

HALLMARKS OF STRATEGIC MANAGEMENT ACCOUNTING: SEEKING TO SUPPORT DECISION-MAKING PROCESSES

JORGE SUAREZ ¹ 

ABSTRACT

The objective of this paper is to systematize, classify and present diverse hallmarks regarding strategic management accounting that are essential to understanding this concept, its evolution over time, and its contributions to strategic decision-making and strategic targeting. Based on a qualitative and analytical methodology, a total of 66 papers on the topic obtained from Scopus and Science Direct were analyzed, and information was categorized according to certain criteria.

The main idea is that strategic management accounting may contribute, through the supply of strategic and innovative information, to supporting how companies are strategically managed and their strategic decisions.

The general conclusion is that this branch of accounting is still in a stage of consolidation, with developments in diverse areas to face the challenges derived from globalization, the free market, technological change and global competition, along with diverse challenges in training, management styles, and awareness of the importance of making decisions based on relevant and integral external and internal information.

Keywords: strategic management accounting, management accounting, strategy, strategic decision-making

JEL Classification: M410, M190.

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¹ BA School of Business and Finance, Latvia; National University of Colombia; e-mail: jsuarez@unal.edu.co

INTRODUCTION

The aim of this paper is to systematize, classify and present diverse hallmarks regarding strategic management accounting (hereinafter SMA) that are essential to understanding this concept, its evolution over time, and its contributions to the strategic decision-making and strategic targeting of organizations, from a research perspective. This activity of categorization is crucial due to the diverse and even controversial perspectives and factors that authors have applied over time to define and characterize SMA.

The methodology is qualitative and analytical. The collected ideas are derived from a systematic literature review based on papers obtained in Scopus and Science Direct for the period 1981-2021. The search equation was the presence of the concept SMA in the title of the articles. In total, 72 papers were identified, of which 66 could be accessed. They were complemented with some additional ideas on strategy.

This article begins by stating that accounting is a discipline which focuses on providing information about financial situation, operational performance, cash flow, budget, and taxes, among other things, which is used for diverse objectives and covers certain informational needs. It has two main branches: i) financial accounting and ii) management accounting (hereinafter MA). On the one hand, the first is the most developed and studied due to it being mandatory for diverse organizations around the world, and it is oriented toward external users. It is regulated through the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), which is the global accounting regulator. Along with taxes, financial accounting represents the main duty for accountants working at companies.

On the other hand, there is a second accounting branch, MA, whose main goal is to provide internal information to support the functions of planning, control and decision-making. It has received less attention in the organizational and academic context compared with the financial branch, with less evident effects on how this information influences the ways in which companies are managed and on decision-making processes.

Historically, internal accounting information has existed since the industrial revolution in the eighteenth century, starting with cost accounting and the determination of the cost of goods produced, the components of the cost – raw materials, labour costs, overhead, and contracts of services² – and the creation of costs systems – job orders costing, process costing, and joint costing – to fulfil this goal.

Then, starting in the 1940s, questions arose in regard to how a management team could use this information to support decision-making processes. As an answer, in MA some techniques were developed for that purpose, for instance i) budgets, ii) break-point analysis, iii) cost-volume-profit analysis, iv) linear programming, v) direct costs, vi) activity-based costing, and vii) activity-based management. With these developments, the role of accounting in supporting planning, control and decision-making became more relevant.³

Thereafter, in 1981 SMA appeared as the last stage in the development of MA to support strategic targeting and strategic decision-making using especially external and long-term information, and to date, it continues to be studied, implemented and consolidated. This new concept arose in a context characterized by globalization, technological change, the free market and global competition. In the same vein, Langfield (2008) stated that during the 1970s and 80s, in business

² This component of the cost started to be studied during the second half of the twentieth century.

³ Two relevant works that examine MA and its weaknesses are Johnson and Kaplan (1987) and Ryan et al. (2002).

schools in the United States, the renowned term of strategy arose, permeating several areas, such as operations, marketing and organizations, and this situation created the need for SMA.

With the purpose of fulfilling its objective, this article is divided into five contrasting sections: first, strategy and SMA meanings; second, the contributions of SMA to strategic decision-making and strategic targeting; third, determinants of the implementation of SMA; fourth, research gaps and constraints of SMA; and finally, conclusions. This structure is derived from the analysis and categorization of the literature review. In this regard, the following section explores the definitions of strategy and SMA.

STRATEGY AND SMA DEFINITIONS

Strategy is defined in relation to the means used to create competitive advantage in a business (Porter, 1987). This advantage can be obtained through the use of generic strategies: i) cost leadership – *focused on cost control*, ii) differentiation – *attention to the attributes of products and services*, and iii) focus – *centred in a particular segment of the market* (Porter, 1985). They are useful in finding a competitive position in any industry.

Mintzberg (1987a) considered that strategy is concerned with the following factors: i) products, ii) processes, iii) customers, iv) citizens, v) social responsibilities, vi) self-interest, vii) control, and viii) colour. Mintzberg (1987b) pointed out that organizations need strategy for several reasons, for instance, to establish directions, outsmart competitors and face threatening environments; to focus effort and coordinate activities; to coordinate and develop beliefs; to reduce uncertainty and contribute to consistency, order and efficiency; and to simplify and explain the world, facilitating action.

Continuing with Mintzberg, he categorized strategy in accordance with the five P's: i) as a plan – *a conscious and purposeful course of action or guideline made in advance*, ii) as a ploy – *a specific tactic to outsmart a competitor or rival*, iii) as a pattern – *a pattern in a stream of actions which is consistent in behaviour*, iv) as a position – *a way of locating an organization in a product-market domain*, and v) as a perspective – *a way of locating an organization in an environment*. In the same paper, he also associated strategy with other factors affecting it: i) products, ii) processes, iii) customers, iv) citizens, v) social responsibilities, vi) self-interest, vii) control, and viii) colour (Mintzberg, 1987a). Figure 1 summarizes the hallmarks of strategy by Porter and Mintzberg.

