It may not, in fact, be true that management accounting information has failed to keep pace with changes in manufacturing processes.

Managers' Attitudes to Cost Information

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Little has been written about the way in which managers use accounting information in general and cost accounting information in particular. However, there are claims in the literature that the information currently produced by management accounting systems does not adequately meet the needs of functional managers:

> Driven by the procedures and cycle of the organization's financial reporting system, management accounting information is produced too late, too aggregated, and too distorted to be relevant for managers' planning and control decisions[1].

Hendricks emphasizes the importance of generating reliable costing data:

> Accurate product costs are needed by managers for new product introduction, pricing, product support, make-or-buy and product discontinuance decisions as well as for external reporting. If the cost accounting system provides inaccurate product cost information, the potential benefits of factory automation may not be realised. What's more, managers may be saddled with a less than optimal pricing structure and product mix[2].

Major factors influencing the usefulness of costing information are the recent advances which have been made in manufacturing technologies. Many manufacturing organizations are presently employing highly automated production techniques, such as Computer-Aided Design (CAD) and Computer-Integrated Manufacture (CIM). Traditional accounting techniques such as standard costing, continue to be used to monitor these advanced systems despite doubts about their suitability to highly automated manufacturing systems. For example, Kaplan notes:

> As information workers, like design engineers and systems analysts, replace traditional blue-collar workers in factories, accounting conventions that allocate overhead to direct labour hours, will be at best irrelevant and more likely counter-productive to a company's manufacturing operations[3].

In today's manufacturing environment, the importance of labour as a direct input has declined significantly and a standard costing system that is designed to monitor labour costs may be inappropriate or even misleading. This point is emphasized by Dugdale:

> As the importance of direct labour diminishes, this practice which has been criticized on academic grounds, becomes unsustainable on practical grounds[4].

Thus it appears that accounting change has not kept pace with the changes which have taken place in manufacturing. Hendricks summarizes the problem succinctly, when he states that the increase in factory automation has exposed and magnified cost accounting problems related to investment justification, product costing and performance measurement. Kaplan goes further and suggests that little advance has actually been made in cost accounting since the first half of the twentieth century. Advances were made in cost accounting in the early 1920s after which innovation ceased despite the fact that products were increasing in number and improving in design. One would have expected accounting to develop in line with the changes which were taking place in production. However, Kaplan has noted no significant innovations by practising managers or management accountants during the last 60 years to affect contemporary management accounting thought.

Many of the apparent difficulties in applying management accounting information in organizations may be attributable to inadequate understanding among managers:

> My experience suggests that the problems here are not technological but educational and social[4].

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Dugdale highlights the lack of receptiveness among managers to new accounting ideas and the myopic attitudes which they adopt. A good accounting system may still provide managers with misleading information if they do not have the training to analyse and utilize it properly for its intended purposes. It is also possible that managers cannot make full use of the system, and the information which it produces, because they have been insufficiently trained to use the system. Those who design and implement management accounting systems have a responsibility to ensure that those who are expected to use it are properly trained in its operation.

Managers look for alternative information sources

Equally, however, those who produce the information must be counselled in the information needs of the users – as Bowhill points out:

> It is all too easy for the accountant to produce a set of accounts and then expect managers to wade through the figures and identify potential problem areas. Accountants need carefully to consider how information should be presented in order that relevant information be clearly highlighted[5].

In undertaking this study, our expectation was that managers would find that the information produced by the costing system did not adequately reflect the realities of the manufacturing environment in which they operate. This would explain why managers look for alternative information sources which are more relevant to their needs. As Emmanuel and Otley point out:

> Managers will formally ignore produced accounting information when they perceive it to be of little relevance to their task and will develop alternative sources of information that are of more value to them[6].

In summary, the literature paints a gloomy picture of the usefulness of cost accounting information to managers and we anticipated that our study results would confirm this.

Questionnaire Survey

The questionnaire was designed to test the general hypothesis that the information currently produced by management accounting systems does not adequately meet the needs of functional managers. The questionnaire was pilot tested through personal visits to managers in the main functional areas. After amendments, copies were sent to 500 companies and 231 usable responses were received. Respondents tended to be from the more senior levels in their organizations.

