

Management Control Systems and Strategy: Trends, Gaps and Opportunities for Future Research

Asmamaw Getie Mihret¹

PhD Candidate at Addis Ababa University, College of Business and Economics, P.O.Box 1176, Addis Ababa, Ethiopia and Asst. Prof. at St. Mary's University, P.O.Box 1211, Addis Ababa, Ethiopia. Email: asmegetie@gmail.com

Padakanti Laxmikantham

Associ. Prof. at Addis Ababa University, College of Business and Economics, P.O.Box 1176, Addis Ababa, Ethiopia
and

Abebaw Kassie Gualu

Asst. Prof. at Addis Ababa University, College of Business and Economics, P.O.Box 1176, Addis Ababa, Ethiopia

Abstract

The relationship between management control systems and strategy is widely researched with varied conceptualization of the relationship and diverse range of theories, methods, and contexts. This paper is an analytical review of literature aimed at documenting an understanding of the relationship between management control systems and strategies to comprehend existing knowledge, identify gaps, and sketch future research directions. Articles were located using keywords from the Scopus database and Google Scholar search engine for the period from 1997 to 2022. The review was conducted by classifying studies in the research context, theory, research approach with its paradigm, and understanding of the relationship between management control system and strategy. After classification, the contributions of research to the field and the lessons learned from these studies are discussed. The findings revealed that prior research mainly focused on the business sector of the developed market context, mainly illuminated by contingency and institutional theories, philosophical divides of realism and interpretivism, and most of them assume a one-directional relationship between management control systems and strategy. The findings imply that further study can enhance understanding by researching in a different context, using robust alternative theories, a critical realist view of mixed methods research, and a bidirectional conceptualization of the relationship between Management control systems and Strategy.

Keywords: *Analytical review, Management Accounting, Management Control systems, Strategy*

¹ *Corresponding author*

1. INTRODUCTION

It is the nature of the object that determines the form of its possible science (Bhaskar, 1998).

The complex nature of strategy and management control systems (MCS hereafter) accompanied by contradictions in research findings on the relationship between the two (Ahrens & Chapman, 2005; Langfield-Smith, 1997, 2006) attract researchers' interest in understanding their relationship further. The term MCS is used in varied conceptualizations and terms in the literature and the definitions are evolving over time (Chenhall, 2003). The strategy literature also significantly shifted in the past two decades by conceptualizing strategy as what a firm does instead of what a firm has (Jarzabkowski, 2004; Jarzabkowski & Spee, 2009; Whittington, 2007). To further understand the area, collecting and synthesizing the literature is a critical first step in priming the pump to make accumulated knowledge available for interpretation and use (Rousseau *et al.*, 2008). Yet, there is a paucity of comprehensive reviews in the area after the noticeable review by (Langfield-Smith, 1997). Even though the review enhanced our understanding of the area, change in conceptualizations of MCS and strategy since then made the relationship between the two more complicated.

MCS is differently defined in the literature, which created a problem in understanding the area better (Malmi & Brown, 2008). Over time, the definition of MCS has changed to encompass a wider range of information, moving away from a focus on the provision of more formal, monetarily quantifiable information to support managerial decision-making (Chenhall, 2003). Malmi & Brown (2008) broadly defined MCS as all the devices and systems managers use to ensure that their employees' behaviors and decisions align with organizational objectives and strategies. Yet, different scholars define it in different ways and terms including management accounting, management accounting systems, management control systems, and organizational controls are used interchangeably (Chenhall, 2003). On the other hand, strategy refers to maintaining a balance between ends, ways, and means; identifying objectives; and the resources and methods available for meeting such objectives (Simeone, 2020). It can be emergent and complex (Roslender & Hart, 2003; Tuomela, 2005), but it can also be formalized or deliberately planned (Govindarajan & Gupta, 1985). However, it is unlikely that a purely emergent

or deliberate form of strategy will be found in practice, which implies the localized and context-dependent nature of the relationship between MCS and strategy.

