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# Performance management: a framework for management control systems research

David Otley\*

This paper proposes a framework for analysing the operation of management control systems structured around five central issues. These issues relate to objectives, strategies and plans for their attainment, target-setting, incentive and reward structures and information feedback loops. Their central focus is on the management of organizational performance. Because the framework has been inductively developed, its application is 'tested' against three major systems of organizational control, namely budgeting, economic value added and the balanced scorecard. In each case, neglected areas of development are exposed and fruitful topics for research identified. It is believed that the framework can usefully be developed further by its use in analysing other instances of management control systems practice, and that case-based, longitudinal studies provide the best route to this end.

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Key words: performance management; management control; strategy implementation; performance measurement; balanced scorecard.

## 1. Introduction

The measurement of the performance of business (and other) organizations has long been of central interest to both managers and management accounting researchers. However, management accounting has tended to restrict itself to considering only financial performance, and to use frameworks and theories drawn primarily from the discipline of economics. Even the attention that has been paid to the so-called 'behavioural aspects' of management accounting has been incorporated into the economic approach through the development of agency theory. However, the discipline of economics does not provide a sufficiently rich picture of the internal activities of organizations to provide reliable guidance to the designers of management control systems. Other approaches, most notably those based on critical theory, have been used to study other aspects of the role and use made of accounting systems, but have tended to concentrate on sectional interest rather than on overall control. The intention of this paper is to provide a perspective more focused on the operation of

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overall control systems, and to do so by looking beyond the *measurement* of performance to the *management* of performance.

It is recognized that 'performance' is itself an ambiguous term, and capable of no simple definition. In particular, the term does not specify to whom the organization is delivering its 'performance'. We will begin at an organizational level of analysis and assume that an organization that is performing well is one that is successfully attaining its objectives; in other terms, one that is effectively implementing an appropriate strategy. Nevertheless, it will become apparent that more attention will need to be paid to the definition of performance from the perspectives of relevant stakeholders.<sup>1</sup> Furthermore, rather than trying to develop a well-articulated theory from first principles, a more inductive approach will be taken that draws upon previous experience in studying organizational control systems to identify some key issues that seem to be relevant to many different organizations. The usefulness of the framework so generated will be demonstrated by using it to analyse three examples of extant control techniques, and to identify features of their application that appear to have been neglected by both practitioners and researchers. In other words, an inductive approach to the generation of theory is adopted, with the methods that this approach suggests for future research being outlined in the discussion section.

## 2. Management control systems

Management control systems provide information that is intended to be useful to managers in performing their jobs and to assist organizations in developing and maintaining viable patterns of behaviour. Any assessment of the role of such information therefore requires consideration of how managers make use of the information being provided to them. The traditional framework for considering these issues was developed by Anthony (1965) at the Harvard Business School under the title of 'management planning and control systems'. This distinguished 'management control' from 'strategic planning' and 'operational control'.

His approach was intended to achieve two aims. First, it was intended to broaden the scope of information being considered beyond just accounting information. Paradoxically, it was largely unsuccessful in achieving this, mainly because of its deliberate neglect of 'operational control'. Operational control was neglected because it was apparent that different organizations used very different practices at the operating level, so Anthony concentrated on the commonalities that existed between them. Focusing on commonalities allowed the use of a common language capable of including all organizational activities. Accounting provided such a language and management control became largely synonymous with management accounting at a time when this discipline of management accounting was in almost terminal decline.<sup>2</sup>

<sup>1</sup>Although this is manifestly a functionalist approach in that it is concerned with the achievement of organizational objectives, it does not preclude the study of power relationships between participants. Critical theories and institutional economics have focussed on these issues, but have tended to neglect the issue of the overall well-being and viability of the organization. The paper is an attempt to redress this balance by explicitly concentrating on issues of overall control and sustainable performance.

<sup>2</sup>This can be seen with hindsight. Critiques, such as that of Johnson and Kaplan (1987), suggest that the situation had become so acute in the mid-1980s that management accounting either needed to be abandoned as being inimical with modern management, or else required a radical overhaul and revision. The 'new' techniques of the later 1980s and 1990s can be seen as a response to this situation.

Second, it brought issues of managerial motivation and behaviour into view. Here it was much more influential in its effects, influencing much of the behavioural management accounting work which was to dominate the 1970s and 1980s. At the same time, a similar approach was being developed in Europe by Hofstede (1967) and publicized in his now famous book, 'The Game of Budget Control', which still represents one of the most comprehensive studies of its kind.

A further weak link in the management control systems framework was also intentional. Its deliberate neglect of the process of 'strategic planning', which at best it took as given and, at worst, ignored completely, was intended to simplify the research questions asked. However, such deliberate neglect inevitably led to the specification of control systems and measures that were common to all strategies. Again, accounting measurement was stressed and non-financial performance measures were neglected.<sup>3</sup> Although it may well have been sensible to concentrate initially on the core area of 'management control', it is now necessary to pay more attention to the neglected elements of strategy and operations. This is particularly important as contemporary organizations are themselves changing, illustrated by such developments as business process re-engineering and de-layering, where the same manager may well be responsible for some elements of strategy, management control and operational control.<sup>4</sup> This paper represents a first step towards the aim of developing a more complete framework for analysis.

### 3. The performance management framework

It will be argued that there are five main sets of issues that need to be addressed in developing a framework for managing organizational performance that are represented as a set of questions.<sup>5</sup> The questions are phrased in a normative tone, reflecting a managerial perspective, but can easily be re-phrased descriptively for use as a research tool. The questions themselves appear to remain constant, but organizations need to continually develop new answers to them. This is because the context in which the organization is set is constantly changing and new strategies need to be developed to cope with new operating environments.

The questions are as follows:

1. What are the key objectives that are central to the organization's overall future success, and how does it go about evaluating its achievement for each of these objectives?
2. What strategies and plans has the organization adopted and what are the processes and activities that it has decided will be required for it to successfully implement these? How does it assess and measure the performance of these activities?