Both Porter and Mintzberg are classically employed in SMA research, for instance by Bromwich (1990), Dixon and Smith (1993), Lord (1996), Roslender and Hart (2002), McLellan (2012), Nixon and Burns (2012), Pavlatos (2015) Manyeva *et al.* (2016), and Turner *et al.* (2017).

A more recent concept of strategy is the one by Gandellini *et al.* (2013), who defined it as a set of decisions in regard to the allocation of resources to products or markets, in the medium or long term, aligned with objectives and considering opportunities and threats – *external factors* – and capabilities and constraints – *internal factors*. In addition, Gong (2013) incorporated the global context and also integrated operations and business strategies. In this spirit, he presented four geographically focused strategies: i) product/service-focused strategy – *narrow range of products/services but access to multiple locations locally/globally*, ii) location-focused strategy – *narrow range of locations, but a bundle of products/service packages*, iii) product/service and location-focused strategy – *narrow range of products/services in one or a few locations*, and iv) unfocused strategy – *a bundle of products or services worldwide*.

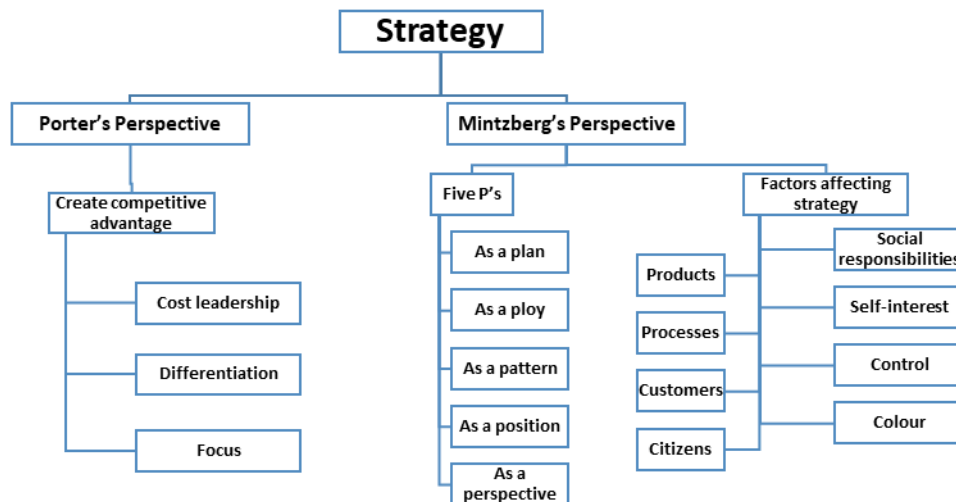


Figure 1 **Hallmarks of strategy by Porter and Mintzberg** (Source: created by the author based on Porter (1985, 1987) and Mintzberg (1987a))

Furthermore, Motohashi (2015) researched the global business strategy in multinational corporations, particularly in the context of Japan, India, China, Russia, Eastern Europe, and Central and South America. This author defined strategy as a company plan to achieve the objectives specified by mid-term management plans. Moreover, he stated that the designing of management strategies depends on the three C's: i) the company, ii) competitors, and iii) customers. Also, global strategies are defined by the three A's framework: i) aggregation – *provided by domestic production; economies of scale*, ii) adaptation – *localization of products for the local market; local responsiveness*, and iii) arbitrage – *leverages distances; value from differences*.

For any organization independent of size, strategy requires a complex planning process on diverse organizational levels, establishing i) the long-term direction, ii) the policies to be pursued, and iii) the objectives and targets which a company will apply (Tayles, 2011). Figure 2 synthesizes the hallmarks of recent viewpoints on strategy.

In short, strategy is associated with essential ways to achieve organizational objectives, taking into account resources, staff, and product or service attributes, to face the challenges imposed by the market and competitors, seeking to gain and keep a competitive advantage over time. Strategy might rely on i) cost leadership, ii) differentiation, iii) focus, or iv) a mixture of these. The definition and monitoring of strategies require organizational and contextual information that may be supplied by SMA.

In this context, the next question to be answered in this paper is related to what SMA is. This section analyses some definitions highlighting the hallmarks of the diverse ideas and contributions by previous authors regarding SMA. It is important to note that the father of SMA is the British researcher Kenneth Simmonds, who, in 1981, defined it as the analysis of MA information related to a business and its competitors to develop a business strategy. Then, in 1982, Simmonds emphasized the external focus of SMA as a contribution in formulating and monitoring business strategy.