Although strategizing and MCS cannot be seen as separate activities (Englund *et al.*, 2017), understanding of their relationship is limited (Tucker & Parker, 2013). However, there is an increase in the number of research papers published in the area (see for example. Arjaliès & Mundy, 2013; Bruining *et al.*, 2004; Chenhall *et al.*, 2011; Henri, 2006; Kober *et al.*, 2003, 2007; Modell, 2012; Tucker *et al.*, 2009; Tucker & Parker, 2013, 2015). Despite the increase in the number of publications, the change in understanding of strategy as a practice which conceptualizes it as what a firm does in everyday practice (Jarzabkowski, 2004; Jarzabkowski & Spee, 2009; Whittington, 2007) accompanied by the varied definition and context-dependent nature of MCS make understanding in the area inadequate. Even though reviewing existing knowledge is the first step for accumulating and extending knowledge (Rousseau *et al.*, 2008), there is a paucity of comprehensive literature reviews after Langfield-smith's (1997) seminal review. Indeed, Langfield-smith's (2006) reviewed quantitative studies on the relationship between MCS and Strategy and Martyn *et al.* (2016) reviewed the relationship between MCS and strategy by selecting studies that applied Simon's Levers of control framework. After the comprehensive review by Langfield-Smith (1997), reviews in the area are specific to methodological and theoretical choices. These calls for a comprehensive review of the literature in the area to synthesize knowledge in consideration of the multifaceted nature of MCS and its relationship with strategy.

This paper is an analytical review of literature aimed at documenting an understanding of MCS and strategy relationships by identifying current understandings, deficiencies and sketching future research directions. To this end, articles were identified using keywords from the Scopus database and Google scholar search engine. Following a systematic approach, we located and reviewed 50 articles in the area. Articles are categorized based on their research context, theory, research approach and paradigm, and understanding of the relationship between MCS and strategy. Based on the current understanding, we suggested future research directions.

The remainder of the paper is organized in the following ways. Section 2 outlines the scope of the review and methodological approach. Section 3 is the

presentation of the review result and discussion. Section 4 outlines the future research agenda, and the last section presents conclusions.

2. SCOPE OF THE REVIEW AND METHODOLOGICAL APPROACH

The review considered MCS and Strategy literature published between 1997 and 2022. The period is considered because of the presence of a comprehensive review in 1997 by (Langfieldsmith, 1997) and this paper is an extension of it. To locate articles in the area, researchers used the keywords “management accounting and strategy,” “management accounting systems and strategy,” “*management control system and strategy*,” and “*organizational controls and strategy*” in the Scopus database and Google scholar search engine. These keywords are used because they are interchangeably used in the MCS literature (Chenhall, 2003). To ensure that the review is comprehensive, researchers used the advanced search option of Google scholar and traced articles cited (Langfieldsmith, 1997) which is the key paper for this study.

The above process resulted in 95 articles; from this, books and non-English articles were excluded, resulting in 74 articles. Researchers used the approach followed by (Rana et al., 2022). Furthermore, articles in non-accounting and business journals are excluded. Moreover, with the intention to focus on quality papers, articles published in a journal ranked below B in the ABDC 2019 quality ranking are excluded. The above process resulted in 50 articles for full reading and analysis from 23 journals. These journals include Accounting Organization and Society (AOS), Management Accounting Research (MAR), Journal of Management Accounting Research (JMAR), Accounting Auditing & Accountability Journal (AAAJ), The British Accounting Review (BAR), Strategic Management Journal (SMJ), Abacus, Financial Accountability and Management (FAM), Journal of Accounting Literature (JAL), Journal of Business Ethics (JBE), Advances in Accounting (AIA), Accounting and Finance (A&F), Journal of Management Control (JMC), British Journal of Management (BJM), Business Strategy and the Environment (BSE), Pacific Accounting Review (PAR), Journal of Accounting in Emerging Economies (JAEE), Sustainability Accounting, Management and Policy Journal (SAMPJ), Journal of Family Business (JFB), Journal of Accounting and Organizational Change (JAOC), European Management Journal (EMJ), and International Journal of Productivity, Performance Management (IJPPM) and Critical Perspectives in Accounting (CPA).

Articles are coded to analyze the selected papers based on the research context, theory, research approach and paradigm, and conceptualization of the

relationship between MCS and Strategy. After the classifications of the articles, researchers used a spreadsheet to generate the frequency using a graph. The review was conducted by critically assessing previous research and identifying lessons learned, context, the appropriateness of methods with the underlining paradigm, theory, and the relationship between MCS and strategy. This way of analysis enabled the authors to critically evaluate the existing literature, identify the gap, and suggest further research.

3. RESULTS AND DISCUSSION

This section presents the descriptive result and critical discussion of the results based on the research setting, theory, methods with the paradigm, and conceptualization of the relationship between MCS and strategy.

3.1 Description of Articles Reviewed

This section presents a list of journals and the distribution of articles published across journals. **Figure 1** summarizes 50 articles published on the relationship between MCS and strategy across 23 journals.