<sup>3</sup>It is paradoxical that this occurred at a time when control techniques were being developed in practice which sought to include a wide range of measures, both financial and non-financial. For example, the General Motors system of performance measures, the development of which culminated in the 1970s (see Johnson and Kaplan (1987)) included several non-financial indicators, and can be seen as the fore-runner of the balanced scorecard approach.

<sup>4</sup>See Otley (1994) for a more detailed account.

<sup>5</sup>These questions represent a development of the approach first put forward in Otley (1987) and utilized and developed by Fitzgerald and Moon (1996).

3. What level of performance does the organization need to achieve in each of the areas defined in the above two questions, and how does it go about setting appropriate performance targets for them?
4. What rewards<sup>6</sup> will managers (and other employees) gain by achieving these performance targets (or, conversely, what penalties will they suffer by failing to achieve them)?
5. What are the information flows (feedback and feed-forward loops) that are necessary to enable the organization to learn from its experience, and to adapt its current behaviour in the light of that experience?

These questions relate very closely to some of the central issues of modern management and management accounting practice. The first is concerned with the definition of goals and the measurement of goal attainment, not just financially but also in terms of meeting all stakeholder aspirations. Clearly, the relative importance given to different goals may well reflect the relative power of different stakeholders. However, the issue of evaluating organizational effectiveness cannot be addressed without confronting these issues. The second is closely connected with issues of strategy formation and deployment, and with very practical issues of business process and operations management. It represents the codification of the means by which objectives are intended to be attained. The third question is more traditional and has a long pedigree of research connected with it, but remains important, as is reflected in the emphasis given to practices such as benchmarking. The fourth question has tended to be neglected by those concerned with performance measurement as being in the purview of the human resource management function. However, the inter-connections between the two fields need to be better recognized to avoid the many counter-productive examples of short-termism driven by financial incentive schemes that are seen in practice. The final question has been considered in part by MIS and MCS specialists,<sup>7</sup> but still needs to be better linked to issues such as the 'learning organization', employee empowerment and emergent strategy.

The remainder of the paper will first develop a theoretical justification for these questions and present them as a framework for the study of organizational control systems.<sup>8</sup> It will then apply the framework to analyse three performance management techniques, one traditional and two relatively new. This will demonstrate how the attempt to develop answers to these questions can act as a guide to productive areas of research and also as an aid to evaluating practical developments and suggesting improvements. The techniques to be examined will be budgeting, Economic Value Added, and the Balanced Scorecard.

<sup>6</sup>Rewards should be understood in the widest possible sense, and not be restricted to just short-term financial rewards, important though these may well be.

<sup>7</sup>For an up-to-date approach, see Checkland and Holwell (1998).

<sup>8</sup>The analysis will be conducted at an organizational level of analysis, typically that of a strategic business unit which is relatively autonomous. However, this is only illustrative, and the framework can be applied at the level of organizational sub-units, although some of the possibilities considered may be more restricted because of corporate policies and decisions. Also, it is quite possible that different control configurations and procedures may be appropriate in different organizational sub-units; in a full case analysis each of these would need to be explored.

#### 4. Theoretical development

The contingency theory of management accounting suggests that there is no universally applicable system of management control but that the choice of appropriate control techniques will depend upon the circumstances surrounding a specific organization. A central contingent variable is the strategy and objectives that an organization decides to pursue. Not only are these objectives likely to heavily influence the choice of performance measures to be used (i.e. the desired outcomes), but they also must act as the criteria against which the contingent choices that have been made can be evaluated (i.e. the 'goodness of fit' of the system).<sup>9</sup> Any controlled system requires objectives and goals against which its performance can be assessed (Otley and Berry, 1980); no specific contingent formulation is necessary to anticipate that the existence of different goals is likely to involve the selection of different performance measures and controls. The first question in the proposed framework is designed to explore and elucidate organizational aims and objectives,<sup>10</sup> and the mechanisms that have been put in place to measure and monitor goal attainment.

More recently, literature on the role of strategy as a specific contingent variable has developed [see, for example, Simons (1995) and Langfield-Smith (1997)]. This suggests that different types of organizational plans and strategies will tend to cause different control systems configurations. However, the empirical studies conducted to date have not yielded any firm conclusions about the nature of the most appropriate connections between strategies and controls. In essence, strategies can be seen as the means by which an organization has decided that its aims can be achieved. It is not the purpose of this paper to elaborate upon the procedures by which strategies are developed, nor on the relative roles of espoused (top-down) and emergent (bottom-up) strategies [see Mintzberg (1994)]. Rather, it takes as given the organization's current strategies (as elucidated by means of the first question) and seeks to investigate the means by which their achievement is pursued and monitored. However, the formal performance measurement system is seen as a major mechanism that can be used to make explicit the set of means-end relationships that the organization has developed as the methods it will use to implement its strategic intent. The second question is therefore designed to explore and document the connections the organization has made between its strategic intent (objectives) and the means by which it hopes to realize them [see Goold and Campbell (1987)]. In practice, it is anticipated that the process of exploring the issues raised by this question will often lead to senior managers feeling the need to elaborate their strategies more precisely in order to maintain a good 'fit' between objectives, plans and performance measures.

Strategies involve a time-frame as a key component. Many business strategies are designed to effect 'improvement', often driven by competitive pressures. Even in the public sector, the continual need to justify the use of resources produces similar pressures for improvement and efficiency. The third question thus raises questions of both effectiveness (to what extent are objectives expected to be achieved in a given time-frame?) and efficiency (what level of resourcing is thought necessary to allow

<sup>9</sup>See Otley (1980) for a discussion of the issues this raises for the development of contingency theories, and Chapman (1997) for a more recent review of the place of such theories in accounting research.