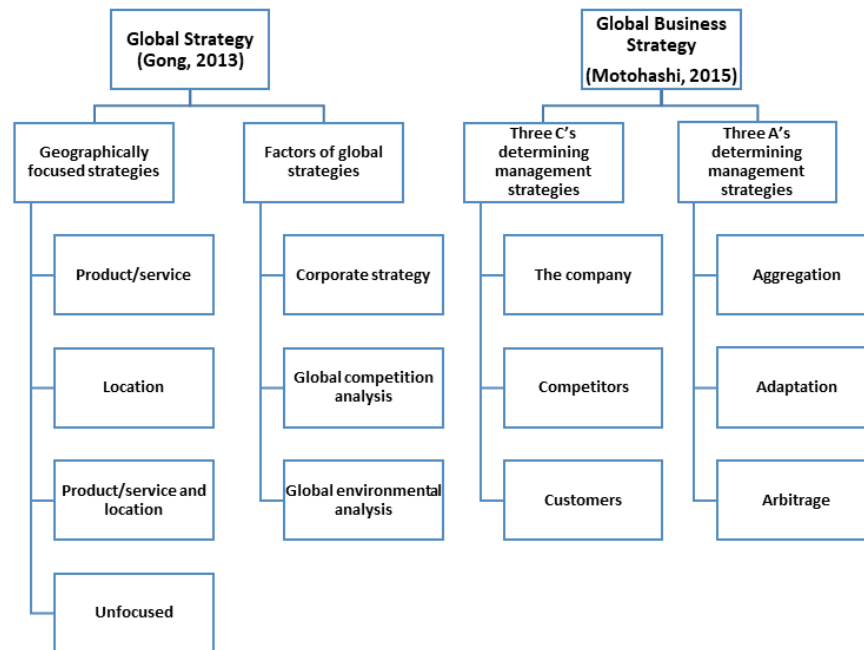


Figure 2 **Hallmarks of recent viewpoints on strategy** (Source: created by the author based on Gong (2013) and Motohashi (2015))

Bromwich (1990) presented SMA as the provision of financial information concerning four aspects: i) a firm's product markets, ii) the competitors' costs, iii) cost structure, and iv) the monitoring of companies' strategies. Dixon and Smith (1993) defined SMA as a new method to provide information that is strategically relevant. Ward (1993) considered SMA as an MA perspective highlighting strategic issues and concerns to develop superior strategies and achieve sustainable competitive advantage. Dixon (1998) remarks that SMA helps companies to gain knowledge of their external environment and demand for change.

Tillmann and Goddard (2008), along with Cinquini and Tenucci (2010), consider SMA as MA systems supporting strategic decision-making. Cadez and Guilding (2008) noted that SMA refers to a set of accounting techniques oriented toward strategy. Nazarova *et al.* (2016) defined SMA as a complex system of relations between objects and subjects of management to calculate manufacturing costs, evaluate organizational activities, and justify management decisions under conditions of risks and uncertainty. Manyeva *et al.* (2016) outline SMA as a process to collect, identify, interpret and represent financial and non-financial information to analyze the internal and external environment, to control the strategy implementation by senior managers.

Some more recent definitions consider SMA as the provision of MA data that involve both a business and its competitors (Phornlaphatrachakorn, 2019). Furthermore, SMA is a variety of activities which provide and analyze MA data related to a company and its competitors to formulate and monitor organizational strategy (Alamri, 2019). Also, SMA is a tool which provides information to support the activities of directing, planning, controlling, and decision-making, to gain strategic and operational success (Phornlaphatrachakorn and Kalasindhu, 2020).

Likewise, Duçi (2021) associates SMA with certain factors such as strategic decisions, maintaining the competitive position of companies and their strategic orientation, incorporating interdisciplinary elements from accounting, management, and strategic management. Shi (2021) defines SMA as an accounting branch related to organizational strategic management, whose

objective is to support upper management in the formulation of competitive strategies and in the implementation of strategic planning, in search of the continued development of companies.

Briefly, SMA is the last stage of MA focused on providing information which is financial and non-financial, especially externally oriented, long-term and forward-looking, to support strategic decision-making and strategic targeting. It is an interdisciplinary concept which integrated accounting, management, marketing, and strategy, among other things. The main interest regarding strategic information relies on four types of information: i) the competitors' finances, ii) the competitors' and firm's own cost structure, iii) the competitors' and firm's own strategies, and iv) the firm's product markets (Bromwich, 1990; ICAN, cited by Obohn and Ajibolade, 2017). This clearly represents a new state in the development of MA, due to the integration of strategy with an external approach for the information and a new player, competitors. Figure 3 condenses the hallmarks of the SMA definition.

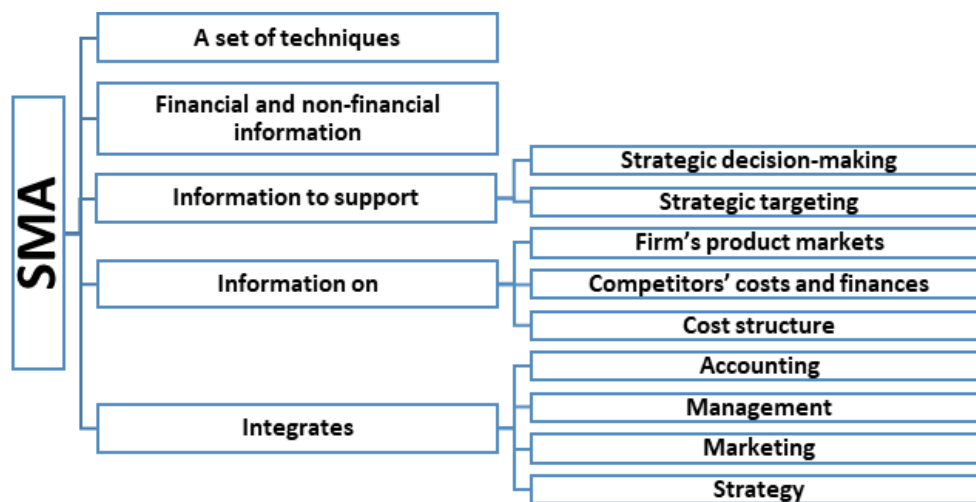


Figure 3 **Hallmarks of the SMA definition** (Source: created by the author)

SMA information contributes to decision-making and strategic targeting. The information of SMA is obtained through the implementation and application of diverse SMA techniques that are illustrated in Table 1, in concordance with the proposals of Guilding et al. (2000), Cravens and Guilding (2001), Langfield (2008), Cadez and Guilding (2008), and Cinquini and Tenucci (2010). This information must be environmental or market-oriented, long-term and forward-looking (Guilding et al., 2000), strategically oriented (Cadez and Guilding, 2008), externally oriented, market-driven and customer-focused (Dmitrović and Suljović, 2017).

