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An international comparison of strategic management accounting practices

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Following a consideration of what accounting practices may comprise strategic management accounting (SMA), the results of a questionnaire survey investigating the incidence and perceived merit of 12 SMA practices are reported. The survey sample comprises large companies in New Zealand, the United Kingdom and the United States. There is a wide range of application rates for the 12 practices appraised; competitor accounting and strategic pricing are the most widely-used. Most of the SMA practices appraised are not widely used. However, based on the perceptions of the benefits from adopting such practices, the potential for greater use exists in all countries examined. Cross-country comparisons highlight fairly similar levels of SMA usage. However, when controlling for company size, there is a suggestion that some practices are used relatively more in N.Z. and relatively less in the U.K. and U.S. There appears to be negligible use of the term 'strategic management accounting' in organizations and practising accountants have a limited appreciation of what the term means.

Key words: strategic management accounting; international comparison.

1. Introduction

The last few years have seen a growing interest in strategic management accounting (SMA). Casual observation of changes in accounting curricula suggest that courses of study entitled 'Strategic Management Accounting' are becoming commonplace in tertiary and professional management accounting education syllabi. A journal issue was dedicated to SMA (*Management Accounting Research*, 1996), and there is a growing number of books that include 'strategic management accounting' in their title (Ratnatunga *et al.*, 1993; Moores and Booth, 1994; Smith, 1997).[1] Despite

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[1] Variations in wording used to identify the theme of SMA are also in evidence. Examples include Ryan's (1995) work entitled '*Strategic Accounting for Management*', Wilson's (1997) book entitled '*Strategic Cost Management*' and Morse *et al.*'s (1996) book '*Management Accounting: A Strategic Approach*'. For the purposes of this paper, terms such as 'strategic accounting for management', 'strategic cost management', and 'strategic cost analysis' are viewed as broadly synonymous with 'strategic management accounting'.

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these developments, SMA has received little attention beyond the confines of conceptual consideration. Lord (1996) and Tomkins and Carr (1996*a*) in fact question whether much empirical work concerned with SMA is taking place. There has been a growth in surveys of conventional management accounting practice (Drury and Tayles, 1995), yet minimal attention has been directed towards determining the incidence of SMA usage. This apparent failing of the literature may be partially attributable to the relatively under-defined nature of SMA (Lord, 1996; Tomkins and Carr, 1996).

The study has four main objectives:

- to appraise the incidence of a variety of strategic management accounting practices;
- to compare the incidence of strategic management accounting practices across three economically advanced countries: New Zealand (N.Z.), the United Kingdom (U.K.) and the United States of America (U.S.A.);
- to assess practitioners' perceptions of the extent to which SMA practices might be helpful to their organization; and
- to appraise the extent to which the term 'strategic management accounting' is used and understood in practice.

In addition to pursuing these objectives, the study offers an original distillation of a set of SMA practices. At present such a list is not available.

The selection of the U.K., the U.S.A., and N.Z. as research sites for the study arose for several reasons. At this exploratory stage of inquiry into SMA usage, it was felt to be prudent to limit the study to English speaking countries. This avoided translation of the questionnaire used in the study. The inclusion of the U.K. and U.S. appears desirable given the size and significance of their economies. The N.Z. economy, however, is relatively small. The inclusion of N.Z. was motivated by the rapidity of change in N.Z.'s commercial environment in the recent past. The extent of the government's continuing privatization of state owned enterprises as well as local government 'commercialization' programmes provide continuing evidence of earlier claims that changes in N.Z.'s economic structure are more radical than in any other industrialized country (Spicer *et al.*, 1991). There is a general consensus that this economic rationalist progression has resulted in a highly competitive domestic economy. One might reasonably anticipate that these developments may have propelled N.Z. into the forefront of advanced organizational practice.[2]

The remainder of the paper is structured as follows. The next section provides background by considering what might be understood by the term 'strategic management accounting' and by introducing the set of strategic management accounting practices to be empirically appraised. Subsequent sections address in turn, the research method employed, the empirical results and a conclusion that discusses findings as well as the study's limitations.

2. Background

Consistent with demarcation problems confronted when attempting to itemize any

[2]In addition, it should be acknowledged that expediency was a major factor affecting the selection of research sites, as the lead author has close research links in the three countries under investigation.

related, socially-defined constructs, generating a definitive list of SMA practices is bound to be problematical. This problem is particularly apparent with respect to SMA as there is still no agreed conceptual framework outlining what constitutes SMA (Tomkins and Carr, 1996*a*). Prior to considering the specific SMA techniques appraised in this study, a discussion of what is to be understood by SMA is required. In this discussion attention will be drawn to those nuances of strategy that offer the most telling basis for distinguishing between SMA and its umbrella discipline of management accounting.

What is meant by 'strategy' and 'strategic management accounting'?

The term 'strategy' has its roots in the military literature. When used in the context of the modern organization it appears to be a particularly elusive concept. Mintzberg (1988) feels it defies a single definition. He resorts to distinct orientations, i.e. plan, pattern, position and perspective, when attempting to define strategy. Important elements of strategy's full meaning are provided by these different perspectives:

> Plan introduces the notion of intention...., pattern focuses on action,.... position introduces context,.... and perspective reminds us that strategy is nothing more than a concept.... (Mintzberg, 1988, p. 19).

A widely acknowledged aspect of strategy focuses on its juxtaposition with tactics (Anthony, 1988; Pearce and Robinson, 1991; Stahl and Grigsby, 1991). Strategy relates to the larger picture or, as Mintzberg observes, 'the important things' (1988, p. 16), whereas tactics are more concerned with the means to achieving the strategy. Tactics tend to be more concerned with matters pertaining to efficiency, while strategy tends to relate to effectiveness matters. The tactics/strategy distinction is not always clear, however, and Porter (1996) alerts us to the difference between operational effectiveness and strategy. One person's strategies can be another's tactics, i.e. what is strategic depends on one's perspective (Terreberry, 1968; Rumelt, 1979). When the time dimension is introduced, i.e. a tactical decision taken today turns out to be a source of strategic advantage tomorrow, the arbitrariness associated with classifying a managerial decision as strategic becomes particularly apparent.

One of the earliest, more general, definitions of organizational strategy was provided by Chandler. He described strategy as 'the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action, and the allocation of resources necessary for carrying out these goals' (Chandler, 1962, p. 13). Chandler's definition highlights the long-term and future-orientated notion of strategy. This theme is also noted by Zabriskie and Huellmantel (1991) who see strategy as concerned with the selection of future markets that can provide growth while operational activities are concerned with managing resources already invested in today's markets.

An alternate theme, that of competition, predominates in Porter's influential writings on strategy (Porter, 1980; 1985). He sees competitive strategy as concerned with 'creating and maintaining a competitive advantage in each and every area of business' (1980). Others highlighting the competitive context include Ohmae (1982) and Henderson (1989). Ohmae comments:

> Business strategy is all about competitive advantage. Without competitors there would be no need for strategy, for the sole purpose of strategic management is to

> enable the company to gain, as effectively as possible, a sustainable edge over its competitors..... (p. 5).

Other commentators highlight the importance of marketing and the environment when defining strategy. Stahl and Grigsby (1991) see strategy as:

> the set of managerial decisions that relates the organization to its environment, guides internal activities, and determines the long-term performance of the organization (p. 4).

Similarly, Herbert and Deresky (1987) see strategic management decisions as concerned with the selection of markets in which to compete.

