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Strategic management accounting in the Republic of Serbia

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ABSTRACT
The transition process in the Republic of Serbia – and the transition from a planned to a market economy – makes managing a company more demanding and sophisticated. In these circumstances, to be competitive, companies must have a strong and sophisticated information system that will provide information support to allow management to react in a timely manner and be proactive to market changes. One of the most important sources of such information is, of course, management accounting. Using only the traditional management accounting (TMA) could no longer fulfil the purpose of management requirements. For this purpose, strategic management accounting (SMA) and strategic cost management (the term ‘SCM’ is more commonly used in US literature) have been developed. This article explores the usefulness of using the aforementioned SMA techniques in obtaining timely and relevant information. Also, the intention was to identify synergetic effects of their implementation in terms of positive impact on cost control and costs reduction. The results were much more positive than expected.

1. Introduction
The Serbian process of transition from a planned to a market economy over the last 25 years means that the business environment has become intensively dynamic and increasingly unpredictable and, correspondingly, managing a company has become more demanding. Only using the traditional management accounting (TMA) would no longer fulfil the purpose, because the same has been characterised as providing information to aid managers internally within a firm, and as such, the focus of the management accounting systems have also tended to be internally-orientated. During the 1980s and 1990s a growing number of academics (Johnson & Kaplan, 1987; Bromwich & Bhimani, 1989, 1994) began to recognise that management accounting was not adapting to the changes in the modern business environment and thus was not fulfilling its function to aid managers.

In the environment mentioned above, to achieve competitiveness companies apply different strategies, and management accounting should be used as one of the main supporting systems for strategy implementation. For this purpose, strategic management accounting
(SMA) and strategic cost management (SCM) have been developed. Therefore, in a bid to improve the quality of management accounting information for managers it was necessary to focus more widely on the external environment of the firm and thus the concept of SMA evolved. SMA involves the provision of information, which is externally-orientated, market-driven and customer-focused, and provides managers with a range of techniques and tools to facilitate strategically-orientated decision-making. Like Kenneth Simmonds (1981, p. 26), who is considered to be the founder of the SMA concept, defines it as monitoring and analysis of management accounting information of the enterprise and its competitors, in order to develop and control strategy. Bromwich (1990, p. 28) believes that SMA provides financial information about the market in which the company sells its products and the costs, as well as the cost structure of competitors.

Given that (traditional) management accounting focuses on financial information, the business context in which decisions are made and implemented is not included. The inclusion of non-financial information and information about the business environment, in order to implement the company’s strategy, has transformed management accounting into SMA. Furthermore, to make management accounting more strategic it is necessary to provide information which has an external, as well as an internal, focus which is orientated towards the future rather than the past.

In order to better understand, in the following table we briefly indicate the key differences between TMA and SMA (Table 1).

The importance of SMA in measuring multidimensional aspects of performance is rapidly increasing (Fowzia, 2011, p. 62) although many companies still use traditional management and/or cost accounting techniques.

### 1.1. Techniques and methods of SMA

It is important to note that if we analyse the definitions of the SMA concept, we could conclude that a large number of them are very general and have significantly different basic content: First, it is not clear if SMA should focus only on financial or on non-financial information also. Second, there is no clear boundary between SMA as information support of strategic management and strategic management itself. A lot of definitions focus on management and strategy process than on information support. Third, there is no clear relation between SMA and strategic marketing and business strategy.

The absence of a widely accepted definition is one of the significant problems for the application and education of SMA. Creators and users of SMA could have different requirements and expectations (Šoljaková, 2012, p. 28).

Other problems relate to an absence of setting lists of techniques and methods that management accounting should include (Langfield-Smith, 2008). One of the best known and most widely used classifications of SMA techniques is classification by Cravens and Guilding (2001), which identified 14 techniques of SMA:

- **Activity-based costing/management (ABC/M)** – the strategic focus of this technique consists of the management of the activities, through which it is possible to define actions aimed at achieving a competitive advantage;
- **Attribute costing** – considering products/services as a bundle of features that differentiate the products, of which costs are determined, this technique can be interpreted...
as externally-oriented because the attributes of services are determined according to customer requirements;

- **Benchmarking** – involves identifying the best practices and comparing the organisation’s performance to those practices with the goal of improvement; this technique underlines the external strategic orientation toward competitors;

- **Competitive position monitoring** – aims at gathering the information on competitors regarding sales, market share, volume and unit costs. Based on the information provided, the company is able to assess its own position relative to main competitors and, consequently, control or formulate its strategy;

