, 1993) and has been shown to predispose firms (e.g., DuPont, Siemens) to rely on budgets in their coordination activities (Theiss, 1937). An increasing degree of organisational complexity often appears to reduce transparency and to create uncertainty among the shareholder and stakeholders, which in turn leads the managers to introduce budgeting not only for coordination per se, but also to signal that they are in control (cf. Ruchala, 1997). Thus we suggest that with increasing complexity there will be a strong emphasis on the coordination function of the budget.

Size can be assumed to influence the propensity to use budgeting in all respects. Size includes many factors, such as complexity (Sharma, 2002). Since we consider complexity as an independent factor on its own, we focus here on organisational size mainly as an indicator of resource capacity that can construct, develop and maintain advanced control systems, such as budgets. It has been found, for example, that usage of advanced capital budgeting techniques, such as real option reasoning and game theory models, increases with organisational size (Verbeeten, 2006).

2.3 Organisational culture, structure and formalisation

The management control system includes the organisational culture, the information system, level of formalisation, and the organisational structure concerning responsibility centres. In conceptualising the management control system in terms of these four aspects we are inspired by Flamholtz et al.'s (1985) model of management control where the authors propose that the core of the control systems – represented by the budget in this paper, is embedded in the control context defined by

- 1 the organisational structure represented by the information system, formalisation and responsibility centres aspects
- 2 the organisational culture
- 3 the external environment, described in terms of organisational complexity in the previous section.

The budget, explored through the three aforementioned functions is in other words an integral part of the management control system, implying that the structural and organisational components identified here could be supportive/obstructive or complementary to the budget. The arguments in this section are based on the idea of management control systems being a package, i.e., acknowledging the interdependency

of different control practices and systems upon which the function of the budget is dependent. This particular section is inspired by the studies of Malmi and Brown (2008) and Grabner and Moers (2003), and explores in more detail a number of selected management control systems and their interactive role vis-à-vis budgeting functions.

We define organisational culture in line with Ouchi (1979) who suggested that it represents a set of broader values and norms that guide workers' behaviour, practices and policies and that represent a form of social control (Flamholtz et al., 1985). Just as ideology increases in importance when tasks and situations are becoming more ambiguous, complex or uncertain, and creating conditions for clan control (Ouchi, 1980), culture can be expected to gain in importance in situations where the budget offers guidance that is too restricted. According to Hansen et al. (2003) the potential failure of budgeting to empower people is usually reflected in its diminishing functions related to the assignment of responsibilities among workers, evaluation of their performance, and even more so the coordination. The same authors suggest that the diminishing role of the budget is usually compensated by a higher reliance on organisational culture (cf. Malmi and Brown, 2008). Thus we expect that reliance on organisation culture as a control mechanism will be negatively related to the three functions of budget with a more profound negative relation to the coordination function, given its action orientation. This is similar to our argumentation in the turbulence dimension.

An information system can be suggested to be complementary to the budget since a strong information system makes it possible to act on actual information instead of acting due to budgetary plans. For example, Lindsay and Libby (2007) suggest that the advanced information system of a Swedish Bank, Svenska Handelsbanken, is a strong part of the explanation of why they can work so efficiently without a budget. The information system could be expected to influence both the coordinative function, and to compensate the budget function of representing the organisational structure, i.e., responsibility assignment. Here the assumption is embedded in the aforementioned view of the management control system as a package (e.g., Grabner and Moers, 2013; Malmi and Brown, 2008) where management control systems are employed in interaction with each other. Thus, we expect a rather similar negative relationship between the information system and the three functions of the budget.

Formalisation is the extent to which the organisation relies on codified and written rules and procedures (Bruns and Waterhouse, 1975). Following the management control systems package idea it can be assumed that the budget becomes a part of the culture and intentions of formalisation, i.e., budgets are treated as just an aspect of formalisation (cf. Sponem and Lambert, 2016). Thus, a strong positive correlation with all the functions could be expected, even if there is no logical link between formalisation and budget and only anecdotal evidence of such a relation (e.g., King et al., 2010).

