

Revisiting the relevance of strategic management accounting research

Relevance of
strategic
management

129

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Abstract

Purpose – The purpose of this study is to present a review of the literature on strategic management accounting (SMA). Specifically, it focuses on the trend of SMA research since the publication of Langfield-Smith's (2008) influential paper "Strategic management accounting: how far have we come in 25 years?" which raised the question of relevance of further SMA research.

Design/methodology/approach – The study reviewed articles published on SMA as a whole (comprising a set of advanced management accounting techniques) and its specific techniques for the period of 2008 to 2019 in 23 leading accounting journals.

Findings – The review finds that research on SMA has focused on the contingencies influencing the adoption and implementation of SMA techniques and the effects of such adoption on various aspects of firm and employee performance. The renovation and modification of existing practices in attempt to match with the organizational context has also attracted the attention of several SMA scholars. In addition, a noticeable shift to the strategic management theory and case study method was observed during the study period.

Originality/value – The study focuses on the trend of SMA research in an attempt to revisit the relevance of further research in this arena, particularly as a response to the criticism raised by Langfield-Smith (2008).

Keywords Strategic management accounting, Techniques, Practices, Relevance, Literature review

Paper type Literature review

1. Introduction

In an influential paper[1], [Langfield-Smith \(2008\)](#) challenged the relevance of further research on the adoption and usage of strategic management accounting (SMA) and its techniques. Her recommendations were based on the review of scholars work from the emergence of SMA (by [Simmonds, 1981](#)) to 2008. As it is now just over one decade since the publication of Langfield-Smith's review, it is a reasonable time to assess how scholars (academics and professionals) of management accounting (MAC) have responded to her recommendation. The purpose of this paper is, therefore, to review the articles published on



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the SMA and its techniques in the influential accounting journals since 2008 to date (November, 2019) to revisit the relevance of studying SMA and its techniques. Although a good number of scholars (Shields, 1997; Ittner and Larcker, 1998; Scapens and Bromwich, 2001; Hesford *et al.*, 2007; Zawawi and Hoque, 2010) has conducted reviews on management control system, MAC and its innovation, the review of SMA and its techniques, to the best of our knowledge, is very limited particularly for the time period (2008-2019) of the study. The present review used the analytical framework of Shields (1997) and Zawawi and Hoque (2010).

Simmonds (1981), in an influential paper published in the UK professional magazine *Management Accounting*, introduced the term “SMA,” which includes the provision of analyzing competitors data in developing and monitoring business strategy (Simmonds, 1981). Since then, researchers (Bromwich, 1990; Shank and Govindarajan, 1992; Hoque, 2001; Roslender and Hart, 2003) have attempted to define the term from their own perspectives due to the non-existence of a generally accepted conceptual framework (Tomkins and Carr, 1996; Langfield-Smith, 2008; Nixon *et al.*, 2011). Moreover, the extant literature demonstrates variations in representing the concept “SMA” such as strategic cost management (SCM) (Shank, 1989; Shank and Govindarajan, 1993) and accounting for strategic management (SM) (Roslender and Hart, 2010).

Despite these variations in defining the concept, researchers came up with new innovations in the field to restore the lost relevance of MAC and to meet up the information needs of changed business environment. These new innovations include a wide range of MAC techniques including activity based costing/management (ABC/M) (Cooper and Kaplan, 1988), target costing (TC) (Monden and Hamada, 1991) and balanced scorecard (BSC) (Kaplan and Norton, 1992).

The use of the term “SMA” to represent these new innovations in the field of MAC leads to the emergence of one major question: “how did researchers isolate SMA techniques from traditional MAC techniques?” More specifically, “what criteria will tell us whether a particular MAC technique is traditional or strategic?” The proponents of SMA attempted to respond to such question by specifying several criteria for isolating SMA from traditional Management Accounting Practices (MAPs). For instance, Guilding *et al.* (2000) suggested that to be qualified as SMA techniques, one or more of the following orientations should be exhibited: focus on environmental (marketing/external) factors, focus on competitors, long-term orientation and forward-looking approach. Majority of the empirical research studies to date (Guilding *et al.*, 2000; Cravens and Guilding, 2001; Cadez and Guilding, 2007, 2008, 2012; Cinquini and Tenucci, 2007, 2010; Turner *et al.*, 2017; Oboh and Ajibolade, 2017; Pavlatos and Kostakis, 2018) have used these criteria in isolating SMA techniques from traditional MAC techniques.

In this paper, we used the following criteria (based on the literature cited above) in isolating SMA techniques from traditional MAC techniques:

- Focusing on the organizational external environment or context.
- Long-term or forward looking approach (consider information beyond the financial year).
- Focusing on both financial and non-financial information.

Using these criteria, the present study identified 17 MAC techniques (Table 3) under the umbrella of SMA. Out of these 17 SMA techniques, 16 were in consistent with Cadez and Guilding (2007, 2008). One more SMA technique added to this list was “(ABC/M).” Cadez and Guilding (2007, 2008) excluded ABC from the list of SMA techniques on the ground that “ABC is more concerned with costing accuracy rather than the adoption of a strategic orientation” (Cadez and Guilding, 2007, p. 132). However, Tayles (2011) included ABC/M to the list of SMA techniques on the ground that ABC has moved to activity-based management (ABM), which focused on more general managerial control and decision support rather than focusing merely on costing accuracy.