<sup>10</sup>No assumption is made about the nature of these goals. The framework is quite compatible with a stakeholder perspective which views organizations as seeking to meet the, potentially conflicting, requirements of different stakeholders.

such achievement?). There are a plethora of approaches and techniques currently deployed in practice that have the aim of increasing goal attainment and reducing the consumption of resources, such as continuous improvement, benchmarking, concurrent engineering and target-costing. Such approaches not only involve the technical specification of goals which are required to be attained (in many cases, developed from roots which go back to the Scientific Management movement), but are also necessarily concerned with issues of motivation and employee behaviour [see Merchant and Manzoni (1989) for one example of such a study]. In popular management theory, goal-setting and performance measurement play a pivotal role, expressed in phrases, such as 'what gets measured, gets done'.<sup>11</sup> Drawing on theories of motivation, both the process of goal-setting (e.g. employee involvement and participation) and the content and nature of specific goals (e.g. 'stretch' targets; difficult but attainable goals) have been studied in considerable detail in the psychological literature. In addition, the encouragement of employees to suggest improvements to production processes or product design, driven by the imperative of improvement, has also received attention, with Japanese practices being particularly prominent.

In accounting terms, answers to all the above three questions are required in the design and construction of budgetary planning and control systems. The first question defines acceptable outcomes and results (often solely in profit or cost-terms); the second is concerned with the development of plans by which the results are expected to be delivered; and the third is concerned with the performance standards which can be expected. A budget can only be drawn up when quantified answers to all three questions are developed. However, the questions are not restricted to just accounting measures and procedures. They may include many of the managerial processes that operate within the organization and cross the functional divisions that may exist. Many of the measurements involved may be non-financial (e.g. production process measures, such as defect rates and cycle time; customer service measures, such as on-time delivery statistics, etc.), or qualitative (e.g. measures of employee morale, customer satisfaction and product innovation). The study by Coates *et al.* (1992) gives many examples of the wide variety of measures that are used by companies in different countries. Finally, some aspects of performance which are believed to be important may not even be measured, perhaps because the level of measurement available is inadequate or distorts the process being measured (e.g. employee attitudes, customer preferences, R&D creativity). The framework of questions should not be taken to imply that precise quantitative measurement and defined target-setting procedures are universally desirable; it provides, first and foremost, a framework within which the full range of extant practices may be described, perhaps as a pre-cursor to attempting to evaluate their effectiveness.

Motivation and incentives are the main focus of the fourth question, which seeks to examine the consequences that follow from the achievement (or the failure to achieve) the performance targets which have been set. These issues are clearly related to the structures and processes of accountability that exist within the organization, and even to the overall governance procedures of the total organization. Increasingly (in the U.K.) these consequences may involve explicit financial rewards (in terms of

<sup>11</sup> However, it should not be assumed that explicit systems of performance measurement based on common-sense design principles are always effective. See, for example, Austin and Gittel (1999) for some interesting examples of counter-intuitive outcomes. They suggest two very different categories of models of performance measurement, one based on compliance, the other based on ambiguity.



salary increases or one-off bonus payments), but will also involve less tangible consequences, such as recognition, status and reputation. Although there is a developing literature on the impact of payment schemes on employee and managerial performance, this is dominated by U.S.-based work which may not transfer easily across cultures.<sup>12</sup> Moreover, in practice, the design of payment systems is very much the province of the personnel or human resources function in most organizations, and these systems may not be well-articulated with the extant performance measurement systems. In any case, the intent of the question is to enable such connections as do exist to be documented and, ultimately, for their motivational impact to be assessed and evaluated.

Information is the necessary final ingredient to complete the control loop. In its traditional feed-back form, information on actual performance is compared with pre-set targets and standards and deviations used to signal the need for corrective action. In addition, feed-forward (or planning) information may be used to predict the need for corrective action before adverse consequences are observed. In both cases, there is a role for immediate corrective action to rectify the perceived problem, but also for double-loop learning to take place to improve the system in such a way that errors do not occur again in the same way. Such uses of information are ubiquitous in the contemporary organization, ranging from quality control charts to financial budgets, and from improved training to the 'learning organization'. Nor should the less formal uses of information be neglected; organizational cultures form and are reproduced, at least in part, by the use of approving and disapproving feedback signals of many types. A final key issue in documenting such feedback loops is to distinguish the different timescales and learning processes involved. These timescales may range from the instantaneous (in real-time production control systems) through hours, days, weeks, months, quarters, years and beyond. The learning processes range from simple corrective action through to the revision of a corporate strategy if it becomes apparent that the current strategy is proving ineffective.

The five areas identified by the above questions are therefore not novel. Studies addressing aspects of them have been part of the management control and wider management literature for many years. However, the integration of the five areas to provide a description of the overall management control and performance management systems of an organization is relatively novel. It is argued that the five areas are heavily inter-connected and procedures introduced to address one question may well impact upon the other areas identified. The framework is not intended to provide a normative or prescriptive framework, but rather to provide a more comprehensive descriptive framework within which the features of an overall control system can be assessed and evaluated.

Ideally, the framework should now be applied in practice to examine the overall control systems of an organization, and it is the author's hope that other researchers will find it a useful tool along the lines pioneered by Fitzgerald and Moon (1996). However, for the purpose of this paper, it will be applied to three major control techniques. The aim is to illustrate that the questions posed give insight into the techniques discussed, and raise a variety of interesting research questions that can be explored. The case of budgeting is used to illustrate how a well-established area of

<sup>12</sup> For example, the contrast between the openness about pay in the U.S. and the secrecy which exists in the U.K., may cause significantly different reactions to performance-related rewards.



study has covered each of the areas mentioned, albeit rarely in an integrated manner. Economic Value Added is used to demonstrate how a particular scheme of performance measurement requires to address each of the areas mentioned, albeit with narrow scope. Finally, the balanced scorecard is used to indicate a technique which has addressed one or two questions in some detail, but which has also neglected other important questions.

