INNOVATION RESEARCH CENTRE

THE IMPLEMENTATION OF STRATEGY: BEHAVIOURAL VS BUDGETARY APPROACHES AND THE EFFECT OF PARTICIPATION

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This study looked at the impact on ROA of aligning budgeting and HRM decisions with strategy. A Lisrel model was tested on 79 large Canadian and U.S. firms. While HR policy alignment was positively associated with ROA, budgetary alignment was only positively associated with ROA inconjunction with process participation.

Strategy

Strategic management may be defined as: "the organizational systems and processes used to establish overall organizational goals and objectives and to formulate, implement and control the strategies and policies necessary to achieve these goals and objectives" (Hofer, 1986). The essence of strategy is putting the organization in a position from which success is possible. There are many approaches to strategic management and each has a different focus. The competing models are not discussed here, though Sexty (1993), in an attempt to reconcile these apparently conflicting schools of thought (he had identified 10 distinct approaches), suggested that there are eight components, all of which are present to a greater or lesser extent in each of the popular models. These are:

1. establishment of a "mission";
2. assessment of the environment;
3. assessment of the organizational resources and capabilities;
4. establishment of objectives;
5. identification of strategic options;
6. selection of a strategy;
7. strategy implementation;
8. monitoring and review

In this study we were concerned with the process whereby strategy, however formed, is translated into action, i.e., the steps an organization takes to enact strategy successfully. According to Govindarajan & Gupta (1985), "strategy implementation" and "monitoring and review" (steps 7 and 8) have not been adequately researched: "...the near absence of empirical studies on the role played by control systems in implementing business unit level strategies presents a significant research opportunity" (p. 52).

Strategy Implementation and Control

Mission statements are formal written documents intended to capture an organization's unique and enduring purpose (Bart, 1997; Bart & Baetz, 1998; Byars, 1987; Campbell, 1993; Campbell & Yeung, 1991; David, 1989, 1993; Ireland & Hitt, 1992; Medley, 1992). They are regarded as the critical starting point for almost every major strategic initiative and considered *de rigeur* in initiating most modern management practices (i.e., TQM, re-engineering and self-directed work teams). According to Bart (1996a), "the importance and impact of having a mission statement has been cited by many researchers in terms of both (a) motivating and controlling employees toward common organizational objectives and (b) guiding the resource allocation process in a more focused manner" (p. 480).

The role of control systems in strategic management is well summarized in Langfield-Smith (1997). According to Ouchi (1977), appropriate control processes are contingent upon the nature of the organization being controlled and the task being carried out. In a situation where the controlling unit has a good understanding of the process within the controlled unit, behavioural control can be exercised; that is, explicit instructions, rules, procedures etc., can be handed down from the controlling entity to the operational unit. Where the process in the controlled unit is not well understood by the controlling unit, explicit instructions are less effective and the controlled unit is better left to make detailed decisions on its own. By default, the controlling unit is reduced to controlling inputs (i.e., budgeted resource allocations) and outputs (i.e., budgeted results). Thus, we have a control dichotomy between behavioural controls and budgetary controls.

A similar perspective can be deduced from Perrow's (1970) two dimensions of task analyzability and number of exceptions. This gives rise to a four cell model. The appropriateness of different control processes in each of these combinations was investigated by Abernathy and Brownell (1997). They made several hypotheses. They expected that where task analyzability is high and the number of exceptions is low, formal administrative controls (including both budgetary and behavioural controls) are most effective. This hypothesis was confirmed only in respect to budgetary control. Where task analyzability is low and the number of exceptions is high, they hypothesized that "personnel" control (Merchant, 1985) (alternatively referred to as "clan" control; Ouchi, 1980), is more effective. This hypothesis was also supported. Where task analyzability is low, and exceptions are few, accounting controls are most suitable. This hypothesis was not supported. Lastly they hypothesised that where task analyzability is high, but exceptions are many, both behaviour and personnel controls will be most suitable. This hypothesis was confirmed in respect of personnel controls, but not behavioural controls.

A logical implication of Ouchi's model is to envisage large corporations which are engaged in a single business as the environment where behavioural and personnel controls would be more appropriate and large corporations which were conglomerately diversified as being more suited to budgetary control.