Bjornenak and Mitchell (2002) provided evidence in support this movement of ABC to ABM by reviewing the literature on ABC between 1987 and 2000. Bjornenak and Mitchell (2002, p. 504) suggested that ABM application has been broadened “to different types of business, to different functional specializations within business and to the complementarities of ABC/M to other new high-profile management and accounting techniques.” Moreover, Cinquini and Tenucci (2007, 2010) included ABC/M in the list of SMA techniques on the ground that ABC/M focus on the management of activities (Cooper and Kaplan, 1999), which assists in defining actions required to achieve competitive advantage (Palmer, 1992). These arguments motivated us to include ABC/M to the list of SMA techniques.

Though several other research studies included value stream costing (Amanollah Nejad Kalkhouran *et al.*, 2017) and shareholder/economic value analysis (Tayles, 2011) to the list of SMA techniques without providing strong arguments as to why such techniques should be considered under the umbrella of SMA. Therefore, we excluded such techniques from the list of SMA.

The present review intends to make an incremental contribution to the extant literature of SMA by exploring the state of research on SMA and its techniques during the past decade. The study also aims to identify the likely trend of SMA research during the past decade specifically the scholars’ response to the recommendation of Langfield-Smith. The extant reviews focused on specific MAC innovations (Zawawi and Hoque, 2010); therefore the present study attempts to provide additional findings on specific SMA techniques and SMA techniques as a package.

The remainder of this paper is organized as follows. Section 2 focuses on the review method used in this paper. Section 3 discusses the trend, topics, research settings, research methods, theories used and the findings of the study. Finally, Section 4 outlines conclusion and avenues for future research. The limitations of the study are also highlighted here.

2. Review method

As mentioned earlier, the present review used the analytical framework of Shields (1997) and Zawawi and Hoque (2010). We reviewed 23 leading accounting journals, which follow a rigorous, double blind peer review process in publishing articles. Of these 23 journals, 22 are similar to the journals reviewed by Zawawi and Hoque (2010). We added one more journal to the list namely *Qualitative Research in Accounting and Management* (GRAM) considering its influence [2] and weight in this field of research. We visited all the issues of these 23 accounting journals published between 2008 and 2019 (up to November) to ensure the inclusion of all the articles published on SMA and its techniques. Additionally, we searched for any article published outside these 23 leading accounting journals on SMA during the period using search engines such as Google, Google Scholar. Table 1 reports the results of the above searches.

As seen in Table 1, the search found 150 articles published on SMA as a package and on its several techniques during the period of 2008-2019, both years inclusive.

Of these 150 articles, 136 have been published in 23 accounting journals. As expected, journals on cost and MAC published comparatively large number of articles on SMA and its techniques as compared to their counterparts. For example, Cost Management (previously *Journal of Cost Management*), a journal of practitioner, published the highest number of papers (24) on SMA techniques, followed by *Journal of Accounting and Organizational Change* (JAOC) (22), *Advances in Management Accounting* (AMA) (17) and *Management Accounting Research* (MAR) (11). The more generalist accounting journals such as *Accounting, Organization and Society* (AOS) (7), *ABACUS* (3), *Accounting and Business Research* (ABR) (3) published relatively few articles on SMA and placed more weight on issues such as financial reporting, audit and taxation. Surprisingly, some of these generalist accounting journals (*Accounting and Finance*, *Journal of Accounting and Economics*, *Journal*

Journals	Coverage	Articles selected	Rank
ABACUS	2008-2019	3	10
ABR	2008-2019	3	10
Accounting and Finance	2008-2019	0	13
Accounting Horizons	2008-2019	2	11
Accounting, Auditing and Accountability Journal	2008-2019	3	10
Accounting, Organizations and Society	2008-2019	7	6
AMA	2008-2019	17	3
Behavioral Research in Accounting	2008-2019	3	10
British Accounting Review	2008-2019	9	5
Contemporary Accounting Research	2008-2019	4	9
Critical Perspective on Accounting	2008-2019	2	11
European Accounting Review	2008-2019	6	7
Journal of Accounting and Economics	2008-2019	0	13
Journal of Accounting and Organizational Change	2008-2019	22	2
Journal of Accounting Education	2008-2019	1	12
Journal of Accounting Literature	2008-2019	0	
Journal of Accounting Research	2008-2019	3	10
Journal of Cost Management/Cost Management	2008-2019	24	1
Journal of MAR	2008-2019	7	6
MAR	2008-2019	11	4
Review of Accounting Studies	2008-2019	0	13
The Accounting Review	2008-2019	5	8
QRAM	2008-2019	4	9
Others ^a	2008-2019	14	
Total		150	

Notes: ^a Baltic Journal of Management 1, Industrial Management and Data Systems 1, International Journal Production Economics 1, International Journal of Productivity and Performance Management 2, Journal of Applied MAR 1, Management Decision 1, Asian Review of Accounting 1, Future Business Journal 1, Review of MAR 1, International Journal of Hospitality Management 1, International Journal of Contemporary Hospitality Management 1, International Journal of Contemporary Hospitality Management 1 and International Journal of Production Economics 1

Table 1.
Distribution of
journals

of Accounting Literature and Review of Accounting Studies) did not publish any article on SMA techniques during the period under study.