The 27 SMA techniques will not be explained individually due to space restrictions, and studying them in depth requires referring to definitions, evolution, contributions, technical procedures, numerical examples, etc. They have been compiled and presented to illustrate the extent of the topic and to promote further research.

Table 1

SMA Techniques

	<u>Guiding et al. (2000)</u>	<u>Cravens & Guilding (2001)</u>	<u>Langfield (2008)</u>	<u>Cadez & Guilding (2008)</u>	<u>Cinquini & Tenucci (2010)</u>
Activity-based costing/management		X	X		X
Attribute costing	X	X	X	X	X
Benchmarking		X		X	X
Brand value budgeting	X	X			
Brand value monitoring	X	X			
Brand valuation				X	
Balanced ScoreCard					
Competitive position monitoring	X	X		X	X
Competitor accounting					
Competitor cost assessment/analysis	X	X	X	X	X
Competitor performance appraisal				X	
Competitor performance appraisal based on public financial statements	X	X			X
Customer accounting/profitability		X		X	X
Environmental management		X			
Integrated performance measurement		X		X	X
Life-cycle costing	X	X	X	X	X
Lifetime customer profitability analysis				X	
Quality costing	X	X		X	X
Strategic cost analysis			X		
Strategic cost management					
Strategic costing	X	X		X	X
Strategic investment appraisal					
Strategic performance measurement			X		
Strategic pricing	X	X		X	X
Target costing	X	X	X	X	X
Valuation of customers as assets				X	
Value chain costing	X			X	X

(Source: created by the author)

With reference to accounting information in organizations, information systems are a key component to register, process, and store information, along with the generation of reports based on it. SMA systems are understood as schemes that must contain information, i) especially non-financial, ii) with a focus on the future, iii) both internal and external to the firm, and iv) based on realistic projections of the future – not simple extrapolations of the past (Brouthers and Roozen, 1999); they are not universal, as was stated by contingency theory (Otley, 1980, 2016).

SMA is associated with SMA systems which should respond to five diverse environments: i) repetitive – no change and stability based on precedents, ii) expanding – slow incremental change based on experience, iii) changing – fast incremental change based on extrapolation, iv) discontinuous – discontinuous predictable change and new strategies based on observable opportunities, and v) surpriseful – discontinuous unpredictable change and novel strategies based on creativity (Brouthers and Roozen, 1999). In this case, the challenge is to identify the level of uncertainty that a particular company faces, with the purpose to create the appropriate SMA system.

According to Cadez and Guilding (2008), there are two approaches in SMA: i) a set of strategically oriented accounting techniques and ii) the involvement of accountants in corporate strategic decision-making processes. Dixon and Smith (1993) stated that the main task for strategic

management accountants is to collect data from several sources, such as marketing, production, accounting, and finance, to define strategic business units, for instance target customer groups, technologies employed by divisional units, competitors and divisional pricing policies.

It is also important to mention the controversies around SMA. Here, Lord (1996) suggested that SMA is a “figment of the academic imagination” and Coad (1996) pointed out that SMA is an emerging field whose boundaries are loose, there is no unified view of what it is or how it might develop, and the existing literature in the field is both disparate and disjointed. Roslender and Hart (2003) considered that SMA corresponded to a set of techniques seeking to restore the little relevance of MA.

Dmitrović and Suljović (2017) highlighted that one of the significant problems for the application and education of SMA is represented by the absence of a widely accepted definition. These authors summarized some weaknesses of SMA definitions: first, it is not clear if SMA should focus only on financial or non-financial information; second, there is no clear boundary between SMA as information-supporting strategic management and the meaning of strategic management itself. In that vein, many definitions focus more on management and strategy processes than on information support.

Furthermore, some scholars believe that SMA is non-existent and not applicable (Bromwich, 2000; Langfield-Smith, 2008; Lord, 1996, cited by Hutaibat et al., 2011). Mevellec and Lebas (2010, cited by Abdullah and Said, 2015) disagree on the contributions of MA given that several small and medium-sized enterprises (SMEs) in Malaysia have been doing well applying minimum accounting resources or not using MA tools, while larger companies have implemented many MA tools and have been slow to respond and/or underperform. This last point of view may also be applied to SMA. Moreover, a study on the essence and the content of SMA allows one to conclude that, despite its popularity in recent years, conceptual justification is still absent and the role of this type of accounting is not defined in a management system (Manyeva et al., 2016).

The various definitions of SMA should not be considered to be weaknesses or constraints but rather possibilities to increase adoption due to perceived merit. Tayles (2011) has a more optimistic view considering that even though the evidence shows that SMA is not widely used in practice, this does not necessarily mean that SMA has not been implemented in strategic orientation at firms. In spite of its weaknesses, SMA seems to be the answer to face the informational and strategic challenges derived from a global context with the presence of key players such as multinational enterprises.

By and large, SMA has also affected the thinking and language of business, the ways in which some business processes are undertaken (Langfield, 2008), the roles of accountants at firms and their involvement in decision-making processes, the quantity of information required for accounting, accounting education and training, the conceptions of business strategies, the mindset of upper management, and the ways in which organizations are managed, among other things. The next section permits us to identify some contributions of SMA to both strategic decision-making and strategic targeting.

CONTRIBUTIONS OF SMA TO STRATEGIC DECISION- MAKING AND STRATEGIC TARGETING

In the economy and business context, organizations must face several strategic challenges through the decision-making and strategic targeting processes. Some of these decisions concern i) prices,

ii) discounts, iii) inventory volume, iv) raw materials, v) staff, vi) product and service attributes, vii) levels of quality, viii) investments, ix) generation of cash flow, x) volume of sales, xi) internationalization, xii) external competition, and xiii) size, among other things.