One way that organizations enact behavioural control is through human resource management (HRM) decisions. There has been a surge in research seeking to integrate the HR function with strategy formulation and implementation (Wright & McMahan, 1992). By specifying the number and timing of hirings, the attributes of the people to be hired, the nature of training and development, behaviours rewarded in appraisal and compensation, substantial influence is brought to bear on the way in which strategy is enacted. In this study, the "HR" dimension is contrasted with financial (budgetary) controls.

As far as behavioural control is concerned, at one extreme it may be the dominant control process within an organization, at the other extreme it may be absent or virtually absent. As far as the budget is concerned, all organizations use budgets. At one extreme they will be the major focus of decision making, at the other extreme they will be a comparatively weak communication device.

Strategy and budgets are connected. Both Donaldson (1985) and Anthony et al. (1997) see a seamless web of decisions from strategies, through programming, to the detail of annual budgets. The budget which emerges from the process is: a commitment of resources to operating units by the organization, authorization for the operating units to carry out activities using those resources; an expression of the realization of organizational plans; and a commitment by operating units to strive for, and achieve, budgeted outcomes.

One dimension of the commitment aspect is the extent to which the operating units are motivated to pursue the goals of the organization.

Motivation

Motivating operating units and the people who work in them calls for goal congruence. That is, the goals of the organization and the goals of the relevant individuals should be achieved through a single set of behaviours. Some models of goal congruence focus on the reward system (see, for example, Govindarajan & Gupta, 1985, for a specific example of integration of control systems with strategy and performance, and also the extensive literatures on agency theory and transaction cost economics). A different perspective is provided by considering participation.

Substantial literature exists which has considered the affects of participation in the budget process (e.g., Argyris, 1952; Becker & Green, 1962; Brownell, 1982; Dunbar, 1971; Hanson, 1966, Kennis, 1979; Wallace, 1966). A participative budget is one where the inputs and outputs are discussed with the people who would be expected to carry out the job tasks and, if appropriate, they are modified in the light of those discussions. General opinion is that greater participation leads to the budgeted outcomes being more realistic, there is a greater feeling of empowerment and a higher overall level of commitment. Thus, participative budgets are seen as more likely to be vigorously pursued, and more likely to be associated with successful outcomes. There are, however, significant numbers of studies indicating that participation is neither associated with increased success, nor even with increased feelings of satisfaction by employees.

In this study, we propose a modified approach to the participation issue. We suggest that participation can happen at more than one juncture in the budgeting process. In particular we suggest that participation in the strategy setting stage may be just as important as participation at the budget setting stage. This has not previously been considered. While participation in strategy setting has been considered as an explicit factor in behavioural control (see Bruns & Waterhouse, 1975), we feel that its role in influencing the inputs into budgets may be equally important. If participation at the strategy stage is effective in achieving commitment etc., to the resultant budget, then participation in the (subsequent) budget setting process may be less important, or even redundant. Participation in strategy setting is considered in our model as a variable that modifies the relationship between the alignment of the budget to strategy and to financial performance. Whereas the relationship might be negative without participation, budgeting is more likely to impact performance successfully where there is participation.

