

**AN EMPIRICAL STUDY OF MANAGEMENT
ACCOUNTING PRACTICES IN IRELAND**

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ABSTRACT

Management accountants were surveyed to ascertain their perceptions regarding the usage of specified management accounting techniques in their companies. Based on a combination of quantitative and qualitative data, findings are presented in relation to ten well established traditional techniques and ten of the more prominent new techniques selected from a review of current literature. The findings indicate that traditional techniques continue to dominate management accounting systems, with heavy emphasis on financial measures of control and performance evaluation. Usage of new techniques is generally low, but tends to be highest in those companies reporting high usage of traditional techniques. It is therefore suggested that the main contribution of these techniques may be in supplementing, as opposed to replacing, traditional techniques. Significant differences were found based on company ownership and size, suggesting a high degree of tailoring to suit particular circumstances. The discussion highlights specific findings which appear inconsistent either with one another or with conventional wisdom, and suggests that these may offer valuable insights into current practice.

INTRODUCTION

Since the mid 1980s, management accounting has been subjected to major criticism and fundamental questioning concerning its relevance to the information needs of managers. It has long been recognised that a significant gap exists between what is taught in traditional management accounting courses (i.e., 'conventional wisdom') and what is practised by management accountants (see, for example, Scapens, 1985; Ryan, Scapens and Theobald, 1992; Ashton, Hopper and Scapens, 1995). It has also been argued that management accounting research has had little impact on practice (Otley, 1984; Edwards and Emmanuel, 1990).

The research reported in this paper is part of a wider study designed to address some of the major criticisms against both management accounting practice and research. This paper is primarily concerned with perceptions of practising management accountants regarding the relevance of management accounting information in their organisations. Specifically, the paper reports perceived usage of specified management accounting techniques in greater detail than previously reported, and also presents related qualitative data not previously reported. The findings therefore contribute a considerable amount of new information, of both a quantitative and qualitative nature, in an area where there is a shortage of empirical findings in an Irish context. As well as being significant in their own right, the findings also provide a necessary framework for the remainder of the study, part of which is designed to address the possible bias and inaccuracies inherent in the perceptions of management accountants, which critics argue are significant contributors to the lack of relevance of management accounting information.

The paper is structured as follows. By way of background to the study, the next section provides a brief summary of relevant literature which has highlighted perceived weaknesses in management accounting practice. Details of the empirical work are then set out, commencing with the specific research questions which the study sought to address, followed by an explanation of the research method selected for the study and a presentation of the main findings. The paper concludes with a discussion of the findings and suggestions for future research.

BACKGROUND

The environment in which management accountants operate has been characterised worldwide by rapid and widespread changes in recent years (Bromwich and Bhimani, 1994). The pressures of global competition and the unprecedented rate of technological development in manufacturing and information processing have contributed to a variety of changes in the internal environment of businesses. Bromwich and Bhimani noted that the fast pace of change has influenced not only approaches to production but also organisational structures, business strategies and managerial philosophies. The limited empirical evidence available (Clarke, 1992 and 1996) and also anecdotal evidence suggests the presence of similar developments in an Irish context.

Concerns expressed by Kaplan (1984) and elaborated upon by Johnson and Kaplan (1987) raised serious questions about the ability of management accounting to develop and adapt in the context of this rapidly changing business environment. Although the view has been expressed that some of this criticism has been excessive (Bromwich and Bhimani, 1989), there has been a general acceptance that a major challenge faces practitioners, educators and researchers of management accounting to ensure its continued relevance to the information needs of managers. There has also been a recognition that the normative approach traditionally adopted by educators and researchers is not helpful to this objective. Instead, a better knowledge of current practices and the information requirements of managers needs to be developed as part of a framework for evaluating and adapting traditional management accounting practices and developing new ones.

The major criticisms of management accounting can be summarised as follows (Drury, 1996):

- Management accounting practice has changed very little over the last fifty years and as a result, does not meet the needs of managers in today's competitive business environment
- Traditional product costing systems are producing increasingly misleading information
- Management accounting is subservient to financial accounting, and the information it produces is therefore driven more by financial accounting regulations and conventions than by the needs of managers

- Management accounting is internally focused and does not adopt a strategic perspective by focusing on the firm's markets and competitors.

Considerable evidence of these deficiencies exists in the literature. For example, Johnson (1990) reported that management accounting systems in a variety of organisations were lagging behind the technological systems by seventy five years. Innes and Mitchell (1989) concluded from a survey of firms in the electronics industry that there was evidence of overly complex financial information and a need for simpler information, capable of being linked to actual performance and which includes more non-financial information. Littler and Sweeting (1989) concluded from a study of technology-based businesses that management accounting systems should better reflect the needs of management and should also facilitate the use of critical indicators, a holistic approach to management of the business and the adoption of a strategic approach to decision making. Given the perceived deficiencies, it is not surprising that a number of observers have estimated that as many as half of all conventional accounting reports are either not used or are duplicative in content (McKinnon and Bruns, 1992).

