



Benchmarking the incidence of strategic management accounting in Slovenia

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Abstract

Purpose – To benchmark the degree to which companies in Slovenia, a country that has experienced success in its transition to a market economy, apply strategic management accounting (SMA) techniques.

Design/methodology/approach – Survey data collected in Slovenia has been benchmarked to survey data collected in similarly sized Australian companies.

Findings – For the Slovenian sample, while none of the techniques investigated are applied extensively, it has been found that competitor focused SMA techniques are the most popular. A group of SMA techniques that have a costing orientation are applied more extensively in Slovenian companies than in the Australian benchmark sample. It has also been found that some techniques that have a relatively high popularity ranking in one country, rank relatively lowly in the other country.

Research limitations/implications – In addition to the generally accepted limitations of survey research, it should be noted that there is no definitive listing of SMA techniques and debate concerning this matter can be expected to continue. A further shortcoming is evident in the cross-country comparison aspect of this study, as a disappointingly small number of Australian financial controllers committed themselves to participating in the study.

Practical implications – It appears likely that systematic differences between the economies and culture of countries contribute to differential use of SMA. This highlights the importance of management considering economic and commercial context when designing management accounting systems.

Originality/value – Despite considerable normative commentary, there is still a paucity of empirical research concerned with SMA. A particularly significant facet of this study concerns its extension of our appreciation of SMA application in a novel international context.

Keywords Strategic management, Accounting, Slovenia, Australia

Paper type Research paper



1. Introduction

This paper can be seen to build on the international strategic management accounting (SMA) investigation conducted by Guilding *et al.* (2000) that appraised the relative use of SMA in three established Western economies, i.e. New Zealand, the UK, and the USA. Guilding *et al.*'s study represented the first to provide an international comparison of the degree to which large companies are applying SMA practices. This study extends Guilding *et al.*'s work by benchmarking the degree of SMA adoption in Slovenia relative to Australia.

Slovenia is a former socialist country that began the process of transition to a market economy in the early 1990s after gaining independence from Yugoslavia. Significant motivation for this study derives from Anderson and Lanen's (1999) evidence that economic and political upheavals in a transition economy are usually associated with equally dramatic changes in management accounting practice. Much of the relative novelty of the study derives from the fact that little accounting research attention has been directed towards European countries that have successfully undergone the type of profound political and economic structural change characterizing Slovenia's recent past.

Slovenia is widely noted as a role model of a successful transition from a socialist to a market economy (Edwards and Lawrence, 2000; Reardon *et al.*, 2005). In the last 15 years, Slovenia's progress has been startling. In 2004, it became a full member of the European Union and NATO. In 2007, it was the first of the new countries to adopt the Euro currency (all the other former socialist block countries are experiencing problems meeting the criteria established for joining this alliance)[1]. Slovenia is also the most economically developed of the new countries, having already overtaken two old EU member states (Greece and Portugal) in terms of per capita GDP. Further, in 2008, Slovenia will be the first of the new countries to take up presidency of the EU.

This successful transition appears to have been supported by Slovenian managers appreciating the importance of applying appropriate strategic planning and control systems (Pucko, 1997; Bogel and Huszty, 1999). The fundamentally changed economic environment in which Slovenian companies now operate can be viewed as likely to have instigated more profound strategic thinking than would be the case for companies in long-standing Western economies, over the same time period. It is this heightened strategic awareness (Bogel and Huszty, 1999) coinciding with widespread and profound overhauls of management accounting systems (Anderson and Lanen, 1999) that triggered the focus of the SMA investigation reported herein. The organisational governance overhaul that companies within these countries have experienced might well signify that they are relatively advanced in terms of the application of some of the more recent business practice innovations such as SMA. The study's objectives are to:

- document the degree to which large Slovenian companies are applying SMA techniques; and
- appraise the relative degree to which Slovenian companies are applying SMA techniques by benchmarking to Australian SMA practice.

The first objective has been pursued by way of a questionnaire survey concerned with 16 SMA techniques and administered to a sample of large Slovenian companies. The second objective has been pursued by benchmarking the observed degree of SMA technique adoption in large Slovenian companies to SMA technique adoption in similarly sized Australian companies.

When seeking to develop a cross-country benchmarking study, a challenge surrounds developing a rationale with respect to what country should be selected as the benchmark sample. Should a country with a similar economy be selected in order to isolate small differences of interest, or should a country with a different economic context be selected in order to give greatest scope for the identification of differences? As the study of SMA is still in its infancy, the decision was taken that the potential for eliciting useful insights would be heightened if a Western country that has been the

subject of limited prior SMA research is selected to serve as the benchmark country. Apart from Chenhall's (2005) study of strategic performance measurement systems and Guilding and McManus' (2002) study of customer accounting, there has been limited enquiry into the nature of SMA practice in Australia[2]. Also, as benchmarking is frequently associated with a quest for best practice, the choice of Australia as a developed country for benchmarking carries significant appeal. Further, the Slovenian and Australian economies exhibit some distinctive characteristics which offer an opportunity to explore for economic contingencies that may affect SMA usage. Finally, it should be noted that the conduct of the study has been facilitated by a working relationship that has developed between a Slovenian- and an Australian-based researcher.

The remainder of the paper is organised as follows. In the next section, the country context is first discussed. Next, prior research concerned with SMA is reviewed. The research method employed is then described. The study's findings are then outlined followed by a concluding section that overviews the study's main contributions and also its limitations.