While there are problems associated with defining 'strategy', problems also abound when attempting to describe the 'strategic management process'. Normative models of strategic management typically refer to a process involving: a statement of mission (Pearce, 1982), the identification of strengths, weaknesses, opportunities and threats; strategic design and implementation; and strategic feedback and control (Hax and Majluf, 1984; Hamermesh, 1986). Descriptive models of strategic management suggest that such normative models are, however, an oversimplification of reality, (Mintzberg *et al.*, 1976; Mintzberg, 1978; Quinn, 1978; Hickson, 1987). Descriptive models tend to depict strategic management not as a deliberate process but as an emergent and highly fragmented process characterized by 'muddling through'. Mintzberg *et al.* (1976) reported that most strategic decisions were interrupted by unanticipated events that altered the pace and direction of the decision.

Consistent with the breadth of interpretations placed on the word 'strategy' and the problems associated with conceiving of a strategic management process, management accounting commentators attach a range of inferences to 'SMA'. Coad notes that

> SMA is an emerging field whose boundaries are loose and, as yet, there is no unified view of what it is or how it might develop. The existing literature in the field is both disparate and disjointed (1996, p. 392).

Simmonds is generally acknowledged to be the father of SMA as he was the first to coin the term (Simmonds, 1981). He defined SMA as 'the provision and analysis of management accounting data about a business and its competitors for use in developing and monitoring the business strategy' (p. 26). He saw profits stemming not from internal efficiencies but from the firm's competitive positioning in its market.

Govindarajan and Shank (1992) approach SMA from a different perspective. They considered the role that cost information plays in four stages of strategic management, i.e. strategy formulation, strategy communication, strategy implementation and strategic control. To this they apply three themes: Value Chain Analysis; Strategic Positioning Analysis; and Cost Driver Analysis to formulate a framework concerned with the relationship between strategy and management accounting. They refer to this framework as 'Strategic Cost Management' which Shank defines as 'the managerial use of cost information explicitly directed at one or more of the four stages of the strategic management cycle' (Shank, 1989, p. 50).

Further perspectives on SMA have been offered by Bromwich (1990, 1992) and

Wilson (1995). Bromwich focuses on the final goods markets. He defines SMA as 'the provision and analysis of financial information on the firm's product markets and competitor's costs and cost structures and the monitoring of the enterprise's strategies and those of its competitors in these markets over a number of periods' (Bromwich, 1990, p.28). Wilson's commentary highlights an 'outward and forward' focus.

These contributions to the SMA literature reflect contrasting emphases. Two of the approaches (Bromwich, and Govindarajan and Shank) derive primarily from Porter's model of competitive positioning. Simmonds approach saw the strategic management accounting function as providing an assessment of competitor costs, prices and cash-flows and the reduction of this information to price-cost-volume figures. Drawing on the work of Porter as well as Buzzell and Gale (1987), and Wilson (1995) attaches importance to the product life cycle.

Much of the domain of conventional management accounting appears to be more associated with the 'tactical' than the 'strategic'. Support for this view is evident when the strategic themes that were highlighted above are considered in the context of the main domains of conventional management accounting practice. The conventional management accounting system does not tend to adopt a long-term, future-orientated stance, nor is it characterized by a marketing or competitive focus. With respect to management accounting's time frame, the financial year predominates. The budget is generally conceived in terms of 1 year and the time frame underlying the return on investment ratio is an amalgam of 1 year and historically determined balances (i.e. 1 year's profit as a percentage of the historical cost of assets). With respect to the inward/outward distinction, the conventional management accounting system's focus is primarily inwardly focused. This is not consistent with promoting a marketing awareness or an appreciation of competitor actions.

Rumelt (1979) suggests that one's perspective should be allowed to determine what is to be understood by 'strategic'. When adopting a management accounting perspective, it seems appropriate that the themes that highlight the non-strategic nature of conventional management accounting systems be adopted as criteria for identifying what constitutes a strategic management accounting practice. The management accounting practices examined in this study exhibit one or more of the following characteristics: environmental or marketing orientation; focus on competitors; and long-term, forward-looking orientation. This perspective represents a confluence of the ideas of earlier writings on SMA, e.g. Bromwich (competitor focus), Simmonds (marketing focus) and Wilson (future focus).

Strategic management accounting practices appraised

Employing the criteria developed above, 12 strategic management accounting practices have been identified. These are: attribute costing; brand value budgeting and monitoring; competitor cost assessment; competitive position monitoring; competitor appraisal based on published financial statements; life cycle costing; quality costing; strategic costing; strategic pricing; target costing; and value chain costing. It should be underlined that the criteria adopted for determining whether a management accounting practice qualifies as SMA do not relate to the proximity of the accounting practice to the needs of those managers charged with 'managing corporate strategy'. Rather, they relate to the extent to which a management accounting practice embodies strategic orientations. The practices under study have been operationalized using the definitions provided in Appendix A. Each of these practices will now be described in turn.[3]

Attribute costing. Drawing on Lancaster's (1966, 1979) theorising that products are comprised of a package of attributes which constitute commodities that appeal to consumers, Bromwich (1990) promotes the notion of viewing product attributes as cost objects. Examples of product attributes include operating performance variables, reliability and warranty arrangements, the degree of finish and trim as well as service factors such as assurance of supply and after sales service. Attributes differentiate products and the matching of a product's attributes with the tastes of consumers determines a firm's market share. The marketing orientation underlying attribute costing warrants its inclusion as an example of SMA.

Brand valuation. In light of the fact that brand valuation is a technique that can only be used in companies with branded products or services, it might be viewed as somewhat tangential to most of the other techniques appraised in this study. It appears worthy of investigation, however, as it is an accounting technique that has recently been the subject of considerable financial accounting debate (Power, 1990). When a management accounting perspective is taken on brand valuation, its potential as a measure of marketing achievements in a strongly branded company becomes apparent (Guilding and Moorhouse, 1992; Guilding and Pike, 1994). The strategic impact of the brand valuation exercise would appear to be dependent on, amongst other things, the valuation method used. Guilding and Pike (1994) found that when the valuation method employed is similar to that developed by Interbrand, strategic implications are manifest. This method involves combining projected brand earnings (an accounting-orientated measure) with a multiple derived from the brand's strength on strategic factors such as the nature of the brand's market, its position in that market and its level of marketing support. A major implication claimed for this exercise is the dialogue that it promotes between the marketing and accounting functions.

Competitor cost assessment. Competitor cost assessment is a widely-discussed SMA practice. Amongst its advocates are: Simmonds (1981); Porter (1985); Jones (1988); Bromwich (1990) and Ward (1992).[4] The significant attention commanded by competitor cost assessment may result partially from the increased incidence of technologically advanced investments. Jones (1988) provides a persuasive case that the long-term commitment associated with such investment and the implied pursuit of improved competitive position, heightens the need for awareness of competitors' costs. He outlines a systematic approach to competitor cost assessment that involves, inter alia, appraising competitors' manufacturing facilities, economies of scale, governmental relationships and technology-product design. Further to these approaches, Ward (1992) describes 'indirect sources' of competitor information. Examples of such indirect information sources include: physical observation; mutual suppliers; mutual customers; and employees (particularly ex-employees of competitors).

[3]A distinction is drawn between brand value budgeting and brand value monitoring in the Appendix and also the empirical analysis. However, for ease of exposition, these two practices have been considered under one heading in the body of the text.

[4]Guilding (1999) has found competitor accounting practices to be related to company size, competitive strategy and strategic mission.

Competitive position monitoring. Competitive position monitoring, as advocated by Simmonds (1986), represents a more holistic approach to competitor appraisal. It broadens the analysis to include appraising major competitors' sales, market share, volume, unit costs and sales. Simmonds sees the breadth of these accounting measures as providing further competitor insight than that resulting from an appraisal based simply on market share. He notes that an increase in a competitor's cost per unit may initially appear favourable. If this increase has resulted from advertising devoted to brand strength development or from investment in new product development, however, the changed cost structure may be more suggestive of the competitor securing a stronger rather than weaker competitive position.