In this way, the contributions of the information generated by SMA techniques can be classified according to four criteria: i) the creation and monitoring of business strategies (Simmonds, 1981, 1982; Bromwich, 1990; Ward, 1993; Innes, 1998, cited by Manyeva et al., 2016; Roslender and Hart, 2003; Hoque, 2004, cited by Cadez and Guilding, 2007; Tayles, 2011; Lachmann et al., 2013; Noordin et al., 2009; Abdullah and Said, 2015; Manyeva et al., 2016; Alborov et al., 2017; Arunruangsirilert and Chonglertham, 2017; ICAN, cited by Obohn and Ajibolade, 2017), ii) building a sustainable competitive advantage (Bromwich, 1990; Ward, 1993; Tayles et al., 2002), iii) strategic management (Ward, 1993; Tayles, 2011; AlMaryani and Sadik, 2012; Cadez and Guilding, 2012; Inghirami, 2014; Nazarova et al., 2016;), and iv) support for strategic decision-making (Innes, 1998, cited by Manyeva et al., 2016; Tayles et al., 2002; Tillmann and Goddard, 2008; Cinquini and Tenucci, 2010; Tayles, 2011; Cadez and Guilding, 2012; Manyeva et al., 2016; Dmitrović and Suljović, 2017; Alborov et al., 2017).

Additionally, SMA permits managers to be prepared for change (Dixon, 1998); to assess organizational effectiveness (Hoque, 2004, cited by Cadez and Guilding, 2007) and long-term achievements in the marketplace (Noordin et al., 2015), in a multi-dimensional approach (Inghirami, 2014); to enhance value creation (Abdullah and Said, 2015) and the evaluation of the organization and its departments' activities along with management decisions under risk and uncertainty (Nazarova et al., 2016); and to analyze the macro, mezzo and microenvironment (Manyeva et al., 2016) and business success (Arunruangsirilert and Chonglertham, 2017).

SMA has four key functions: i) gather information from competitors, ii) use accounting for strategic decisions, iii) cut costs on the basis of strategic decisions, and iv) foster competitive advantage (Lord, 1996; Inghirami and Scribani, 2015). This viewpoint is complemented with the information supplied to i) develop strategic goals and directions, ii) analyze conjuncture, perspectives and market state for estimated company potential, iii) establish the ratio between sales volume for products and markets, iv) determine and analyze indicators to be controlled in accordance with strategic objectives, and v) analyze the influence of deviations on realizing the strategy and taking regulatory decisions (Manyeva et al., 2016, p. 258).

Brouthers and Roozen (1999) and Cinquini and Tenucci (2010) presented six strategic functions that benefit from the information supplied by SMA systems: i) environmental analysis, ii) strategic alternative generation, iii) strategic alternative selection, iv) planning the strategic implementation, v) implementing the strategic plan, and vi) controlling the strategic management process.

The information provided by SMA may also contribute to assessing risks, controlling the strategy, and monitoring the behaviour of executive board members (Seal, 2006, cited by Arunruangsirilert and Chonglertham, 2017). Likewise, these authors consider that SMA is useful in supporting business governance, particularly in regard to controlling the generation and allocation of resources, budgeting, the balanced scorecard, and strategy formulation and implementation. SMA supports better decisions, affecting organizational performance positively (Baines and Langfield-Smith, 2003, cited by Nejad et al., 2017) due to SMA having created an opportunity for firms to change the typical way managers accomplish profitability, creating new strategic models to improve profitability (Abdelmoneim and Jones, 2014).

Within that context, Dmitrović and Suljović (2017) pointed out that MA should be used as one of the main supporting systems for strategy implementation. For this objective, SMA and strategic cost management have been developed. It is also essential to understand that SMA's core emphasis relies on strategic positioning to gain competitive advantage, instead of cost reduction, control and

performance evaluation, which are more associated with traditional techniques (Obohn and Ajibolade, 2017). Finally, the success of SMA practices may be reflected in the actions taken by the top management or management accountants to improve performance. They may be systematically linked to constructs and measures involved in i) business strategies, ii) critical success factors, and iii) product and process design (Abdullah and Said, 2015). Figure 4 compiles the main contributions of SMA.

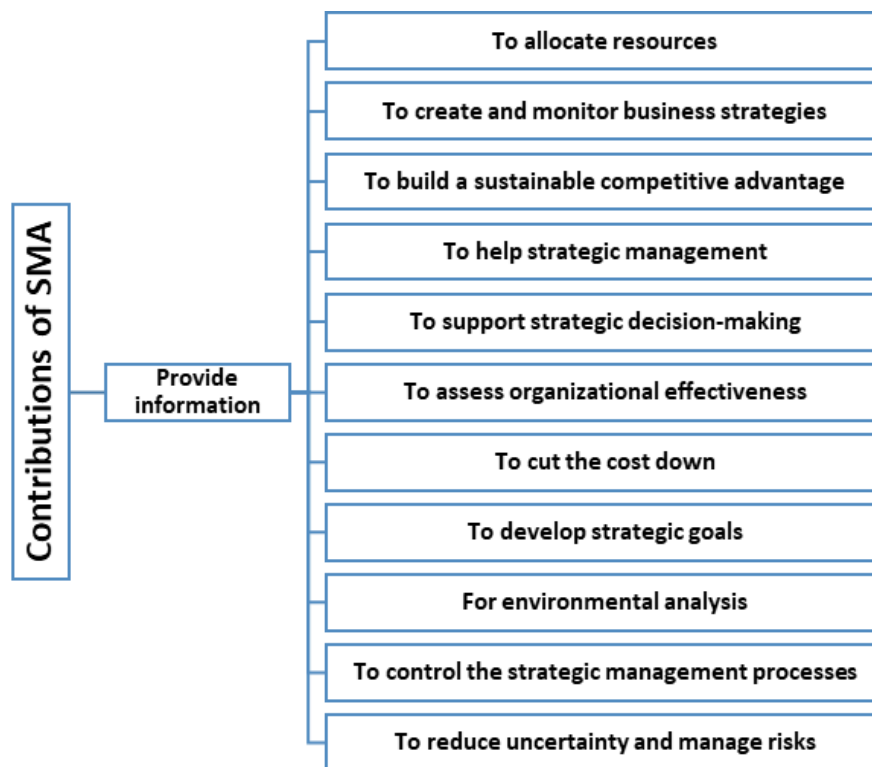


Figure 4 **Contributions of SMA** (Source: created by the author)