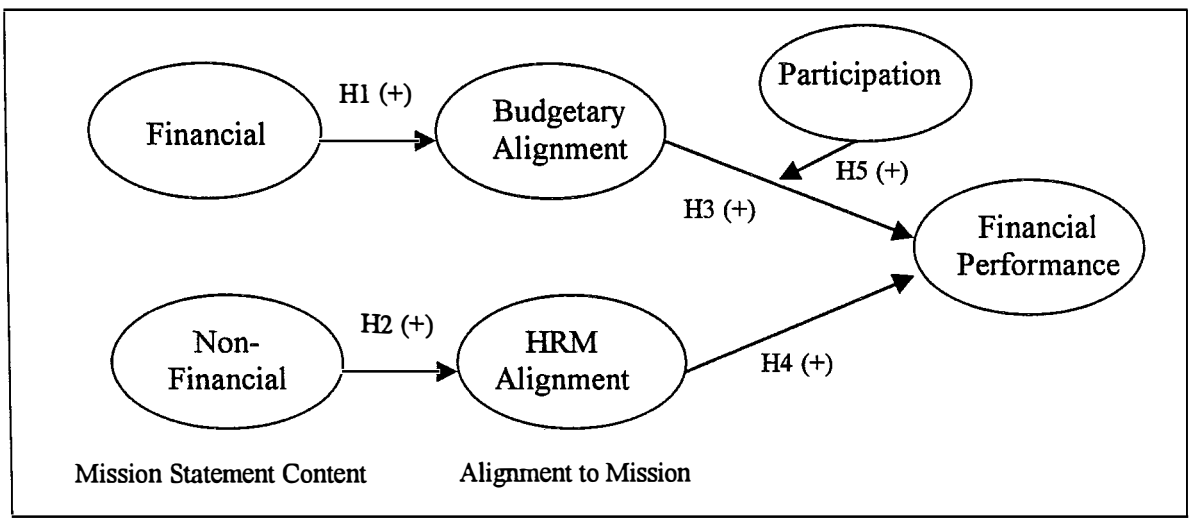
Formal vs. Informal Controls

This study concentrates on the formal dimension of the control process. There is also an informal dimension to control. The informal dimension is represented by organizational culture and one very strong aspect of that is "clan" control (Ouchi, 1979). Organizational culture is the set of shared values and norms of an organization. Clan control is the way that adherence to a higher authority (e.g., membership of a professional body) exerts influence beyond the power of the organization itself and whatever control systems it has proposed. These aspects are not studied here. Future research could include these in a richer model.

Successful Strategy

The objective in this study is to determine whether a linkage exists between the adoption of particular types of control systems and the success of the organization. Accordingly we have used the criterion of return-on-assets (ROA) as a summary measure of organizational success. This contrasts with some earlier studies which used more subjective criteria, such as how successful managers felt they had been (e.g., Abernathy & Brownell, 1997). The complete model tested in this study is in Figure 1.

Figure1. Theoretical Model of the Mediators and Moderators of the Relationship between Mission Statement Content and Financial Performance



Research Method

Sample

A survey was conducted of 88 managers and supervisors from some of North America's largest industrial and service organization. A response was received from all contacted firms. After removal of firms that reported not having a mission statement and listwise deletion of missing data values 79 were left for analysis. Of the respondents, 43% were Chairs, CEOs,

Presidents or General Managers, 30% were Vice Presidents, 9% were directors, 6% were managers and 12% were in the "other" category (supervisors, line managers, etc.). Thus, most of the sample was made up of senior managers. As informants, senior management is most able to recognize the relative importance of organizational changes, be they performance or strategy related (Glick, et al, 1990). Testing revealed no significant intra-group variations. The final sample was made up of manufacturing firms (52%), service firms (35%) and firms that categorized themselves as both manufacturing and service firms (14%)[1]. The average firm studied had assets of about three billion, firm profits of about $59 million and revenues of $2.9 billion.

Measures

Mission statement content. Mission statement content items were selected from the list provided by Bart (1997b). One item asked, "To what extent does your organization's current mission statement include/mention non-financial objectives" and other asked "To what extent does your organization's current mission statement include/mention specific financial objectives." Responses were made on a three-point scale: "not at all" (1), "somewhat" (2), and "clearly specified" (3). For the non-financial objectives item the mean was 2.06 and the standard deviation was 0.76. For the financial objectives item the mean was 1.69 and the standard deviation was 0.77.

Alignment. The extent to which the "firm aligned its internal budgeting system with its mission" was measured by one item. Responses were made on a five-point scale ranging from 1 ("not at all") to 5 ("to the greatest possible extent"), the mean was 3.34 and the standard deviation was 1.24. Alignment of HRM to mission was measured by four items concerned with: (1) performance evaluation criteria, (2) system of rewards, (3) recruitment/selection systems and (4) training and development systems. Responses were made on a five-point scale ranging from 1 ("not at all") to 5 ("to the greatest possible extent"). Again, responses were made on a five-point scale ranging from 1 ("not at all") to 5 ("to the greatest possible extent"). Psychometric properties are in Table 1.