- **Competitor cost assessment** – in contrast to the previous technique, competitor cost assessment concentrates uniquely on cost structures of competitors; the main criticism of this technique regards the information sources;

- **Competitor performance appraisal based on public financial statements** – a relevant source of competitors’ evaluation is constituted by public financial statements; today’s international accounting harmonisation permits a simpler comparison between companies of different countries;

- **Customer accounting** – this technique considers customers or group of customers as unit of accounting analysis and aims at appraising profit, sales or costs deriving from customers or customer segments;

- **Integrated performance measurement** – implies a definition of an integrated performance measurement system, which contains both financial and non-financial measures (balanced scorecard [BSC]); the BSC was proposed by (Kaplan & Norton, 1992) in which financial and non-financial measures were integrated for strategic performance management purpose. It aimed to create a balance by linking vision and strategy of the business with multi-dimensional perspectives of customers, internal business processes, learning and growth, and financial position.

- **Life cycle costing** – aims at calculating the total cost of a product throughout its life cycle, from the design to the decline, through introduction, growth and maturity; it is a clear long-term accounting perspective and market orientation;

- **Quality costing** – product quality has become a precondition to its market success; this technique classifies and monitors costs as deriving from quality prevention, appraisal, internal and external failures;

- **Strategic costing** – costing systems are progressively getting into the strategic management process, which means that costing systems must explicitly consider strategy and the pursuit of long-term competitive advantage;

- **Strategic pricing** – focuses on the use of competitor information, like competitors’ reactions to price changes, price elasticity, economies of scale and experience, in the pricing process;

- **Target costing** – within this technique many external factors intervene;

- **Value chain costing** – propose an approach to accounting that considers all the activities performed from the design to the distribution of the product; the strategic implications regard the exploiting of the economies and efficiencies deriving from the external linkages between the company and both suppliers.
Considering the purpose of this research article we will mention three SMA techniques more, which are not included by above mentioned list of techniques. The three additional techniques are as follows:

- **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 (Guilding, Cravens, & Tayles, 2000, p. 131).

- **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 (Guilding et al., 2000, p. 131).

- **Environmental management accounting** – represents a combined approach that provides for the transition of data from financial accounting, cost accounting and mass balances to increase material efficiency, reduce environmental impacts and risks and reduce costs of environmental protection (Jasch, 2003, p. 667).

2. Literature review

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.

The effects of SMA implementation have not been sufficiently explored. Therefore, all of the research was superficial and theoretically orientated. The only book on the topic of SMA was written and published in 2003 (Vlade Miličević, 2003), with emphasis on the theoretical analysis of the scope and limitations of conventional management accounting, the role of SMA in creating the competitive and corporate strategy and the problems strategically oriented management accounting system.

On the other hand, much of the domain of conventional management accounting appears to be more associated with the ‘tactical’ than the ‘strategic’. The conventional management accounting system does not tend to adopt a long-term, future-oriented stance, nor is it characterised by a marketing or competitive focus. Strategic decisions usually involve the longer-term, have a significant effect on the organisation and, although they may have an internal element, they also have an external element. In order to make strategic decisions and monitor strategic programmes it is necessary to use SMA methods (techniques). Langfield-Smith (2008, p. 206) points out that a range of techniques have been included under umbrella of SMA, and that some commentators define SMA in terms of its techniques. These include target costing, life cycle costing, strategic cost analysis, competitor cost analysis, activity-based costing (ABC), and activity-based management, attribute costing and strategic performance measurement systems. Guiding et al. (2000) have included 12 SMA practices in their international study (attribute costing, brand value budgeting, brand value 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). Shank (1989) believes that the real novelties in SMA are the product life cycle costing, value chain analysis and quality
costing. According to him, other methods represent the elaboration and supplement of the concepts established long ago (he particularly commented on the ABC). Although the focus of ABC is cost allocation (not strategic support), it can be used for strategic planning. In addition to the above mentioned, the BSC is the most widely used strategic management technique among the integrated performance measurement systems.