## 5. Budgeting

Budgeting has traditionally been a central plank of most organizations' control mechanisms, as it is one of the few techniques capable of integrating the whole gamut of organizational activity into a single coherent summary. Performance is defined essentially as profitability; in a profit centre, the overall measure of performance combines an output measure (revenue) with an input measure (cost) and the budgeting process seeks to keep the two elements in balance. Cost centres are more problematic as results can no longer be measured in financial terms, and thus cannot be directly compared with costs. The budgeting process tends to assume a given level of output or sales and attempts to determine an appropriate level of spending.<sup>13</sup> In order to develop a budget there is a need for an underlying plan by which the organization's objectives are expected to be achieved and which serves as the basis for the cost structure underlying the budget.<sup>14</sup>

Target setting has long been seen as an important part of budgeting, with both the process (e.g. participation) and the outcome (e.g. target difficulty) being the subject of behavioural accounting research. Although reward structures and incentive schemes have received some attention (particularly in the agency literature), the topic has been more implicit than explicit in the budgeting literature.<sup>15</sup> However, clearly much of the influence of performance evaluation is driven by the desire of managers to please their superiors and thus gain some form of reward (financial or otherwise). Finally, feedback loops are assumed to exist because of the regular reporting of (typically monthly) accounting variances and the consequences that these engender. The virtue of the budgetary control process is that it provides an encompassing framework by means of which all aspects of an organization's activity are encapsulated into a single set of financial statements against which actual outcomes can be monitored. However, the downside of the narrowness of the budgetary process has been likened to driving a motor car solely by looking through the rear view mirror (and a mirror that provides only an imperfect reflection, at that).

There appears to be a growing dissatisfaction amongst practitioners with current budgeting practice [see, for example, Bunce *et al.* (1995)]. The rate of change in the current environment for many businesses means that the annual budget process is too

<sup>13</sup>This is especially true of discretionary cost centres; in production units, some surrogate measure of output is often constructed (number of units; standard direct labour hours, etc.) and a linear 'flexed' budget developed. The literature on ABC also represents an attempt to develop more sophisticated 'cost drivers' which will allow better budgets to be constructed.

<sup>14</sup>However, it has to be recognized that the phenomenon of the 'planless budget' also occurs, with budget numbers merely being extrapolated from past experience.

<sup>15</sup>The literature on performance evaluation and style of budget use is also relevant, although the connection with rewards is still usually implicit or expressed in terms of obtaining a good evaluation from a superior [see Briers and Hirst (1990) for a useful overview].

infrequent; but if frequent budget revisions are undertaken, they prove to be time-consuming and can lead to control loss. The essentially hierarchical nature of budgetary control is in stark contrast to the focus on value chains and business processes that many organizations are adopting. The budget focuses only on financial results and, worse, does not necessarily pay sufficient attention to the means by which those results are to be achieved. Valid as these criticisms undoubtedly are, the budgeting process still represents the central co-ordinating mechanism (often the only co-ordinating mechanism) that most organizations have. It is therefore not to be discarded lightly, but the key areas needing improvement must be addressed. Some questions that arise from the preceding framework include:

- How can budgeting be better tied into the achievement of strategic goals?
- How can resource allocation be matched to strategic imperatives?
- How can budgeting be adapted to monitor and control the business processes along the value chain running from the extraction of raw materials through to the delivery of products to the final consumer?
- Are there better ways of setting budgetary targets than the usual incrementalism based on historic achievement?
- Can we avoid the distorting effects that arise when managers are given a reward for achieving budget targets?
- Can variances be used in processes of learning and adaptation rather than in the apportionment of blame?
- Above all, can the budget process be harnessed to add value to organizational activities rather than representing a drain on organizational and managerial resources?

The performance management framework thus flags up some vital issues for studying and revising budgetary practice. These issues will be considered in more depth by looking in some detail at two currently popular techniques that have been more recently developed to improve organizational control. The first is a purely financial performance measure, Economic Value Added [EVA<sup>TM</sup>],<sup>16</sup> which it is argued can avoid some of the performance measurement problems currently experienced with other financial performance measures. The second is the Balanced Scorecard approach developed by Kaplan and Norton (1992, 1996), which explicitly adopts a multi-dimensional framework. Although these are sometimes seen as competing approaches, they will be regarded here as complementary, for reasons that will become apparent. Both have been explicitly devised to allow a more structured approach to performance management and to avoid some of the problems associated with more traditional control methods, such as budgeting.

## 6. Economic value added

Economic Value Added has been developed by the Stern Stewart Corporation as an overall measure of financial performance that is intended to focus managers' minds on the delivery of shareholder value.<sup>17</sup> The aim of the stock market quoted organiza-

<sup>16</sup> EVA<sup>TM</sup> is a trademark of the Stern Stewart Corporation.

tion is seen as maximizing shareholder value and it is therefore argued to be important that the main measure of financial performance used within such organizations should be congruent with this objective. As is well known, most measures of financial performance, such as profit or return on investment, suffer from inherent defects that may cause dysfunctional decision-making on the part of managers. EVA<sup>TM</sup>, which is defined as accounting profit less a charge for capital employed, is claimed to be less problematic in this respect. Indeed, the debate on this issue is well known in the management accounting journals of the 1970s, where the concept of residual income was extensively debated.<sup>18</sup> On the face of it, EVA<sup>TM</sup> is little more than a new acronym for old-fashioned residual income.

In technical terms such a view is correct, although it understates the significance of the development work undertaken by Stern Stewart. They state, for example, that they have developed nearly 200 accounting adjustments that may need to be undertaken to convert conventional accounting profit into a sound measure of EVA<sup>TM</sup>, although most organizations will need only to use about ten of these. Although the reasons behind many of these adjustments are technical (for example, to preserve the articulation between the balance sheet and the profit and loss account, in the maintenance of a 'clean surplus' view of accounting profit), others are clearly designed to be motivational in their impact. O'Hanlon and Peasnell (1998) demonstrate how the Stern Stewart formulation comes to a balance between the extremes of a cash flow (objective, but historic) measure of profit and a net present value (subjective, but future-oriented) measure. Stern Stewart attempt to motivate the increase of shareholder value (which is only subjectively assessable) by developing a more objective measure that is less prone to managerial manipulation. In so doing, they demonstrate formidable technical expertise in addressing one of the fundamental issues that has long concerned management accountants.