Relative financial performance. To measure performance, we utilized each company's published return-on-assets (ROA; David, 1989; Roth & Ricks, 1994). While firm performance can be measured according to many different methods (which, in turn, reflect the priorities of the company), we selected ROA because it is a financial measure receiving a lot of attention from analysts and managers (Venkatraman, 1989). ROA is also frequently used in academic assessments of performance (e.g., Brush & VanderWerf, 1990). The mean ROA percentage was – 0.72 with a standard deviation of 7.79.

Table 1. Measurement Items and Measurement Validation: Psychometric Properties

	Item-Construct Loadings	T-test
Alignment: NFI = 1.00 NNFI = 1.00 CFI =1.00 GFI = 0.98		
(1) performance evaluation criteria	.94	10.54
(2) system of rewards	.87	9.35
(3) recruitment/selection systems	.84	8.89
(4) training and development systems	.74	7.36

[1] Sample size was too small to test separate models for manufacturing firm, service firms and manufacturing and service firms.

Participation. Participation, for purposes of this study is taken to be the extent to which executives, managers and lower level personnel were involved in the strategy formation process. Respondents were asked to indicate the degree of involvement in mission creation by: (1) the CEO, (2) senior management, (2) middle managers and (3) non-managers. Responses were made on a four-point scale ranging from "not involved" (1) to "significantly involved" (4).

Structural Equation Method

Hypothesis 1-4 was tested using structural equation modeling. Structural equation analysis is by definition a hybrid of factor and path analysis. A common approach to estimating the structural equation model is that recommended by Anderson & Gerbing (1988). They distinguish between the measurement model and the structural model. The measurement model specifies the indicators (items on the questionnaire) of each construct, and assesses the reliability of each construct for use in estimating the causal relationships in the structural model. The structural model is the set of one or more dependent relationships linking the model constructs. Because a latent variable model may not fit the data due to errors in the measurement model and/or errors in the structural model, Anderson and Gerbing (1988) suggest a two-step process where the fit of the measurement model is first established and then the fit of the full model (measurement and structural) is evaluated. Maximum-likelihood Lisrel 8 (Joreskog & Sorbom, 1993) analysis was used.

Fit statistics. Lisrel 8 produces several statistics that show the degree to which the input data fits the theoretical model. Although chi-square is sometimes used as a fit statistic, it is sensitive to sample size[2], departures from the multivariate normality assumption, and the model's complexity (Baggozi & Yi, 1988, Bentler & Bonnet, 1980; Bearden, Shubhash & Teel, 1982; Oliver & Bearden, 1985). Accordingly, in recognition of these problems and as recommended by Bollen (1990), we report several other fit measures: the goodness-of-fit index (GFI) developed by Joreskog & Sorbom (1984), the comparative fit index (CFI; cf. Bentler, 1990), normed fit index (NFI) and non-normed fit index (NNFI; Bentler & Bonnet, 1980).

RESULTS

Table 1 summarizes the results of the confirmatory factor analysis (first stage of the modeling procedure) on the initial measurement model for alignment. Factor loadings in Table 1 show that the measurement model performed well. For instance, all the factor loadings are higher than 0.80 and statistically significant ($p < 0.05$). Factor loadings at the 0.40 level and above are routinely used in the social sciences (Ford, MacCallum & Tait, 1986).

Table 2 reports means, standard deviations and correlations of variables used in the Lisrel analysis. In stage 2, the theoretical model fit the data without conditional codes[3] or other signs of

[2] An important caveat to keep in mind in drawing conclusions from our analysis is the size of the data set associated with the tests reported. Because of unavoidable constraints and missing data, our data set was small at 79 firms.

[3] Conditional codes indicate problems in the estimation process. This may be due to linear dependencies between parameters or problematic boundary parameters and may cause difficulty in the interpretation of results. See Bentler (1989) for a detailed description.

mispecification. Although the overall chi-square was significant ($\chi^2 = 19.57$, $df = 4$, $p>0.05$), as might be expected with this statistic's sensitivity to sample size (Baggozi & Yi, 1988), all the other fit indices (Goodness of Fit Index = 0.91, Comparative Fit Index = 0.91, Normed Fit Index = 0.90 and Non-Normed Fit Index = 0.80; Table 3) were within acceptable ranges and showed the model accounted for a substantial amount of variance. Hence, the model was a reasonable representation of the data. Modification indices did not suggest freeing any paths.