Most of the literature regarding SMA were at the conceptual levels. In recent years such approaches have influenced research conducted around the factors affecting SMA techniques implementation (Cravens & Guilding, 2001; Guilding et al., 2000; Cadez, 2002; Imeokparia, 2008; Cinquini & Tenucci, 2010), confirming the increasing interest on the assessment of the extension of their use within companies and the factors affecting it. The overall findings of this research revealed some significant issues, such as that the SMA techniques were not strategy-driven, some SMA techniques had an influence on financial performance improvement, the intensity of the usage of SMA techniques were high in New Zealand when compared to UK and USA, some cost-oriented SMA techniques were applied more extensively in Slovenian companies than in the Australian benchmark sample, several SMA techniques appeared to be used in Italian companies as they were in other countries investigated in different studies, there were significant usage of SMA techniques in Nigeria manufacturing companies. Also, one of the latest research papers was conducted on 70 manufacturing companies in Bangladesh by Fowzia (2011) which shows that a total of seven SMA techniques are medium adopted such as ABC, benchmarking, competitive position monitoring, life cycle costing, quality costing, strategic costing and target costing and the rest of the techniques are in the range of low adoption, that there is no difference in using different types of SMA techniques among different types of industry. It means the SMA techniques are not well used by the manufacturing organisations, so that they are not capable of strongly influencing in achieving strategic effectiveness.

Another important research paper was conducted on the 400 largest companies in Croatia (the responding rate was 16.25%) by Ramljak and Rogošić (2012) which shows that a total of six SMA techniques are medium-low adopted such as ABC, quality costing, target costing, balance scorecard, life cycle costing and environmental costing are in the range of low adoption but, with an upward trend in their use in recent years. As previously mentioned, research in Croatia is important because of the possibilities of comparison with research results from two countries with practically the same culture and business philosophy, as well as consideration of possible differences in the use of SMA techniques in companies from Croatia and Republic of Serbia.

In the context of these studies mentioned above, this study tries to examine and determine the effects of the implementation of SMA techniques in large Serbian companies.

3. Research hypotheses

Management accounting systems have three primary purposes:

➢ To allow for the allocation of costs between cost of goods sold and inventory for internal and external profit reporting;

➢ To provide relevant information to aid management decisions;

➢ To provide information to aid in planning, control and the evaluation of performance.
Whilst these are indeed important and critical requirements of accounting systems, the traditional viewpoint has been to use internal information to achieve them and this is where the failings of TMA can be seen to be apparent.

When we look better and better analyse the key differences between traditional and SMA, what we are mentioned above, we can say and confirm that the majority of companies in the Republic of Serbia is still using conventional methods of calculating costs, the crucial part of TMA. That is the reason why the large sized companies are chosen to be analysed.

The essential difference between TMA and SMA is in the scope of information. Traditional techniques cannot fully meet the purpose of the information in the manner that is expected in today's modern business environment. Because of that reason, broad-scope information is associated with more sophisticated techniques. In order to be useful for decision-making, the information from management accounting reports must be relevant (broad-scope of integrated and aggregated information) and timely. Summing up the above, we have developed our first hypothesis of which, it can be expected that:

\[ H1 \]: The use of strategic management accounting techniques has a positive impact on providing management with relevant and timely information.

Through research we want to determine whether there is a correlation between the use of these techniques and the cost control and reduction, which, of course formulate another hypothesis which states:

\[ H2 \]: Synergy effects of implementing the different techniques of strategic management accounting have a positive impact on the cost control and cost reduction.

### 4. The empirical research methodology and results

A large-scale multipurpose survey was conducted during August, September and October 2015 on the use of cost systems and SMA practices in large-sized companies. According to the latest changes in Serbian accounting law, a large company is considered if two of the following three requirements are exceeded: average number of 250 employees and more, income of 35,000,000 EUR and more, and an average value of total assets worth more than 17,500,000 EUR during the financial year. The Republic of Serbia operates 332 large companies which makes 0.11% of the total number of companies but, on the other hand, they employ 35.14% of the total number of workers and have a turnover of 35.67% of the...
total turnover of Serbian companies. For the purposes of this study we selected a sample of 80 large companies by the criteria of their turnover. Selected companies make up more than half of the total revenue, which consist of large companies. Particularly, 70% of companies included in the survey are companies that are among the top 100 most successful companies in the Republic of Serbia. Fifty-nine sample companies are manufacturers and 21 are trading companies. The answers to the questionnaire we received from production companies. By analysing the responses received from the selected enterprises, it can be concluded that the reason we only get answers from production companies is their overall complexity of the processes, leading to greater opportunities and benefits from the use of SMA techniques in relation to commercial enterprises. Respondents were mainly financial controllers and financial managers.