2. The country context

Slovenia commenced its transition process to a market economy in the early 1990s. This process has seen Slovenian companies undergo fundamental organisational change with the privatisation of many enterprises that had been government owned under the old economic regime. After declaring independence in 1991, Slovenia opened its borders to foreign competition. This new competition placed strong pressure on prices, quality and customer service, and resulted in many corporate failures. At the beginning of the economic change process, Slovenian managerial expertise with respect to core commercial activities such as marketing, general management and financial management was notably deficient (Edwards and Lawrence, 2000). Today, however, much appears to have changed. The companies that emerged from this transition have well established management teams who have moved the corporate focus away from a socially oriented agenda to the conventional Western corporate objective of shareholder wealth maximization.

These changes have resulted in rapid economic growth and Slovenia is quickly catching up with the more established members of the EU. *The World Factbook* (2006) indicates that in 2005, 60.3 percent of Slovenia's GDP derived from services, 36.9 percent from manufacturing and 2.8 percent was provided by agriculture. Exports represent more than 50 percent of the total GDP, with manufactured goods, machinery and transport equipment, chemicals (including pharmaceuticals) and food being the main export commodities. The GDP per capita (2005) according to purchasing power parity is \$US 21,500 (*The World Factbook*, 2006).

Australia, on the other hand is a long-standing, well established Western economy. *The World Factbook* (2006) indicates the following GDP composition for 2004: 75.2 percent services, 21.2 percent manufacturing and 3.6 percent agriculture. Australia is relatively less engaged in international trade, as its exports represent only about 17 percent of GDP. The main exported commodities comprise coal, gold, meat, wool, alumina, iron ore, wheat, machinery and transport equipment. Australia's GDP per capita in 2005 is \$US 31,600 measured by purchasing power parity (*The World Factbook*, 2006).

From these economic profiles it is evident that Slovenia derives a substantially larger proportion of its GDP from manufacturing. As commented on by Guilding and McManus (2002) it also appears pertinent to recognise that Australia has a relatively high dependency on the primary industry of mining. By contrast, Slovenia does not have an abundance of natural resources, other than wood (Slovenia is Europe's most forested country). Second, Slovenia is more engaged in international trade than Australia. This fact can be largely attributed to Australia's relative geographic isolation. This factor may be noteworthy as it signifies that Slovenian companies experience greater international competitive pressure. Further, a differential in the composition of exports is apparent. Compared to Slovenia (and many other countries) Australia exports a large proportion of low value added items, i.e. agricultural and mining commodities.

3. SMA literature review

3.1 *The evolution of "strategic management accounting"*

Since, the mid 1980s criticisms about the current state of management accounting practices were widely publicized in the professional and academic literature (Kaplan, 1984, 1986; Johnson and Kaplan, 1987; Ashton *et al.*, 1991; Bhimani and Bromwich, 1992; Drury, 1992). Perhaps the most general and critical weakness of conventional management accounting practice was identified by Kaplan (1984, p. 414) who argued that:

Management accounting can no more exist as a separate discipline, developing its own set of procedures and measurement systems and applying these universally to all firms without regard the underlying values, goals, and strategies of particular firms, but it must serve the strategic objectives of the firm.

The criticisms raised have carried considerable resonance, as Cravens and Guilding (2001) note that the recent past reflects something of a management accounting renaissance. Revisions of management accounting practices have produced a variety of novel approaches in the fields of costing, strategic investment appraisal, strategic control and performance management. Paralleling developments at the level of individual accounting techniques the new term "strategic management accounting" has emerged. Hoque (2001) sees the significance of SMA to be such as to view it as a whole new discipline.

Simmonds (1981) was the first to use the term "strategic management accounting." He defined it as "the provision and analysis of management accounting data about a business and its competitors for use in developing and monitoring the business strategy" (Simmonds, 1981, p. 26). Simmonds highlighted the potential of management accountants playing a greater role in competitor analysis. This perspective was significant as it pointed towards an externally-focussed role for management accountants, at a time when academics and conventional practice exhibited a highly internally-focussed orientation.

Bromwich (1988, 1990, 1992) provides some slightly different perspectives on SMA. He sees SMA (1988, p. 27) as concerned with:

... the evaluation of the enterprise's comparative advantages or value added relative to its competitors and to evaluate the benefits the enterprise's products yield over their lifetime to customers and the benefits which these sales yield to the firm over a long decision horizon.

Bromwich introduced a concern with customers and also an explicit emphasis on the long term, to the SMA notion. Contemporaneously, in the USA, Shank and Govindarajan (1988, 1992a, b, 1993) commenced a stream of work that focused on what they termed "strategic cost management." They analysed the role that cost information plays according to four stages of strategic management and argued that effective cost management requires a broad focus that is external to the firm (Shank and Govindarajan, 1992a), and captures a strategic (long-run) perspective (Shank and Govindarajan, 1993).

While the SMA literature has since grown (Rickwood *et al.*, 1990; Wilson, 1991; Ward, 1992; Palmer, 1992; Clarke, 1995; Ryan, 1995; Roslender, 1995; Coad, 1996; Lord, 1996; Tomkins and Carr, 1996a, b; Smith, 1997; Dixon, 1998; Roslender *et al.*, 1998; Brouthers and Roozen, 1999; Szendi and Shum, 1999; Guilding *et al.*, 2000; Cravens and Guilding, 2001; Hoque, 2001; Cadez, 2002; Tayles *et al.*, 2002; Roslender and Hart, 2003)[3], there is still limited consensus on the exact meaning of the term "strategic management accounting." A second striking characteristic of the SMA literature is the paucity of empirical research. Most of the literature is at the conceptual level, and it is only of late that some empirical research has been directed towards SMA (Lord, 1996; Szendi and Shum, 1999; Guilding *et al.*, 2000; Cravens and Guilding, 2001).