Competitor appraisal based on published financial statements. Moon and Bates (1993) describe an approach to competitor performance appraisal which is based on published financial statement interpretation. The specific nature of the approach to data collection evident in this mode of SMA, has given rise to its separate consideration here. The significance of this specificity is underlined by the fact that, unlike the approaches already considered, published financial statement interpretation involves techniques that are familiar to traditionally-trained accountants. Moon and Bates outline an analytical framework that can be applied to a competitor's published statements as part of an appraisal of key sources of competitive advantage. This analysis can include monitoring trends in sales and profit levels as well as asset and liability movements. Moon and Bates claim that strategically significant insights can be derived from an appropriately conducted analysis of a competitor's published statements.

Life cycle costing. Life cycle costing has been the subject of several commentaries, e.g. Berliner and Brimson (1988); Shields and Young (1991); Susman (1991) and Wilson (1995). Wilson demonstrates diagrammatically the strategic implications arising from the adoption of this perspective. Rather than appraising costs on an annual basis, the relevant time frame in life cycle costing is dependent on the length of the stages in a product's life. These stages can include design, introduction, growth, maturity and decline. Commentaries on this approach to costing concur that it can counter short-termist management tendencies. The pressure stemming from a traditional accounting approach that recognises the per annum loss accumulating during the design phase of a product's life may result in premature market introduction. Management embracing the philosophy of life cycle costing, however, can be expected to recognise the importance that a thoroughly executed research and design phase carries for the product's lifetime profitability.

Quality costing. Another example of a strategically-orientated approach to costing is provided by cost of quality analysis. Product or service quality, whether perceived or real can be a source of competitive advantage. Quality costs have been classified as prevention, appraisal and failure costs (Heagy, 1991). These costs are interrelated, a fact that suggests management might monitor them as part of a policy of securing an optimal level of relativities. It is generally held that increased preventative expenditure can result in considerable savings and competitive advantage stemming from reduced failure costs (returns, rework, scrap, lost sales, etc.). The fact that lost sales appraisal requires a high degree of subjective assessment suggests that the primary benefit of this example of strategic management accounting may derive from its attention-directing role.

Strategic costing. Strategic costing is a widely-used term in much of Shank and Govindarajan's (1988, 1991, 1992, 1993) work. They believe that in order for cost analysis to support the pursuit of competitive advantage, it must explicitly consider strategic issues. Their 1988 study uses a case analysis to demonstrate the sub-optimal decision that can result from using a conventional costing approach (i.e. an analysis conducted from a 'relevant' cost, short-run perspective). Employing an analysis that considers strategic issues and draws on concepts articulated in the marketing and competitive strategy literatures (e.g. product positioning and market penetration), Shank and Govindarajan show how a preferred solution to the case can be derived.

Strategic pricing. Jones (1988) and Simmonds (1982) discuss strategic pricing in the context of case studies. The more extensive consideration is provided by Simmonds who demonstrates how sub-optimality can result from a pricing decision informed by a conventional accounting analysis based on internally-orientated, historically-based information. He claims that strategic pricing which uses competitively-orientated analysis will result in a better-informed pricing decision. Included in the factors that might be appraised in such an analysis are: competitor price reaction; price elasticity; projected market growth; and economies of scale and experience. Foster and Gupta's (1994) survey finding that accounting information's greatest potential use is perceived by marketing executives to be in connection with pricing decisions underlines the importance of separate consideration applied to this mode of SMA.

Target costing. Target costing refers to the process where a product is designed to satisfy a consumer need and a target cost is determined for the product. This target cost is subsequently strived for in order to earn a target profit level for the product. Target costing is implemented primarily during the development and design phases of the manufacturing process. Closely associated with target costing is Kaizen costing. This approach takes target costing beyond the design and development stages as it is implemented during the manufacturing phase of the product's life. Kaizen costing requires that continuing efforts are made to secure further cost savings. Recent interest in these philosophies stems from their successful implementation in Japan (Sakurai, 1989; Aalbregste, 1991; Monden and Hamada, 1991; Morgan, 1993), earlier reference to essentially the same philosophy was also made by Henry Ford (1932, pp. 146–147), however. These philosophies can be classified as strategic management accounting as they move costing away from a quest for accurate monitoring towards a costing philosophy that is forward-looking and closely aligned to a quest for competitive advantage. The external focus underlying these management philosophies becomes evident when it is recognised that they signify market-led costing rather than cost-led pricing.

Value chain costing. Shank and Govindarajan (1992) propose an approach to costing that builds on Porter's (1985) value chain analysis. This approach is referred to as 'value chain costing'. Porter argues that competitive advantage in the marketplace ultimately derives from providing better customer value for equivalent cost, or equivalent customer value for lower cost. He views the series of activities occurring between a product's design and distribution as links in a chain. From this thinking stems the value chain analysis. This concerns identifying where customer value can be enhanced or costs lowered in a firm's relevant segment of the value chain. Shank and Govindarajan believe that value chain costing provides a useful extension to conventional cost analysis. They show that management accounting's traditional concern with monitoring value-added stops short of a search for latent benefits and potential cost savings embedded in the firm's linkages with suppliers and customers. To explore such opportunities signifies a paradigm shift away from factors internal to the firm. Shank and Govindarajan also demonstrate how a value chain costing perspective can provide insights into make/buy and forward/backward integration decision-making. Hergert and Morris (1989) also propose a costing system structured around a value chain philosophy.

3. Method

Sampling procedure

These 12 SMA practices have been itemized in a questionnaire designed to elicit usage rates. A senior accounting official in large companies in N.Z., the U.K. and the U.S.A. comprised the survey sample.[5] The N.Z. sample was drawn from the Deloitte Touche Tohmatsu data base of N.Z.'s 230 largest companies: 200 public and private companies (measured by turnover); and 30 financial institutions (measured by assets). Thirteen companies where no financial accounts or a published contact address could be found were omitted, providing a final sample size of 217 companies. For the U.K., the largest 175 (in terms of turnover) companies were drawn from a comprehensive database of the largest British companies. Prior to mailing, telephone contact was made with all of these companies and 20 expressed an unwillingness to participate, resulting in a final sample size of 155. In the U.S., using asset size as a filter, the largest 937 companies were drawn from the Compact Disclosure data base. Problems were encountered identifying the correct address for 17 of these companies with the result that the final sample comprised 920 companies. The response pattern for each country is presented in Table 1.

For the N.Z. sample, two investigations for non-response bias were undertaken.

Table 1
Survey response patterns

	N.Z.	U.K.	U.S.	Total
Sample size	217	155	920	1292
First mailing respondents	82	59	87	228
Second mailing respondents	42	4	40	86
Total respondents	124	63	127	314
Unadjusted response rate (%)	57	41	14	25
Usable response rate (%)	51	38	13	23

[5]Each of the authors oversaw questionnaire administration in one of the three countries sampled. While all the questionnaires included one identical section, i.e. the questions that resulted in the data reported herein, each author slightly tailored other sections of the questionnaire in order to allow for the exploration of a range of other research issues.

Firstly, 10 of the non-respondents were contacted by phone. Four non-respondents indicated the most widely-cited 'too busy' or 'not enough time' reasons for their non-response. One non-respondent cited 'lack of interest because the practices referred to in the questionnaire are irrelevant to my organization'. This reason gives rise to a degree of concern, as other non-respondents may have had a similar view. The second test of non-response bias involved comparing data provided by 'first mailing' respondents with data provided by 'second mailing' respondents. Using a Mann–Whitney test, a statistically significant ($p < 0.05$) difference was observed for one variable. This particular variable is not implicated in the present study.