The questionnaire was mailed to the accounting manager or the financial manager in each firm. These managers were chosen as respondents because they should be able to provide the information required for the purposes of this study. The survey procedure consisted of four points of contact: by phone, sending a questionnaire by mail, reminder by e-mail and replacement questionnaire by e-mail. After that, through phone calls with the companies involved in this study, we explained the confidentiality of their responses, which will exclusively be used for the realisation of this research.

The TMA techniques were predominant. During the transition phase of Serbian economy and increased foreign investment, the development of the management accounting system was expected. According to the findings of this research, at least one of the SMA techniques has been applied in 73.75% of the observed Serbian companies. This finding testifies to a serious perception of SMA importance in decision-making in recent years.

ABC is the most used technique in the observed companies (with a frequency of 67.80%) followed by quality costing (40.68%). Value chain costing is in use 37.29% of the time, attribute costing 32.20% and benchmarking 25.42%. The least used techniques are target costing (in 16.95% companies), competitor performance appraisal based on public financial statements (in only 5.08% companies) and Environmental Management Accounting (in only 3.39% companies).

Descriptively speaking, the survey confirms the high importance of SMA techniques as a key factor in the use of accounting information in the processes of decision-making. Also, when we speak in favour of the first hypothesis, manufacturing companies have responded positively in obtaining relevant and timely information due to the use of SMA techniques. In order to verify this, the Mann-Whitney test was performed. The results of the nonparametric test is shown in Tables 2 and 3, noting that ‘SMA = 0’ refers to a company that does not apply any of observed technique, and that ‘SMA = 1’ refers to a company that has implemented at least one of the SMA techniques.

Table 2. The ranks of relevance and timeliness in companies according to strategic management accounting implementation.

<table>
<thead>
<tr>
<th>SMA</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>19</td>
<td>15,64</td>
<td>297,16</td>
</tr>
<tr>
<td>1</td>
<td>40</td>
<td>37,79</td>
<td>1511,60</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>17</td>
<td>14,67</td>
<td>249,39</td>
</tr>
<tr>
<td>1</td>
<td>38</td>
<td>36,14</td>
<td>1373,32</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N – Number of respondents.
Source: Authors.
High values of the Mann-Whitney U and Wilcoxon tests indicate that the first hypothesis is accepted as valid and as such it is supported by these findings. Also, it was found that there is a difference in the accounting system of companies that employ some of the SMA techniques and those companies that use only TMA techniques. But most companies use some SMA techniques to complement and support TMA techniques in the process of managerial decision-making.

The results related to the second hypothesis are shown in the Tables 4 and 5.

The mean values of the perceived effect of the accounting instruments usage is shown in Table 4, noting that ‘SMA = 0’ refers to a company that does not apply any of observed technique, and that ‘SMA = 1’ refers to a company that has implemented one of the SMA techniques and ‘SMA = 2’ refers to the usage of two or more techniques. The effect of the management accounting instruments (traditional, sophisticated, synergy of two or more sophisticated) was tested based on Likert 5-item scale, where 1 = ‘strongly disagree’, 2 = ‘disagree’, 3 = ‘neither disagree nor agree’, 4 = ‘agree’ and 5 = ‘strongly agree’ that management accounting system has impact on cost control/cost reduction.

In order to better point out the superiority of SMA techniques in relation to the TMA techniques, we compared certain indicators in the financial statements of companies that use SMA techniques and those who do not use them. Comparative analyses of financial statement indicators are shown in Table 5.

The results shown in Table 4 tell us that the cost reduction and cost control is closer to ‘neither disagree nor agree’ in companies with TMA while the mean value of the same variables is closer to ‘agree’ in companies applying at least one SMA technique and even higher in companies that use two or more of these methods suggesting that synergistic effect is valuable in this context. Also, a small standard deviation value indicates and confirms the accuracy of measurements and very small deviations from the obtained results. Those results are confirmed by the fact that all analysed indicators point to the superiority of SMA techniques compared to TMA technique. This fact is most evident with the materials costs, production costs and business profit. Considering these indicators, we conclude that the combined use of specific techniques of SMA influence better capacity utilisation, rational use of materials and inventory management of the companies. All of the previously mentioned lead to the cost reduction, better cost control and better business results of the companies that use SMA techniques. Therefore, it can be concluded that the second hypothesis is accepted.

Also, at the end of our questionnaire, it is very important to emphasise the fact that when we asked respondents about whether the use of the techniques of SMA have an influence on improving performance and increasing profit, companies have responded to that with YES, explaining the fact by 30–80% in terms of improved performance and increased profits of these companies.

Table 3. Mann-Whitney test statistics.