Despite the lack of a generally accepted SMA conceptual framework, Tomkins and Carr (1996b) feel that the beginnings of a framework outline can be discerned. Building on this view, it now appears that three main themes in addressing SMA can be identified. In what approximates to chronological order, these are:

- (1) a partial theme;
- (2) a normative theme; and
- (3) a positive theme.

The partial SMA theme is characterised by the work of the SMA pioneers. They have consistently used the term "strategic management accounting" (or "strategic cost management") in their writings, although their focus tended to be on a particular SMA technique or dimension, such as competitor accounting (Simmonds, 1981; Rickwood *et al.*, 1990), strategic pricing (Simmonds, 1982), attribute costing (Bromwich, 1990), or value-chain costing (Shank and Govindarajan, 1992a). These early works are also characterised by the use of case study scenarios to facilitate exposition of the SMA practice under consideration.

The second theme has built around the premise of advancing a strategic management normative theory. Strategic management can be seen as the integration of the individual elements involved in planning, implementing and controlling a strategy. If managerial accountants are to increase their role in strategic management, commentators such as Wilson (1991), Palmer (1992), Ward (1992), Ryan (1995), Smith (1997) and Brouthers and Roozen (1999) see it as incumbent upon them to develop practices supportive of the pursuit of strategic objectives (e.g. customer information, competitor information, product information, technology information). A distinct characteristic of this second SMA theme is that the commentaries provide broadly-based conceptual models that tend to use rationale rather than empiricism for their justification.

The third theme of SMA contributions has a positive orientation. Researchers that characterise this approach (Szendi and Shum, 1999; Guilding *et al.*, 2000; Cravens and Guilding, 2001; Hoque, 2001; Roslender and Hart, 2003) evaluate management

accounting practices and examine their degree of “strategic orientation” in an attempt to provide a SMA framework. Drawing on the framework provided, several empirical studies have then appraised the incidence of SMA usage (Szendi and Shum, 1999; Guilding *et al.*, 2000; Cravens and Guilding, 2001). The study reported herein can be seen as exemplifying this third theme.

3.2 *What techniques comprise strategic management accounting?*

As already noted, there is limited consensus on what constitutes an SMA conceptual framework. This signifies that we have not moved beyond the point of a limited consensus with respect to what constitutes an SMA practice or technique, and that a degree of subjectivity is bound to be involved when attempting to develop a listing of SMA techniques.

Szendi and Shum (1999) claimed to offer a distillation of SMA techniques in their examination of strategic (advanced) manufacturing and management accounting techniques in Latin American countries. It appears, however, that the majority of the 22 techniques investigated in their study can be viewed as conventional management accounting practices and that no convincing argument is provided as to why a particular management accounting technique is viewed as “advanced.”

Guilding *et al.* (2000, p. 117) offered a different distillation of SMA techniques and described their “strategic” criterion used in this process. They noted that “much of the domain of conventional accounting is more associated with the ‘tactical’ than the ‘strategic.’” The assumed time frame in much conventional management accounting appears to be one year (e.g. return on investment is assumed to have a one year context), and with respect to the inward/outward relative dimension, an inward focus predominates. These characteristics highlight the non-strategic nature of conventional management accounting, as strategy implies a time dimension that reaches into the long-term future combined with an externally-based perspective that is focused on the organisation’s commercial environment (Andrews, 1987; Mintzberg, 1987; Mintzberg *et al.*, 1995; Hunger and Wheelen, 1996; Porter, 1996). Guilding *et al.* (2000) consequently proposed that the themes highlighting the non-strategic orientation of traditional management accounting be used as criteria for determining what qualifies as a SMA technique. They conclude that techniques qualifying as “strategic management accounting” should exhibit degrees of one or more of the following orientations: environmental, competitive, marketing, or long-term, forward-looking orientation.

Employing these criteria, Guilding *et al.* (2000) identified 12 SMA techniques. 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. In a subsequent work, Cravens and Guilding (2001) included a further three techniques: activity-based costing, benchmarking and integrated performance measurement. Guilding and McManus (2002) noted that customer accounting can also be viewed as constituting a SMA practice (Ward, 1992; Foster and Gupta, 1994; Hoque, 2001; Cadez, 2002). Guilding and McManus investigated the incidence of four elements of customer accounting. These are: customer profitability analysis, customer segment profitability analysis, lifetime customer profitability analysis, and valuation of customers or customer groups

as assets. This signifies that the incidence of 19 SMA practices has been appraised in the literature.

Investigation of these 19 techniques followed their prior description in the literature. While noting that this provides some validation for the selection of techniques investigated, Guilding *et al.* (2000) note that it does not preclude the possibility of the scope and focus of one SMA technique overlapping with that of another. The view has been taken in this study that brand value budgeting and brand monitoring are sufficiently related techniques that they can be collapsed into one technique which has been labelled "brand valuation." [4] For the same reason, customer profitability analysis and customer segment profitability analysis have been collapsed into one technique which has been labelled "customer profitability analysis." The view has also been taken that activity-based costing does not qualify as an SMA technique. Departing from the position taken by Cooper and Kaplan (1988), it is felt that activity-based costing is more concerned with costing accuracy rather than the adoption of a strategic-orientation. These amendments have yielded 16 SMA techniques for analysis in this study. A brief description of these techniques is provided here [5].