More recent published work provides some evidence of a growing emphasis on a wide range of techniques which have emerged in recent years in the teaching, research and practice of management accounting. For example, Horngren, Foster and Datar (1997) reflect the changes occurring in the role of management accountants in organisations. Significantly increased emphasis is given to customer focus, key success factors, total value-chain analysis and continuous improvement, while more detailed treatment of benchmarking recognises the importance of the external environment. The examination syllabus of CIMA reflects the global developments in management accounting practice and research, covering an extensive range of 'newer' techniques and their application in the modern business environment.

A number of recent case studies document successful implementation of a variety of newer techniques, mainly in the US and UK. These techniques include ABC (Dedera, 1996; Davis and Darling, 1996; Malmi, 1997), EVA/ABM (Hubbell, 1996), target costing (Dutton and Ferguson, 1996; Kato, 1993) and key performance measures (Newton, 1997). Recent CIMA publications provide further evidence of a grow-

ing emphasis on modernising management accounting practice to reflect current developments in organisation structures and management philosophies, covering such diverse topics as use of activity-based information (Innes, 1998), decision-support systems (Sutcliffe, 1998) and product costing in an AMT environment (Schmidt, 1998).

Despite these developments, surveys of management accounting practices worldwide have shown a relatively low incidence of adoption of new techniques. Bromwich and Bhimani (1994) reported that, despite a high level of interest ABC and its variants, the take up of ABC in the USA and the UK has been slow. They also suggested that the existence of a number of documented cases of decisions either not to use ABC or to abandon its use altogether is indicative of doubts about its usefulness. Surveys in the UK (Drury, Braund, Osborne and Tayles, 1993) and in Ireland (Clarke, 1992 and 1996; O'Dea and Clarke, 1994) found that, although a high level of interest in new techniques was expressed, the actual take-up of these techniques was very low.

Although there is some disagreement regarding the scale of change that is needed to address the criticisms of management accounting (Bromwich and Bhimani, 1989), there is a general recognition of an urgent need to develop a better understanding of the role of management accounting information in a rapidly changing environment. Against this background, the current study sought to address a number of research questions.

EMPIRICAL WORK

Research Questions

The overall objective of the study was to examine the usage of management accounting information across a broad range of organisations in Ireland. The research questions addressed below focus on the relative usage of traditional and 'new' techniques, which were identified as being prominent in current management accounting literature. Specific research questions were designed to examine the usage levels of these techniques and to selectively probe wherever the findings appeared to be noteworthy in the light of expectations created by contemporary literature. The specific research questions can be set out as follows:

Question 1

What is the extent of usage of 'traditional' management accounting techniques, and where there is low reported usage, what are the reasons for this?

Question 2

What is the extent of usage of 'new' techniques, and where there is high reported usage, what are the reasons for this?

Question 3

Are there any significant differences between Irish indigenous companies and multinational subsidiaries in relation to usage of either traditional or new techniques?

Question 4

Are there any significant differences between large and small companies in relation to usage of either traditional or new techniques?

Research Method

A survey questionnaire was sent by post to 332 management accountants. The questionnaire was pilot tested using a small group comprised of two practising management accountants and six managers drawn from production and sales departments¹. Subject to minor amendments, this procedure confirmed that the questionnaire was clear and unambiguous. The target group was selected from the CIMA Republic of Ireland list of members. Selection included all companies likely to have a production and/or sales function and excluded service organisations. Only one person from each organisation was selected. Questionnaires were anonymous and respondents were requested to return completed questionnaires directly to the researchers in a prepaid envelope. Reminders were sent two weeks after the initial mailing. Usable responses were obtained from 108 respondents. This represents a response rate of 32.5 per cent, which is reasonable for a survey of this nature. A comparison of early and late responses showed no evidence of non-response bias. Descriptive details of respondents' organisations are shown in **Table 1**.

Table 1: Descriptive Details of Survey Respondents' Organisations

		n	%
Employer Organisation :	Irish Indigenous	43	39.8
	Multinational Subsidiary	65	60.2
	TOTAL	108	100
Production Function :	Yes	91	84.3
	No	16	14.8
	Missing	1	0.9
	TOTAL	108	100
Sales Function :	Yes	78	72.2
	No	27	25.0
	Missing	3	2.8
	TOTAL	108	100
Total Employees :	Less than 100	32	29.6
	100 - 250	34	31.5
	251 - 500	25	23.1
	501 - 1,000	10	9.3
	1,001 - 2,000	5	4.6
	Greater than 2,000	2	1.9
	TOTAL	108	100
Sales Turnover :	Less than £5m	8	7.4
	£5m - £25m	40	37.0
	£26m - £50m	19	17.6
	£51m - £100m	15	13.9
	£101m - £250m	15	13.9
	Greater than £250m	11	10.2
	TOTAL	108	100

Questionnaires requested a combination of quantitative and qualitative information. Quantified data, which emerged from the use of rating scales, were analysed using SPSS and provided an initial indication of general trends and some apparent inconsistencies in the data. The inclu-

sion of a number of open-ended questions provided qualitative data, and an opportunity to explore these emerging trends in greater detail.