The first question in the framework for analysis is thus answered by the assertion that the single objective of such a stock market quoted organization is to deliver as much value as possible to the shareholders. The surrogate for measuring this value is defined in historic accounting terms in a way that minimizes the dysfunctional consequences inherent in the use of any such measure. However, it needs to be recognized that the measure does not anticipate the earning of future income, despite the existence of predictions based on stock market valuations, but it remains an historic income measure. Stern Stewart would argue the EVA<sup>TM</sup>; is the best surrogate for or predictor of future share price performance, but this remains an open empirical question.

The second question is largely unanswered. The means by which such outcomes are to be attained are not specified. The most charitable interpretation of this lacuna is that a very decentralized organization is envisaged which allows subordinate managers a great deal of discretion over their operating activities. In such circumstances, it could be argued that it is inappropriate to constrain subordinates by insisting they operate to plan; rather, they have to deliver value by whatever means they can invent.

<sup>17</sup> Stakeholders other than shareholders are not explicitly considered in the EVA framework. At best, other stakeholders are seen in an instrumental manner as parties with whom contracts are entered into, as the means by which the objective of increasing shareholder value is attained.

<sup>18</sup> See, for example, Otley and Emmanuel (1976).

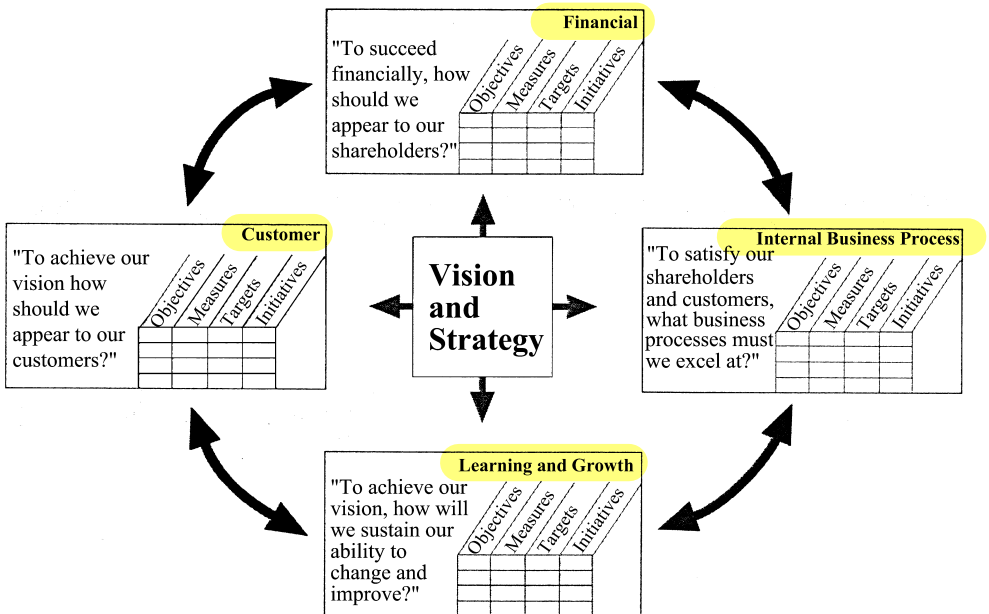
With regard to target setting, at first glance one would imagine that this is a simple issue, because the implicit standard against which residual income or EVA<sup>TM</sup> is assessed is zero.<sup>19</sup> However, this only holds true where valuations are conducted on an NPV basis. Because EVA<sup>TM</sup> takes a more historic view and only uses accounting rather than economic valuations, there can be an 'inheritance effect' whereby managers can benefit from or be penalized by the past history of the organization. For example, in the 'rust bowl' industries, the depreciated historic cost of assets may exceed their market valuation; here, EVA<sup>TM</sup> is expected to be negative and a target of zero would be over-ambitious. Thus, the EVA<sup>TM</sup> approach pays particular attention to the setting of appropriate targets. The objective appears to be the traditional one of attempting to ensure that targets are 'tip-toe', 'stretch' or challenging, whilst still being regarded as realistic by those who will be required to attain them.

Reward structures are another major focus of the EVA<sup>TM</sup> approach. Not only is this a by-product of the Stern Stewart history (it was originally a compensation consultant), but reflects an awareness of the imperfect nature of the EVA<sup>TM</sup> measure, even after all the recommended adjustments have been made. The central suggestion is that, although bonus calculations should be based on the attainment of target levels of EVA<sup>TM</sup>, such a bonus should not be paid immediately in cash, but should be subject to smoothing over a 3-year period, and payable in full only if performance is maintained into the future. The reason for using this method is explicitly motivational and designed to avoid potentially dysfunctional short-term behaviour. Stern Stewart thus recognize the potential dysfunctional effects of short-term performance targets coupled too closely to financial rewards, and have developed a scheme to reduce the worst such effects.

Finally, Stern Stewart also briefly discusses the process by which future targets should be adjusted in the light of actual results. Here again they are at pains to avoid the circularity that can result from a strong management team being expected to perform well and thus inflating stock market expectations. If this were to be allowed to inflate EVA<sup>TM</sup> targets, a good management team would be penalized purely because they were expected to deliver shareholder value. A compromise is therefore proposed which is again based on an historic approach, perhaps benchmarked against what is being achieved elsewhere.

The EVA<sup>TM</sup> literature is therefore a good example of the performance management framework being used in practice, albeit to just a single over-arching measure of financial performance. Each of the five major questions is addressed, although the second question is touched upon only implicitly. By concentrating on a single over-arching financial performance measure, the EVA<sup>TM</sup> approach is able to disregard questions of strategy, although only at the cost of spending a great deal of effort on discussing the capitalization of items, such as R&D expenditure. That is, strategies which require current spending to produce expected future benefits must be 'properly' accounted for. In summary, the approach has been well worked through, and represents one of the most coherent performance management systems currently on offer. Nevertheless, even under its own assumptions concerning organizational objectives, it is clearly not as comprehensive as it claims, and is particularly weak in measuring and monitoring the means by which managers have adopted to achieve their overall objectives.