For the U.K. sample, 11 non-respondents were contacted by phone to determine the reason for their non-participation. Six non-respondents cited 'not enough time', three indicated that participation in surveys was 'against company policy' and one non-respondent indicated that he did not understand the terms in the questionnaire. Again, this final reason does give rise to a degree of concern over the potential for non-response bias.[6]

For the U.S. sample, a Mann–Whitney test comparing late versus early respondents for all 57 questions posed was conducted. A significantly different response ($p < 0.05$) has been found in the case of four questions. Only one of these questions was also included in the N.Z. and U.K. questionnaire, however. Given the number of questions posed, the threat of non-response bias does not appear to be great. Nevertheless, the potential of the collected data being biased towards the views of respondents who are positively disposed to SMA (more likely to respond), rather than those negatively disposed towards SMA (less likely to respond), should be borne in mind.

Variable measurement

SMA usage. Following the question: 'To what extent does your organization use the following practices?', the 12 SMA practices were itemized. Next to each item, a Likert scale ranging from '1' ('not at all'), to '7' ('to a great extent') was provided. Respondents could also indicate 'N.A.' if a particular practice does not apply to their organization. A glossary was included to aid interpretation of SMA terminology.

Perceived merit of SMA. Similar to the format employed to measure SMA usage, following the question: 'To what extent do you consider the following practices could be helpful to your organization?', the 12 SMA practices and the same seven-point Likert scales together with the option of 'N.A.' were provided.

Familiarity with the term 'strategic management accounting'. Two questions designed to appraise practising accountants familiarity with the term 'SMA' were also included in the questionnaire. The first question asked: 'Prior to completing this questionnaire, do you consider you had a strong appreciation of what is meant by 'strategic management accounting?'. Responses to this question were recorded on a Likert scale ranging from '1' ('zero') to '7' ('very high'). The second question asked: 'Is the term 'strategic management accounting' used in your organization?'. Responses to

[6]Data that would permit the application of the Oppenheim (1966) test for non-response bias by exploring for differences in the data provided by early and late respondents is not available for the U.K. sample.

this question were recorded on a Likert scale ranging from '1' ('never used') to '7' ('used frequently').

4. Findings

A two-tiered analysis of data collected has been made. The first level is based on the entire data set collected in the three countries, and the second is restricted to companies of a similar size. Previous work has suggested that management accounting sophistication is positively associated with firm size (Bruns and Waterhouse, 1975; Merchant, 1981). As the bulk of the N.Z. firms are smaller than the U.K. and U.S. firms sampled, failure to control for size might lead to inappropriate interpretation of results. The lower threshold of U.S.$ 250 million annual sales and the upper threshold of U.S.$ 6020 million annual sales have been adopted as the qualifying criteria for inclusion in the matched sub-sample. This followed an inspection of data which indicated that these thresholds yield an acceptable sub-sample size for each country. For the N.Z. sample, these sales cut-off points fall at the 72nd and 100th percentiles, for the U.K. sample they fall at the 1st and 62nd percentiles and for the U.S. sample, they fall at the 8th and 78th percentiles. This signifies that the matched sub-sample analysis is based on 32 N.Z. firms, 35 U.K. firms and 77 U.S. firms.

To facilitate ease of exposition, the 12 SMA practices have been classified following an exploratory factor analysis of usage rates. The principal component method of extraction with varimax rotation has been used. This procedure has yielded three factors with eigenvalues greater than one and a percentage of variance explained of 60%. Seven SMA practices loaded most heavily on the first factor (eigenvalue of 4.3). These are: 'attribute costing'; 'life cycle costing'; 'quality costing'; 'strategic costing'; 'strategic pricing'; 'target costing'; and 'value chain costing'. One apparently incongruous item appearing in this grouping is 'strategic pricing'; as the other six SMA practices all explicitly refer to 'costing'. Strategic pricing is also relatively incongruous with the other two factor analytic groupings described below, however. It may be that the glossary's definition of strategic pricing which refers to cost notions, i.e. 'economies of scale, and experience', lies behind strategic pricing's association with the six costing-related SMA practices. For the purposes of data presentation, the seven SMA practices associated with factor one will be collectively termed 'strategic costing and pricing'. 'Competitive position monitoring', 'competitor cost assessment' and 'competitor performance appraisal based on published financial statements' loaded most heavily on the second factor (eigenvalue of 1.5). These three practices will be collectively referred to as 'competitor accounting'. 'Monitoring brand values' and 'brand value budgeting' loaded most heavily on the third factor (eigenvalue of 1.4). These two SMA practices will be collectively referred to as 'brand value accounting'.

Findings relating to the usage rates of strategic costing and pricing are presented in Table 2a. The first data column in this table represents the full sample's usage rate mean scores. Consistent with the format adopted in all subsequent tables, the practices are presented in descending order of usage, with means ranging from '4.54' (strategic pricing) to '2.33' (attribute costing). The only practice scoring above the mid-point of the 'not at all/to a great extent' anchored Likert scale is strategic pricing. This suggests that the six strategic costing practices referred to in Table 2a

Table 2
Strategic costing and pricing usage means

(a)	Full sample	New Zealand	U.K.	U.S.A.	Cross-country differences: Full sample	Cross-country differences: Matched sample
Strategic pricing	4.54	4.63	4.73	4.36	–	U.S.[a]
Strategic costing	3.49	3.44	3.72	3.43	–	–
Quality costing	3.22	3.46	3.11	3.07	–	–
Target costing	3.12	3.16	2.90	3.19	–	–
Value chain costing	3.04	3.15	2.60	3.15	U.K.[b]	U.K.[c], N.Z.[d]
Life cycle costing	2.60	2.43	2.60	2.73	–	–
Attribute costing	2.33	2.54	1.91	2.37	U.K.[e]	U.K.[e]
n	*239–279*	*79–109*	*52–54*	*107–116*		
(b)						
Perceived strategic costing and pricing merit mean scores						
Strategic pricing	5.45	5.32	5.38	5.62	–	–
Strategic costing	4.91	4.86	4.94	4.93	–	–
Quality costing	4.29	4.65	3.98	4.10	N.Z.[f]	N.Z.[f]
Value chain costing	4.27	4.37	3.96	4.35	–	N.Z.[f], U.K.[g]
Target costing	3.94	3.83	3.40	4.35	U.S.[h], U.K.[i]	U.S.[j], U.K.[i]
Life cycle costing	3.58	3.38	3.58	3.76	–	–
Attribute costing	3.49	3.65	3.13	3.56	U.K.[g]	U.K.[g]
n	*219–247*	*79–95*	*52–53*	*88–98*		

Notes. All items scored on a Likert scale where "1" denotes used "not at all", and "7" denotes used 'to a great extent'.
[a]U.S.: Used significantly less in U.S. (Mann–Whitney U; $p < 0.10$).
[b]U.K.: Used significantly less in U.K. (Mann–Whitney U; $p < 0.05$).
[c]U.K.: Used significantly less in U.K. (Mann–Whitney U; $p < 0.01$).
[d]N.Z.: Used significantly more in N.Z. (Mann–Whitney U; $p < 0.05$).
[e]U.K.: Used significantly less in U.K. (Mann–Whitney U; $p < 0.10$).
[f]N.Z.: Scored significantly higher in N.Z. (Mann–Whitney U; $p < 0.05$).
[g]U.K.: Scored significantly lower in U.K. (Mann–Whitney U; $p < 0.10$).
[h]U.S.: Scored significantly higher in U.S. (Mann–Whitney U; $p < 0.01$).
[i]U.K.: Scored significantly lower in U.K. (Mann–Whitney U; $p < 0.05$).
[j]U.S.: Scored significantly higher in U.S. (Mann–Whitney U; $p < 0.05$).

have not risen above low levels of acceptance. Strategic pricing scores significantly higher than strategic costing which is the next highest ranking item (matched pairs sign test, $p < 0.01$).