All in all, SMA contributes to strategic decision-making and strategic targeting, supporting organizations through the provision of relevant and timely information which incorporates internal and external perspectives, permitting them to decrease the level of environmental uncertainty and risks they have to face. This information must be innovative, precise and synthesized. Now it is time to study the determinants of the implementation of SMA in organizations.

DETERMINANTS OF THE IMPLEMENTATION OF SMA

The implementation of SMA in organizations is a process that requires financial resources, training, research, control, monitoring and evaluation of the impacts that this newly available information may have on decision-making processes and strategic targeting. Within this context, there are some critical success factors and determinants of implementation of SMA in companies that were established by Ward (1993):

1. SMA must support strategic decision-making and its implementation.

2. SMA must include financial information in a suitable and clear way.
3. SMA must help the definition of decisions, activity which is supported by the provision of fresh and timely financial information.
4. The company must determine a set of optimum financial efficiency indicators of organizational activity aligned with a competitive business strategy.
5. SMA must consider indicators of economic and administrative activity focused on profit and expenses.
6. SMA must ensure data collection supported by a quality computer database, providing managers only with essential information for administrative decisions.
7. An SMA system requires dividing costs into unavoidable and controllable.
8. An SMA system requires dividing expenses into technical and economical.
9. An SMA system may use a standard-costing method strategically.
10. An SMA system must follow changes over time.

The previous statements evidenced a set of factors that SMA must integrate to fulfil its promises and ends. In addition, Noordin et al. (2015) highlighted a high intensity of market competition as impacting the adoption of SMA practices. Later, Cadez and Guilding (2008) identified some factors driving the application of SMA techniques: i) high degrees of competition, ii) high degrees of regulation, iii) resource scarcity, iv) business strategy, v) capacity of accountants, vi) company size, and vii) information systems capabilities. Abdul et al. (2012) identified managerial approaches as an aspect affecting SMA implementation.

Later, Lachmann et al. (2013) identified that structural characteristics are determinants of the use of SMA techniques. Pavlatos (2015) pointed out nine aspects affecting the implementation of SMA in hotels: i) a higher level of environmental uncertainty, ii) the desire to reduce that uncertainty, iii) improving managerial decision-making and managerial planning and control, iv) corporative structure, v) quality of information systems, vi) organizational life cycle style, vii) historical performance, viii) strategy, and ix) size.

Likewise, Yap et al. (2013, cited by Abdullah and Said, 2015) stated that the most common challenge for companies in deciding on and adopting new practices is the resistance that comes from both middle-level managers and subordinates. This shows how cultural aspects affect the implementation of new practices, as is the case with SMA techniques. Abdullah and Said (2015) also cited a paper by Sulaiman et al. (2004) to show that many firms in Malaysia are still applying traditional MA techniques for three reasons: i) lack of expertise, ii) awareness, and, finally, iii) support from top management.

Furthermore, Abdel-Maksoud et al. (2005, cited by Nejad et al., 2015) found that advanced MA practices exist in firms that have made significant investments in total quality management (TQM), just-in-time (JIT) initiatives, and advanced manufacturing technology. Isa and Foong (2005, cited by Nejad et al., 2015) also highlighted that changes in the business environment and intensification of reliance on advanced manufacturing technology affect the use that executives tend to make of accounting information in their daily decision-making.

Turner et al. (2017) identified factors associated with the use of traditional MA practices, which in turn may be potential signs of SMA use; they are: i) organizational structure, ii) organizational technology, iii) organizational culture, and iv) environmental uncertainty. Moreover, Arunruangsirilert and Chonglertham (2017) identified some organizational characteristics affecting the demand for more strategic information, which in turn may determine the use and

implementation of SMA techniques, which are i) bigger size of the board of directors, ii) the existence of an independent board, iii) the presence of an audit committee, and iv) a high frequency of meetings. This is supplemented by some characteristics of CEOs such as i) education, ii) experience, and iii) involvement in networks, as stated by Nejad et al. (2017). Figure 5 compiles the main determinants of the implementation of SMA.