<sup>19</sup> There are some other sufficient conditions for such a relationship to hold, discussed in O'Hanlon and Peasnell (1998).



**Figure 1.** The balanced scorecard: a framework to translate a strategy into operational terms. *Source:* Robert S. Kaplan and David P. Norton, "Using the balanced scorecard as a strategic management system," *Harvard Business Review* (January–February 1996): 76. Reprinted with permission.

## 7. The Balanced Scorecard Approach

The Balanced Scorecard Approach has been developed at the Harvard Business School by Kaplan and Norton since the early 1990s. It is an essentially multi-dimensional approach to performance measurement and management that is linked specifically to organizational strategy.<sup>20</sup> It suggests that as well as financial measures of performance, attention should be paid to the requirements of customers, business processes and longer-term sustainability. Thus four areas of performance are defined (now labelled as financial, customer, internal business and innovation and learning), and it is suggested that up to four measures of performance should be developed in each area. These (potentially 16) performance measures are not necessarily comprehensive, but should represent the critical success factors necessary for continued organizational success or, minimally, survival. Thus, there is intended to be a close link between the business unit strategy adopted and the performance measures selected.

In the following discussion, the performance management framework will be applied to analyse the balanced scorecard approach and to suggest some extensions and improvements that might be made to the approach. These are quite tentative, and meant primarily to illustrate the power of the framework both to make practical recommendations, and to provide a structure for empirical research and analysis.

A major strength of the balanced scorecard approach is the emphasis it places on

<sup>20</sup> Compare Kaplan and Norton (1992) and Kaplan and Norton (1996) to see how the approach has been developed during that period.

linking performance measures with business unit strategy. This appears to be a very weak area in many organizations and the technique provides a practical approach to addressing this issue. At first sight, it would appear to be a stakeholder approach. Two of the major areas defined represent major stakeholders, namely the providers of finance and the customers. Employees also figure, although they seem to have migrated from the business process box to the long-term 'Innovation and Learning' box during the development of the technique. Other stakeholders, such as suppliers, governments, local communities and the environment receive only passing mention. However, it must be pointed out that in the introduction to their 1996 book, Kaplan and Norton explicitly state that the balanced scorecard is not a stakeholder approach; the shareholders are still the dominant group. This appears to be a reflection of the cultural environment of the U.S.A. and possibly also a consequence of the rise in popularity of EVA<sup>TM</sup>. From the perspective of this paper, the Balanced Scorecard approach is clearly a stakeholder approach, and this represents one of its major advantages. It also suggests other boxes that might usefully be incorporated into the development of balanced scorecards for specific organizations in both the public and private sector.

There is also rather little detail given of how to select specific performance measures to be placed in the balanced scorecard boxes. Clearly some of these must represent key result areas; but others need to incorporate the strategic plans of the organization in reflecting the choices that have been made as to how those results are to be achieved. For example, customer service levels and satisfaction may be a key result area, but strategic choices have to have been made concerning the means of delivering such service (e.g. speed of delivery, product quality, technical advice etc.). There is much work to be done in determining how to map the necessary pattern of means-end relationships onto the balanced scorecard boxes. Clearly, for example, a customer objective may well be attained by a business process means. Much of this knowledge is probably tacit in the practices of the management consultants who implement the Balanced Scorecard and could usefully be more formally explicated.

It is sometimes suggested that the upper left-hand boxes (financial and customer) represent results measures, whereas the bottom right-hand boxes (business process and innovation and learning) represent the means by which the desired results will be obtained. However, this is clearly true only in the most simple-minded terms. Little or no guidance is given in the Balanced Scorecard literature on how means and ends should be linked analytically. A further area of ambiguity is the way in which the 'balanced' scorecard appears to have become more 'linear' in its approach. In the 1996 book, a linear chain is suggested whereby better trained employees (now in the Innovation and Learning box) will lead to better business processes being designed (one input to such changes, but surely by no means the only one); these in turn will lead to more satisfied customers and then to happier shareholders. Although a plausible chain of events, it is again very much a simplification of reality. It can be argued that the original exposition of the approach in the 1992 article better preserves the 'balanced' nature of the scorecard; all the performance objectives need to be achieved in order for the organization to have been successful. However, the mapping of means-end relationships for a given organization is of crucial importance for the development of a meaningful Balanced Scorecard, and is worthy of much greater attention.

The topic of setting performance targets is not much discussed in the balanced



**scorecard literature.** This is unfortunate, as it provides one response to the often-voiced criticism of the approach, namely that it does not specify how trade-offs are to be made between the difference measures used. Indeed, others would view this as the strength of the approach; all the areas identified should only be on the scorecard if they are crucial to the success of the organization. One means of resolving this conflict lies in the setting of targets. Here, the level of difficulty of attaining the required level of performance in different areas essentially defines the relative levels of attention that managers need to pay to them. Thus, target setting is a crucial feature of well-implemented balanced scorecard, and worthy of much more detailed attention.

Reward structures are also little mentioned, although they have the potential to destroy the impact of an otherwise well-designed scorecard. The most obvious example of this would be where a scorecard has been implemented, but bonuses are still given based on the achievement of budget targets. By contrast, one organization has reinforced its commitment to the balanced scorecard approach by linking bonuses specifically to scorecard measures. In particular, if threshold levels of performance were not achieved on every scorecard measure, then no bonus would be paid despite high achievement elsewhere. Whilst not necessarily recommending this approach, it does seem to be congruent with the balanced scorecard philosophy. If each measure represents a critically important area of performance, not achieving any one represents an inadequate standard of overall performance.