Consistent with subsequent tables, the columns appearing to the right of the full sample column provide an analysis by country. Statistically significant differences between countries, both for the full sample and the sub-sample controlled for size, are highlighted in the final two columns. A systematic cross-country difference appears more likely when statistically significant differences have been noted in both the full and matched sample data columns. It should be noted, however, that differences between countries when the comparison is conducted at the full sample level may be attributable to size effects. Despite this, such cross-country differences are deemed worthy of disclosure as they are reflective of national practices, and can also provide corroboratory evidence supplementing the analysis conducted at the matched sub-sample level. From Table 2a, strong evidence suggesting the U.K. uses value chain and attribute costing less than the other two countries is apparent. There is also a suggestion that the U.S. uses strategic pricing to a relatively low degree and that N.Z. companies have a relatively high deployment of value chain costing.

Table 2b summarizes findings concerned with the perceived merit of the strategic costing and pricing practices. The similarity of the relative ranking of the seven practices across Table 2a,b is noteworthy. With the exception of 'value chain costing', which ranks marginally behind 'target costing" in Table 2a, all other practices appraised have a consistent ranking across the two tables. All practices appraised in Tables 2a and b scored significantly higher in Table 2b (two related samples sign test; $p < 0.001$), suggesting scope for further deployment of these practices. It is also noteworthy that four of the practices (strategic pricing, strategic costing, quality costing and value chain costing) averaged above the midpoint of the 'not at all' helpful/'to a large extent' helpful scale.

With respect to cross-country differences, a corollary to the U.K.'s relatively low usage rates for attribute costing and value chain costing is apparent in Table 2b's disclosure of a lower perceived merit for these practices in the U.K. It also appears that, contrary to the position in the U.S., U.K. accountants hold the benefits of target costing in relatively low esteem. Finally, N.Z. accountants appear to hold quality costing and value chain costing in higher regard than their contemporaries in the U.K. and U.S.

Table 3a presents analysis concerned with the three competitor accounting practices. From this table, it is immediately apparent that competitor accounting appears to be more developed than the strategic costing practices referred to in Table 2a. All three practices have average scores above the mid-point on the 'not at all/to a large extent' used measure. When a cross-country perspective is taken, at the matched sub-sample level it appears that N.Z. adopts two of these practices to a relatively high degree while the U.S. employs them relatively little. The importance of conducting the cross-country analysis at this sub-sample level is highlighted by findings reported in Table 3a. At the full sample level, it appears N.Z. companies tend to use 'competitor performance appraisal based on published financial statements' to a relatively low degree. The notion that this is a systematic 'country effect' is dispelled by the finding that, when the analysis is conducted at the matched sub-sample level, N.Z. companies score relatively highly with regards to use of this practice. This analysis highlights the extent to which company size is a confounding variable when attempting to appraise cross-country differences.[7]

Table 3b reveals the same ranking of the three competitor accounting practices as that appearing in Table 3a. In keeping with the relationship found between Tables 2a and b, it has been found that the perceived merit scores for all three practices are significantly higher than their usage rates (two related samples sign test; $p < 0.01$). Consistent with the findings reported in Table 3a, it appears that N.Z. accountants see relatively low merit while U.K. accountants see relatively high merit in 'competitor performance appraisal based on published financial statements'. Limited significance can be attached to this observation, however, as no significant differences are noted when the analysis is conducted at the sub-sample level.

[7]Nine of the 12 SMA practices are positively related to sales (Spearman rank order correlation; $p < 0.1$). The three practices where no association has been found are: attribute costing; quality costing; and target costing.

Table 3
Competitor accounting usage means

(a)	Full sample	New Zealand	U.K.	U.S.A.	Cross-country differences: Full sample	Cross-country differences: Matched sample
Competitive position monitoring	4.99	4.95	5.20	4.93	–	U.S.[a], N.Z.[b]
Competitor performance appraisal based on published financial statements	4.42	4.17	4.78	4.50	N.Z.[c], U.K.[d]	U.S.[e], N.Z.[f]
Competitor cost assessment	4.07	3.91	4.37	4.09	–	–
n	*278–279*	*108–109*	*54*	*115–116*		
(b)						
Perceived competitor accounting merit mean scores						
Competitive position monitoring	5.73	5.69	5.85	5.70	–	–
Competitor performance appraisal based on published financial statements	5.31	5.05	5.72	5.36	N.Z.[g], U.K.[h]	–
Competitor cost assessment	5.27	5.16	5.49	5.26	–	–
n	*256–258*	*104*	*54–55*	*97–99*		

Notes. All items scored on a Likert scale where '1' denotes 'not at all' helpful, and '7' denotes helpful 'to a great extent'.
[a]U.S.: Used significantly less in U.S. (Mann–Whitney U; $p < 0.01$).
[b]N.Z.: Used significantly more in N.Z. (Mann–Whitney U; $p < 0.01$).
[c]N.Z.: Used significantly less in N.Z. (Mann–Whitney U; $p < 0.10$).
[d]U.K.: Used significantly more in U.K. (Mann–Whitney U; $p < 0.10$).
[e]U.S.: Used significantly less in U.S. (Mann–Whitney U; $p < 0.10$).
[f]N.Z.: Used significantly more in N.Z. (Mann–Whitney U; $p < 0.05$).
[g]N.Z.: Scored significantly lower in N.Z. (Mann–Whitney U; $p < 0.05$).
[h]U.K.: Scored significantly higher in U.K. (Mann–Whitney U; $p < 0.05$).

Tables 4a and b present data concerned with brand value monitoring and budgeting. These practices are generally held to be most appropriate for strongly branded companies in the fast moving consumer goods sector (Guilding and Pike, 1994). A degree of perceived relevance (albeit low) in companies outside this sector may have caused some respondents not to indicate 'N.A.' for these items. This may have contributed to the relatively low scores reported in Table 4a and 4b. These results appear to be relatively robust as no cross-country differences, whether analyzed at the full or matched sample level, are discernible. Consistent with the practices already considered, it has again been found that the perceived merit scores are significantly above the usage rate scores (two related samples sign test; $p < 0.01$).

One final SMA aspect appraised is the familiarity of practising accountants with the term 'strategic management accounting'. Recall that this aspect has been appraised by asking two questions. The first appraises the respondent's appreciation of

Table 4
Brand value accounting usage means

(a)	Full sample	N.Z.	U.K.	U.S.A.	Significant international differences
Monitoring brand values	2.73	2.59	2.65	2.88	–
Brand value budgeting	2.32	2.16	2.50	2.35	–
n	*241–249*	*82–85*	*52*	*107–112*	
(b)					
Perceived brand value accounting merit mean scores					
Monitoring brand values	3.38	3.42	3.42	3.32	–
Brand value budgeting	3.33	3.28	3.21	3.45	–
n	*217–222*	*78–80*	*52*	*85–92*	

Notes. All items scored on a Likert scale where '1' denotes 'not at all' helpful, and '7' denotes helpful 'to a great extent'. Whether analysed at the full or matched sample level, no statistically significant cross-country differences have been found.

the term prior to completing the survey questionnaire and the second measures the extent to which the term 'strategic management accounting' is used in the respondent's organization. Findings pertaining to these two questions are presented in Table 5. It appears that 'SMA' is a rarely used term in organizations (a mean score of '1.85' on the 1–7 measurement scale) and that appreciation of the term is limited (a mean score of '3.21', i.e. well below the mid-point of the measurement scale). There is a suggestion of greater familiarity with the term in the U.K., although there is no statistically significant cross-country difference when analysing at the matched subsample level.