<table>
<thead>
<tr>
<th>Test</th>
<th>Relevance</th>
<th>Timeliness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U (a)</td>
<td>108,50</td>
<td>98,26</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>297,16</td>
<td>249,39</td>
</tr>
<tr>
<td>Z</td>
<td>-3,666</td>
<td>-2,609</td>
</tr>
</tbody>
</table>

Source: Authors.
5. Conclusion

Considering that so far in the Republic of Serbia there have been no studies of this type, it should be noted that in the last seven years there has been increased use of SMA techniques in the process of business analysis and decision-making, from the reasons for the growing inflow of foreign capital in recent years and the conclusion of joint ventures partnerships. All this is one part of the conditions for access of the Republic of Serbia to the EU and adapting the Serbian economy to the trends of modern business.

In this article, it was clear that companies that use at least one of the techniques of SMA receive on much higher level of relevant and timely information compared to companies that do not use these techniques. The first hypothesis was confirmed and therefore the main purpose of SMA was empirically supported.

Also, through statistics we can declare that there is a strong correlation between the implementation of various techniques of SMA and the positive impact on cost control and cost reduction. Therefore, the second hypothesis was determined.

Finally, when we analyse and compare the results of the research in Croatia and the results of this study, we see a strong connection and a cultural impact (belonging to the same country of Yugoslavia for more than 60 years, Balkan region countries, similar mentality, language, similar age structure, similar organisational structure of the companies, similar organisation of financial and accounting functions, transition process similarities, the arrival of foreign investors) in using some certain techniques in the Republic of Serbia and in Croatia. Also, this confirms the fact of preparedness and adaptation of Serbian companies in acceptance of a sophisticated and technologically advanced way of doing business.

Table 4. The mean value of the effects of management accounting instruments usage.

<table>
<thead>
<tr>
<th>SMA</th>
<th>Mean Cost reduction</th>
<th>Mean Cost control</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2.89</td>
<td>3.16</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>0.809</td>
<td>0.633</td>
</tr>
<tr>
<td>Mean</td>
<td>3.60</td>
<td>4.13</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>0.507</td>
<td>0.342</td>
</tr>
<tr>
<td>Mean</td>
<td>4.24</td>
<td>4.42</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>0.436</td>
<td>0.504</td>
</tr>
<tr>
<td>Mean</td>
<td>3.644</td>
<td>3.949</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>0.826</td>
<td>0.729</td>
</tr>
</tbody>
</table>

Source: Authors.

Table 5. Financial statement indicators analyses.

<table>
<thead>
<tr>
<th>Indicators/Companies</th>
<th>Using SMA techniques</th>
<th>Not using SMA techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Costs/Total Costs</td>
<td>43.39%</td>
<td>58.94%</td>
</tr>
<tr>
<td>Fuel Energy Costs/Total Costs</td>
<td>1.84%</td>
<td>3.27%</td>
</tr>
<tr>
<td>Product Services Costs/Total Costs</td>
<td>19.18%</td>
<td>21.28%</td>
</tr>
<tr>
<td>Wages Costs/Total Costs</td>
<td>9.10%</td>
<td>7.72%</td>
</tr>
<tr>
<td>Business Profit/Total Income</td>
<td>15.60%</td>
<td>13.31%</td>
</tr>
</tbody>
</table>

SMA – Strategic Management Accounting.
Source: Authors.
Given that each of these SMA techniques treat some part of the strategy, Serbian companies need to use them as much as possible and in that case will provide a better picture of market movements and changes and have the opportunity to act much faster, more efficiently and in a more sophisticated manner than their competitors.

6. Limitations of the study and future developments

Limitations and future developments in the field of the study can be presented through the next few points, as follows:

- The sample size is representative and relevant for this research, as selected companies accounted for more than half of the income generated from large enterprises in the Republic of Serbia. However, for the purposes of future research, a list of selected companies should be extended both numerically, and on other economic activities, so that the study gets even more scientific character;
- Pay attention to the simplification of the academic terms of SMA techniques as well as by people from the business world could better understand and give as complete and accurate answers to the questionnaire. This, in the end leads to more precise research results;
- In order to better clarify the problem of research topics, we could analyse and expand the survey with additional questions. The determination of additional questions should be in accordance with the principle of order and consistency with topic that is the subject of this research.

These are just some of the proposals that need to be considered for future research. All with the aim of determining certain rules in using SMA techniques and their contribution to the value growth of companies in Republic of Serbia.

Disclosure statement

No potential conflict of interest was reported by the authors.

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