Finally, the role of feedback from the balanced scorecard has similarly had little attention paid to it. Most obviously, feedback provides information about the extent to which a company is achieving its key strategic aims. However, it is perhaps the 'double loop' learning that is even more important. Is the strategy working as expected? If not, is this because of inadequate implementation or because the strategy itself is faulty? Furthermore, only part of a company's activities are driven by the deployment of espoused strategy; is the organization picking up the emergent strategies that are being developed at grass roots level and incorporating these into the scorecard? What becomes evident from this analysis is that the balanced scorecard is clearly a dynamic tool, the contents of which will change over time as strategies develop and key success factors change. This is recognized in the scorecard literature, but there is little guidance as to how it should be managed. Lastly, this approach also makes it clear that the scorecard does not stand in isolation; rather, it is underpinned by the traditional measurement systems present in all organizations. Just because an item does not appear on the scorecard does not imply that it is no longer measured and reviewed. Perhaps the scorecard can be seen as an embodiment of Simon's (1995) interactive control systems; that is, it reports those measures which senior managers have decided should be emphasized for a period of time.

The balanced scorecard is designed to be at the centre of an organization's control mechanisms to effectively deploy strategy and to link operational practices with strategic intent. However, it cannot stand alone and its links with more traditional control systems need to be reviewed. For example, in Kaplan and Norton (1996, p. 197) there is a diagram with the balanced scorecard placed at the centre, illustrating the benefits that can flow from its adoption. By contrast, a very similar diagram (p. 192) with the budget at the centre is used to illustrate the barriers to action that follow from the use of budgetary control systems. However, it seems unlikely that an organization can survive using just the balanced scorecard without the normal



budgetary apparatus. What is needed is an examination of how the two techniques can be linked in a productive and complementary manner. Furthermore, both the balanced scorecard and budgeting tend to be deployed through the organizational hierarchy; some attention also needs to be paid as to how to best link measures of process effectiveness along the value chain to this type of hierarchical approach.

The Balanced Scorecard is thus a potentially powerful tool by which senior managers can be encouraged to address the fundamental issue of effectively deploying an organization's strategic intent. It focuses on establishing links between strategic objectives and performance measures; it also pays some attention to measuring the achievement of the components of the strategic plan the organization has espoused (i.e. the means that it is believed will lead to the desired ends). The balanced scorecard literature also indicates that it is as much the process of establishing a scorecard that yields benefit as the resultant measurement schema. However, the literature is remarkably silent on this point. Procedures for mapping means-end relationships are not explicated. In addition and surprisingly, target-setting is not mentioned despite its central role; the links with reward structures are neglected; and the establishment of information systems and feedback loops are taken for granted. All of these neglected areas provide opportunities for further research.

## 8. Discussion

The above analysis is intended to give an indication of how the proposed framework can be used to analyse control techniques that are being used in many organizations. An overall summary is given in Table 1 below.

It can be seen that no single technique has developed answers to all five of the questions posed, although the application of such techniques requires attention to be paid to them all. It may therefore be beneficial for both practitioners and researchers to consider all of the aspects identified in evaluating and refining the above techniques. However, there is a significant shortcoming in analysing single techniques in this way. It may be that, although a particular technique does not address all of the issues identified, such matters are dealt with by a combination of a variety of techniques in an overall organizational control system. A more holistic approach is clearly appropriate, with the unit of analysis being the organization. Here an attempt should be made to analyse the totality of the control systems being utilized against the issues defined above.

It is important to be clear at this point that the purpose of the framework outlined is not intended to serve as a prescription for 'best practice' on the assumption that explicit procedures for developing a performance measurement and management system which emphasize the establishment of comprehensive and quantitative measures of performance, explicitly linked to financial rewards, is the universally best way forward. At the very least, there is insufficient evidence available to substantiate such a position, and the distinct possibility that in many circumstances such an approach may be counter-productive. However, there is a dearth of information available concerning what is current practice in major business, and what is the impact of different configurations of controls. Rather, the intention has been to develop a framework which can provide a structure for examining extant practice in a more holistic way than has previously been the case.

**Table 1***Comparison of the three control techniques analysed using the performance management framework*

Question	Budgetary control	EVA <sup>TM</sup>	Balanced scorecard
1. Objectives	Financial objectives: –profit; –cash flow; and –ROCE	Single financial objective.	Multiple objectives based on strategy.
2. Strategies and plans	Means/end relationships not formally considered, although budget is based on a plan of action.	Delegated to responsible managers. May be considered when setting targets.	Implicit in selecting some performance measures; no formal procedures suggested.
3. Targets	Best estimates for financial planning; literature on target-setting gives some guidelines for control.	Some guidance is given with respect to ‘inheritance effect’.	Not considered, despite being central to ‘balance’.
4. Rewards	Not addressed, despite many rewards now being made contingent upon budget achievement.	Appropriate incentive schemes a central part of the methodology.	Not addressed.
5. Feedback	Short-term feedback of budget variances. Incremental budgeting from year to year.	Some discussion of longer-term impact.	Reporting of performance assumed, but no explicit guidance given.

Although these three performance management techniques have been reviewed from a practical point of view, there are evidently some important research questions that arise out of this analysis. Given the paucity of studies of control systems operation, we could start with description and work our way towards explanation. Why have organizations changed their control systems to incorporate some of these techniques? What are the antecedents that caused them to make changes, and what have the consequences of the changes been? Only by asking such questions can we begin to develop a soundly based understanding of the merits and disadvantages of the approaches currently on offer from the management consultants.

This paper does not necessarily espouse the highly rationalistic approach to developing performance measures and attaching monetary rewards directly to the attainment of performance targets by individual managers that may be attributed to some proponents of approaches, such as EVA<sup>TM</sup>. It is an open research question as to how effective such techniques are and whether their long-term 'side effects' outweigh the possible short-term benefits achieved. Other, 'softer' and more 'visionary' approaches, involving the encouragement of shared values may be seen as being more appropriate to some circumstances, and less destructive of organizational culture and ethos. However, even such gentler approaches can be analysed using the preceding framework, and the assessment of the benefits and weaknesses of alternative approaches is essentially an empirical question that can be resolved only by the detailed observation and analysis of practice.