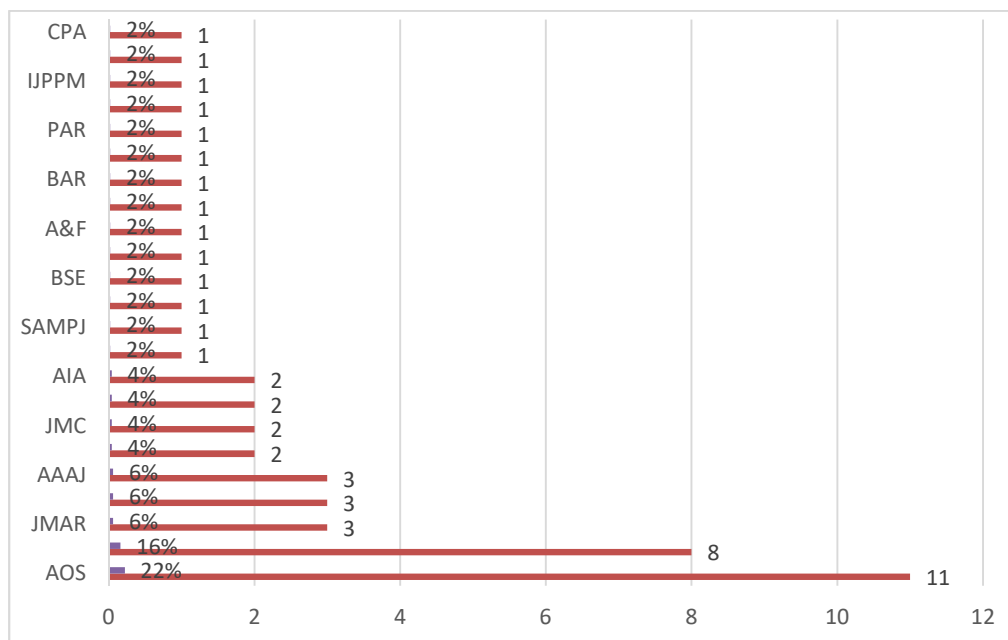


Figure 1 Number of articles per journal

Source: Authors own presentation

Figure 1 shows a wide variety of journals published in the area of MCS and strategy. The highest number of papers were found in AOS (22%), (Anderson & Lanen, 1999; Bedford et al., 2016; Chenhall, 2003; Davila, 2000; Erhart et al., 2017; Henri, 2006; Jørgensen & Messner, 2010; Naranjo-Gil & Hartmann, 2006; Widener, 2007) followed by MAR (16%) (Arjaliès & Mundy, 2013; Bruining et al., 2004; Cuganesan et al., 2012; Gond et al., 2012; Jermias & Gani, 2004; Kober et al., 2007; Modell, 2012; Slagmulder, 1997), JMAR (6%) (Chenhall et al., 2011; Chenhall & Langfield-Smith, 2003; Naranjo-Gil & Hartmann, 2006), JAL(6%) (Martyn et al., 2016; Nyamori et al., 2001; Tucker et al., 2009) and AAAJ (n=3;6%) (Ferreira et al., 2010; Tucker & Parker, 2013; Whittle & Mueller, 2010), JAOC (4%) (Cinquini & Tenucci, 2010; Hutaibat et al., 2011), JMC (n=2;4%) (Pasch, 2019; Van der Kolk & Schokker, 2016), AIA (4%) (Kober et al., 2003; Tsamenyi et al., 2011). The remaining journals that published 2% each include Abacus (Perego & Hartmann, 2009), SAMPJ (Solovida & Latan, 2017), EMJ (Nilsson & Consulting, 2001), BSE (Hosoda & Suzuki, 2015), BJM (Kald et al., 2000), A&F (Nilsson, 2002), FAM (n=1) (Tucker & Parker, 2015), BAR (Adler, 2011), SMJ (Marginson, 2002), PAR (Bromwich, 1999), JAEE (Nimtrakoon & Tayles, 2015), IJPPM (Riccaboni & Luisa Leone, 2010), JFB (Acquaah, 2013) and CPA (Englund *et al.*, 2017). Moreover, as shown in the Annex section, most studies are published in journals ranked A and above in the ABDC journal quality ranking of 2019. This shows that research on the area is accepted in top tier accounting and other related field journals.

3.2 Research Setting

The research setting refers to the continent and the sector in which the research is conducted. As shown in Figure 2, most studies are conducted in Europe (34%). Followed by studies without specific continents because of their nature (26%), Australia (20%), Asia (14%), North America (4%) and Africa (2%) respectively.