3.2.1 Attribute costing. This SMA technique is concerned with costing the benefits that products provide to customers (Roslender and Hart, 2003). Bromwich (1990) sees these benefits as constituting the ultimate cost drivers. The customer (external) orientation highlights why attribute costing may be considered as an example of SMA.

3.2.2 Benchmarking. This technique focuses on a search for best practice. It involves a continuous comparative process that can be applied to all areas of an organization's activities, including strategic development, operations and customer service (Brownlie, 1999). There are various types of benchmarking (Elnathan *et al.*, 1996; Hoque, 2001) whereby best practice is usually an ideal provided by sources external to the company, or another high performing division within a company.

3.2.3 Brand valuation. This technique assigns financial value to the equity associated with the name or image of a brand (Cravens and Guilding, 1999). A formalisation of brand value accounting can underscore the view that brand-related expenditure should be viewed as an investment rather than an expense, thus highlighting the future and long-term oriented focus of this technique. This dimension of brand valuation can be considered in the context of Tayles *et al.*'s (2002) promotion of SMA as an approach to appraising investment in other intangibles such as intellectual capital.

3.2.4 Competitive position monitoring. Simmonds (1986) talks of competitive position as an asset with finite earning potential. As part of competitive position assessment, Simmonds suggests that trends with respect to sales, market share, volume, profit, unit cost, and cash flow should be appraised when formulating strategy. Although Simmonds noted that accounting is still a long way from being able to quantitatively express an organisation's competitive position in a single-figure, Rangone (1997) describes an analytical framework that results in a single-figure denominated quantitative assessment of an organisation's competitive standing.

3.2.5 Competitor cost assessment. This technique can be distinguished from competitive position monitoring due to its specific concentration on the cost structures of competitors. Advocates of this technique (Simmonds, 1981; Jones, 1988; Bromwich, 1990; Ward, 1992) argue that an assessment of a key competitor's relative cost position

can yield an enhanced appreciation of an organisation's strategic decision-making environment.

3.2.6 Competitor performance appraisal. Moon and Bates (1993) propose that strategic performance and key sources of competitive advantage can be assessed by applying an appropriately conducted analysis of competitors' published financial statements. Moon and Bates illustrate this analytical technique by investigating and interpreting the accounts of two UK retailers.

3.2.7 Customer profitability analysis. This appears to be most widely-discussed customer-focused accounting technique. Commentaries have been provided by Shapiro *et al.* (1987), Bellis-Jones (1989), Ward (1992) and Connolly and Ashworth (1994). The technique is concerned with tracing customer specific costs and sales to individual customer accounts (Guilding and McManus, 2002).

3.2.8 Integrated performance measurement. Integrative performance measurement systems provide financial and non-financial performance measures that cut across a range of organizational perspectives. When combined together, "these measures provide a way of translating strategy into a coherent set of performance measures" (Chenhall, 2005, p. 396). This SMA technique can be seen to be closely related to the balance scorecard that has been popularized largely through the writings of Kaplan and Norton (1992, 1996a, b).

3.2.9 Life cycle costing. Rather than appraising cost on the somewhat arbitrary temporal basis of a year, life cycle costing promotes the view of classifying costs according to the stages that comprise a product's life (Czyzewski and Hull, 1991; Shields and Young, 1991; Wilson, 1991). These stages are generally viewed as comprising: development, introduction, growth, maturity and decline. The advocates of this technique argue that it can provide a useful counter to short-term management tendencies.

3.2.10 Lifetime customer profitability analysis. This approach moves beyond computing the annual profit that will be generated from a particular customer to considering all future projected profits that will result from a trading relationship with a particular customer (Guilding and McManus, 2002). The use of profitability analysis over multiple years is motivated by marketing practitioners' common observation that customer profitability changes with the length of the trading relationship (Foster and Gupta, 1994; Jacob, 1994).

3.2.11 Quality costing. Belohlav (1993, p. 55) argues that "a common denominator in many discussions on competitiveness and strategy is the issue of quality." Typically, quality costs are classified into four categories: prevention, appraisal, internal failure, external failure (Kaplan and Atkinson, 1989; Albright and Roth, 1992). Today, in many firms quality is typically defined in terms of customer satisfaction. Consistent with this view, the model proposed by Heagy (1991) places the customer into the equation of quality costs by including the cost of lost sales due to poor quality in the measurement process.

3.2.12 Strategic costing or strategic cost management. Contrary to the traditional cost analysis, assessing the financial impact of alternative managerial decisions, Shank and Govindarajan (1988, 1992a, b, 1993) and Shank (1996) provide a framework where cost data is used to develop superior strategies in order to gain competitive advantage. This technique recognizes concepts from strategic management (e.g. value chain) and

marketing (e.g. product positioning) as most relevant in strategic decision making, thus highlighting an external and future focus.

3.2.13 Strategic pricing. Simmonds (1982) uses a case study to demonstrate that pricing decisions based on a conventional internally-oriented and historically-based analysis can result in sub-optimality. In his view the data used in making pricing decisions should be supplemented with information regarding possible competitor reactions to any proposed change in pricing policy. Another case study is used by Rickwood *et al.* (1990) to illustrate a similar perspective.

3.2.14 Target costing. Target costing is an approach that supports cost reduction initiatives at the point of new product development or design (Monden and Hamada, 1991). The target cost is the full product cost that is aspired to. It is derived from estimates of selling volume, price and desired profit (Cooper and Slagmulder, 1999). The approach involves determining a target price that will provide the desired market share, and then a target cost is determined in order to provide the total product profit level sought (Shank and Fisher, 1999).