Organisational structure has been suggested to influence budget through the degree of decentralisation (King et al., 2010; Sharma, 2002). With increasing decentralisation, informal control works less well, and formal control has to be imposed, which is done through different means, budget being one of them. We prefer to describe organisational structure in terms of responsibility centres (cf. Anthony, 1988), assuming that with an increasing level of responsibility, moving from revenue and cost centres, to profit centres and ending at investment centres, a higher level of autonomy is arrived at, thus inducing more emphasis on budgeting. Thus, our argument relies less on the hypothesis that informal control reduces in capacity with increasing size, but that with a higher level of

decentralisation, higher levels of autonomy are reached, which demand an increase in control. The emphasis could be expected to be more pronounced concerning the coordinative function since the responsibility function obviously is reduced because these centres are clearly defined in terms of responsibility and therefore in evaluation.

We summarise our reasoning in expectations about factors influencing the budget's functional emphasis in Table 1.

Table 1 Expectations of functional emphasis

	<i>Coordination</i>	<i>Responsibility</i>	<i>Evaluation</i>
<i>Environment</i>			
Turbulence	(+)	(++)	(++)
Competitive intensity	(+)	(++)	(+)
<i>Corporation</i>			
Size	(++)	(++)	(++)
Cost leadership	(++)	(+)	(+)
Complexity	(++)		
<i>Management control system</i>			
Culture	(-)	(-)	(-)
Information system	(-)	(-)	(-)
Formalisation	(+)	(+)	(+)
Investment centre	(++)	(+)	(+)

3 Method

The population consists of all corporations in Sweden with a size larger than 20 million Swedish Krona (about 2.1 million Euros) in sales and more than five employees. Corporations of that size have some probability of using formalised budgets. In 2010, the point at which data was collected, the population was, according to Affärsdata 22 397 corporations (Bengtsson and Tjörnebrant, 2010). We randomly picked 727 corporations from this population, constituting 3.2% of the population. From this sample, 52 were discarded because we could not find any e-mail addresses. We got 196 responses, but 85 responses were discarded because of lack of data, misunderstandings etc. We ended up with 111 responses that could be used in the full analysis, thus representing a response rate of 16.4%, which appeared to be in the range of other studies. For example, Hansen and Van der Stede (2004) achieved an 18% response rate, and King et al. (2010) achieved 14.6% but in both cases from a restricted sample and only directed to individuals responsible for the budget, thus creating a biased sample and a bias in the respondents. In a recent survey, Libby and Lindsay (2010) achieved 13.6% in a Canadian survey and 1.5% in a US survey. Unfortunately, we do not have data on non-respondents, which makes it impossible to make a drop-out analysis. We cannot therefore claim to be able to generalise our findings to the Swedish population of corporations. Our study could correctly be described as an exploratory study of antecedents to budget functions in Sweden.

3.1 *Dependent variables*

We observed our factors through posing the following statements (in Swedish) with response alternatives on a seven-point scale:

- *Coordination emphasis*: We use a budget for planning our activities; Our budget is a direct economic translation of our planned activities; We use a budget for coordinating our activities; We use a budget for coordinating our employees (Cronbach's alpha = 0.915).
- *Responsibility emphasis*: We use a budget for distributing responsibility among our employees; The employees are active participants in the process of making the budget and its goals; The employees influence the budget goals (Cronbach's alpha = 0.785).
- *Evaluation emphasis*: We use a budget for supervising our employees' work; We use a budget for evaluating our employees' performance (Cronbach's alpha = 0.863).

