

Research Executive Summaries Series

Applying the controllability principle and
measuring divisional performance in UK companies

Vol. 1, No. 8

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Executive Summary

A copy of the full report is available for download from the CIMA website; www.cimaglobal.com

Aim of this executive summary

This executive summary aims to provide a summary for practitioners of the authors' CIMA-funded research project published as a research report under the title 'Divisional performance measurement: An Examination of the Potential Explanatory Factors'.

Key issues underlying the research project

The key issue underlying the research project is whether or not divisional managers are held accountable for items which they cannot influence by their actions. The conventional wisdom of management accounting, as reflected in textbooks, advocates the application of the 'controllability principle,' which is that the evaluation of a manager's performance should be based only on those factors that are under a manager's control. The application of the controllability principle to divisional performance measurement results in the need to distinguish between the economic performance of divisions and the performance of divisional managers. It is advocated that different performance measures should be used to evaluate the economic performance of the divisions and the performance of divisional managers. A separate divisional managerial performance measure applies the controllability principle by excluding those costs that cannot be controlled or influenced by a divisional manager whereas divisional economic measures generally include the allocation of uncontrollable costs based on the principle that, if the divisions were independent companies, they would have to bear such costs.

The limited empirical evidence, however, suggests that the allocation of uncontrollable costs for evaluation of managerial performance is widespread and that the controllability principle often does not appear to be applied in practice. It is apparent that the traditional two-fold classification of costs as being controllable or non-controllable is too simplistic and that the application of the controllability principle lies along a continuum. At one extreme there is no application of the controllability principle with companies holding managers responsible for all uncontrollable factors. At the other extreme there is the full application of the controllability principle where companies tend to hold divisional managers responsible only for controllable factors. In between these extremes managers may be held accountable for some uncontrollable factors and not others.

The choice of appropriate measures of divisional managerial performance has been widely debated in the management accounting literature. One area of debate is the extent to which the controllability principle should be applied. Should different performance measures be used to evaluate the performance of divisional managers and the economic performance of the divisions or should a single measure be used for both purposes? Another area of debate relates to the choice of appropriate performance measures. The debate was concerned with which traditional financial measures (e.g. net profit before or after taxes, controllable profit, residual income, return on investment) should be used. Over the past decade new measures have emerged such as economic value added® (EVA®) and the balanced scorecard. Non-financial measures have also been given more prominence and the relative emphasis that should be given to financial and non-financial measures, and how they should be integrated, have been subject to debate.

In view of these developments, and the fact that most of the previous empirical research was undertaken over 20 years ago when the business environment and management practices were very different from those existing today, it was considered appropriate to undertake empirical research relating to the application of the controllability principle and divisional performance measurement in UK companies.

Aims of the research project

The aims of the research project were therefore as follows:

- to investigate how far financial and non-financial measures are used in practice to evaluate the performance of divisional managers;
- to identify the extent that the 'controllability principle' is applied to factors that are identified as uncontrollable;
- to identify the influence of level of application of the controllability principle on the degree of satisfaction with the divisional performance measurement system; and
- to investigate the relationship between the use of non-financial measures and the degree of satisfaction with the performance measurement system.

Content of the research report

A large part of the research report describes the growth and importance of divisionalised structures (not summarised further here), the different financial measures that are used in practice to evaluate divisional performance and the different categories of uncontrollable costs. It then describes, presents and analyses the research findings.

Conduct of the research project

The research project involved analysing the results of 124 usable returned completed postal questionnaires from manufacturing companies with an annual turnover over £100 million. The analysis was based on annual sales turnover and divisionalised structures (including listed and unlisted companies and subsidiaries or divisions of overseas companies). The respondents were located in finance sections, at head office and in divisions.

Background to the research

To understand why the research project focused on the specified objectives it is appropriate to look at some of the underlying information contained in the report.

Divisional performance measures

The report addresses how divisional performance can be measured.

Distinguishing between economic and managerial divisional performance

Corporate management require performance measures to assist in evaluating the economic performance of a division as a whole and its economic viability and future direction. Divisional profit in this case usually, but not always, includes all allocated central costs. In addition, measures are required to evaluate the performance of divisional managers. For evaluating managerial performance conventional wisdom advocates that performance evaluation should be limited to the profit that is controllable or at least influenced by that manager's actions. Examples of costs that would be excluded from controllable profit include foreign exchange rate fluctuations and allocated central administrative expenses.