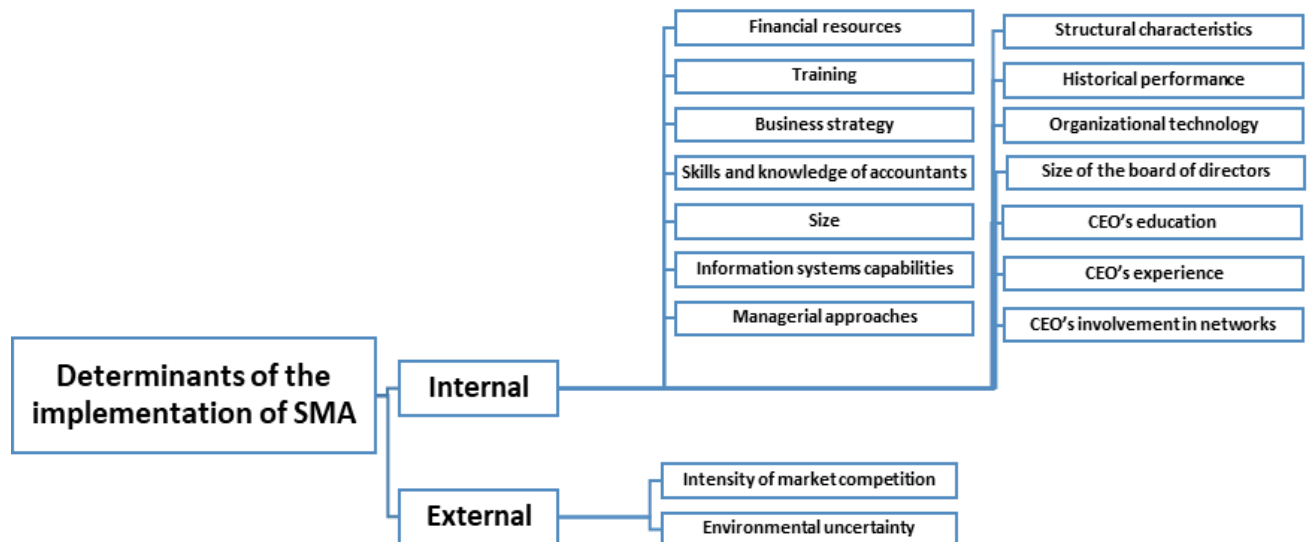


Figure 5 **Determinants of the implementation of SMA** (Source: created by the author)

This section has illustrated several factors affecting the implementation of SMA, putting in evidence the complexity of the topic, its study, research, and implementation, among other things. The following section will describe the research gaps of SMA.

RESEARCH GAPS AND CONSTRAINTS OF SMA

This section is about the research gaps of SMA that were identified in the literature review. This will mark and determine ideas, challenges and perspectives for future research. In this particular case, they will be presented in chronological order. Bromwich (1990) was the first author on SMA who suggested carrying out future research to answer three questions related to i) the roles of SMA in decision-making processes in companies, ii) the effects that the introduction of new technologies could have on the competitive position of companies, and iii) the role of accountants as providers of information for strategic decision-making.

Later, Brouthers and Roozen (1999) stated that in companies, managers obtain different information from several internal and external sources, but this information is not always shared with other managers. For instance, marketing managers may obtain information on competitors without sharing it with other internal managers, putting in evidence problems of formalizing data gathering and dissemination. Also, there is a lack of relationship between the obtained information and the level of environmental turbulence faced by companies described above.

Guiding et al. (2000) pointed out that the most common research gap in SMA is represented by the lack of empirical research. In their opinion, this is because SMA is a non-defined concept. An

article by Roslender and Hart (2002) evidenced a gap in regard to how business strategy defines the design and development of accounting information systems and the factors attracting customers to a particular brand and their willingness to pay for it compared with competitors.

In a subsequent paper, Roslender and Hart (2003) suggested researching the evolution of the concept of SMA over time, along with the use of longitudinal studies. Another research gap is the interface between MA and marketing management and their relationship with the capacity of the brand to generate economic profit. Finally, there is a lack of studies on the willingness of management accountants to work together with other management areas, highlighting marketing management.

Langfield (2008) considered surveys on the adoption and implementation of SMA to have limited value. Instead, she proposed researching how SMA-inspired techniques and processes are disseminated in general practice within organizations. In addition, a study on contemporary MA work and MA information used by companies is essential. Also, questions arise on the ways in which MA practices attract the attention of organizational actors, how they are implemented and how they continue being a source of fascinating research. Lastly, there is no convincing evidence that SMA is widely used in practice, the concept is not well understood by researchers and practitioners, and sometimes it is not even recognized.

Tillmann and Goddard (2008) recommended building a strong theory with higher generality, incorporating grounded theory⁴, also researching MA and sense-making in diverse contexts, organisational settings and forms, different countries and non-strategic contexts. Cadez and Guilding (2008) called for research on the relationships between firms and MA practices, including additional factors such as i) intensity of competition, ii) environmental uncertainty, iii) technology, iv) structure, and v) organizational culture.

In the context of higher education, Hutaibat et al. (2011) found a lack of knowledge of SMA and how it supports strategizing, as well as literature on SMA derived from the private sector, and with a significant focus on profit maximizing. McLellan (2012) suggested researching the factors and conditions causing maladjustment between MA practices and strategy, as well as providing valuable recommendations and solutions to overcome and avoid this situation.

AlMaryani and Sadik (2012) identified some constraints and difficulties that organizations face in regard to the use and application of SMA techniques: i) higher costs compared with the use of traditional MA techniques, ii) the unwillingness of management teams to change the information systems currently used, iii) the lack of appropriate databases to support the use of these techniques, iv) the deficiency of administrative and financial staff appropriately qualified to apply and use SMA techniques and methods, and v) an absence of detailed data and information to employ these techniques.

In the same spirit, AlMaryani and Sadik (2012) recommended continuing to study the methods and techniques of strategic cost accounting and SMA in other economic sectors and countries, using different research methods and approaches in their application. Lastly, they proposed some questions for future research on the roles played by SMA techniques and their contributions to strategic goals and objectives, the constraints and difficulties that companies face when they employ SMA techniques, and the benefits derived from employing SMA techniques.

⁴ Two representative contributions are suggested: i) Glaser, B. and Strauss, A. (1967), *The Discovery of Grounded Theory: Strategies for Qualitative Research*, Aldine Transaction, New Brunswick, NJ, and ii) Lawrence, J. and Tar, U. (2013), *The Use of Grounded Theory Technique as a Practical Tool for Qualitative Data Collection and Analysis*, *Electronic Journal of Business Research Methods*, Vol. 11, No. 1, pp. 29-40.

Taking into account that the most common theory used in the research on SMA is contingency theory, Cadez and Guilding (2012) call for future research complementary to this dominant approach. Cuganesan et al. (2012), who analyzed SMA in a public sector agency, suggest future research on SMA costing practices in this sector and its strategizing effects.