Results

Results are reported for each of the research questions set out earlier.

Question 1

What is the extent of usage of 'traditional' management accounting techniques, and where there is low reported usage, what are the reasons for this?

The survey questionnaire included a list of ten well known techniques which have been prominent in management accounting textbooks for many years. Respondents were asked to indicate the extent to which each is used to provide information to management. The findings are summarised in **Table 2**.

Table 2: Usage of 'Traditional' Management Accounting Techniques

'To what extent is each of the following techniques used in the provision of information to management?'

(Scored: 5=Very frequently; 4=Often; 3=Sometimes;
2=Rarely; 1=Never)

	Mean Score (n=106)
Budgets	4.54
Variance Analysis	4.08
Standard Costing	3.85
ROI	3.34
Volume-based Overhead Absorption	3.20
DCF	3.06
Marginal Costing	2.98
Cost-plus Pricing	2.97
Flexible Budgets	2.93
Breakeven Analysis	2.63

High reported usage of budgeting, standard costing and variance analysis was as expected, given the results of previous research. The low reported usage of breakeven analysis was surprising, however, and the relatively low usage of flexible budgets seems inconsistent with the widespread reported usage of variance analysis. The relatively high reported usage of volume-based overhead absorption methods was also noteworthy, given the criticisms of these approaches over the last decade, and the relatively less frequent use of academically respectable techniques such as DCF and marginal costing. Frequency analysis indicated that over 50 per cent of respondents reported usage of volume-based overhead absorption methods either very frequently or often.

Respondents were asked to provide brief reasons in each case where one of the 'traditional' techniques listed in **Table 2** was perceived as being used either rarely or never. Responses were analysed with particular focus on those techniques where a mean score of less than three was reported. A summary of the reasons given for low perceived usage is shown in Appendix A. Despite some limitations necessarily imposed by the use of a survey questionnaire, these responses provided some useful insights and these are considered further in the Discussion section.

Question 2

What is the extent of usage of 'new' techniques, and where there is high reported usage, what are the reasons for this?

The survey questionnaire also included a list of ten 'new' techniques and approaches which have emerged in relatively recent times, and respondents were asked to indicate the extent to which each is used to provide information to management. The findings are summarised in **Table 3**.

As expected, mean scores for these 'new' techniques are generally lower than those reported for traditional techniques. A striking feature of the findings is the extensive use of non-financial performance measures. Almost 50 per cent of respondents reported use of such measures either very frequently or often. These findings appear inconsistent with low perceived usage of the balanced scorecard, which ranked last on the list of new techniques. Frequency analysis indicated that 80 per cent of respondents never use the balanced scorecard and a further 12 per cent use it only rarely.

Table 3: Usage of 'New' Management Accounting Techniques

<p><i>'To what extent is each of the following techniques used in the provision of information to management?'</i></p> <p>(Scored 5=Very frequently; 4=Often; 3=Sometimes; 2=Rarely; 1=Never)</p>	
	Mean Score (<i>n=106</i>)
Non-financial Performance Measures	3.42
Customer Profitability Analysis	3.30
Benchmarking	2.68
Quality Cost Analysis	2.35
Distribution Channel Profitability Analysis	2.07
Activity Based Costing	2.00
Target Costing	1.98
Activity Based Cost Management	1.87
Lifecycle Costing	1.41
The Balanced Scorecard	1.34

Based on the limited amount of previous findings available, low usage of the 'new' techniques was expected. Respondents were therefore asked to give reasons in each case where perceived usage was high, i.e., either very frequently or often. These comments were analysed, with particular focus on those techniques with a mean score higher than two in **Table 3**, and a summary of comments is presented in Appendix B. The comments reflect a trend towards a sharper focus on key performance indicators in the setting of targets and the monitoring of performance. A striking feature of the comments was the extent to which they mirrored recent literature in setting out the advantages of the 'new' techniques over traditional management accounting techniques.

Question 3

Are there any significant differences between Irish indigenous companies and multinational subsidiaries in relation to usage of either traditional or new techniques?

A comparison of mean scores for each of the traditional and new techniques highlighted areas of notable differences between Irish indigenous companies and multinational subsidiaries. Significant differences were found in the usage of both traditional and new techniques. Mean scores

reported in **Table 4** indicate a higher usage of most techniques under both headings by multinational companies, and in a number of cases Mann Whitney U test results showed these differences to be statistically significant. Most notably, the traditional techniques of budgeting, standard costing and discounted cash flow (DCF) achieved significantly higher mean scores for multinational companies, while the new techniques of activity based cost management (ABCM), life cycle costing, benchmarking and non-financial performance measures also achieved significantly higher mean scores for the multinational respondents. Customer profitability analysis was the only technique under either traditional or new headings to show a large difference in favour of Irish companies, narrowly missing statistical significance at the 10 per cent level.