The measure traditionally used to measure divisional performance has been return on investment (ROI), which measures divisional profit against the level of investment in assets attributable to a division. However, if ROI is used to evaluate managerial divisional performance it can lead to sub-optimal decisions. For example, divisional managers may be incorrectly motivated not to undertake a project with a return in excess of the cost of capital simply because it has a lower projected ROI than the current ROI for the division as a whole. To help overcome this problem conventional wisdom advocated the use of controllable residual income (RI), which is controllable profit less a charge for the cost of capital employed. Previous empirical studies, however, suggest that RI does not appear to be widely used in practice.

Limitations of financial performance measures

The historical limitations of financial performance measures can be summarised as follows:

- they focus on short-term periods and encourage short-termism;
- they are lagging indicators, evaluating the outcomes of management actions after a time period. Therefore it is difficult to establish a relationship between managers' actions and reported financial results;
- they deal only with the current period, not the future; and
- they use financial accounting information based on the historical cost concept and thus tend to be poor estimates of economic performance.

Given that the problems associated with the use of financial performance measures, two possible methods of dealing with them emerged in the early 1990's. The first (economic value added) seeks to improve financial performance measures and the second (the balanced scorecard) incorporates non-financial performance measures with financial performance measures.

Economic value added (EVA)

During the early 1990's Stern Stewart and Co., a New York-based consulting firm, repackaged and refined residual income in the form of economic value added® (EVA®). The objective of EVA is to develop a performance measure that accounts for the ways in which corporate value can be added or lost. Thus, by linking divisional performance to EVA managers are motivated to focus on increasing shareholder value. The EVA concept extends the traditional residual income measure by incorporating adjustments to the divisional financial performance measure for distortions introduced by GAAP.

EVA can be defined as:

EVA = Conventional divisional profit ± accounting adjustments - cost of capital charge on divisional assets

Adjustments are made to the chosen conventional divisional profit measure (e.g. controllable profit, net income) in order to replace historic accounting data with a measure that approximates economic profit and asset values. These adjustments result in the capitalisation of many discretionary expenditures (e.g. research and development, marketing and advertising) by spreading these costs over the periods in which the benefits are received.

Also by taking into account all the capital costs, economic value added attempts to show the amount of wealth a business created or destroyed in each period.

The balanced scorecard

Non-financial measures, such as of competitiveness, product leadership, productivity, quality, delivery performance, innovation and flexibility have long been advocated as a further way to prevent short-termism. Historically incorporating non-financial measures have presented two problems:

- there are too many of them; and
- they often tend to conflict with each other

The balanced scorecard, developed by Kaplan and Norton, seeks to integrate financial and non-financial performance measures and identify key ones that link to strategy. Measures are developed based on four perspectives that seek to answer four questions:

Perspective	Question
Customer	How do our customers see us?
Internal business processes	What must we excel at?
Learning and growth	Can we continue to improve and create value?
Financial	How do we look to our shareholders?

The balanced scorecard involves establishing major objectives for each of the four perspectives, translating each objective into targeted performance measures and comparing actual performance measures with the target measures. A critical assumption of the balanced scorecard is that each performance measure is part of a cause-and-effect relationship involving a linkage from strategy formulation to financial outcomes.

The balanced scorecard thus consists of two types of performance measures. The first consists of lagging measures. These are the financial (outcome) measures within the financial perspective that are the results of past actions. They show the financial impact of the decisions as their impact materialises and this can be long after the decisions were made. The second are leading measures that are the drivers of future financial performance. These are the non-financial measures relating to the customer, internal business process and learning and growth perspectives.

Controllability and cost allocations

The report addresses what is meant by controllability, uncontrollable factors and non-controllable costs, and why these latter might be allocated when evaluating divisional managerial divisional performance.

The controllability principle and non-controllable factors

The controllability principle states that:

'managers should be held accountable only for the results that they can significantly influence.'