3.2 *Independent variables*

- *Turbulence*: Our products change every year; We develop new products each year (Cronbach's alpha = 0.746). This is a simplification of turbulence in order to reduce the number of questions, highlighting market turbulence and suppressing technological and input turbulence.
- *Competitive intensity*: There are competitors that through their products and services fulfil the same needs that our organisation does; Our organisation is exposed to competition (Cronbach's alpha = 0.670).
- *Size*: How many employees does your organisation have? (Open question).
- *Cost leadership*: Our organisation has mainly a cost leadership/differentiation/focused strategy.
- *Complexity*: Our organisation has many dissimilar products; Our organisation is engaged in many markets (Cronbach's alpha = 0.627).
- *Culture*: There are unwritten rules in our organisation on how to act properly.
- *Information system*: Our information system is advanced; Our information system is used to direct our organisation (Cronbach's alpha = 0.812).
- *Formalisation*: Our organisation relies on fixed rules concerning the distribution of resources; Our organisation relies on fixed rules concerning the management of the employees' behaviour (Cronbach's alpha = 0.602).
- *Responsibility centre*: Which type of responsibility centre is most frequent in your organisation? The respondents were asked to tick on the following: cost, revenue, profit, or investment centre. Each category were made dummy variables and in the analysis, the investment centre was made a reference variable and thus omitted from the tests.

All attitude variables are standardised to have a range between 1 and 7.

3.3 Control variables

We controlled for a respondent effect through three variables: *gender*, *function* and *tenure*. It has been found that there could be a difference in a budget's role in terms of its articulated, intended and real role (Samuelson, 1986), and our assumption was that these differences could be influenced by the respondent's gender, tenure but most of all, the respondent's structural position.

Gender was observed through the question on which gender the respondent had and was given the value of 0 for females and 1 for males.

Function was observed through coding function into four categories: Owners or CEOs of the corporation, Controller or similar function, Assistant at the economic department, and Others. In the analyses, Others are omitted.

Tenure was observed through the question 'How long have you been working in the corporation?'

4 Results

We found the mean of the three functional emphases to be: coordination = 4.6, responsibility = 3.8 and evaluation = 3.3. The low value on evaluation could be interpreted as indicating the corporations avoiding management by exceptions (Ronen and Livingstone, 1975), i.e., not to put action capacity at risk with an excessively strong evaluative emphasis on the budget. This contrasts with a Finnish sample from 1999 (Ekholm and Wallin, 2000) where they achieved the highest score for 'control and evaluation', which could resemble our evaluation dimension, and then 'planning' which could be similar to our coordination.

On inspecting the descriptive statistics we notice that the respondents have an almost even gender distribution and that a fairly large number of owners (35%) are among the respondents. Turbulence is rather moderate on average, but competitive intensity is higher. Cost leadership appears not to be a preferred strategy, which gives a low variance which will reduce our possibility to make good inferences on that expectation. The most common responsibility unit is the profit centre (56%).

Inspecting the correlation matrix (Table 2) we find that the function of responsibility has a high correlation with the function of evaluation and that evaluation has a lower correlation with coordination. A factor analysis with principal component analysis, using varimax rotation indicated the close relationship between evaluation and responsibility, and created a strong single component with the coordinative questions. A forced factor analysis of three extracted factors created three components with adequate questions belonging to each component, except for one question of responsibility that loaded high on both responsibility component and coordination.

The risk of multicollinearity appears to be low, except for the rather high correlation (0.43) between turbulence and complexity. We report VIF-values for each regression model, and they give us reasons to fear a risk of dependency.