3.2.15 Valuation of customers as assets. In the marketing literature, it appears commonplace to conceive of customers as assets (Levitt, 1983; Srivastava *et al.*, 1998; Turchan and Mateus, 2001; Guilding and McManus, 2002). Given the importance of customer bases, Foster *et al.* (1996) propose that assessments of management performance should be supplemented by tracking how the value of customer bases change in time. Models of customer value are still in their infancy, however, an asset value could be developed by discounting to present value the estimated profits that will be generated by the trading relationship with a particular customer or group of customers (Guilding and McManus, 2002).

3.2.16 Value chain costing. Shank and Govindarajan (1992a, b) developed a costing method that represents a management accounting operationalisation of Porter's (1985) value chain analysis. The focus of this technique is external to the firm as it involves viewing the organization as a link in the chain of all value-creating activities associated with the provision of a product or service. Shank and Govindarajan demonstrate that traditional value added analysis can be seen to be somewhat narrow as it fails to consider any latent cost savings that lie unrealized in the firm's linkages with its suppliers and customers.

4. The research method

4.1 Sampling procedure

Data were collected using a mailed questionnaire survey administered contemporaneously in Slovenia and Australia. The Slovenian sample was drawn from the *Slovenian Chamber of Commerce and Trade* disclosure of the 500 largest Slovenian companies in terms of total revenue. A second filter, number of employees, was also applied to more completely ensure that the sample frame represents large Slovenian companies. Only companies with 100 or more employees were selected. Following the elimination of companies where no valid mailing address could be identified, the final sample comprised 388 Slovenian companies.

As part of a strategy to develop an accurate mailing list and secure a high response rate, each Slovenian company was contacted by phone and the name of the most suitable person to complete the survey was elicited. As anticipated, the individual identified was typically the Chief Accountant, Chief Controller or Chief Financial Officer.

In most cases, the purpose of the research was explained to the identified contact person over the phone. The mailed survey package comprised an introductory letter explaining the purpose of the research, a copy of the questionnaire, a glossary of terms used and a postage-paid return envelope. The first mailing resulted in 124 usable responses. A reminder letter was posted one month following the initial mail-out. The follow-up mailing yielded an additional 69 usable responses, thereby providing a total response rate of 49.7 percent.

To appraise for non-response bias in the Slovenian data collected, Mann-Whitney tests were conducted to investigate for significant differences between responses provided by early and late respondents (the first and last 25 percent of questionnaires returned were analysed). No significant differences ($p < 0.05$) were noted for any of the variables under examination.

Pursuit of the international comparative dimension of the study necessitated the identification of a sub-sample of similarly sized large Slovenian and Australian companies. This is because of the enduring finding that management accounting sophistication is positively associated with firm size (Merchant, 1981; Libby and Waterhouse, 1996; Guilding, 1999; Hoque and James, 2000). The bulk of the 500 largest Slovenian companies are smaller than most of Australia's largest 500 companies, therefore failure to control for size would likely result in a misleading analysis where firm size is the underlying criterion factor, and this would mask any systematic, country-based, effect. Analysis of the Slovenian companies' revenue distribution revealed that most companies (69 percent) fall within an annual revenue range of \$AUS20-120 million, and it was determined that a sufficient sample of Australian companies falling within this annual revenue size range could be achieved. As a result, the cross-country comparative aspect of the study was pursued via an analysis of Slovenian and Australian companies with an annual revenue range of \$AUS20-120 million.

The Australian sample was drawn from the Australian *Business Review Weekly's* web site listing of top public companies. 298 companies falling within the \$AUS20-120 million annual revenue range were identified for inclusion in the sample. The survey package, comprising all the same elements that were mailed to the Slovenian sample, was mailed to Financial Controllers in these Australian companies.

About 20 Financial Controllers completed and returned the questionnaire following the first mailing. Following this, follow-up telephone calls were made to 85 of the non-respondents, and a further six completed questionnaires were secured. This procedure thus yielded a somewhat disappointing response rate of 8.6 percent[6]. The phone calls were not only lodged in an effort to increase the response rate, they were also used also to determine the factor behind the Financial Controller's recalcitrance to participating in the study. The main reasons cited for not responding to the questionnaire mailing were: participation in voluntary surveys contravenes company policy, and "too busy." Two of the non-responding Financial Controllers also indicated that their companies had little use for SMA techniques. This cited reason for non-response gives cause for an element of concern over potential non-response bias.

In addition to determining the main reasons for non-response, Mann-Whitney tests were conducted to investigate for differences in the responses provided by the early and late Australian respondents (the first and last 25 percent of questionnaires returned were analysed). No significant differences ($p < 0.05$) were noted for any of the SMA usage measures. While the investigations conducted suggest little concern for

non-response bias in the two data sets collected, it should be acknowledged that accountants in firms that employ SMA techniques to a relatively high degree may be more likely to respond to an SMA survey compared to accountants in firms that employ SMA techniques to a relatively low degree.

4.2 Variable measurement

The degree of SMA technique usage was measured using instruments developed by Cravens and Guilding (2001) and Guilding and McManus (2002). The questionnaire posed the question: "To what extent does your organization use the following techniques?" and immediately following this question, the 16 SMA techniques were listed together with a Likert-type scale ranging from "1" (not at all), to "7" (to a great extent). A glossary was also included with definitions of the SMA techniques to promote consistent interpretation of SMA terminology.

For the Slovenian sample, the questionnaire and the glossary were translated into Slovenian. The translation was completed by one of this paper's authors who is fluent in both languages. To ensure that the translated version was as close as can reasonably be achieved to the English version, it was validated by two native Slovenian university researchers who are both fluent in English.