Table 4: Usage of ‘Traditional’ and ‘New’ Management Accounting Techniques — Differences Based on Respondent Company Status

‘To what extent is each of the following techniques used in the provision of information to management?’

(Scored 5=Very frequently; 4=Often; 3=Sometimes; 2=Rarely; 1=Never)

	All Respondents (n=108)	Irish Company (n=43)	Multi- national (n=65)
Technique	Overall Mean	Mean Score	Mean Score
(‘Traditional’ techniques)			
Budgets	4.54	4.30	4.70***
Variance Analysis	4.08	3.90	4.20
Standard Costing	3.85	3.37	4.17***
ROI	3.34	3.19	3.44
Volume-based O/H Abs.	3.20	2.92	3.38
DCF	3.06	2.77	3.25*
Marginal Costing	2.98	3.02	2.95
Cost-plus Pricing	2.97	3.20	2.83
Flexible Budgets	2.93	2.75	3.05
Breakeven Analysis	2.63	2.71	2.57

('New' techniques)			
Non-financial Perf. Meas.	3.42	3.15	3.60*
Customer Profitability Analysis	3.30	3.58	3.11
Benchmarking	2.68	2.38	2.87*
Qual. Cost Analysis	2.35	2.28	2.39
Distribution Channel Profitability Analysis	2.07	1.90	2.19
ABC	2.00	1.85	2.10
Target Costing	1.98	2.00	1.97
ABCM	1.87	1.58	2.05**
Lifecycle Costing	1.41	1.16	1.57**
Balanced Scorecard	1.34	1.25	1.40
Mann Whitney U test significance levels : * = Significant at the .10 level			
** = Significant at the .05 level			
*** = Significant at the .01 level			

Question 4

Are there any significant differences between large and small companies in relation to usage of either traditional or new techniques?

For the purposes of this question, two alternative size criteria were used (applied at the level of the company participating in the study), i.e., annual turnover and number of employees. Data relating to both criteria were supplied in bands (see **Table 1**), and the size criterion was determined for each using the median band. This resulted in large companies being defined as >£25m using the turnover criterion and >250 employees using the employee criterion. Mean scores were compared for usage of all traditional and new techniques, using the Mann Whitney U test, and a summary of results is presented in **Table 5**.

In general, the findings provide convincing evidence of greater usage of traditional and new techniques by larger companies. Only two of the traditional techniques (cost-plus pricing and breakeven analysis) and two of the new techniques (non-financial performance measures and customer profitability analysis) failed to achieve statistical significance using either of the size criteria. Using both size criteria simultaneously, the difference achieved statistical significance for four of the traditional techniques (variance analysis, standard costing, volume based overhead absorption and DCF) and three of the new techniques (benchmarking, ABC and ABCM)².

Table 5: Usage of 'Traditional' and 'New' Management Accounting Techniques — Differences Based on Respondent Company Size

		'To what extent is each of the following techniques used in the provision of information to management?'			
		(Scored: 5=Very frequently; 4=Often; 3=Sometimes; 2=Rarely; 1=Never)			
Technique	All Respondents	Size based on Annual Sales Turnover		Size based on Number of Employees	
		=<£25m n=48	>£25m n=60	=<250 n=66	>250 n=42
('Traditional' techniques)	Mean	Mean	Mean	Mean	Mean
Budgets	4.54	4.28	4.75***	4.48	4.64
Variance Analysis	4.08	3.79	4.32*	3.88	4.41**
Standard Costing	3.85	3.26	4.30***	3.41	4.52***
ROI	3.34	3.00	3.60*	3.17	3.60
Volume-based O/H Abs.	3.20	2.87	3.47*	2.94	3.63**
DCF	3.06	2.38	3.58***	2.69	3.62***
Marginal Costing	2.98	2.72	3.19*	2.84	3.20
Cost-plus Pricing	2.97	3.12	2.85	3.12	2.73
Flexible Budgets	2.93	2.61	3.19**	2.75	3.23
Breakeven Analysis	2.63	2.59	2.66	2.61	2.66

[TABLE 5 CONT'D]

Technique (‘New’ techniques)	All Respondents		Size based on Annual Sales Turnover		Size based on Number of Employees			
	=<£25m n=48		>£25m n=60		=<250 n=66		>250 n=42	
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	
Non-financial Perf. Meas.	3.42	3.30	3.51	3.35	3.51	3.35	3.51	
Customer P.A.	3.30	3.24	3.35	3.27	3.35	3.35	3.35	
Benchmarking	2.68	2.31	2.98**	2.47	3.05**	3.05**	3.05**	
Qual. Cost Analysis	2.35	2.11	2.53	2.13	2.13	2.13	2.71**	
Distribution Channel P.A.	2.07	1.70	2.37**	1.92	2.33	2.33	2.33	
ABC	2.00	1.60	2.31***	1.79	2.32**	2.32**	2.32**	
Target Costing	1.98	1.88	2.05	1.79	2.30*	2.30*	2.30*	
ABCM	1.87	1.53	2.14**	1.68	2.18**	2.18**	2.18**	
Lifecycle Costing	1.41	1.22	1.58**	1.42	1.40	1.40	1.40	
Balanced Scorecard	1.34	1.11	1.52**	1.25	1.49	1.49	1.49	

Mann Whitney U test significance levels: * = Significant at the .10 level

** = Significant at the .05 level

*** = Significant at the .01 level

DISCUSSION

The study provides some noteworthy findings regarding perceptions of management accountants of the usage of management accounting information in their organisations. The discussion which follows focuses initially on broad overall issues emerging from the findings and then highlights some specific matters and apparent contradictions arising from a detailed consideration of the findings for individual techniques.