The remaining 14 articles were published in other accounting and management journals including *International Journal of Productivity and Performance Management* (2), *Management Decision* (1) and *Asian Review of Accounting* (1). The details of these journals and volume of papers are detailed in the note of [Table 1](#).

3. Findings

This section concentrates on the findings of the review by paying particular attention to the trends of SMA research, the settings used, the topics focused, theoretical frameworks used and the research methods used. The discussion also includes comparisons, though to a limited extent, with the previous reviews.

3.1 Trends of strategic management accounting research

[Table 2](#) presents year wise distribution of articles on SMA and its techniques. As can be seen in the table, the highest number of articles (24) was published in 2012 followed by 18 in

2014 and 17 in 2011. The general trend of the volume of articles published on SMA depicted a fluctuating trend (Figure 1).

However, the table exhibited a sharp increase in the volume of articles from 2009 to 2012 (12, 15, 17 and 24). This continuous increase in the volume of articles on SMA may be taken as a non-response of MAC scholars to the call of Langfield-Smith (2008).

Though the year 2013 (9), 2016 (6) and 2018 (6) demonstrated a sharp decline in the volume of paper published, the volume again experienced boost in 2014 (18), 2015 (10) and 2017 (16). These results stimulate us to assert that research on SMA as a package and its specific techniques remains unaffected by the criticisms of its opponents.

3.2 Topics

Table 3 reports the distribution of topics of the articles selected for the study. As can be seen from this table, 20 articles have been published on SMA as a whole, while five are on SCM. Langfield-Smith (2008) documented that MAC techniques (e.g. ABC, BSC, value chain costing) that were considered under the umbrella of SMA in UK were considered under the umbrella of SCM in the USA. Taking this fact into account, the table reported a total of 25 articles published on SMA/SCM as a package during the period 2008-2019, implying that the

Year	Frequency
2008	14
2009	12
2010	15
2011	17
2012	24
2013	9
2014	18
2015	10
2016	6
2017	16
2018	6
2019	3
Total	150

Table 2.
Year-wise
distribution of
Articles

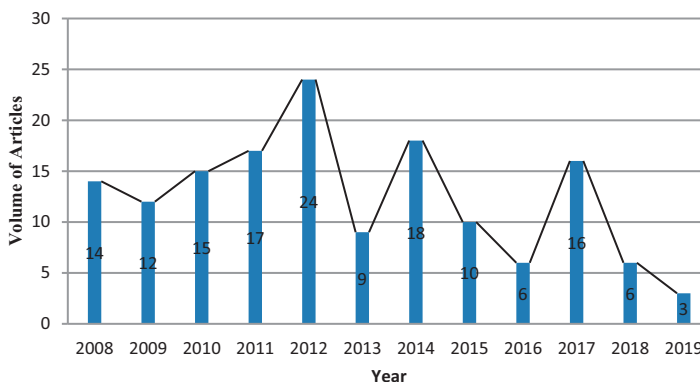


Figure 1.
Trend of articles
published on SMA

Table 3.
Distribution of topics

Topics	Frequency
SMA in general	20
SCM	5
ABC/M	33
Attribute costing	0
LCC	3
Quality costing	0
Strategic costing	0
TC	10
Value-chain costing	0
Competitor cost assessment	0
CPM	1
Competitor performance appraisal	0
CPA	4
Lifetime CPA	0
Valuation of customers as assets	0
Benchmarking	0
Brand valuation	0
SPM/IPM/BSC	74
Strategic pricing	0
Total	150

topic did not lose its importance in the field of *MAR*. Moreover, the volume is considerably large as compared to those (3) reported by [Zawawi and Hoque \(2010\)](#).

With respect to the specific SMA techniques, BSC has received enormous attention of MAC researchers. Almost one-half (74 of 150) of the articles have been published on integrated performance measurement or BSC. This finding is consistent with [Hesford *et al.* \(2007\)](#) and [Zawawi and Hoque \(2010\)](#), which documented considerable shift of management control research in the performance measurement arena. However, majority of these articles focused on the way the performance measurement is linked to the organizational strategy ([Aranda and Arellano, 2010](#); [Adler, 2011](#); [Francioli and Cinquini, 2014](#)) and factors influencing its adoption in the organization ([Silvi *et al.*, 2015](#); [Chen *et al.*, 2016](#); [Cooper *et al.*, 2017](#)). The adoption and reformation of public sectors' BSC/performance measurement also received the attention of several scholars ([Bobe *et al.*, 2017](#)).