5. The findings

To facilitate ease of exposition and interpretation, exploratory factor analysis has been used to categorise the 16 SMA techniques. The factor analysis applied was the principal component method of extraction with varimax rotation. This procedure has yielded four components with eigenvalues higher than one and a 57 percent of variance explained.

Five SMA techniques loaded on the first component (eigenvalue 4.8). These are: "attribute costing," "life cycle costing," "quality costing," "target costing," and "value chain costing." Common to all five techniques is the term "costing," therefore for the purpose of data presentation, this SMA grouping will be referred to as "costing." Five techniques also loaded on the second component (eigenvalue 1.9). These are "benchmarking," "competitive position monitoring," "competitor cost assessment," "competitor performance appraisal," and "integrated performance measurement." This component has a competitor accounting theme. Three of the items explicitly refer to "competitor," and benchmarking usually signifies a competitive context. This second SMA grouping will thus be collectively referred to as "competitor accounting." The third component (eigenvalue 1.4) comprises three techniques: "brand valuation," "strategic costing," and "strategic pricing." Of the four components deriving from the factor analysis, this appears to have the lowest degree of intuitive congruency. Despite this, the three SMA techniques can all be viewed as relating to the notion of strategic decision-making and will be collectively termed "strategic decision-making." The final three techniques load on the fourth component (eigenvalue 1.1). These are "customer profitability analysis," "lifetime customer profitability analysis" and "valuation of customers as assets," and will be collectively referred to as "customer accounting."

Findings relating to the usage rates of the SMA "costing" practices are presented in Table I. Consistent with the layout applied in all subsequent tables, the first data column records the usage rate mean scores for the entire Slovenian sample, with the techniques presented in descending order of usage. Also consistent with subsequent tables, the second and third data columns provide the

	Full Slovenian sample	Slovenian matched sub-sample	Australian matched sub-sample	Mann-Whitney <i>U</i> test	
				<i>Z</i> score	Sig. level
Quality costing	4.33	4.31	1.67	-5.71	0.00**
Value chain costing	3.85	3.90	2.63	-2.95	0.00**
Target costing	3.73	3.64	2.00	-4.05	0.00**
Attribute costing	3.61	3.60	1.71	-4.76	0.00**
Life cycle costing	2.88	2.90	2.21	-2.17	0.03**
<i>N</i>	193	134	26		

Table I.

Strategic costing usage means

Note: All items scored on a scale where 1 denotes “not used at all” and 7 denotes “used to a great extent”

usage rate mean scores for the Slovenian and Australian matched sub-samples. Statistically significant differences between the sub-samples are highlighted in the final two columns by reporting the *Z* score and Mann-Whitney *U* test level of statistical significance.

The usage means for the costing techniques (full Slovenian sample) range from 4.33 (quality costing) to 2.88 (life cycle costing). The usage means in the matched Slovenian sub-sample are very similar to the full sample. In both the full and the matched samples, quality costing is the only technique scoring above the mid-point of the “not used at all/used to a great extent” scale, highlighting that the other four costing techniques referred to in Table I have relatively low levels of application in Slovenian companies. Relative to Australia, however, Slovenian companies are using all five practices significantly more. It is also noteworthy that the relative rankings of the two countries are highly inconsistent. Quality costing, for example, is the most widely used costing technique in Slovenia yet the least popular in the Australian sub-sample. Life cycle costing, is the least applied costing technique in Slovenia, yet it ranks as second most popular in Australia.

Table II presents usage means for the competitor accounting techniques. Usage means for the full Slovenian sample range from 4.67 (competitor performance appraisal)

	Full Slovenian sample	Slovenian matched sub-sample	Australian matched sub-sample	Mann-Whitney <i>U</i> test	
				<i>Z</i> score	Sig. level
Competitor performance appraisal	4.67	4.47	4.04	-0.99	0.32
Competitive position monitoring	4.57	4.31	4.40	-0.42	0.67
Benchmarking	4.22	3.92	4.36	-1.25	0.21
Integrated performance measurement	4.02	3.94	2.83	-2.70	0.01**
Competitor cost assessment	3.40	3.38	3.96	-1.44	0.15
<i>N</i>	193	134	26		

Table II.

Competitor accounting usage means

Note: All items scored on a scale where 1 denotes “not used at all” and 7 denotes “used to a great extent”

to 3.40 (competitor cost assessment). Only competitor cost assessment scores below the mid-point of the measurement scale. Consistent with the expectation that management accounting sophistication is positively associated with company size, for all five practices investigated, usage means in the matched Slovenian sub-sample are lower than the full sample usage means. The cross-country comparison of these practices reveals a somewhat mixed picture that is quite different to that observed in the strategic costing analysis.

Although integrated performance measurement is used statistically significantly more in Slovenian companies[7], the mean usage rate of three of the five competitor accounting techniques is higher for the Australian sub-sample (it should be noted, however, that none of these differences are statistically significant). Differences in the relative rankings of the techniques in the two countries are again in evidence. In Slovenia competitor performance appraisal is the most popular, however it ranks only third in Australia.

Table III provides the findings for the strategic decision-making techniques. Two of these three techniques score above the mid-point of the measurement scale (strategic pricing has a mean of 4.38 and strategic costing has a mean of 4.19), while brand valuation's mean of 3.41 is below the scale's mid-point. When a cross-country perspective is taken, it can be seen that the relative rankings of the three techniques are the same, however, strategic costing and brand valuation are applied significantly more in Slovenian companies.