Table 2. Correlation matrix of variables in the model

	1	2	3	4	5	6	7	
1. Financial mission content	1.00							
2. Non-financial mission content	.40***	1.00						
3. Alignment of budget	.21	.22	1.00					
4. Alignment of performance evaluation criteria	.27*	.32**	.68***	1.00				
5. Alignment of the system of rewards	.16	.25*	.65***	.80***	1.00			
6. Alignment of recruitment/ selection systems	.03	.24*	.67***	.77***	.71***	1.00		
7. Alignment of training and development systems	.07	.15	.59***	.69***	.60***	.74***	1.00	
8. Degree of participation in mission creation	.17	.18	.27*	.29**	.31**	.13	.17	1.00

N= 79, *p<.05 **p<.01 ***p<.001, two-tailed

Table 3. Path Coefficients, Total and Indirect Effects on Firm Performance: Structural Equations Modeling Results for the Theoretical Model

Hypothesis	Description of Path			Expected Direction	Path Coefficient[a]	T-statistic
1	Financial content	⇒	Budget alignment	+	.41	3.87
2	Non-financial content	⇒	HR alignment	+	.82	12.35
3	Budget alignment	⇒	Financial Performance	+	.57	-5.64
4	HR alignment	⇒	Financial Performance	+	.69	6.96
Overall Fit Indices						
Goodness-of-fit index (GFI)			.91			
Comparative fit index (CFI)			.91			
Normed fit index (NFI)		.90				
Non-normed fit index (NNFI)			.80			

[a] All significant at = 0.05.

Since the theoretical model is supported, it was used to test the hypotheses 1-4. Table 3 reveals that the paths associated with H1-4 are significant at conventional levels ($p<0.05$). In the firms studied, financially oriented mission statement content is taken into account when deciding the firm's budget and non-financially oriented mission statement content is taken into account when deciding the firm's human resource management. Going one stage beyond either of those two effects (on the budget and on the human resource management aspects), most companies would regard ROA as a good measure of (short-term) success. Contrary to expectations, when the budget is aligned with the financial strategy, the effect on ROA is negative, and statistically significant. When human resource factors are aligned with the non-financial strategy the effect on ROA is positive and significant.

As is discussed earlier, participation is one of the key variables in the success or failure of any budgetary control system. Moderated regression analysis was carried out on the data to

discover the effect of participation in the process. Table 4 reveals that participation moderates the relationship between alignment of budget to mission and ROA ($t = 4.89$, $p < 0.05$). That is, the greater the participation, the stronger the association with ROA.

Table 4. Moderated Regression Analysis of Participation Effects on Budget and ROA(%)

Variables	B	β	t	R	R^2	Adj. R^2	ΔR^2	F
Alignment of Budget	-1.26	-.21	-6.36**	.83	.69	.67	0.09	57.16***
Participation	5.55	.97	12.70***				0.49	
Budget x Participation	.81	.49	4.89***				0.20	
Constant	-9.02							

N=97. *p<.05 **p<.01 ***p<.001. **B** - Regression coefficient, β - Beta coefficient (standardized regression coefficient).

Discussion

What can an organization do to maximize its ROA? Many firms follow the "financial" route. They concentrate their efforts on strategy formulation in financial terms, and they link their budgeting and budgetary control activities to those financial strategy criteria. The findings of this study suggest that this is an incomplete approach. If the financial approach is to be used effectively, it should be associated with high levels of participation from various levels of the organization. Without that participation, the implementation of a financially oriented strategy may negatively impact ROA.

Recently, organizations have publicized their strategies and included a HRM aspect. These have been directed at key HRM functions, such as, selecting innovative individuals, rewarded creativity and investing in the training and development of employees. In short, strategies have recognized the organization's employees as one of their essential assets. When this occurs, organizations may wish to align HR policies and practices with strategies. However, prior to this study, little empirical justification has been available for this. According to our findings, aligning HR to organizational strategy will improve ROA.

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