Research on ABC also received attention (33 of 150 articles) of several researchers particularly the adoption and contingency factors ([Hoozée and Bruggeman, 2010](#); [Al-Sayed and Dugdale, 2016](#)), its effect on performance ([Krumwiede and Charles, 2014](#)) and the effect of organizational culture and structure on the success of ABC implementation ([Zhang *et al.*, 2015](#)). Amongst the remaining SMA techniques, only TC has received the attention of MAC researchers (10 of 150 articles). Customer profitability analysis (CPA) (4), life-cycle costing (LCC) (3) and competitive position monitoring (CPM) (1) received a very little attention of the researchers. Surprisingly, the rest of the 11 SMA techniques failed to receive the attention of scholars in this field. Moreover, the selected leading 23 accounting journals did not publish any paper on these 11 techniques (e.g. attribute costing, valuation of customers as asset, lifetime customer valuation).

3.3 Settings

The distribution of settings is presented in [Table 4](#). The table reported the dominance of manufacturing industry (37 of 150) followed by service industry (26) and multiple industries (16)

Topics	Frequency	Relevance of strategic management
Single industry	3	135
Manufacturing	37	
Service	26	
Specific industry	2	
Multiple industries	16	
Generic	5	
Public sector	8	
Inter-organizational	2	
International	1	
Multinational	4	
Specific country	2	
No setting or other settings	44	
Total	150	

Table 4.
Distribution of settings

in the field of SMA research. Heavy emphasis on MAC practices in the manufacturing industries is historically evidenced in the MAC literature (Shields, 1997; Scapens and Bromwich, 2001; Zawawi and Hoque, 2010). Moreover, the applicability of majority of the SMA techniques is greater in the manufacturing industries as compared to their counterpart, service industry.

However, several SMA techniques such as ABC and BSC also experienced incremental application in the service industry. This is also consistent with the findings of Hussain and Hoque (2002), Lapsley and Wright (2004) and Zawawi and Hoque (2010). Surprisingly, the application of several SMA techniques particularly BSC in the public sector was notable as a response to the reformation in the sector (Hutaibat *et al.*, 2011; Chiwamit *et al.*, 2017; Bobe *et al.*, 2017).

However, research on SMA techniques using other settings could not attract MAC scholars at large. More surprisingly, a considerable number of articles did not use any particular setting (44 of 150) majority of which are conceptual in nature.

3.4 Theories

Table 5 reported the distribution of theories used in the articles reviewed in the present study. The results demonstrated the supremacy of “Strategic Management (SM)” theory (51), followed by contingency theory (15). Interestingly, the rest of the theories could not attract researchers in this field to a greater extent. Amongst the remaining theories, psychology (7), institutional theory (5) and sociological theories also attracted researchers to a limited extent. However, 38 articles did not use any explicit theory. Zawawi and Hoque (2010) held that sociology theories have been derived, predominantly in MAC innovation research, from a wide-range of theories including actor-network theory, innovation diffusion theory, stakeholder theory, structuration theory. The key finding of this review in terms of theoretical framework used is the substantial shift to “SM” theory from that of contingency or sociology theory. For example, Shields (1997) documented the dominance of economics theory in the North American MAC research whereas Zawawi and Hoque (2010) reported the overriding use of sociology theory in the management accounting innovation (MAI) research. This might be attributed to the dominance of strategic-oriented performance measures such as BSC research in this field, specifically the effort to link strategy to organizational performance measurement system. Nevertheless, the continuous use of contingency theory in MAC (Shields, 1997), MAI (Zawawi and Hoque, 2010) and SMA research (this paper) signified the majesty of this theory in tracing out the factors associated with the adoption and implementation of specific as well as overall MAC techniques and their effect on firm’s performance. Institutional theory, particularly New Institutional Sociology, has

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136

Topics	Frequency
Economics	1
Contingency theory	15
Organizational behavior	1
Production and operations management	4
Psychology	7
SM	51
Economics and organizational behavior	0
Organizational behavior and sociology	0
Economics and sociology	0
Economics and POM	0
Economics and contingency theory	0
Organizational behavior and POM	0
Organizational behavior and psychology	1
Sociology and psychology	4
SM and contingency theory	1
Practicetheory	1
Upper echelon theory	1
Institutional theory	5
Institutional and critical theory	1
Othersa	19
No explicit theory	38
Total	150

Table 5.

Distribution of theories

Notes: ^aDiffusion of innovation theory, grounded theory, corporate governance theory, Person-organization fit theory, inscription theory. Actor-network theory, configurational theory, self-determination theory, fuzzy set theory, inequity theory, dynamic capabilities theory and general diffusion theory

attracted several MAC scholars in investigating how the institutional factors brought changes in the particular SMA technique.

-In addition to the specific theory cited in [Table 5](#), research on SMA techniques also used several other theories including diffusion of innovation theory, grounded theory, corporate governance theory, person-organization fit theory, inscription theory, actor-network theory and general diffusion theory.