Table 2 Descriptive statistics and Pearson correlation coefficients

	Mean	Std dev	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Coordination	4.65	1.47	59 ^a	54 ^a	03	-10	-22 ^c	-22 ^c	-11	18 ^d	26 ^b	24 ^c	03	16 ^d	-13	42 ^a	37 ^a	04	06	-13
2 Responsibility	3.81	1.47	X	65 ^a	-04	-08	-28 ^b	30 ^b	-03	31 ^b	16 ^d	37 ^a	-07	21 ^c	08	44 ^a	30 ^b	-12	02	-02
3 Evaluation	3.32	1.67	X	X	05	-08	-18 ^d	16 ^d	-05	34 ^a	23 ^c	24 ^c	-05	17 ^d	04	26 ^b	22 ^c	-08	07	-04
4 Gender	0.58		X	X	X	-06	29 ^b	-27 ^b	-23 ^c	07	11	00	-06	06	-07	-03	-11	05	08	-03
5 Tenure (log)	11.59	8.91		X	X	X	26 ^c	-17 ^d	-20 ^c	-05	06	-10	14	-13	15	07	-01	-19 ^c	06	04
6 Owner	0.35			X	X	X	X	-84 ^a	-14	-06	10	-31 ^b	-09	-02	04	-16 ^d	-08	-18 ^d	03	05
7 Controller	0.57			X	X	X	X	X	-22 ^c	02	-08	35 ^a	10	00	02	16 ^d	-03	15	-04	-01
8 Assistant	0.04			X	X	X	X	X	X	-04	-13	-05	-08	-11	01	-14	05	-09	-06	-02
9 Turbulence	3.55	1.58		X	X	X	X	X	X	X	-02	00	-16 ^d	43 ^a	09	17 ^d	-02	04	08	-01
10 Comp intensity	5.88	1.10		X	X	X	X	X	X	X	X	17 ^d	04	15	-08	15	15	-10	11	10
11 Size (log)	1.64	0.59		X	X	X	X	X	X	X	X	X	04	05	-17 ^d	35 ^a	01	-01	-04	-02
12 Cost leadership	0.14			X	X	X	X	X	X	X	X	X	X	X	15	-01	06	-05	05	06
13 Complexity	4.25	1.61		X	X	X	X	X	X	X	X	X	X	X	08	13	34 ^a	11	-06	-01
14 Culture	4.68	1.40		X	X	X	X	X	X	X	X	X	X	X	X	03	15 ^d	-08	12	-13
15 Info. system	3.77	1.54		X	X	X	X	X	X	X	X	X	X	X	X	X	38 ^a	-24 ^c	24 ^c	-01
16 Formalisation	4.3	1.24		X	X	X	X	X	X	X	X	X	X	X	X	X	X	-06	02	-06
17 Cost unit	0.17			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-14	-06
18 Revenue unit	0.09			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-51 ^a
19 Profit unit	0.56			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-35 ^a

Notes: n = 111; ^ap < 0.001, ^bp < 0.01, ^cp < 0.05, ^dp < 0.1. Decimal point omitted for correlation coefficients.

We analysed the following model:

$$\begin{aligned} \text{Functional emphasis} = & \text{Constant} + \text{Control variables} + \text{Environment variables} \\ & + \text{Corporate variables} + \text{Management control system variables} + \text{residual.} \end{aligned}$$

The regression results are presented in Table 3. We enter four blocks of variables, starting with the control variables, then continuing with environmental, corporate and management control system variables, making it possible to find the incremental contribution by the different sets of variables. The statistics of beta, standard errors and VIF are from the final, full model.

Table 3 Results of regression analysis for functional orientation

	<i>Coordination</i>		<i>Responsibility</i>		<i>Evaluation</i>	
<i>Control variables</i>	Stand β (Std err.)	$\Delta R^2 = 0.08$ $\Delta F = 1.74$	Stand β (Std err.)	$\Delta R^2 = 0.09$ $\Delta F = 2.14^d$	Stand β (Std err.)	$\Delta R^2 = 0.05$ $\Delta F = 1.12$
Gender	0.08 (0.27)	VIF = 1.3	0.05 (0.26)	VIF = 1.3	0.08 (0.33)	VIF = 1.3
Tenure (log)	-0.06 (0.34)	VIF = 1.3	-0.04 (0.33)	VIF = 1.3	-0.6 (0.41)	VIF = 1.3
Owner	0.11 (0.65)	VIF = 6.9	0.14 (0.63)	VIF = 6.9	-0.09 (0.79)	VIF = 6.9
Controller	-0.31 (0.65)	VIF = 7.5	0.38d (0.63)	VIF = 7.5	0.09 (0.79)	VIF = 7.4
Assistant	-0.02 (0.97)	VIF = 2.3	0.09 (0.9)	VIF = 2.4	-0.04 (1.18)	VIF = 2.4
<i>Environment</i>		$\Delta R^2 = 0.09$ $\Delta F = 5.78^b$		$\Delta R^2 = 0.13$ $\Delta F = 8.6^a$		$\Delta R^2 = 0.16$ $\Delta F = 10.6^a$
Turbulence	0.22 ^c (0.09)	VIF = 1.4	0.30 ^b (0.09)	VIF = 1.43	0.39 ^a (0.11)	VIF = 1.4
Competitive intensity	0.21 ^c (0.12)	VIF = 1.18	0.12 (0.11)	VIF = 1.18	0.21 ^c (0.14)	VIF = 1.2
<i>Corporation</i>		$\Delta R^2 = 0.02$ $\Delta F = 0.63$		$\Delta R^2 = 0.06$ $\Delta F = 2.91^c$		$\Delta R^2 = 0.02$ $\Delta F = 0.84$
Size (log)	0.000 (0.24)	VIF = 1.5	0.19 ^d (0.24)	VIF = 1.5	0.14 (0.3)	VIF = 1.5
Cost leadership	0.07 (0.36)	VIF = 1.2	-0.07 (0.35)	VIF = 1.2	-0.04 (0.44)	VIF = 1.2
Complexity	-0.1 (0.1)	VIF = 1.6	-0.05 (0.09)	VIF = 1.7	-0.12 (0.11)	VIF = 1.6