5. Conclusion and discussion

This study was conducted in light of our minimal understanding of the extent to

Table 5
Familiarity with term 'strategic management accounting' mean scores

	Full sample	New Zealand	U.K.	U.S.A.	Cross-country differences: Full sample	Cross-country differences: Matched sample
Appreciation of what 'SMA' means[a]	3.21	3.05	3.70	3.13	U.K.[c]	–
Term 'SMA' used in organisation[b]	1.85	1.78	1.79	1.94	–	–
n	*282–283*	*111*	*56*	*115–116*		

Notes. [a]Scored on a Likert scale where '1' denotes 'zero' appreciation, and '7' denotes 'very high' appreciation.
[b]Scored on a Likert scale where '1' denotes 'never used', and '7' denotes 'used frequently'.
[c]U.K.: scored significantly higher in U.K. (Mann–Whitney U; $p < 0.05$).

which strategic management practices are employed. Its contribution might be considered in the context of growing interest in competitor analysis (Porter, 1985; Zajac and Bazerman, 1991; Dent, 1996), as well as strategic management accounting more generally (Bromwich, 1990; Palmer, 1992; Coad, 1996; Lord, 1996; Tomkins and Carr, 1996; Wilson, 1997). In addition to investigating the extent to which SMA practices are used, perceptions of the merit of these practices have been appraised. This follows Ghoshal and Westney's (1991) empirical work on competitor analysis systems that found 'a significant gap between what was needed by the organization and what was currently being delivered by the company's competitor analysis system'. Similarly, Foster and Gupta (1994) document a gap between how marketing managers perceive the potential role of accounting information in supporting decision making and current practice.

Four main findings can be distilled from the study. Firstly, the SMA practices appraised are experiencing wide-ranging degrees of application. Competitor accounting and strategic pricing appear to be the most popular SMA practices. The strength of this claim with respect to competitor accounting is underlined by the fact that all three dimensions of competitor accounting appraised scored above the mid-point of the 'not at all/to a great extent' used measure. In addition, with the exception of competitor cost assessment (which averaged marginally below the mid-point of the measure for N.Z. accountants), this finding is replicated in all three countries investigated. The fact that strategic pricing has been operationalized using only one measure, however, signifies that further research that distinguishes between the underlying dimensions of strategic pricing is to be welcomed. Despite this expression of caution, there does appear to be robustness in the claim that strategic pricing ranks relatively highly. It has achieved an average score well above the mid-point of the measure in all countries surveyed. Usage rates of the other six SMA practices disclosed in Table 2a averaged well below the mid-point of the '1–7' measurement scale; the highest mean score for these practices was '3.49' (recorded by strategic costing).

Secondly, while usage rates for most of the practices appraised scored relatively lowly, two factors suggest it would be inappropriate to dismiss their potential. Firstly, it has been found that for all SMA practices appraised, the perceived merit scores are significantly greater than the usage rate scores. Secondly, for the eight SMA practices where relatively low degrees of usage have been found, three ('strategic costing', 'quality costing' and 'value chain costing'), scored above the mid-point with respect to perceived merit. In addition, the perceived merit of 'target costing' scored above the mid-point of the perceived merit scale in the U.S. These observations suggest that Ghoshal *et al.*'s (1991) and Foster *et al.*'s (1994) reported gap between what is needed and what is supplied by accounting systems can be extended to strategic management accounting systems more generally.

The third main finding relates to the study's cross-sectional research design. One might view the study's findings as suggesting relatively consistent cross-country application of SMA. For the entire data set, significant differences in cross-country usage rates have been found for only three of the 12 SMA practices considered. When the international analysis is restricted to companies of a similar size, differing degrees of adoption are apparent for five of the 12 practices. In advance of data analysis, it had been anticipated that controlling for company size would reduce cross-country differences observed. This expectation has not been realized because when the comparison is conducted at the matched sub-sample level, N.Z. companies make greater use of three SMA practices ('value chain costing', 'competitive position monitoring' and 'competitor performance appraisal based on published financial statements'), while the U.S. uses three of the practices to a relatively low degree ('strategic pricing', 'competitive position monitoring' and 'competitor performance appraisal based on published financial statements'). None of these differences are observed when the analysis is conducted on the full data set. In light of the premise that size is positively related to SMA adoption,[8] we conclude that when the comparison is conducted on the full data set, the smaller size of the average N.Z. company sampled negates a tendency for greater SMA, and that the reverse is the case for the U.S. sample. When attempting to take a holistic view of these findings, it appears that large N.Z. companies have a greater propensity to use some SMA practices than similarly sized U.K. and U.S. companies. As significant players in a domestic economy, it might be that a greater proportion of the N.Z. companies drawn from the matched sub-sample data set are part of multinational conglomerates, and that greater SMA might result from the adoption of company-wide sophisticated accounting systems. It may also be the case that greater SMA in N.Z. corporations has arisen as a result of the highly-developed competitiveness of the N.Z. commercial environment that was referred to in the introductory section.

Finally, it has been found that there is negligible use of the term 'strategic management accounting' in organizations and that appreciation of the term amongst practising accountants is somewhat limited. This reinforces Tomkins and Carr's (1996*b*) claim, made in an academic context, that SMA is ill-defined. There is a suggestion of greater appreciation of SMA amongst the U.K. sample. This finding might relate to the fact that much of the literature cited earlier has U.K. origins and that the first reference to 'SMA' was made in a U.K. professional accounting periodical (Simmonds, 1981).

Shank and Govindarajan (1988) have suggested that strategic accounting will supplant managerial accounting as a framework for decision-making. With the exception of strategic pricing and some aspects of competitor accounting, the evidence uncovered in this study falls well short of providing vindication for Shank and Govindarajan's prophesy. In light of recent surveys highlighting the durability of conventional management accounting practices (for a review, see Drury and Tayles, 1995), it appears more appropriate to talk of a gradual expansion of the generally accepted management accounting paradigm rather than revolutionary developments signifying abandonment of the old order. Coining a description applied elsewhere, limited adoption of strategic management accounting appears to be a further example of the profession in a state of 'evolution not revolution' (Bromwich and Bhimani, 1989).

The study's findings should be interpreted in light of several limitations. In addition to generally acknowledged limitations of survey research, a problem confronted in this study relates to the scope of practices to be considered, i.e. what management accounting practices comprise strategic management accounting? The criteria adopted in this study do not relate to the proximity of the accounting practice to the needs of those managers charged with 'managing corporate strategy', rather, they relate to the extent to which a management accounting practice embodies

[8] See footnote 7.

strategic orientations. Roberts (1990) refers to an apparent tension between strategic management and the use of accounting as an instrument of internal control. At the root of this tension appears to be management accounting's predilection towards the internal and historical. Following Mintzberg's (1987) suggestion that there is a need for eclecticism in the interpretation of what is meant by 'strategy', the term has been viewed in this study in a manner highlighting the non-strategic nature of conventional management accounting systems.

A second related shortcoming is the incompleteness of the set of SMA practices considered. Given the current stage of SMA's literary evolution, it would be premature to suggest we are moving towards the distillation of a definitive listing of SMA practices. While this incompleteness should be acknowledged, it is nevertheless believed that most substantive contributions to the literature have been recognized. Departing from the views expressed by others (e.g. Kaplan *et al.*, 1990), the position has been taken here that activity-based costing (ABC) does not constitute an example of strategic management accounting. It was felt that ABC is more concerned with costing accuracy (Cooper, 1991), than the adoption of a strategic-orientation. Costs are caused by activities and activities are the result of strategic choices (Rotch, 1990). If the result of an ABC exercise suggests that a change in strategy is warranted, the implications that ABC can carry for strategic decision-making becomes immediately apparent. Once the initial strategic reaction to the increased costing accuracy provided by the ABC system has been experienced, however, there is no reason to view the new costing system as exhibiting a greater strategic-orientation than that which it has replaced. It may be that the introduction of the old costing system may have also resulted in a similar initial strategic reaction and a change in organizational activities. Despite this view, strong arguments could be offered for the inclusion of a derivative of ABC, i.e. activity-based management (Raffish and Turney, 1991). In addition, it might also be said that the practices appraised in the study could have included other management techniques such as customer accounting (Foster *et al.*, 1996), just in time management (Schniederjans, 1992), and benchmarking.