Our investigations centred on two main cost topics, standard costing and budgets. Interestingly, of the 90 per cent of respondents who acknowledged that their company used standard costing systems, 35 per cent felt that the cost information which they provided was "essential", while only 3.3 per cent said that it was worthless. Respondents were asked how helpful they found standard costing information to be under five headings: decision making and control purposes; motivating themselves; evaluating their own performance; motivating their subordinates; and evaluating their subordinates' performance. The results are shown in Table I. The column labelled "Weighted score" has been calculated by weighting column 1 as double column 2, with no weight given for column 3, and then dividing throughout by the total of the three columns.

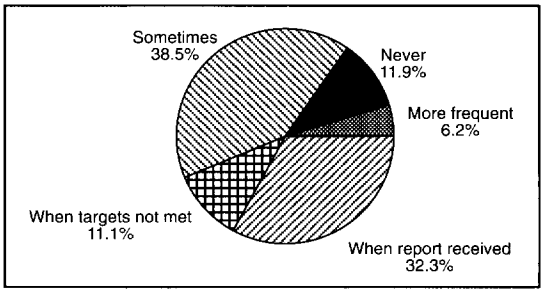
Table I. *Respondents' Evaluations of Standard Costing Information*

	Very useful	Quite useful	Not useful	Weighted score	*n*
Decision making and control	63	68	18	1.30	149
Motivating you	26	66	52	0.82	144
Evaluating your performance	30	65	50	0.86	145
Motivating your sub-ordinates	21	60	61	0.72	142
Evaluating your sub-ordinates	25	60	60	0.76	145

This enabled a simple, if crude comparison to be made among the rows. It will be seen that the result is a high value placed on the first use of standard cost information, with rather less for the other uses.

When asked how much more difficult the respondent's job would be, and how much they felt that their company would be harmed if there were to be no standard costing system, the majority view was that the company would be more seriously damaged than they themselves would be. The result is probably best interpreted as indicating that respondents could find alternative sources of information; but the company as a whole could not.

Figure 1. *Frequency of Discussion of Results of Budgets*



Budgeting Systems

Almost all respondents reported that their companies had budget systems (97 per cent) and the same question was asked about their usefulness as was asked about the standard cost system. The results are shown in Table II.

In Table II the scoring method for the fifth column is the same as for Table I. It can be seen that, as with standard cost information, the greatest perceived use for budget information is for decision making and control. It is interesting to note that all scores in this table are noticeably higher than those in Table I; budget information is, apparently, seen as more useful for all these purposes than standard cost information.

Surprisingly, only two-thirds of respondents reported that budget information was used to monitor their performance. (This compares with 53 per cent being monitored through standard cost information, 24 per cent believed it was not so used; and oddly, 9 per cent claimed they did not know if it was or not.) The overwhelming majority of respondents reported that this was not the only basis on which they were judged.

Respondents were also asked how frequently their budget results were discussed and the results are shown in Figure 1.

Variation in Usefulness

As might be expected, our follow-up interviews revealed that the perceived degree of usefulness of accounting data varied according to the nature of the consumer. One marketing manager we interviewed expressed the view that standard cost data were extremely useful in taking decisions on the pricing of products. In his company, where products were priced keenly to compete in the market, it was important to be aware of the standard costs to ensure that an adequate profit was earned on sales.

Standard cost information, however, was less useful to those in the personnel function. One manager explained

Table II. *Respondents' Evaluations of Budget Systems*

	Very useful	Quite useful	Not useful	Weighted score	*n*
Decision making and control	126	79	21	1.46	226
Motivating you	60	103	55	1.02	218
Evaluating your performance	56	125	39	1.08	220
Motivating your sub-ordinates	42	94	80	0.82	216
Evaluating your sub-ordinates	47	99	71	0.89	217

that he was more interested in information about employee absences, sickness levels, holiday and overtime levels than in costs. Although he sought and received information from the accounting function on a regular basis, this information had little to do with standard costing. This contrasts with the view of a general manager who was convinced that standard cost information was essential in the operation of any production process. There was a need to establish standards and monitor achievements continuously against these standards. He was supported in this view by his production manager who commented that, "if you can't measure production output, you can't control it". The standard cost system was, for him, an important way of measuring output.