Notes: n = 111; ^ap < 0.001, ^bp < 0.01, ^cp < 0.05, ^dp < 0.1 (the statistics of beta, standard errors and VIF are from the final, full model).

Table 3 Results of regression analysis for functional orientation (continued)

	<i>Coordination</i>		<i>Responsibility</i>		<i>Evaluation</i>	
<i>Man. control system</i>		$\Delta R^2 = 0.21$ $\Delta F = 5.38^a$		$\Delta R^2 = 0.14$ $\Delta F = 3.74^c$		$\Delta R^2 = 0.07$ $\Delta F = 1.61$
Culture	-0.2 ^c (0.1)	VIF = 1.3	0.04 (0.09)	VIF = 1.3	0.005 (0.12)	VIF = 1.3
Information system	0.23 ^c (0.10)	VIF = 1.7	0.19 ^d (0.1)	VIF = 1.7	-0.01 (0.12)	VIF = 1.7
Formalisation	0.33 ^b (0.12)	VIF = 1.6	0.23 ^c (0.12)	VIF = 1.6	0.23 ^c (0.15)	VIF = 1.7
Cost unit	-0.04 (0.4)	VIF = 2.1	-0.16 (0.44)	VIF = 2.1	-0.19 (0.55)	VIF = 2.1
Revenue unit	-0.1 (0.5)	VIF = 1.5	-0.12 (0.5)	VIF = 1.5	-0.06 (0.62)	VIF = 1.5
Profit unit	-0.21 ^d (0.4)	VIF = 2.1	-0.12 (0.33)	VIF = 2.05	-0.15 (0.41)	VIF = 2.05
	adj $R^2 = 0.29$ $F = 3.811^a$		adj $R^2 = 0.32$ $F = 3.99^a$		adj $R^2 = 0.18$ $F = 3.02^b$	

Notes: n = 111; ^ap < 0.001, ^bp < 0.01, ^cp < 0.05, ^dp < 0.1 (the statistics of beta, standard errors and VIF are from the final, full model).

Inspecting the control variables, we find that overall they do not correlate with the functions. However, we obtained a weak indication of a significant correlation between respondents as owners or CEOs and those being controllers. The difference in opinion about the importance of the three functions concerning coordination where owners grading 4.2 and controllers grading 4.9; for responsibility: 3.3 and 4.2; for evaluation: 2.9 and 3.6; and for summary of functions: 10.4 and 12.7 respectively. This was particularly true for responsibility aspect, where an ANOVA indicated strong significance, thus indicating a difference in opinion between the groups. Sharma (2002) obtained observations from Australian financial controllers in hotels, where they responded on average between 4.42 and 4.58, and without discriminating between budget characteristics such as communication, control and performance evaluation, which indicated that the respondents could have been overemphasising the characteristics of the budget. Thus, without controlling for respondents' structural position, studies will run the risk of getting biased data and thus the possibilities to make comparisons between studies will be reduced.