A third problem revolves around defining and operationalizing the SMA constructs lying at the heart of the study. The SMA practices considered were drawn from the literature. While this supports their credibility as accounting practices worthy of consideration, it does not exclude the possibility of overlapping practices. While due consideration was given to this problem in the course of generating the 12 SMA practices, it is an issue that is bound to persist in any attempt to itemize management accounting practices. The constructs were operationalized using, wherever possible, terminology and definitions that have been most widely-applied in the literature. Definitions of the terms used in the questionnaire were provided to managers participating in the study. Others, however, may have chosen to define the terms slightly differently. Standardization of terminology used in connection with SMA practices employed can be expected to be minimal. This problem has been highlighted by the minimal degree to which the term 'strategic management accounting' is used in companies. When collecting empirical data in a relatively under-defined subject area, other than attempting to ground the study as firmly as possible in the fledgling literature and acknowledging the underlying problem of such research, there is little further remedial action available to the researcher.

It is believed that such problems should not dissuade us from the prosecution of empirically significant studies. They do, however, highlight the need to acknowledge that such work is bound to be of an exploratory nature. Despite considerable recent interest in strategic applications of management accounting, it has been difficult to conceive a conceptual framework underlying the strategic management accounting literature. In 1981, Simmonds stated that strategic management accounting has no literature of its own. Tomkins and Carr's (1996*b*) tentative suggestion that a SMA paradigm is becoming visible, and this exploratory study's contribution in terms of synthesizing and appraising the usage of a particular set of SMA practices serve as testimony to Simonds' vision concerning SMA. They also appear to signify that the view that strategic management accounting has no literature of its own is increasingly becoming a perspective from the past.

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Appendix A: Glossary of terms provided to respondents

Attribute costing

The costing of specific product attributes that appeal to customers. Attributes that may be costed include: operating performance variables; reliability; warranty arrangements; the degree of finish and trim; assurance of supply; and after sales service.

Brand value budgeting

The use of brand value as a basis for managerial decisions on allocation of resources to support/enhance a brand position, thus placing attention on management dialogue on brand issues.

Brand value monitoring

The financial valuation of a brand through the assessment of brand strength factors such as: leadership; stability; market; internationality; trend; support; and protection combined with historical brand profits.

Competitor cost assessment

The provision of regularly updated estimates of a competitor's costs based on, for example, appraisal of facilities, technology, economies of scale. Sources include direct observation, mutual suppliers, mutual customers and ex-employees.

Competitive position monitoring

The analysis of competitor positions within the industry by assessing and monitoring trends in competitor sales, market share, volume, unit costs, and return on sales.

This information can provide a basis for the assessment of competitor's market strategy.

Competitor appraisal based on published financial statements

The numerical analysis of a competitor's published statements as part of an assessment of a competitor's key sources of competitive advantage.

Life cycle costing

The appraisal of costs based on the length of stages of a product or service's life. These stages may include design, introduction, growth, decline, and eventually abandonment.

Quality costing

Quality costs are those costs associated with the creation, identification, repair, and prevention of defects. These can be classified into three categories; prevention, appraisal, and failure costs. Cost of quality reports are produced for the purpose of directing management attention to prioritize quality problems.

Strategic costing

The use of cost data based on strategic and marketing information to develop and identify superior strategies that will sustain a competitive advantage.

Strategic management accounting

That body of Management Accounting concerned with the provision of strategically-orientated information for decision-making and control.

Strategic pricing

The analysis of strategic factors in the pricing decision process. These factors may include: competitor price reaction; price elasticity; market growth; economies of scale; and experience.

Target costing

A method used during product and process design that involves estimating a cost calculated by subtracting a desired profit margin from an estimated (or market-based) price to arrive at a desired production, engineering, or marketing cost. The product is then designed to meet that cost.

Value chain costing

An activity-based costing approach where costs are allocated to activities required to design, procure, produce, market, distribute, and service a product or service.

References

Aalbregste, R. J., 1991. Target Costing, in Brinker, B. (ed.) *Handbook of Cost Management*, New York, Warren, Gorham and Lamont.

Anthony, R. N., 1988. *The Management Control Function*, Boston, Harvard Business School Press.

Berliner, C. and Brimson, J., 1988. *Cost Management for Today's Advanced Manufacturing*, Boston, MA, Harvard Business School Press.

Bromwich, M., 1990. The case for strategic management accounting: the role of accounting information for strategy in competitive markets, *Accounting, Organizations and Society*, **15**(1/2), 27–46.

Bromwich, M., 1992. Strategic Management Accounting, in *Management Accounting Handbook*, Drury, C. (ed.), Oxford, Butterworth-Heinemann, pp. 128–153.

Bromwich, M. and Bhimani, A., 1989. *Management Accounting: Evolution Not Revolution*, London, CIMA.

Bruns, W. J., Jr. and Waterhouse, J. H., 1975. Budgetary Control and Organization Structure, *Journal of Accounting Research*, Autumn, 177–203.

Buzzell, R. D., and Gale, B. T., 1987. *The PIMS Principles: Linking Strategy to Performance*, New York, Free Press.

Chandler, A. D., 1962. *Strategy and Structure*, Cambridge, MA, M.I.T. Press.

Coad, A., 1996. Smart work and hard work: explicating a learning orientation in strategic management accounting. *Management Accounting Research*, **7**, 387–408.

Cooper, R., 1991. Activity-Based Costing for Improved Product Costing, in Brinker, B. (ed.), *Handbook of Cost Management*, New York, Warren, Gorham and Lamont.

Dent, J. F., 1996. Global competition: challenges for management accounting and control, *Management Accounting Research*, **7**, 247–269.

Drury, C. and Tayles, M., 1995. Issues arising from surveys of management accounting practice, *Management Accounting Research*, **6**, 267–280.

Ford, H., 1932. *My Life and Work*, New York, Doubleday, Page and Co.

Foster, G. and Gupta, M., 1994. Marketing, cost management and management accounting, *Journal of Management Accounting Research*, Fall, 43–77.

Foster, G., Gupta, M. and Sjoblom, L., 1996. Customer profitability analysis: challenges and new directions, *Journal of Cost Management*, Spring, 5–17.

Ghoshal, S. and Westney, D.E., 1991. Organising competitor analysis systems, *Strategic Management Journal*, **12**, 17–31.

Govindarajan, V., and Shank, J., 1992. Strategic cost management: tailoring controls to strategies, *Journal of Cost Management*, Fall, 14–24.

Guilding, C., 1999. Competitor-focused accounting: an exploratory note, *Accounting, Organizations and Society*, **24**, 583–595.

Guilding, C. and Moorhouse, M., 1992. The Case for Brand Value Budgeting, in Drury, C. (ed.), *Management Accounting Handbook*, Oxford, Butterworth-Heinemann, pp. 173–195.

Guilding, C. and Pike, R., 1994. Brand valuation: a model and empirical study of organisational implications, *Accounting and Business Research*, **24**(95), 241–254.

Hamermesh, R. G., 1986. Making planning strategic, *Harvard Business Review*. July–August, 115–20.

Hax, A. C., and Majluf, N. S., 1984. The corporate strategic planning process, *Interfaces* **14**, January–February, 47–60.

Heagy, C. D., 1991. Determining optimal quality costs by considering cost of lost sales, *Journal of Cost Management*, Fall, 64–72.

Henderson, B. D., 1989. The origin of strategy, *Harvard Business Review*, November–December, 139–143.