This suggests there is a need to distinguish between controllable and uncontrollable factors. Uncontrollable factors can be classified into the following categories:

- economic and competitive factors, to which managers have to react;
- acts of nature, which are beyond management control;
- costs that are uncontrollable by divisional managers such as group head office general and administrative costs, taxes, interest and corporate costs; and
- divisional interdependencies whereby the actions of divisions impact on each other.

While the effects of acts of nature tend to be treated as uncontrollable, the treatment of the remaining factors varies in practice.

Distinguishing between controllable and uncontrollable costs

Applying the controllability principle is not an easy task because control typically lies along a continuum with two extremes: full control and no control; and in between there are different degrees of control. Conventional wisdom provides the following guidance for distinguishing between controllable and uncontrollable items:

1. If a manager can control the quantity and price paid for a service then the manager is responsible for all the expenditure incurred for the services and the expenditure is fully controllable.
2. If the manager can control the quantity of the service but not the price paid for the service then the costs are partially controllable and only that amount of difference between actual and budgeted expenditure that is due to usage should be identified with the manager.

3. If the manager cannot control either the quantity or the price paid for the services then the expenditure is uncontrollable and should not be identified with the manager.

A more simplistic general guideline is to 'Hold managers accountable for the performance areas you want them to pay attention to.'

Various approaches can be used to apply the controllability principle. Divisional managerial performance can be evaluated by comparing actual performance against budget culminating with a bottom line that represents the chosen divisional profit measure (e.g. controllable profit, net income, EVA).

Controllability is imposed by making managers accountable for the variance between actual and budgeted outcomes. Uncontrollability can be fully recognised by excluding non-controllable items from the performance report or partially recognised by ensuring that the manager is not made accountable for the variance by assigning budgeted costs instead of actual costs. In the former situation the divisional target and actual profit measure is not reduced whereas the latter results in divisional profit being reduced by the budgeted allocation.

If managers are allocated with the actual costs for uncontrollable items the controllability principle is clearly not being applied. However, if managers are allocated with budgeted costs it could be argued that the controllability principle is being partially applied by not making managers accountable for the variance. The allocation of budgeted uncontrollable costs can be viewed in these circumstances as representing a means of increasing the target profit measure to ensure that divisional profits are sufficient to cover budgeted allocated uncontrollable costs. Alternatively, instead of relying on cost allocations a higher budgeted target for the chosen divisional performance measure that takes into account these factors can be set. Thus, problems that may arise from allocating uncontrollable costs are avoided.

Reasons for the allocation of uncontrollable costs

Why do companies continue to allocate costs that are uncontrollable? Rationales for cost allocations have been based on behavioural and institutional factors. The following behavioural factors have been identified:

- makes managers aware that such costs exist and must be covered by divisional profits (although as indicated above this could be achieved just by increasing the level of target profit);
- stimulates managers to put pressure on resource centre managers to control their costs;
- puts full business risk onto divisional managers, as if they were managers of non-divisionalised companies; and
- induces divisional managers to take a greater interest in the costs of shared resources.

Institutional reasons include:

- legal requirements (e.g. taxation of subsidiaries);
- the requirements of government contracts (i.e. based on full cost);
- tradition (allocation is done by accountants who regard cost allocation as part of their tradition); and
- to aid inter-division and inter-competitor comparison to tie in with the link between top executive pay and measures of accounting profit.

Reasons for non-allocation of common resource costs

Common resource costs may not be allocated because:

- the amounts are too small to warrant allocation;
- they are not controllable by divisional managers;
- the costs of making the allocations would exceed their benefits;
- divisional managers object to charges they cannot influence and control; and
- allocations are arbitrary and tend to distort divisional profits unnecessary internal tension can be avoided by no allocation.

The research project findings

Measuring managerial and economic divisional performance

Of the responding companies, 38% do not apply the controllability principle as they do not distinguish between managerial and economic divisional performance. The same performance measure was used by 44% but different items were used within the same performance measures – thus they were making at least some attempt to apply the controllability principle. The remaining companies (18%) sought to apply the controllability principle by using different performance measures for economic and managerial performance.