Table IV summarizes data for the three customer accounting techniques. Usage means for the full Slovenian sample range from 4.00 (customer profitability analysis) to 1.97 (valuation of customers as assets), signifying that none of the customer accounting techniques ranks particularly highly compared to the other SMA techniques appraised.

This same ranking of the techniques appears in all of the samples investigated and is consistent with the ranking reported by Guilding and McManus (2002). For customer accounting, no statistically significant cross-country differences are discernible.

	Full Slovenian sample	Slovenian matched sub-sample	Australian matched sub-sample	Mann-Whitney <i>U</i> test	
				<i>Z</i> score	Sig. level
Strategic pricing	4.38	4.29	3.88	-0.82	0.41
Strategic costing	4.19	4.13	3.33	-1.79	0.07*
Brand valuation ^a	3.41	3.34	2.52	-2.01	0.04**
<i>N</i>	193	134	26		

Note: All items scored on a scale where 1 denotes "not used at all" and 7 denotes "used to a great extent"; ^afor the brand valuation technique, the respondents were given the option to indicate that this technique is not applicable in their company because their company does not possess brands. Companies that opted for this option were treated as missing values in mean score calculation (43 out of the 193 Slovenian companies, and two out of 26 Australian companies)

Table III.
Strategic decision-making usage means

	Full Slovenian sample	Slovenian matched sub-sample	Australian matched sub-sample	Mann-Whitney <i>U</i> test	
				Z score	Sig. level
Customer profitability analysis	4.00	3.90	3.50	-0.98	0.33
Lifetime customer profitability analysis	2.72	2.70	2.35	-1.24	0.22
Valuation of customers as assets	1.97	2.08	2.17	-0.62	0.54
N	193	134	26		

Note: All items scored on a scale where 1 denotes “not used at all” and 7 denotes “used to a great extent”

Table IV.
Customer accounting
usage means

6. Conclusion

This study can be seen to build on the SMA international investigation conducted by Guilding *et al.* (2000) that compared the SMA usage rates of three Western countries: New Zealand, the UK, and the USA. The main significance of the study described herein stems from its focus on Slovenia, a former socialist country that has recently managed a successful major political and economic transition. This change has triggered an era of renewal and heightened strategic focus (Pucko, 1997; Bogel and Huszty, 1999). The strategic orientation of SMA and the fact that SMA techniques have only recently been receiving attention from normative commentators combined to suggest that SMA application might be relatively advanced in Slovenia.

Two aspects of the study appear worthy of further comment. Firstly, the degree to which the SMA practices are applied in Slovenia varies considerably, with competitor performance appraisal being the most extensively applied technique, and valuation of customers as assets being the least applied. Of the 16 techniques, seven appraised had a mean score usage rate above the mid-point of the “not used at all/used to a great extent” measurement scale. The most popular practice appears to be competitor accounting. Four out of five of the dimensions of competitor accounting score above the mid-point of the measurement scale. A similar finding was reported by Guilding *et al.* (2000), thus providing a suggestion that from an international perspective, competitor accounting is the most extensively applied dimension of SMA. The least popular SMA theme in Slovenia appears to be customer accounting, as all three of its dimensions failed to provide means above the measurement scale’s mid-point.

Simons (1990) and Ward (1993) suggested that SMA has the potential to serve as a management tool that can be integral to a quest for competitive advantage. If this is true, the relatively low SMA usage levels observed in this study suggest that Slovenia has some way to go in terms of realizing this potential. Recent surveys of conventional management accounting techniques (Drury and Tayles, 1995; Szendi and Shum, 1999; Ekholm and Wallin, 2000) highlight the durability of conventional management accounting techniques and it appears fair to say that, by comparison, SMA practices continue to be relatively marginalised. If the profession is, as Bhimani and Bromwich (1992) suggest, in a state of “evolution not revolution,” then the evolution is slow, and at best, partial.

The second aspect of the study deserving of further comment relates to the international comparative analysis undertaken. Of the 16 SMA techniques investigated, eight have been found to be used statistically significantly more in the Slovenian sub-sample than in the Australian sub-sample. This finding may at first sight appear to support the premise that transition countries are likely to have high usage rates of relatively new, strategically oriented, accounting techniques. However, determining the extent to which this really is the case is problematical. Guilding *et al.* (2000) in their study of SMA techniques applied in the USA, UK, and New Zealand report much higher usage rates than those observed for Australia in this study, and marginally higher than the SMA usage levels observed for Slovenia. The companies studied in Guilding *et al.*'s study were, however, much larger than the companies investigated in this study. Therefore, we do not yet have a fair basis for comparing Slovenian SMA usage rates with those in the USA, UK, and New Zealand[8].

Maybe even more interesting than the quantum of differences in SMA usage rates across Slovenia and Australia is the pattern of these differences. It is striking that all of the five techniques that have been classified under the "costing" generic label, together with "strategic costing," are applied more extensively in Slovenia than in Australia. This provides a strong reason to conclude that these differences are not randomly occurring[9], rather, they appear to be country contingent. Following Porter's (1985) taxonomy of generic competitive strategies, this finding can be viewed as a suggestion that, relative to Australian enterprises, Slovenian companies place a high emphasis on pursuing competitive advantage through the application of a cost leadership strategy. Such a view would be consistent with Slovenian companies attaching a relatively high degree of importance to SMA costing tools and has support from Pucko's (1997) study which provided evidence indicating extensive application of cost reduction strategies in Slovenian companies. This finding can also be seen as consistent with Slovenia's greater emphasis on manufacturing and perhaps also supportive of the premise that Slovenian companies are exposed to higher levels of international competition than that evident in Australia, where cost management is not as key to competitive sustainability.