The explanatory power of the regressions ranged between 0.18 and 0.32, which is within the range of similar regressions of similar models, for example King et al. (2010) obtained adjusted $R^2 = 0.24$ and Sharma (2002) got within the range of 0.15 and 0.26.

The block of environmental variables added significantly in all models to the explanatory power. Turbulence appears to stimulate an emphasis on the budget functions, and when inspecting the standardised beta, we see that coordination has a lower beta than responsibility, which in turn has a lower beta than evaluation. Thus, turbulence appears to increase the emphasis put on the budget, especially on the incentivising functions, and specifically on the ex post function of evaluation.

Competitive intensity is significant for both coordination and evaluation, but not for responsibility.

The variables observing the influence of corporate characteristics, i.e., size, strategy and complexity, did not significantly correlate with any function, except for size, which correlated weakly with responsibility. Since it is hard to think that a corporation does not organise in order to deal with, for example, the complexity of the organisation, our non-significant results of corporate characteristics can be interpreted as indicating that other methods are used for this purpose. It appears that the budget is more an instrument of dealing with external conditions than internal.

The block of management control systems variables strongly added explanatory power concerning coordination but also added to the model with responsibility as the dependent variable. This could be interpreted as indicating that other parts of the management control system are emphasised more and simultaneously, for example, the reward system. Culture was negatively correlated with coordination, but not correlated with the incentive functions, thus indicating support for the idea that budget and culture are substitutes concerning coordination.

The information system is correlated with coordination, but only weakly with responsibility and is not correlated with evaluation. This does not support the idea that advanced information systems can substitute for the coordinative function of the budget. Instead, the positive correlation could be interpreted as an information system complement and supporting the budget in its coordinative function. It could, however, be the case that we have a spurious correlation where the budget is considered to be part of the information system, thus measuring the same phenomenon, which could explain the positive correlation.

Formalisation is highly correlated with all functions, especially with coordination. Thus, in order to manage resources, the budget and formalisation are complementary. It could even be the case that formalisation, being rules, is mixed by the respondents with budget discipline ('you have to obey the budget'). Thus, here we again have the risk of observing the same phenomenon, which should make us more reluctant to draw strong conclusions.

Responsibility centre was only weakly significant concerning coordination, where the dominance of investment centres put more emphasis on coordination than profit centres do. Even if the significance is weak, the consistent negative sign indicates that the autonomy of investments centres is governed by a greater emphasis on the budget.

Our results are summarised in Table 4.

Table 4 Empirical results concerning functional emphasis

	<i>Coordination</i>	<i>Responsibility</i>	<i>Evaluation</i>	<i>Overall</i>
<i>Environment</i>				
Turbulence	(+) pos	(++) pos	(++) pos	Pos
Competitive intensity	(+) pos	(++)	(+) pos	
<i>Corporation</i>				
Size	(++)	(++) weak pos	(++)	
Cost leadership	(++)	(+)	(+)	
Complexity	(++)			

Table 4 Empirical results concerning functional emphasis (continued)

	<i>Coordination</i>	<i>Responsibility</i>	<i>Evaluation</i>	<i>Overall</i>
<i>Management control system</i>				
Culture	(-) neg	(-)	(-)	neg
Information system	(-) pos	(-) weak pos	(-)	pos
Formalisation	(+) pos	(+) pos	(+) pos	pos
Investment centre	(++) weak pos	(+)	(+)	weak pos

5 Conclusions

Our results should be treated as exploratory due to the fact that we did not have the opportunity to find out if our sample was representative of the population. They indicate that the budget is very much alive, and it appears to be more emphasised in order to deal with external situations than with internal characteristics, and it appears to be part of the formalisation of the organisation. It seems to be mainly used as a coordinative device, and less as an instrument for evaluating actions. Thus, one can make the speculation that the budget is now being relieved of the duty to be the main management control device, which is in accordance with findings from Finland (Ekholm and Wallin, 2000; Henttu-Aho and Järvinen, 2013; Henttu-Aho, 2016), the USA and Canada (Libby and Lindsay, 2010). Our findings indicate that the budget can now return to its original function, that of coordination. But, at the same time, it retains some functions especially connected to responsibility and to a slighter degree to evaluation. These findings resonate particularly well with those of a Finnish study by Henttu-Aho and Järvinen (2013) who found that coordination and evaluation functions, and to some extent the responsibility function remain of significance even though the new management accounting tools such as target setting and forecasting are increasing in popularity.