Integration of New Techniques

The findings suggest that where new techniques are being adopted it is by way of an integrative process, whereby new methods of analysing and presenting information are gradually introduced to supplement existing practices. There is little evidence of abandonment of traditional techniques on the introduction of new ones. Participating companies who make greatest use of traditional techniques (i.e., multinational and large companies) also recorded the highest scores for usage of the new techniques.

The study also provides evidence that, as far as formal techniques are concerned, management accounting systems are still dominated by traditional practices which many authors (e.g., Bromwich and Bhimani, 1994; Drury et al., 1993; Johnson and Kaplan, 1987) have associated with deficiencies such as inaccurate product costings, short-termism in performance evaluation, domination of financial accounting and failure to promote the company's strategy. It is simplistic, however, to assume that these deficiencies can be effectively addressed by the replacement of traditional techniques with new ones, as implied in some of the literature. There is evidence in both the quantitative and qualitative data collected for this study of an awareness of the strengths and weaknesses of both groups of techniques, and of a selective adoption of newer methods where deemed appropriate. There is also an implied suggestion that information produced through the use of traditional techniques is being tailored to meet the needs of users. The extent to which criticisms are being addressed cannot therefore be ascertained from a review of the techniques in use. It is also important to consider how the resulting information is used and adapted to meet the needs of users.

Differences Based on Company Ownership and Size

Table 1 indicates that management accountants who participated in the study represent a broad variety of organisations in terms of company ownership (i.e., whether it is an Irish indigenous company or a multinational subsidiary) and size (in terms of annual turnover and number of employees). This provided an opportunity to investigate differences in the pattern of usage of the techniques covered by the study. Results reported in **Tables 4** and **5** indicate generally higher usage levels for multinational and large companies, and that in many cases the differences were statistically significant.

These findings were very much in accordance with prior expectations. Multinational and large organisations are likely to have broader exposure to the waves of criticism levelled against traditional management accounting practices and have a greater awareness of the substantial benefits of the new ideas and techniques claimed by their proponents in the international literature. It also seems likely that, given the greater breadth and complexity of their operations, these organisations are more inclined to become disillusioned with what has been described as narrow, inflexible and inwardly focused management accounting systems. As a consequence, they may attempt to broaden and improve their information systems through the application of new thinking and ideas. Finally, these organisations are more likely to be in a position to finance the introduction of new systems and the overhaul of existing ones. The introduction of more sophisticated costing systems and more broadly based systems of performance evaluation have been shown to be time consuming and costly exercises, the benefits of which can be uncertain and less immediate than the cost. Multinationals and other larger organisations are better placed to spread this cost and risk. The findings in this area underline the need to recognise the importance of characteristics such as ownership and size when assessing the quality of a company's management accounting system and the potential benefits to be derived from the introduction of new techniques.

Low Usage of New Techniques

Despite the stated advantages of the new techniques presented in the management accounting literature, a striking feature of the findings was the generally low usage of those techniques relative to traditional meth-

ods. For example, only half of the new techniques covered by the study achieved an average score of greater than two (which corresponds to 'rarely' on the rating scale). Usage was particularly low among small companies. For example, of the companies reporting annual turnover of £25 million or less, a high percentage of respondents never use a balanced scorecard (81 per cent), lifecycle costing (79 per cent), ABCM (58 per cent), target costing (48 per cent) or ABC (60 per cent). For this category of companies, only two of the new techniques (non-financial performance measures and customer profitability analysis) achieved a mean score greater than the least popular of the traditional techniques (breakeven analysis).

Results for the full sample of respondents indicated generally higher usage levels for traditional techniques than for newer methods. It was particularly noticeable that the highest usage of new techniques tended to be associated with the highest usage of traditional methods, thus suggesting that the main role for many of the newer techniques may be that of supplementing rather than replacing traditional methods.

With regard to the specific techniques covered by the study, some of the detailed findings are worthy of comment and are included below. These are singled out for comment, either because of some noteworthy aspect of the quantitative and qualitative data or because of some apparent inconsistency in the findings.