The cross-country difference in the application of "integrated performance measurement" finding also appears noteworthy. Carr and Tomkins (1996) observed that German companies place more emphasis on strategy (non-financial considerations) in their management systems relative to their UK counterparts, where an emphasis on financial calculus predominates. Given the fact that Slovenia is a continental European country with a Germanic mentality and strong historical bonds to the German speaking world (Slovenia was part of the former Austro-Hungarian Empire until its collapse after World War I), while Australia is an Anglo-Saxon country with strong historical and cultural links to the UK, Carr and Tomkins' observation appears to find some resonance in this study's findings.

The interpretation of cross-country differences has thus far focused on potentially distinctive Slovenian characteristics. As noted earlier, it also needs to be recognized that the Australian economy has some key distinctive dimensions. The fact that a relatively low proportion of Australia's gross national product is generated from manufacturing activities could also be a key factor lying behind some of the observed international differences. Several of the definitions provided in the glossary provided with the questionnaire carry a strong manufacturing inference (this is particularly the

case for attribute, quality, life cycle, target and value chain costing). The Australian sub-sample's relatively high ranking of life cycle costing compared to the other costing techniques (in Slovenia life cycle costing ranks as the least popular strategic costing technique) might result from the project orientation of many primary industry activities. Further, the opportunities for branding in primary industries would appear to be less than in the manufacturing and service sectors. This may well account for the Australian sample's relatively low level of brand valuation activity. Competitor accounting appears to be the one sphere of SMA application where the Australian sub-sample does not rank behind the Slovenian sub-sample. Primary industries would appear to have fewer large competitors (making the pursuit of competitor accounting easier and potentially more meaningful) and the relative standardisation of operations may well facilitate some competitor accounting analysis.

The study's findings should be interpreted in light of several limitations. While the generally accepted limitations of survey research apply, in this study a further concern arises due to the limited consensus with respect to what practices constitute a definitive listing of SMA techniques. This problem is bound to persist, as even for conventional management accounting, which has a much longer history than SMA, there is no single definitive listing of techniques. A closely related problem stems from the incompleteness that can be expected to be endemic to any generated listing of SMA techniques. SMA continues to be in a state of fairly rapid evolution. Future empirical works conducted in a similar vein to the study described herein could benefit from extending the techniques appraised to include practices such as the valuation of relationships (Turchan and Mateus, 2001) or intellectual capital measurement (Tayles *et al.*, 2002).

A further shortcoming is evident in the cross-country comparison aspect of this study, as a disappointingly small number of Australian financial controllers committed themselves to participating in the study. Despite considerable effort applied through phone calls made to the companies sampled, in which a pledge of anonymity was made together with the promise of a delivered copy of the study's executive report, the poor reaction suggests a developing inertia in large Australian corporations with respect to participating in academic accounting studies. This represents a particular problem for survey-based researchers, especially when we recognize that the survey could be expected to be of interest to practitioners due to the relative degree of novelty associated with the SMA techniques appraised. Despite the study's shortcomings, the insights gained into the mix and degree of SMA application in Slovenia suggest that this study can provide a useful pointer towards the conduct of further research directed to other nations that have recently experienced a period of rapid economic and commercial transition. A comparative survey conducted contemporaneously across several such economies has the potential to offer significant insights (although considerable care would have to be exercised if translating the questionnaire into more than one language), or an alternative way would be to adopt a grass roots approach involving the conduct of case studies to gain a deeper understanding of the nature and context of SMA development.

Notes

1. New countries are the ten countries that entered the EU on May 1, 2004 (Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia) and the

two countries that entered the EU on January 1, 2007 (Bulgaria and Romania). Together with the 15 old members (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden and UK), the EU currently comprises 27 countries. The Eurozone on the other hand comprises only 13 countries. With the exception of Slovenia, these are all old members (Denmark, Sweden and UK have chosen not to implement Euro currency).

2. Neither Chenhall (2005) nor Guilding and McManus (2002) use the term “strategic management accounting;” however, the accounting practices they investigated can be seen to constitute particular examples of SMA.
3. It should be noted that not all these commentators use the term “strategic management accounting” in their writings. Alternative terms that have been used include “strategic accounting” (Ryan, 1995; Brouthers and Roozen, 1999), “accounting for strategic management” (Dixon, 1998), “accounting for strategic positioning” (Roslender, 1995), and “strategic cost management” (Shank and Govindarajan, 1993).
4. Part of the reason for collapsing brand value budgeting and brand monitoring into one variable resulted from Guilding *et al.*'s (2000) observed low usage rates for these techniques in New Zealand, the USA and the UK.
5. More extensive descriptions of most of these techniques are provided in Guilding *et al.* (2000) and Guilding and McManus (2002).
6. Considerable effort was made to increase the response rate for the Australian sample by way of the phone calls. It appears, however, that like in many other Western countries, senior Australian corporate officials are becoming negatively disposed to the increased number of survey questionnaires that they appear to be receiving.
7. It is noteworthy that of the five competitor accounting techniques, “integrated performance measurement” would appear to have the lowest “competitor” orientation.
8. The upper limit of the range of companies used in Guilding *et al.*'s matched sub-sample investigation is 65 times greater than that used in this study and Guilding *et al.*'s lower limit is 16 times higher.
9. Further support for this view is provided by the fact that no attempt was made to categorise the SMA techniques presented in the survey questionnaire.

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