Nixon and Burns (2012) identified some gaps between the SMA literature and four factors: i) the strategic management literature, ii) the practice, iii) cognate strategic-oriented literature, and iv) the scarcity of consistency-cohesion-coherence among SMA techniques. This is compounded by limitations in SMA literature in regard to definitions along with empirical evidence on how SMA practices are implemented and employed in organizations. They also stated that SMA is weak due to the short life cycle of many of its tools and concepts.

Lachmann et al. (2013) recommended further research exploring both the determinants and effects of the use of SMA techniques, analysing reasons for strategic orientation, and regarding the match of organizational characteristics and configurations in SMA techniques and the corresponding performance effects. Later, Inghirami (2014) recognized the scarcity of empirical research on SMA, along with the fact that in organizations SMA's meaning is not understood.

Abdelmoneim and Jones (2014) called for the development of additional non-financial indicators for managing three aspects – i) intellectual capital, ii) customer satisfaction, and iii) customer loyalty – and for exploring their relationship with profitability. Nejad et al. (2015) recommended thinking about how SMEs may implement SMA to face the challenges of rapidly changing technology and increase global competition. In addition, a few studies on SMEs have taken into account such factors as external environment and technology (Ahmad, 2012; Collis and Jarvis, 2002; Jankala, 2007; O'Regan and Sims, 2008, cited by Nejad et al., 2015). Finally, it is essential to continue with studies on the use of SMA techniques and their effects on business performance.

Abdullah and Said (2015) established the need for more research concerning three factors of SMA: i) diffusion, ii) implementation, and iii) usefulness. Noordin et al. (2015) considered that the case study method may offer advantages, detailing the technical aspects related to SMA along with the existence of limited knowledge on the backgrounds and outcomes of SMA information usage in organizations.

Carlsson et al. (2015) questioned the analysis of the importance of close inter-organizational relationships for strategic decision-making and the importance of complementing industry-level data with data from close relationships with external actors, for instance customers and suppliers. This additional information could provide a richer understanding of how technology road maps emerge as a result of activities in the industry, on inter and intra-organizational levels.

Pavlatos (2015) put in evidence the insufficiency of empirical research on SMA in the context of services and in relation to how SMA works under environmental uncertainty, which is commonly driven by recession and economic crisis, e.g., the subprime crisis and COVID-19. Lastly, it is relevant to explore the relationship between SMA and top executive characteristics – CEO, CFO.

On the one hand, Inghirami and Scribani (2016) pointed out that literature regarding SMA is especially oriented toward the conceptual level with a strong academic emphasis. On the other hand, they identified the scarcity of literature on implementation difficulties and costs. According to Manyeva et al. (2016), there is not enough attention to the scientific justification of SMA. Likewise, there is a shortage of empirical research in regard to SMA implementation and usage at SMEs (Santini, 2013, cited by Nejad et al., 2017) and in diverse spheres of popular culture (Lapsley and Rekers, 2017).

Dmitrović and Suljović (2017) believe that the effects of SMA implementation have not been sufficiently explored. As a result, all of the research has been superficial and theoretically

orientated. In order to carry out more scientific research, they also suggest extending the field study to include more companies and other economic activities, along with an expansion of the survey, incorporating additional questions. Obohn and Ajibolade (2017) called attention to the fact that most research on SMA focused on developed countries, with a lack of evidence from developing nations. Moreover, there are few theories used to support studies on SMA, which could cause controversies regarding this concept, and there are still apathetic attitudes among respondents of questionnaires. Figure 6 summarizes some research gaps and constraints of SMA.



Figure 6 **Research gaps and constraints of SMA** (Source: created by the author)

Finally, Nejad et al. (2017) found that few studies have focused on the relationships among SMA, CEO characteristics and their involvement in networks. In addition, the doors are open to carry out research employing more intensive case study methodology to improve the understanding of the drivers and outcomes of SMA adoption. The next section summarizes the main conclusions.

CONCLUSIONS

SMA is still a controversial topic due to the diverse and contradicting perspectives that can be identified in the literature review. On the one hand, from an optimistic viewpoint, the research and study of SMA will continue to be interesting, challenging, and demanding, in order to give some answers to the diverse questions and research gaps, achieving more relevance in the strategic decision-making and strategic targeting of organizations. On the other hand, the research and study of SMA may be perceived as not fruitful due to low levels of implementation and use of its practices by companies, along with the diverse challenges that this topic must face in the coming years.

Even though SMA is not fulfilling its objectives and promises, both accounting and organizations will continue to require an informational tool to identify and face the challenges imposed by a global context and competitors and the focus on customers' needs. In this scenario, SMA seems to have some advantages compared to new and future developments. This new information must integrate information which is financial and non-financial, external and internal, future oriented and long-term.

The current situation also requires training programmes and publications on SMA techniques to gain additional theoretical and empirical knowledge in hopes of creating a workforce capable of attending to the organizational demands on information to come up against the uncertainty derived from the global, competitive, technological and changing context. Professionals in accounting and business areas seem to be the most appropriate to lead these processes of disclosure, implementation and use by companies, thus contributing to progress towards the desired consolidation of SMA.

The implementation and use of SMA requires cooperation among social actors. It could be an opportunity for diverse internal departments to integrate numerous ideas, which may be complemented by the viewpoints of external and international players, such as partners, competitors, customers, and suppliers. Finally, it is necessary to continue developing research on some of the research gaps indicated earlier, along with the description of research methods to be applied in the study of SMA and empirical research in diverse industries.

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About author. Jorge Suarez is international PhD student in Business Management, BA School of Business and Finance – RISEBA University of Applied Sciences. He is Lecturer and member of Research Group in Accounting, Organizations and Environment GICOMA, National University of Colombia.

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