3.5 Research approach

[Table 6](#) presents the distribution of research methods used in the articles reviewed. As seen in the table, the most frequent methods used were the survey and case study methods (50 articles each), followed by the conceptual/practical insight (26 articles) and experimentation (10) methods. The remaining methods (e.g. mathematical analytic (4), archival (1) and multiple research (1) methods) failed to receive the attention of the scholars in the SMA research. The widespread use of case study method appears to be the most important shift in the MAC research from that of the review of [Shields \(1997\)](#) and [Zawawi and Hoque \(2010\)](#). This shift may be considered as the response of MAC scholars to the call of [Langfield-Smith \(2008\)](#) as she recommended conducting more case study research in this arena.

Nevertheless, the survey method did not lose its appeal in this field of research as the table showed that the equal number of articles used the survey method. This finding is fairly consistent to the finding of [Zawawi and Hoque \(2010\)](#), which also documented the dominant use of this method in MAI research. However, [Zawawi and Hoque \(2010\)](#) cited several shortcomings of survey method including controversies of bias, data collection procedure, response rate and

Research method	Frequency	Relevance of strategic management
Survey	50	<div>137</div> <div>Table 6.</div> <div>Distribution of research methods</div>
Conceptual/practical insight	26	
Case study/field study	50	
Multiple research methods	1	
Archival	1	
Experimentation	10	
Mathematical analytic	4	
Literature review	6	
Action research	0	
Mixed (survey and archival)	2	
Total	150	

inconsistencies of findings with theories used and prior research studies. To overcome these shortcomings, they recommended the use of a careful and appropriate procedure in the design of survey such as [Dillman's \(1983\)](#) total design method.

With respect to the use of case study method, the review found an extensive focus on the development of model ([Englund and Gerdin, 2014](#); [Barros and Ferreira, 2017](#); [Cooper et al., 2017](#)) and implementation process of a particular SMA technique ([Herath et al., 2014](#); [Cooper et al., 2019](#); [Baharudin and Jusoh, 2019](#)) in a particular organizational setting.

3.6 Results of previous research

The discussion on the results of prior research has been categorized into two groups, namely:

- (1) SMA practices as a whole/package; and
- (2) specific SMA practice such as ABC, BSC, TC.

3.6.1 Strategic management accounting as a package. As can be seen in [Table 3](#) (already cited in Section 3.2), there are 20 articles on SMA and five articles on SCM as a whole. These papers focused on a wide-range of issues including the paradox of SMA, factors influencing their adoption and implementation and the effect of adoption on performance. For example, [Nixon and Burns \(2012\)](#) explicated why SMA techniques have not been adopted widely in the context of evolution of SM literature. They showed that majority of the SMA techniques have been developed based on the narrow, first-era, view of SM literature, which got maturity with the industry analysis model and generic competitive strategies of Michael Porter. They further held that the extant SMA literature has neglected the second era view of SM that broadly focused on internal structure and organizational resource. They call for more research on SMA, specifically “research that aims to strengthen the links among SMA, SM, practice, cognate areas and SMA techniques” ([Nixon and Burns, 2012](#), p. 241).

Several other studies have focused on the contingent factors influencing the adoption and implementation of SMA techniques. For example, [Pavlatos and Kostakis \(2018\)](#) explored that various top management team (TMT) characteristics such as education, tenure and creativity and historical financial performance affects the extent of adoption and usage of SMA tools. [Amanollah Nejad Kalkhouran et al. \(2017\)](#) documented significant positive effect of CEO education and networks on the usage of SMA tools. The other contingent factors that influence the adoption and uses of SMA techniques were environmental uncertainty, structure, quality of

information system information, organizational life cycle stages (Pavlatos, 2015), strategy and company size (Cadez and Guilding, 2008; Cinquini and Tenucci, 2010; Pavlatos, 2015).

The use of SMA in the higher educational institute (Hutaibat *et al.*, 2011), hotel industry (Pavlatos, 2015; Turner *et al.*, 2017), public sector (Cuganesan *et al.*, 2012), hospital (Lachmann *et al.*, 2013) and theater producer (Lapsley and Rekers, 2017) was also evident in the extant SMA literature. Appendix provides the details of these 20 articles that described SMA as a set of advanced MAC tools.

3.6.2 Specific strategic management accounting techniques. Amongst the specific SMA techniques, BSC, ABC and TC have received substantial attention of the researchers as seen earlier in Table 3. Considering the misery of other SMA techniques usage rate, this section grouped them under the head “other SMA techniques”.