There is a strong preference for an absolute target performance measure rather than a ratio/percentage measure for measuring managerial performance. The three most important measures are:

- target profit before charging interest on capital was considered to be the most important measure by 55% of the organisations;
- target profit after charging interest on capital (residual income) was ranked as the most important measure by 14% of the respondents; and
- 9% ranked a version of EVA as the most important measure (EVA was used by 23% of the respondents, with another 11% planning to introduce it)

Interestingly, a target return on capital employed measure (i.e. ROCE / ROI) was ranked as the most important measure by only 7% of the respondents. It would appear that there is a strong preference for the use of absolute performance measures rather than ratio measures. A possible explanation for this observation is that central headquarters' require divisional managers to focus on maximising an absolute value rather than a percentage return.

The research confirms that both 'head office' and divisional managers have considerable involvement in setting financial targets.

Using non-financial measures

Most respondents do not rely on financial measures alone to evaluate divisional performance: non-financial measures were used by 78% of respondents. A balanced-scorecard approach was very popular, being used by 42% of all respondents. Financial measures were, however, considered to be more important than non-financial measures by approximately 70% of the respondents, although as the respondents were located in the finance function there may be bias here.

Divisional use of common resources and other costs

Common resources are defined as resources or services provided centrally to two or more divisions. They include such items as data processing, research and development, marketing, training, purchasing, personnel, accounting, internal audit, legal services and planning. A great majority (95.2%) of respondents stated that divisions used common resources, but 73% of respondents indicated that the costs were less than 10% of divisional turnover.

Common resources are distinguished from group business-sustaining general and administration costs. The latter are completely uncontrollable by divisional managers, and include such costs as depreciation on buildings and equipment at head office.

Application of the controllability principle to non-controllable factors

A large majority of companies (83%) allocate at least some common resource costs to divisional managers when computing performance measures, although the greater the degree of decentralisation, the lower the amount of common resources allocated.

In attempting to find out more about uncontrollable costs the research project divides common resource costs into three categories and indicates the percentage of companies which describe themselves as falling into each category. The table below describes these categories, and indicates how conventional wisdom advocates how the controllability principle should be applied.

Table 6.3 (see below) of the research report indicates how common resource costs with different degrees of controllability and uncontrollable general/administration costs are allocated. This table presents clear evidence that the majority of companies do not apply the controllability principle to the assignment of common resource costs, as about 55% allocate all or most uncontrollable common resource costs to divisional managers when measuring divisional performance.

Of the other non-controllable factors, the research shows that about 86% of the respondents took very little account of the effect of uncontrollable environmental factors (such as changing economic conditions, competitor actions and business climates) and divisional interdependencies when allocating costs. In addition, non-controllable factors were not even taken into account informally, even by companies which allocated uncontrollable costs in full.

Neither the location of the head office (UK or overseas), the fact that the company is listed on the stock exchange nor the informal consideration of non-controllable factors were found to explain the level of application of the controllability principle.

Table 6.3 The extent to which costs of common resources and business-sustaining corporate general administrative costs are allocated to divisions

	The extent of costs allocated to divisions	Controllable common resource costs (full autonomy - category 1)		Partially controllable common resource costs (limited autonomy - category 2)		Non-controllable common resource costs (No autonomy - category 3)		Business-sustaining corporate general administrative costs	
		No.	%	No.	%	No.	%	No.	%
(a)	None of the costs are allocated	-	-	-	-	23	31.1	18	15.5
(b)	Only a minor portion of the costs are allocated	6	54.5	2	3.8	3	4.0	12	10.3
(c)	A small but significant portion of the costs are allocated	1	9.1	10	18.9	8	10.8	12	10.3
(d)	Most, but not all of the costs, are allocated	3	27.3	19	35.8	11	14.9	25	21.6
(e)	All of the costs are allocated	1	9.1	22	41.5	29	39.2	49	42.3
Total		11	100	53	100	74	100	116	100

Why do most companies allocate all or most non-controllable costs?

A number of potential reasons are indicated for why companies allocate all or most non-controllable costs. Table 6.5 from the research report shows the results derived from a 7-point scale (ranging from a score of 7 indicating extremely important to 1 indicating not at all important).

The most important reasons for allocating common resource costs were behavioural, and relate to an attempt to use allocations to make managers aware of the costs and to act as surrogates for the costs that would be incurred if the divisions operated as independent companies. Measurement and institutional reasons were least important.