Customer Profitability Analysis and ABC

Customer profitability analysis is a relatively new but important topic in management accounting. It is usually included in textbooks as one of the evolving applications of activity-based information. The needs of different customers can vary significantly and, in their efforts to retain existing customers and attract new ones, companies can be drawn into providing widely different levels of service. Each of these service levels has associated costs which traditional cost systems rarely recognise. One would expect that companies signalling significant use of customer profitability analysis would require an activity-based information system to provide the necessary data to support a more accurate and detailed calculation of the cost of selling to individual customers.

The current study reveals that, in the sample studied, customer profitability analysis is a widely used technique, with 45 per cent of respondents indicating that they use it very frequently or often, and another 26 per cent revealing that they use it sometimes. This appears inconsistent with the relatively low usage of activity-based information, possibly suggesting that companies indicating a usage of customer profitability analysis do not undertake a rigorous calculation of all the costs associated with servicing a particular customer. Such companies may simply be defining customer profitability as gross profit per customer, or contribution per customer, or gross profit less direct selling expenses per customer.

It is also interesting to note the finding that Irish indigenous companies make greater use of customer profitability analysis than do multinationals. This is out of pattern with the general trend which shows multinational companies making greater use of both traditional and new techniques than Irish indigenous companies.

Respondents were asked to indicate why they made significant use of customer profitability analysis. The importance of this technique was highlighted by an observation from one respondent that '80 per cent of profit comes from 20 per cent of our customer base'. Other reasons offered were that it is used as a basis for price increases and discount negotiations, and that it highlights the costs of getting and servicing a particular customer in various parts of the world.

Non-financial Measures and the Balanced Scorecard

Of the ten 'new' management accounting techniques listed in the questionnaire, non-financial performance measures emerged with the highest mean score, reflecting the fact that almost 50 per cent of respondents indicated use of such measures very frequently or often. It is also noteworthy that multinational companies were significantly higher users of non-financial performance measures than indigenous companies. The following is a summary of the more interesting comments:

- 'manufacturing is best controlled by self-enabled operators using non-financial measures'

- 'non-financial performance measures tend to be more operationally relevant to non-management staff and are drivers of performance as opposed to results of performance'
- 'useful for strategic decision making'.

It is surprising that, while the item 'non-financial performance measures' received the highest mean score for usage of 'new' techniques, the balanced scorecard received the lowest. In fact over 90 per cent of respondents indicated that they rarely or never use the balanced scorecard. It therefore seems likely that many organisations may have an uncoordinated set of non-financial performance measures which have been gradually developed over time in a somewhat informal manner. The balanced scorecard requires a more formal framework for performance measurement, focusing on the key 'strategic' performance areas which are crucial to long-term success, such as financial performance, operating efficiency, customer satisfaction, employee performance, innovation/change and community/environmental issues. Despite the wide publicity given to the balanced scorecard over the past five years, there are some companies which have not yet heard of its existence (as evidenced by question marks appearing on respondents' replies). Even where there is an awareness of the balanced scorecard, it may not have been adopted for a variety of reasons. Companies may not be willing to devote the time and energy to developing a scorecard, and the payoff from having a scorecard may be difficult to measure. The installation of a scorecard requires agreement among top management on the business strategy of the organisation and, in such situations, hidden disagreements can surface when an abstract strategy is put under the microscope. In addition, the installation of a new measurement system can be resisted by both management and employees who may feel uncomfortable with a change in the status quo.

Flexible Budgets and Variance Analysis

Since some costs vary with activities, the literature suggests that the original budget should be adjusted (flexed) to the actual level of activity to facilitate meaningful variance analysis for control and performance evaluation purposes. Surprisingly, the Nulty (1992) and Drury et al. (1993) surveys reveal that approximately 40 per cent of respondents used flexible budgets. This figure is consistent with the findings of the

current study and highlights the inconsistency between relatively high usage of variance analysis and relatively low usage of flexible budgets.

It seems clear from the reasons given for low usage of flexible budgets that a number of respondents view such budgets from a purely planning perspective, and many appear to misunderstand the concept of a flexible budget. This is apparent from respondents' comments regarding low usage of flexible budgets, such as the following:

- 'rolling budgets are updated quarterly'
- 'group policy dictates that a fixed budget be set once a year and revised once only'
- 'too difficult to report to non-financial departments'
- 'forecasts are prepared regularly, but the minimum target that managers must deliver on is the budget. Flexible budgets remove accountability and can hide problems'.

Several comments reveal that flexible budgeting is not used because of lack of demand from senior management, because it is deemed inappropriate and because it is too time consuming. Drury et al. (1993) suggest the possibility that even though flexible budgets are not formally and routinely prepared, the ideas of flexible budgeting may still be employed and taken into account when comparing actual with budgeted performance.

Volume-based Overhead Absorption and ABC

Over the past ten years there has been continuous criticism of traditional overhead absorption methods. It is now widely recognised that a significant amount of overhead cost is driven, not by production volume, but by the number of activities involved (e.g., number of set-ups). Despite this, the current study reveals a relatively high usage of volume-based overhead absorption methods, compared with a relatively low usage of ABC. This finding is in line with those of Clarke (1996) and Drury et al. (1993).