Indeed, to talk of the 'management control system' may itself be misleading. Some 20 years ago, an article on the contingency theory of management accounting (Otley, 1980), initially labelled one of the boxes in a diagram the 'organizational control system', but this was later changed it to the 'organizational control *package*' because the term 'system' seemed to imply too rational a perspective. Organizational control systems are more like packages. Different elements are added by different people at different times. Studying such systems is perhaps more akin to archaeology (see Hopwood (1987)) than anything else, although we have the advantage of being able to talk to the current operatives of the 'systems'. It is therefore misleading to assume that the study of performance measurement and management methods will result in a totally coherent outline of a rational set of control mechanisms well-suited to the purposes for which they have been designed. Although individual component parts of such systems may approach this degree of rationality, it is unlikely that the total package of control measures that are in place at any point in time will possess such a degree of coherence. This situation has a number of implications for research methods.

Without wishing to rule out the use of a wide range of approaches in studying an essentially very complex topic, some approaches are likely to be more productive than others, and should be emphasized. These would firstly involve a *longitudinal* element, and study the operation of a set of control systems over a period of time. This would enable the inter-relationship between different control systems elements to be examined and explained. It would also permit exploration of both the antecedents and consequences of control systems choices. The second element would involve the study of a *single organization* in some depth, to appreciate the context in which it operates and the reciprocal impact of context and organization. The third element would allow for a *survey component* within a case study of a single organization, so that the inductive generalizations made can be tested, at least within the organization

studied. That is to say, a case study of a single organization can also usefully include a survey of (say) 100 managers. Thus, one major methodological approach can be adopted to develop explanations of control practices within single organizations and result in inductive generalizations. This proposed methodology is not new, although few examples of its application occur outside of Scandinavia and the U.K.<sup>21</sup> However, the methods have been applied to research on management control systems and performance management issues in only a few instances.<sup>22</sup> Given the significant changes that have taken place in management and control systems practice over the past decade or so, there is clearly scope for a great deal of important research to be undertaken.

The framework outlined above can therefore be seen as a template against which extant practice can be both described and assessed. A complete control system involves each of the five elements identified both separately and in combination. Weaknesses in one area can be, at least partly, compensated for by strengths in other areas. For example, EVA<sup>TM</sup> uses the 'bonus bank' as a means of avoiding the worst effects of an imperfect performance measure. It is therefore misleading to look at only some of the areas identified as weaknesses there may well be balanced by strengths elsewhere. The framework can provide a checklist to help ensure that a more complete picture of control systems operation is observed. Practice can be assessed in terms of the behavioural consequences that are observed to occur when a particular system is operated in a specific context. Furthermore, as evidence is amassed concerning the effects of different control system configurations, it may become possible to assess the appropriateness of a particular system to the circumstances in which it is implemented.

## 9. Conclusions

By means of the three application areas reviewed, it has been shown how the wider perspective of performance management and strategy implementation can be used to analyse the working of practical control systems. In each case, there are suggestions for improving business practices and issues raised for academic research. For example, what is the role of budgeting in the modern organization? How is it now being used in practice, and what changes are being made to traditional practices? New financial performance measures, such as EVA<sup>TM</sup> are being adopted by many organizations. How do they link with currently used measures, and how are they integrated into an overall control system? In what circumstances do they seem to be appropriate and where may they need to be amended? What are the contextual factors that affect an organization's likely interest in such matters? The balanced scorecard is also proving to be a very popular tool, but how are organizations actually using it in practice? Does it deliver the benefits claimed for it, and how might it be most effectively be combined with existing control systems?

Performance management therefore provides an important integrating framework, both academically and practically. It goes well beyond the traditional boundaries of management accounting, and will require the skills of management accountants (and management accounting researchers) to be developed in at least three areas. First, the

<sup>21</sup> The pages of Management Accounting Research represent one of the prime sources of this type of work.

<sup>22</sup> See Otley and Berry (1994) for one example.

management accountant needs to understand the operational activities of the organization. This was a traditional skill of the old 'cost and works' accountant, but one that has been neglected more recently. Attempting to design control systems without having a detailed knowledge of how the business works is likely to prove a recipe for disaster. Second, there is a need to connect control systems design with issues of strategy, both espoused and emergent. Control systems need to reflect the aims of an organization and the plans that have been developed to achieve those aims. The 'strategic management accounting' movement has recognized this challenge, but has been more concerned to develop new techniques than to design overall control systems. Third, there is a need to focus on the external context within which the organization is set, rather than just being concerned with internal activities. Competitor analysis is clearly important, but even more central is the value that an organization is delivering to its customers. A process orientation that focuses on value chains is required to complement the vertical and hierarchical approach to control that has long dominated the literature.

Furthermore, the developments outlined so far cannot be treated as purely technical matters that can be analysed from an economic perspective alone. The intention in using performance measures is to influence managerial behaviour, so that managers have the knowledge and motivation to act in the organization's best interests. This is an area where there are likely to be very different approaches that are dependent upon national and organizational culture. Interestingly, this is exactly the field to which that early pioneer of budgetary behaviour, Geert Hofstede, devoted much of his later career.

The conclusion is straightforward. Although individual techniques of management accounting and control have been studied individually within a restricted context, they need also to be studied as part of a wider organizational control system. The use of management accounting and control systems can be fruitfully analysed from the framework of performance measurement and performance management. This makes it clear that management accounting and other performance measurement practices need to be evaluated not just from an economic perspective, but from a social, behavioural and managerial perspective, within an overall organizational context. It is these social, cross-national and cultural aspects that make the study of control systems such a fascinating topic for academic research and such a challenge to the practitioner. This paper has attempted to provide an outline framework that will help both academics and practitioners to more fully understand the context in which they are working, and to help develop control practices that are well-suited to the contexts in which they are applied.

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