3.6.3 Integrated performance measurement/balanced scorecard. Integrated performance measurement and BSC was at the top of the list of SMA techniques to the MAC researchers since 2008 to 2019 and addressed a wide-range of issues raised by academics and practitioners. Survey on BSC concentrated on several issues including the purposes (e.g. decision-rationalization, coordination, self-monitoring) and drivers of using BSC (Wiersma, 2009), the identification of contingent factors affecting the use and implementation (Chiang, 2008; Ho *et al.*, 2014), the extent of adoption and its alignment with strategy (Silvi *et al.*, 2015; Chen *et al.*, 2016), as a tool for strategy evaluation (Tayler, 2010), the outcome of adoption on employee performance (Burney and Widener, 2013), the mediating role of several factors (Burney *et al.*, 2009) and even, in measuring the performance of board members (Northcott and Smith, 2011). Case studies on the BSC mostly focused on how it is used in management decision and control processes (Sundin *et al.*, 2010), the process of change in the performance measurement system (Munir *et al.*, 2013) and how its use changed actors’ perception and action (Seal and Ye, 2014). Studies focusing on public sectors principally dealt with how reformation of a particular sector fostered the redesign of its performance measurement system, specifically how political ideology facilitated its adoption to align with strategic policy goals and policy implementation and, at the same time reduce the management discretion to bring functional integration to the BSC framework (Bobe *et al.*, 2017).

Conceptual papers (Herath *et al.*, 2014) primarily focused on the development of the original model proposed by Kaplan and Norton (1992) to include additional perspective such as environmental performance (Perego and Hartmann, 2009; Alewine and Miller, 2016) and to examine the applicability of such model in a particular organizational setting (Alewine and Miller, 2016).

3.6.4 Activity-based costing/management. Studies focusing on ABC have addressed a variety of issues including the extent of adoption, adoption process, contingent factors affecting the successful adoption and the effects of adoption on various aspects of firm’s performance. Maiga and Jacobs (2008), for instance, documented that the extent of ABC usage is associated with quality improvement, cost improvement and cycle-time improvement and that these variables act as intervening variables between the extent of ABC use and profitability. The effect of other contingent variables such as perceived innovation attributes, organizational factors, perceived environmental uncertainty (PEU) (Al-Sayed and Dugdale, 2016) organizational culture and structure (Zhang *et al.*, 2015), product diversity and advanced manufacturing technology (Schoute, 2011) and top management support (Byrne, 2011) on successful implementation of ABC have also been studied. The effect of using ABC on several aspects of firm performance such as identification of core supply chain inefficiencies (Masschelein *et al.*, 2012) and profitability while using with customer service as strategic priority (Krumwiede and Charles, 2014) were also addressed. An appropriate definition of ABC (Brierley, 2011) and its diffusion in less developed economies (Nassar *et al.*, 2011) were also addressed in the literature.

Apart from these issues, time-driven ABC has also received the attention of several scholars. Specifically the suitability and complexity of time-driven ABC (Barros and Ferreira, 2017) and the role of collective worker participation and leadership style on its design (Hoozée and Bruggeman, 2010) have been explored in the literature. In addition, Lelkes (2014) discussed the technical efficiency of duration-based costing system as an alternative to ABC.

3.6.5 Target costing. TC has also received the attention of MAC scholars to a limited extent. The issues covered in the articles published on TC were considerably diversified. For instance, Yasukata *et al.* (2013) documented, using a case study, that the diffusion of TC was a result of deliberate managerial activity, while Kee and Matherly (2013) showed that the interdependence between product and production affect the usage of TC. Woods *et al.* (2012), using a case study of MNC, documented how economic value added is introduced in TC system and provided preliminary evidence on how TC can, while using with other SMA techniques, play the bridging role in connecting strategic process and profit generation. Baharudin and Jusoh (2019) demonstrated how a non-Japanese company (Malaysian automotive manufacturer) modified the fundamental steps of TCM to match with its resources, processes and strategic routines.

3.6.6 Other strategic management accounting techniques. Amongst the remaining SMA techniques, CPA, LCC and CPM have also received MAC scholars' attention, but to a very limited extent. With respect to the CPA, Fish *et al.* (2017) documented how the power and political capital, beliefs and intuition of executives affect the design of CPA using a case study of a manufacturing company in USA. De La Villarmois and Levant (2009) focused on the development of CPA method in bringing simplicity in evaluation, while Roslender and Hart (2010) presented review and critique of extant customer accounting techniques and noticed the fundamentals of how to take the customers into account.

Dunk (2012) documented how LCC analysis, while using with customer involvement and cost management, enhance the competitive advantage of a firm. Knauer and Möslang (2018) examined the factors affecting the adoption of LCC and its effect on the achievement of cost management goals. They reported significant positive effect of the magnitude of guarantee and warranty costs and ecological sustainability cost on the extent of LCC adoption and the benefits of LCC adoption on various aspects of cost management, the most imperative one of those benefits was the identification of cost drivers. The remaining SMA techniques such as value chain costing, brand valuation, strategic pricing. could not attract the attention MAC scholars particularly the contributors of the selected 23 leading accounting journals.

4. Conclusions and future research

The aim of the present study was to present a review of the literature on SMA as a whole and its techniques based on the articles published in the leading 23 accounting journals over the past 12 years (2008-2019). The inclusion of organizational external environment, long-term orientation and use of non-financial information were used as the criteria for isolating SMA techniques from the traditional MAC tools. The overall findings of the review revealed that research on SMA has focused on the contingencies influencing the adoption and implementation of SMA techniques and the effect of such adoption on various aspects of firm and employee performance. The renovation and modification of existing practices in the endeavor to match with the organizational context has also attracted the attention of several scholars. However, akin to the findings of Zawawi and Hoque (2010), this study also found that the innovations in the SMA arena remained stagnant.