Budgets vs Standards

Interviewees were asked about budgets, their relative importance in the organizational control system and how they compared with standard costs. The response was mixed but the balance of opinion was that standards were more helpful in the day-to-day monitoring of the detailed operation of companies. Budgets were examined less frequently, usually monthly, and there was a tendency to regard them as targets, the achievement of which was less important than adherence to a strict standard. If additional expenses were incurred and these were more than outweighed by the resulting benefits, then exceeding the budget was quite acceptable. One explanation for the lower concern about budgets was that management built slack into them and they were, consequently, less difficult to achieve than standards.

Practical Considerations

Generally the results of the study indicate that managers are broadly happy with the kind of information which they presently receive from accountants.

This is rather surprising, as it is at odds with the views widely expressed by leading academics in this field and which were discussed at the beginning of this article. It is interesting therefore, to pause for a moment and reflect on how managers measure the usefulness of cost information which they receive and to consider the extent to which the business environment in which they operate can influence their perceptions of its value.

One measure of the usefulness of information is its relevance in the decision-making process. This, of course, is one of the points about which we enquired in the study and which managers rated highly. But it may be that managers responded in this way because they assess the usefulness of cost information in relation to *existing* corporate systems, procedures and objectives rather than *optimum* systems, procedures and objectives. In other words, inertia and complacency may have had a significant influence on the findings and it may be that what the results communicate is not the ability of established cost systems to adapt to changes in the manufacturing process, but the failure of managers to appreciate that the cost system continues to monitor and report on activities which are no longer relevant.

This hypothesis was not tested in our study because there was an assumption that managers know what is the "best" information for their purposes and circumstances. On reflection, however, this is a doubtful assumption because managers can often be immersed in the day-to-day running of a business and are not in a position to stand back and reflect on the efficiency of existing information systems. Yet, it is immensely important that they do so, to ensure that changes in technology and manufacturing processes are matched by changes in the way in which information is collected, processed and presented.

Changes in manufacturing processes can occur almost imperceptibly. Manual tasks can be replaced by automation on a gradual basis. Individual changes may have only slight effects on the process, insufficient in themselves to signal the need for change in the collection and processing of information or in the characteristics to be measured. Together, however, their impact can be dramatic, and unless managers continually review information systems, they may end up with a system which is apparently efficient, but measures outcomes which are no longer relevant.

Continual testing of systems is an important function of management □

As the nature of the manufacturing environment changes, managers must maintain vigilance and constantly enquire into whether cost systems are focused on the critical operating activities in the organization. Some cost accounting departments will initiate change, but it would be foolish for managers to rely entirely on their initiative. Continual testing of systems to monitor the extent to which they have been adapted in response to manufacturing change is an important function of management.

The test is not difficult to perform. Simply think of a significant and recent change in the manufacturing process in your organization. Enquire about the cost information which you receive in relation to that part of the process. Ask if the information has altered significantly since the change was introduced. Consider whether the cost information which you receive helps you to monitor this part of the process well. Or, could different information be collected and supplied in a form which would enable you to monitor this part of the process more effectively?

Conclusion

At the beginning of this article we quoted the views of Johnson and Kaplan and others, that the information provided by existing accounting systems is misleading and distorted. Perhaps it is; but if so, this kind of information is still being produced and it appears that managers like it. This seems to allow two possibilities; either Johnson and Kaplan are wrong, and managers are right to use what they do. Alternatively, they are right and managers are not perceptive enough or knowledgeable enough about the potentialities and problems of their systems to understand this. Either way, we can propose no resolution, and are limited to offering only the information that managers do, in general, like the accounting information which they receive.

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Application Questions

(1) How useful do you find the cost information that you receive?

(2) Are there ways in which cost information reports could be improved to meet your specific needs?

(3) Identify recent changes in the manufacturing process in your organization. Consider the extent to which the nature of the cost information supplied has altered in response to the manufacturing change. Could more relevant information be collected and supplied?