Herbert, T. T. and Deresky, H., 1987. Generic strategies: an empirical investigation of typology validity and strategy content, *Strategic Management Journal*, **8**, 135–147.
Hergert, M. and Morris, D., 1989. Accounting data for value chain analysis, *Strategic Management Journal*, **10**, 175–188.
Hickson, D. J., 1987. Decision making at the top of organizations. *Annual Review of Sociology* **13**, 165–192.
Jones, L., 1988. Competitor cost analysis at caterpillar, *Management Accounting* (U.S.), October, 32–38.
Kaplan, R. S., Shank, J., Horngren, C., Boer, G., Ferrara, W. and Robinson, M., 1990. Contribution margin analysis: no longer relevant/strategic cost management: the new paradigm, *Journal of Management Accounting Research*, **2**, 1–32.
Lancaster, K. J., 1966. A new approach to consumer theory, *Journal of Political Economy*, April, 132–157.
Lancaster, K. J., 1979. *Variety, Equity and Efficiency: Product Variety in an Industrial Society*, New York, Columbia University Press.
Lord, B. R., 1996. Strategic management accounting: the emperor's new clothes?, *Management Accounting Research*, **7**, 347–366.
Merchant, K. A., 1981. The design of the corporate budgeting system: influences on managerial behavior and performance, *The Accounting Review*, October, 813–829.
Mintzberg, H., 1978. Patterns in strategy formulation. *Management Science*, **24**(9), 934–948.
Mintzberg, H., 1987. The strategy concept 1: five Ps for strategy, *California Management Review*, Fall, 11–23.
Mintzberg, H., 1988. Opening Up the Definition of Strategy, in Quinn J. B., Mintzberg H. and James, R. M. (eds.), *The Strategy Process*, Englewood Cliffs, NJ, Prentice-Hall, pp. 13–20.
Mintzberg, H., Raisinghani, D. and Theoret, A., 1976. The structure of unstructured decisions, *Administrative Science Quarterly*, **21**, 246–275.
Monden, Y. and Hamada, K., 1991. Target costing and kaizen costing in Japanese automobile companies, *Journal of Management Accounting Research*, Fall, 16–34.
Moon, P., and Bates, K., 1993. Core analysis in strategic performance appraisal, *Management Accounting Research*, **4**, 139–152.
Moores, K. and Booth, P., 1994. *Strategic Management Accounting*, Queensland, Australia, John Wiley.
Morgan, M. J., 1993. Accounting for Strategy, *Management Accounting*, May, 20–24.
Morse, W. J., Davis, J. R. and Hartgraves, A. L., 1996. *Management Accounting: A Strategic Approach*, Cincinatti, Ohio, South-Western.
Ohmae, K., 1982. *The Mind of The Strategist*, McGraw Hill.
Oppenheim, A. N., 1966. *Questionnaire Design and Attitude Measurement*, New York, Basic Books Inc.
Palmer, R. J., 1992. Strategic goals and the design of strategic management accounting systems, *Advances in Management Accounting*, **1**, 179–204.
Pearce, J.A., II, 1982. The company mission as a strategic tool, *Sloan Management Review*, Spring, 15–24.
Pearce, J. A. and Robinson, R. B., 1991. *Strategic Management*, 4th edition, Irwin, Homewood, Il.
Porter, M. E., 1980. *Competitive Strategy*, The Free Press.
Porter, M. E., 1985. *Competitive Advantage: Creating and Sustaining Superior Performance*, New York, Free Press.
Porter, M. E., 1996. What Is Strategy, *Harvard Business Review*, November–December, 61–78.
Power, M., 1990. *Brand and Goodwill Accounting Strategies*, London, Woodhead-Faulkner.
Quinn, J. B., 1978. Strategic change: logical incrementalism, *Sloan Management Review*, Fall, 21–38.
Raffish, N. and Turney, P., 1991. Glossary of activity-based management, *Journal of Cost Management*, Fall, 53–63.
Ratnatunga, J., Miller, J., Mudalige, N. and Sohal, A., 1993. *Issues in Strategic Management Accounting*, Harcourt Brace Jovanovich.

Roberts, J., 1990. Strategy and accounting in a U.K. conglomerate. *Accounting, Organizations and Society*, **15**(1/2), 107–126.
Rotch, W., 1990. activity-based costing in service industries, *Journal of Cost Management*, Summer, 4–14.
Rumelt, R. P., 1979. Evaluation of Strategy: Theory and Models, in Schendel D. E. and Hofer C. W. (eds.), *Strategic Management: A New View of Business Policy and Planning*, Boston, MA, Little Brown, pp. 196–212.
Ryan, R., 1995. *Strategic Accounting for Management*, London, The Dryden Press.
Sakurai, M., 1989. Target costing and how to use it, *Journal of Cost Management*, Summer, 39–50.
Schniederjans, M., 1992. *Topics in Just-in-Time Management*, Needham Heights, MA, Allyn and Bacon.
Shank, J. K., 1989. Strategic cost management: new wine, or just new bottles?, *Journal of Management Accounting Research*, **1**, Fall, 47–65.
Shank, J. K., and Govindarajan, V., 1988. Making strategy explicit in cost analysis: a case study, *Sloan Management Review*, Spring, 19–29.
Shank, J. K., and Govindarajan, V., 1991. Strategic Cost Management and the Value Chain, in Brinker, B. (ed.), *Handbook of Cost Management*, New York, Warren, Gorham and Lamont.
Shank, J. K. and Govindarajan, V., 1992. Strategic cost management: the value chain perspective, *Journal of Management Accounting Research*, Fall, 179–198.
Shank, J. K., and Govindarajan, V., 1993. What 'drives' cost? a strategic cost management perspective, *Advances in Management Accounting*, **2**, 27–46.
Shields, M. D., and Young, M. S., 1991. Managing product life cycle costs: an organizational model, *Journal of Cost Management*, Fall, 39–52.
Simmonds, K., 1981. Strategic management accounting. *Management Accounting*, **59**(4), 26–29.
Simmonds, K., 1982. Strategic management accounting for pricing: a case example, *Accounting and Business Research*, **12**(47), 206–214.
Simmonds, K., 1986. The accounting assessment of competitive position, *European Journal of Marketing*, **20**(1), 16–31.
Smith, M., 1997. *Strategic Management Accounting: Issues and Cases*, 2nd. edition, Butterworths.
Spicer, B., Bowman, R., Emanuel, D. and Hunt, A., 1991. *The Power to Manage*, Auckland, Oxford University Press.
Stahl, M. and Grigsby, D., 1991. *Strategic Management for Decision Making*, PWS Kent.
Susman, G. I., 1991. Product Life Cycle Management, in Brinker, B. (ed.) *Handbook of Cost Management*, New York, Warren, Gorham and Lamont.
Terreberry, S., 1968. The evolution of organizational environments, *Administrative Science Quarterly*, 590–613.
Tomkins C. and Carr, C., 1996*a*. Editorial: strategic management accounting, *Management Accounting Research*, **7**, 165–167.
Tomkins C. and Carr, C., 1996*b*. Reflections on the papers in this issue and a commentary on the state of Strategic Management Accounting, *Management Accounting Research*, **7**, 271–280.
Ward, K., 1992. Accounting for marketing strategies, in Drury, C. (ed.), *Management Accounting Handbook*, Oxford, Butterworth-Heinemann, pp. 154–172.
Wilson, R. M. S., 1995. Strategic Management Accounting, in Ashton D. J., Hopper T. M. and Scapens R. W. (eds.) *Issues in Management Accounting*, 2nd edition, Prentice-Hall, London, pp. 159–190.
Wilson, R. M. S. (ed.), 1997. *Strategic Cost Management*, Aldershot, Ashgate/Dartmouth.
Zabriskie, N. B. and Huellmantel, A. B., 1991. Developing strategic thinking in senior management, *Long Range Planning*, **24**(6), 25–32.
Zajac E. J. and Bazerman, M. H., 1991. Blind spots in industry and competitor analysis: implications of interfirm (mis)perceptions for strategic decisions, *Academy of Management Review*, **16**(1), 37–56.