With respect to the focus of the selected journals, cost and management journals (e.g. *Cost Management and AMA*) emphasized more on publishing articles on SMA, whilst generalist accounting journals are found to accentuate more on tax, audit, financial reporting and corporate governance issues. This finding was in line with the findings of Zawawi and Hoque (2010). The

trend of the volume of articles published showed a fluctuating trend, with the highest number of articles published in 2011, 2012, 2014 and 2017. In regard to the topics covered, BSC and ABC were at the center of attention of MAC scholars with trifling focus on TC and CPA. However, manufacturing sectors remained at the top of the priority list of MAC scholars with substantial focused on service and public sector enterprises. Surprisingly, there seemed to be a generous shift to the SM theory from other organizational and sociological theories in the SMA research. In respect of research method used, case study method received immense attention of the scholars with equal weight given to the survey method. This finding was a clear move from prior studies such as [Zawawi and Hoque \(2010\)](#) and [shields \(1997\)](#).

The continuous publication of articles on SMA and its several techniques by leading accounting journals signified that research on SMA has not been languished as suggested and presumed by several scholars ([Langfield-Smith, 2008](#); [Lord, 1996](#)). However, comparatively less number of articles has focused on the adoption rate of SMA as a whole and its specific techniques, which may be taken as a partial response to the call of [Langfield-Smith \(2008\)](#), which suggested limited value on such research. With respect to future research in this field, we suggest researchers to look at the following areas.

4.1 Nature and extent of strategic management accounting practices in the developing economies

Very little is known till date with respect to the adoption/implementation of SMA techniques, specifically SMA as whole. Considering the positive effect of the use of several SMA techniques on firm and employee performance, it is imperative to explore the nature and extent of SMA practices in the developing economies.

4.2 Environmental (external) contingencies

The findings of the present review suggested that the extant literature principally focused on the organizational contingencies that influence the adoption and implementation of particular SMA techniques. Several environmental contingencies such as intensity of competition ([Cadez and Guilding, 2008](#)), environmental uncertainty ([Zawawi and Hoque, 2010](#)) and national culture are yet to be addressed in this field of research.

4.3 Investigating the adoption of unexplored strategic management accounting techniques

Several SMA techniques such as strategic pricing, brand valuation, quality costing remained unexplored in the context of both developed and developing economy. Therefore, researchers have to devote their efforts in exploring these practices in the further research.

4.4 Development of new practices

The present review revealed that innovations in the field of SMA remained stagnant. SMA scholars have to devote their efforts in developing innovative techniques to meet the information needs of the business operating in the face of fourth industrial revolution.

4.5 Role of professional management accounting bodies

The role of professional cost and MAC bodies (e.g. The Chartered Institute of Management Accountants, Institute of Management Accountants) in popularizing SMA tools might be the subjects of future research. Specifically, the approach professional bodies followed or to be followed to inform organizational actors about the benefits of using particular SMA techniques may be of particular interest.

The study suffers from a number of limitations. First, the study is based on literature review and suffers from the lack of empirical observation using either survey or case study. Second, the existence of four perspectives of SM and 10 school of strategy (Nixon and Burns, 2012) limits the relevance of criteria used in the study, and therefore bound to be subjective due the non-existence of a generally acceptable conceptual framework of SMA. Third, the study reviewed articles published only in 23 leading accounting journals (with partial focus on few non-accounting journals); therefore articles published on SMA in other non-accounting and management journals such as production and operation management, public sector management and logistics management journals remained outside the scope of review of the present study. Nevertheless, we believe that our study has provided a number of grounds for future SMA research.

Notes

1. The word “influential” is used considering the impact factor of the journal and the scholars contributing in the journal. Accounting, Auditing and Accountability is a journal published by Emerald Publishing Limited and the impact factor of the journal is 2.537 (2018) and five-year impact factor is 4.397 (November, 2019).
2. *Qualitative Research in Accounting and Management (QRAM)*, a journal published by Emerald Publishing Limited, has also received the attention of famous MAC scholars such as Lee Parker, Zahirul Hoque and Christopher S. Chapman. Also, the cite score of the journal was 1.98 (2018).

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Table A1.
Attributes of articles
on SMA