Table 6.5 Importance of factors influencing organisations to allocate the costs of shared resources

Rank	Reasons	Nature of the reasons	% of responses rating 1 or 2	% of responses rating 6 or 7	Number	Sum (total score)	Mean	Standard deviation
1**	To show divisional managers the total cost of operating their divisions (a)*	B***	3.1	70.1	97	563	5.80	1.15
2	To make divisional managers aware that such costs exist and must be covered by divisional profits (g)	B	5.1	62.9	97	547	5.64	1.26
3	Divisional managers would incur such costs if they were independent units (m)	B	6.2	47.4	97	503	5.19	1.47
4	Divisional managers should bear the full business risk as they were managers of non-divisionalised companies (c)	B	6.2	43.3	97	495	5.10	1.29
5	To stimulate divisional managers to put pressure on resources centre managers to control their costs (j)	B	12.3	45.3	97	471	4.86	1.79
6	To induce divisional managers to take greater interest in the costs of shared resources (k)	B	14.4	43.3	97	468	4.82	1.71
7	To enable inter-division or inter-firm comparisons to be made (e)	I	22.6	29.9	97	422	4.35	1.85
8	To provide signals on the efficiency of service department that provides shared resources (f)	B	23.7	26.8	97	404	4.16	1.77
9	To stimulate divisional managers to economise in their usage of shared resources (h)	B	26.8	24.7	97	394	4.06	1.76
10	Divisional managers control the usage of the resources (l)	B	29.9	18.6	97	356	3.67	1.75
11	Distinguishing between controllable and uncontrollable requires subjective judgements which can create conflicts (b)	D	24.7	8.2	97	350	3.61	1.52
12	It's extremely difficult to separate controllable and uncontrollable elements (d)	D	33.0	13.4	97	346	3.57	1.73
13	Because cost allocations are part of a company's tradition (i)	I	50.5	11.3	97	284	2.93	1.87

* Letters represent the ranking of the questionnaire
 ** The rank was made in descending order
 *** B = behavioural dimensions,
 I = institutional dimensions and
 D = difficulty of separating controllable from non-controllable elements.

Why do some companies not allocate common resource costs?

Although most respondents do make such allocations, the ones who did not cited primarily that common corporate costs are not controllable by divisional managers, and that divisional managers object to charges they can neither influence nor control.

Allocating the variance between budget and actual for common resource costs

A further aspect of the application of the controllability principle was investigated by examining how the variance between budgeted and actual allocated uncontrollable common costs was dealt with. Within the uncontrollable cost category 70% of divisional managers were not held accountable for the variance. This indicates that the controllability principle is applied here, by protecting managers from differences arising from inefficiencies occurring outside their division.

Satisfaction with the performance measurement system

The research project found that there was no general dissatisfaction with the system. In particular, managers with greater autonomy of common resource costs did not have a greater degree of satisfaction with the performance measurement system. Similarly, managers for whom the controllability principle was not applied were no more satisfied or dissatisfied with the system. However, the greater the use of non-financial measures the less satisfied were the respondents with the system. Suggested reasons for this are:

- preparing non-financial measures may involve some degree of judgement or conflict between divisional managers and top managers, reducing satisfaction, or
- emphasising both types of measure may lead to confusion, especially if they give conflicting messages.

Relation between applying the controllability principle and the use of non-financial measures

There is no evidence to suggest that the lower the level of application of the controllability principle, the greater the use of non-financial measures.

Conclusion

The research report provides useful insights into:

- how far companies distinguish between managerial and economic divisional performance;
- the relative importance of financial and non-financial measures;
- the preferred financial measures for managerial performance;
- the fact that most companies apply the controllability principle in some situations at least, but not in others;
- the fact that, rather than simply raising target profit to cover the costs, companies prefer to allocate budgeted uncontrollable costs;
- the fact that the controllability principle is seen as important but is applied flexibly; and
- the impact of the use of the controllability principle and non-financial measures of the satisfaction with the performance and measurement system.

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First published in 2005 by:
The Chartered Institute
of Management Accountants
26 Chapter Street
London SW1P 4NP

Printed in Great Britain

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May 2004

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