Our exploration of the MCSs in relation to budget functions has relied on the assumption that MCSs represent a package of interrelated mechanisms (cf. Grabner and Moers, 2013; Malmi and Brown, 2008; Basuony, 2014). We suggest that the function of the budget will be determined by the different mechanisms and their interrelations with each other. To some extent our data support this idea by showing that with use of some of the MCS there is a reduction of budget use especially in some of its functions. For example, our findings suggest that culture could be used as a substitute for the budget coordination function, an information system and formalisation could be considered to be an integral part of the budget rather than an influencing factor, at least in the eyes of the respondents.

The study has several limitations. We have assumed our organisations to be private commercial organisations. Had we included governmental organisations, we would have had to stress at least one more function of the budget, that of negotiating with the political environment, which gives it the character of talk and symbolism found in the Scandinavian institutional school (Czarniawska-Joerges and Jacobsson, 1989). Studies of commercial corporations have, however, found similar tendencies, for example that budgets can be used in order to create legitimacy towards lenders (Perez and Robson, 1999). In a more normative context one could, however, imagine one more function,

stakeholder information, based on the old idea of budget reporting and budget auditing for commercial corporations (cf Ijiri, 1968; Ruchala, 1999).

Another limitation is that we do not consider performance. After all, organisations do not exist in order to produce budgets, but to produce principal and stakeholder satisfaction. Since we consider the population of commercial corporations, we include both family firms and listed corporations. It cannot be assumed that their stakeholders and principals share the same objectives and interests, for example family firms tend to have survival as the overriding goal, while listed corporations could be assumed to have maximisation of risk-adjusted profit as a goal. We therefore make the rather controversial assumption that the respondents represent a fair share of effective corporations. Future research could, however, include performance and operationalise it through a subjective variable (cf. Umans, 2013).

Our study develops and uses new constructs that measure different budget emphases, and this represents the methodological contribution of this study. Yet the newness of this instrument entails some degree of uncertainty. While the instrument has achieved a satisfactory level of reliability, we cannot discount the potential validity concerns associated with its use.

Our study's limited response rate and inability to check for response bias represents yet another limitation. While our response rate is similar to the studies exploring budgeting in randomly selected private corporations by the means of surveys (e.g., King et al., 2010; Libby and Lindsay, 2010) we acknowledge the threats to validity of the results given the small sample used. Similarly, our study suffers from the same limitations as the aforementioned studies (ibid) in that performing the non-response bias is impossible given that we do not possess information on the different aspects of the total population of private firms in Sweden. However, our study does not propose that the results can be generalised to the population, instead stressing its explorative nature.

Our study might further suffer from the excessive focus on established research paradigmatic concepts related to internal and external triggers (Granlund and Lukka, 2017). Yet exploration of new constructs and challenging taken-for-granted beliefs could be hard to do with quantitative investigation. Thus, a potential future research direction that this paper might inspire would be to explore the interactive nature of the triggers in relation to budget functions performed through the employment of qualitative methodology. Finally, we acknowledge that our statistical testing is unable to capture the moderating and mediating effects between the independent variables, thus future studies might consider exploring similar concepts by means of structural equation modelling or through moderating and mediating regression analyses.

As far as the authors are aware, this is the first general study of why corporations put different functional emphases on their budget in Sweden. From Scandinavia and especially from Sweden stories have originated about the death of the budget, both in research and in practice (Budding et al., 2015). Even if our study has to be treated as exploratory, we believe that we cannot rule out the possibility that the budget in Sweden is still alive, and doing rather well. We believe that the debate about the death of the budget could be enlightened by the idea that corporations appear to not regard the budget as a dictator of the management control system, but as a humble servant that can be instructed to perform needed and wanted functions. Like Jeppe, who had good reasons to drink, corporations still have good reasons for using the budget.

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