Appendix						
Author/year	Topic	Journal title	Article type	Setting	Theory	Research method
Cadez and Guilding (2008)	Integrated contingency model of SMA	AOS	Empirical	Multiple industries	Contingency theory	Survey
Tillmann and Goddard (2008)	SMA and sense-making in a multinational company	MAR	Empirical	One multinational company	Grounded theory	Case study
Ratnatunga (2008)	Carbonomics and SMA issues	<i>Journal of applied MAR</i>	Conceptual		Grounded theory	Literature review
Ma and Tayles (2009)	Emergence of SMA: Institutional perspective	ABR	Empirical	One multinational company	Institutional theory	Case study
Cinquini and Tenucci (2010)	SMA and business strategy	JAOC	Empirical	Manufacturing	Contingency theory	Survey
Huraibat <i>et al.</i> (2011)	SMA in higher educational institute	JAOC	Empirical	Service	Grounded theory	Case study
(continued)						
						Strategy type, company size and accountants' participation in strategic decision-making positively influence SMA use. SMA usage has positive effect on firm performance Management accountants undertake sense-making activities using several strategies and SMA to understand the process Information provided by SMA techniques (e.g. costs of carbon regularity compliance and passing on the increased cost of carbon regulation to consumers through higher prices) may assist in carbon management Several SMA techniques have been adopted by the company. Enhanced role of management accountants in strategic decision-making process was also evidenced The use of several customer and competitor-based SMA techniques in Italian manufacturing companies. Defender and cost-leader type strategy follower use costing-based SMA techniques Strategizing mindset, particularly bureaucratic and entrepreneurial mindset, encapsulates institutional and individual stance toward SMA

Author/year	Topic	Journal title	Article type	Setting	Theory	Research method	Key findings
Tayles (2011)	General concepts of SMA	<i>Review of MAR</i>	Conceptual		SM	Literature review	Though the adoption rate of SMA techniques was low; the scores of perceived benefits and possibility of future adoption was promising
Nixon and Burns (2012)	The paradox of SMA	<i>MAR</i>	Conceptual		SM	Literature review	The extant literature of SMA used the first era concept of SM and ignored the second era resource-based SM literature
Cuganesan <i>et al.</i> (2012)	SMA, strategy practices in public sector	<i>MAR</i>	Empirical	Public sector	SM	Case study	MAC can positively contribute in strategizing beyond the typically ascribed functions of decision-facilitation and decision influencing
Cadez and Guiding (2012)	Strategy, SMA and performance	<i>Industrial Management and Data Systems</i>	Empirical	Manufacturing	Configurational theory	Survey	Various configurations results in varying level of fits and performance. Configurations that are internally consistent can lead to higher firm performance
Lachmann <i>et al.</i> (2013)	SMA practices in Hospitals	<i>JAOC</i>	Empirical	Hospital industry	SM	Survey	SMA techniques are used to a limited extent. Structural characteristics affect the use of SMA techniques
Carlsson-Wall <i>et al.</i> (2015)	SMA in close inter-organizational relationships	<i>ABR</i>	Empirical	Manufacturing	SM	Case study	SMA in close inter-organizational relationships has several characteristics parallel to accounting and strategizing literature with few differences. The use of SMA techniques provided various indirect benefits
Pavlatos (2015)	Contextual factors, SMA usage and historical performance in hotels	<i>International Journal of Contemporary Hospitality Management</i>	Empirical	Hotel industry	Contingency theory	Survey	Seven contingent factors affect SMA usage in hotels including PEU, structure, strategy and size. Lagging performance also affects SMA usage but moderated by PEU
Turner <i>et al.</i> (2017)		<i>International Journal of</i>	Empirical	Hotel industry	Contingency theory	Survey	Market orientation business strategy is the key determinant of hotel property

(continued)

Table A1.

Table A1.

Author/year	Topic	Journal title	Article type	Setting	Theory	Research method	Key findings
	The role of SMA in hotel property performance	<i>hospitality management (IJHM)</i>					SMA usage. The relationship between market orientation and firm performance is mediated by SMA usage and customer performance
Amanollah Nejad Kalkhouran <i>et al.</i> (2017)	CEO characteristics, SMA usage and firm performance	<i>JAOC</i>	Empirical	Service	Upper echelon and contingency theories	Survey	CEO education and network are positively associated with SMA usage. The positive effect of SMA usage on firm performance is mediated by CEO education and network
Lapsley and Rikers (2017)	The relevance of SMA to popular culture	<i>MAR</i>	Empirical	Service	SM	Case study	Strategy is a social process rather than a practice
Oboh and Ajibolade (2017)	SMA and decision-making	<i>Future Business Journal</i>	Empirical	Service	Contingency theories	Survey	Registered banks in Nigeria use SMA as a principle of operation. SMA usage has significant positive effect on strategic decision-making and firm's market share
Arunruangsirilert and Chonglertham (2017)	Corporate governance and SMA	<i>Asian Review of Accounting</i>	Empirical	Multiple industries	Agency theory, resource dependency theory and stewardship theory	Survey	Several corporate governance variables such as separation of CEO from chairman, proportion of independent director and frequency of audit committee meetings affect positively SMA usage and participation while board size has negative on SMA usage
Pavlatos and Kostakis (2018)	The effect of TMT characteristics and historical financial performance on SMA	<i>JAOC</i>	Empirical	Manufacturing	Upper echelon and Role theory	Survey	Companies with low past profitability makes heavy use of SMA techniques. TMT characteristics such as educational background, tenure, creativity influence the level of SMA usage
Alamri (2019)	SMA facets and organizational performance	<i>Baltic Journal of Management</i>	Empirical	Multiple industries	SM	Survey	SMA facets have significant effect on both financial and nonfinancial organizational performance