Despite the high profile of ABC since its introduction, it has not had a major impact globally. While ABC is being implemented by a growing number of companies, the figures for its uptake are relatively low. The current study produces a figure of 13 per cent of respondents indicating that they use ABC very frequently or often. Some of the reasons given

for the usage of activity-based approaches were: they accurately reflect the costs associated with a product or customer; they allow decisions to be made on loss-making product lines; and, in one respondent's words, they are 'believable and transparent'.

The literature suggests many reasons why ABC is not more widely used in practice. ABC is not necessarily appropriate for all companies. Such systems are more likely to be beneficial where companies are operating in a highly competitive environment, have a high proportion of overhead costs and high product diversity. ABC is costly to implement in terms of time, software and training, and the financial benefits are difficult to quantify. Behavioural issues, such as staff resistance to change and lack of senior management commitment, can be impediments to the introduction of ABC.

Breakeven Analysis

The findings on the level of usage of breakeven analysis are also noteworthy. Only 22 per cent of respondents reported using it frequently or often, while 47 per cent indicated that they rarely or never use it. These usage levels are well below prior expectations (based on previous findings). For example, in an earlier study conducted in Ireland, Clarke (1996) reported that 82 per cent of responding companies use cost-volume-profit analysis. An examination of frequencies in the current study revealed an identical figure of 82 per cent for companies using breakeven analysis. The use of a frequency rating scale, however, provided important additional information and showed that the majority of those users are in the 'rarely' or 'sometimes' categories, resulting in breakeven analysis achieving the lowest average score of all ten traditional methods included in the study.

Respondents were asked to explain low levels of usage of breakeven analysis. The reasons varied, but the following is a selection of the most interesting comments:

- 'the company's sales are driven by the needs of a small but very influential customer base, and sometimes products are produced to satisfy these customers in small runs regardless of their viability'
- 'too many product lines'
- 'more focus on product line profitability rather than on individual products'.

SUMMARY AND CONCLUSION

The key findings regarding specific management accounting practices in participating companies can be summarised as follows:

- With regard to traditional management accounting techniques, there is relatively low usage of breakeven analysis and flexible budgets, while there is relatively high usage of volume-based overhead absorption methods despite recent criticisms
- Mean scores for the usage of 'new' techniques are generally lower than those reported for traditional techniques. Usage was particularly low among small companies
- With regard to the adoption of 'new' management accounting techniques, non-financial measures are used either very frequently or often by 50 per cent of respondents. Surprisingly, the balanced scorecard received the lowest mean score, with 90 per cent of respondents rarely or never using it. The reported wide usage of customer profitability analysis is inconsistent with the generally low level of activity-based techniques
- In terms of differences between indigenous Irish companies and multinationals, the latter, in general, make greater use of 'new' techniques while continuing to place higher reliance on traditional accounting methods. One significant exception to this is that indigenous Irish companies make greater use of customer profitability analysis than do multinationals
- With regard to company ownership and size, there is generally higher usage of both traditional and 'new' techniques by multinational and large companies.

The findings should be considered in the light of particular strengths and weaknesses of the study. Use of a postal survey imposes a major restriction in terms of the nature and volume of questions. In particular, it does not facilitate follow-up questions to explore potentially interesting areas or apparently inconsistent responses, and the possibility of inconsistent interpretation of questions by respondents can never be totally ruled out. Although the use of frequency rating scales represents an improvement on previous studies in an Irish setting which used simple yes/no responses, a possible complication exists in the interpretation of responses. Some techniques, once adopted, could be expected to be used every period (e.g., overhead absorption, variance analysis),

whereas others may only be required from time to time (e.g., DCF, breakeven analysis). An element of ambiguity therefore exists in the interpretation of responses. A further consideration is the fact that only preparers were surveyed, and the possibility of data distortion from respondent bias must therefore be recognised. The possible exposure to respondent bias arising from this design was recognised from the outset. The research was not intended to seek an impartial evaluation of the accounting information system, but rather to record purely the views of information preparers as an essential first step in the establishment of a framework for further investigation. It should also be noted that, although the findings contain much useful information about a broad range of companies, they are not strictly generalisable across a wider population.

A particular strength of the study is that the participants are all professionally qualified management accountants. A reasonable level of understanding of traditional management accounting practices and the more prominent 'new' techniques could therefore be assumed. A further notable strength of the study was the use of rating scales for a number of questions. This overcame a weakness of earlier studies which simply reported whether or not specific techniques were used, without any reference to the important question of frequency of use. The survey questionnaire also included a suitable blend of open and closed questions and succeeded in encouraging many respondents to volunteer useful and insightful information.

Three final conclusions emerge from the findings and may be helpful in guiding future research effort. Firstly, the fact that new techniques are most prevalent in companies reporting highest usage levels of traditional techniques suggests that the key role for new techniques may be in supplementing, as opposed to replacing, the older techniques. This should be a prominent consideration in any attempt to evaluate those techniques or interpret research findings. Secondly, areas of apparent conflict, where the findings appeared to be at variance with one another or with conventional wisdom, offer opportunities for researchers to gain a deeper understanding of the practice of management accounting. To achieve this, a combination of research methods is required together with a rejection of the normative type of reasoning which has dominated much of the management accounting literature. Finally, the emergence of significant differences based on company ownership and size sug-

gests a high degree of tailoring of management accounting systems to suit particular circumstances. Research which explicitly recognises these circumstances and their implications is likely to offer greatest potential for providing useful insights into current management accounting practice.

NOTES

¹ A second phase of the study (which is not reported in this paper) was planned to include managers. It was therefore deemed desirable from the outset to use a questionnaire which was clear and unambiguous to both accountants and managers.

² Using both size criteria simultaneously, separate analyses were carried out for Irish and multinational companies. In both cases, results were very similar to those obtained using the overall sample, indicating that size and ownership effects were independent of each other.

APPENDIX A

'Traditional' Techniques Perceived to Have Relatively Low Usage — Perceived Reasons for Low Usage

Break-even Analysis

- ‘Not relevant to business.’
- ‘Too many product lines.’
- ‘Management does not view this technique as important.’
- ‘Historically it has not been used internally and is not required by the group.’
- ‘Product lines fairly static with little change in price structures.’
- ‘Non-quantifiable decision criteria more important.’
- ‘The company’s sales are driven by the needs of a small but very influential customer base, and sometimes products are produced to satisfy these customers in small runs regardless of their viability.’
- ‘More focus on product line profitability rather than on individual products.’

Flexible Budgets

- ‘Generally no major change in activity within a year.’
- ‘Volumes do not move that significantly.’
- ‘Too difficult to report to non-financial departments.’
- ‘Regular re-forecasting is carried out.’
- ‘One budget per year prepared.’
- ‘Company produces a fairly narrow range of products and has very high fixed costs. Flexible budgets would be of little value.’

Cost-plus Pricing

- ‘Marketing compile quotes without accounting involvement.’
- ‘Pricing based on market segment fit.’
- ‘Pricing set at head office.’
- ‘Prices negotiated with customers depending on their importance.’
- ‘Sales prices are what the market will bear.’
- ‘Prices are set based on tax incentives in Ireland not cost.’

Marginal Costing

- ‘Historically not required by group.’
- ‘Most of our overheads are treated as fixed costs.’
- ‘Use full standard costing.’
- ‘Existing reporting is adequate.’
- ‘Not sustainable in working with long-term customers.’
- ‘Data required not available.’
- ‘We normally use absorption costing rather than marginal. However, we do use marginal costing in *ad hoc* studies or on not-so-profitable business.’

APPENDIX B

‘New’ Techniques Perceived to Have Relatively High Usage — Perceived Reasons for High Usage

Non-financial Performance Measures

‘These are considered critical as a measure of customer satisfaction and operating performance (e.g., order fill rate, trend in levels of complaints, product returns, orders per account).’

‘Are better understood and have more widespread acceptance.’

‘Unsure as to why they are needed. They are dictated to us by our European headquarters.’

‘Manufacturing is best controlled by self-enabled operators using non-financial measures.’

‘Measures are used to drive process improvement in many areas.’

‘Useful for strategic decision making.’

‘Drivers of performance as opposed to results of performance.’

Customer Profitability Analysis

‘It is important to identify and nurture key customers (80 per cent of profit from 20 per cent of customer base).’

‘To decide customer priority.’

‘Useful for pricing and discount negotiations.’

‘In times of shortage the least profitable customers are not supplied.’

‘Focuses attention on key accounts and helps define strategy.’

‘Highlights the costs of getting and servicing a particular customer in various parts of the world.’

‘To assess benefits of dealing with small volume customers.’

‘Indicates where to concentrate in the fight to keep market share.’

‘Our business has a high volume of small and large customers. It is essential to be aware of where profits come from.’

Benchmarking

‘Need to assess against competition in highly competitive environment.’

‘Introduced as part of business re-engineering — we have certain measurements to maintain.’

‘To drive continuous improvement.’

‘Used by group to indicate inefficiencies in all subsidiaries and to bring low-performing subsidiaries up to the performance of the best.’

Quality Cost Analysis

‘Cost of quality analysis is looked on as an area of opportunity for cost reduction.’

‘The trend year on year indicates level of improvement.’

‘ISO 9000 requirement.’

‘Quality is important in the food industry.’

‘Quality is fundamental in a pharmaceutical business.’

‘A 6 sigma approach has been adopted by the corporation — leads everything now. Significant resources are being assigned.’

Distribution Channel Profitability Analysis

‘Focuses attention on key channels and helps to find strategy for development.’

‘Distribution channel profitability data is critical to the company.’

‘We group our customers according to globally used channels for profitability.’

Activity Based Costing

‘It accurately reflects the costs associated with a product or customers.’

‘It allows us to make decisions on loss-making product lines.’

‘It is believable and transparent.’

‘ABC technique is used for planning and customer quotations.’

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