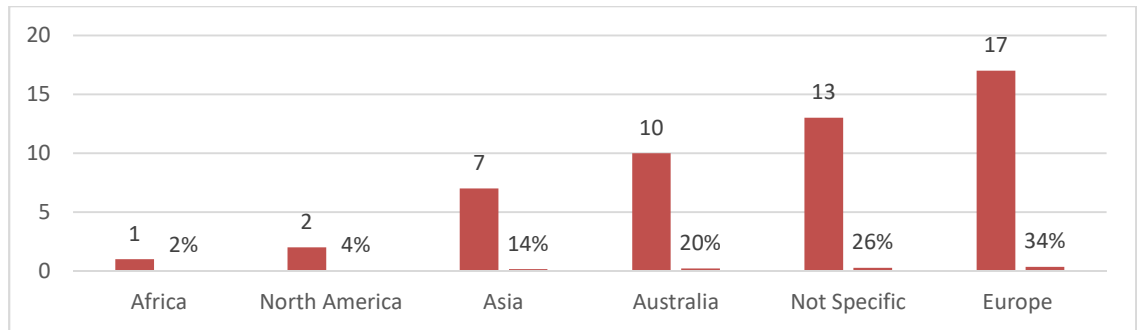


Figure 2: MCS and strategy papers across continent

Source: Authors' presentation

Most studies are in the developed market context, specifically European (see for example. Marginson, 2002; Modell, 2012; Naranjo-Gil & Hartmann, 2006; Perego & Hartmann, 2009; Slagmulder, 1997; Van der Kolk & Schokker, 2016; Whittle & Mueller, 2010) and Australian (Bedford *et al.*, 2016; Chenhall, 1998, 2005; Chenhall & Langfield-Smith, 2003; Cuganesan *et al.*, 2012; Ferreira *et al.*, 2010; Kober *et al.*, 2003, 2007; Tucker & Parker, 2013, 2015). The next continents with the higher number of articles published are Asia, North America, and last is Africa with only one article published. Cooper (1980) asserted that accounting tools might be viewed as a means of sustaining and legitimizing the current social, economic, and political arrangements. Hence, the nature and use of tools like MCS and strategy differ in context. The way management accounting tool like MCS used can be influenced by the dominant social group (Ashraf & Uddin, 2015), state ideology (Alawattage & Alsaied, 2018; Li & Soobaroyen, 2020), and leadership style (Abernethy *et al.*, 2010; Jansen, 2011). Hence, given the above issues and the context-dependent nature of MCS and strategy, the findings in western economies and the private business sector organizations may not hold in other areas of the world. Strategizing and MCS in those contexts will not follow a similar path to those in less developed markets.

Moreover, the sectors are classified into five, as shown in Figure 3. These classifications include business (62%), governmental (6%), NGOs (4%), multinational companies (4%), and the rest are not identified with specific sectors (18%) because of their nature as conceptual or review papers. Most studies are in the business sector, followed by no specific sector identification, government, NGOs, and multinational corporations respectively.

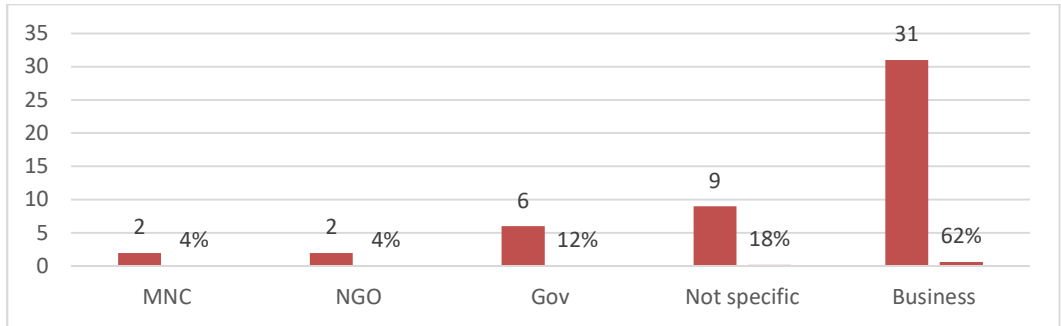


Figure 3: MCS and strategy papers across the sector

Source: Authors' own presentation

Sector-based issues influence the relationship between MCS and Strategy (Tucker & Parker, 2013). The conceptualization and the relationship between MCS and strategy in the private and public sector environments differ. MCS practices and strategies are interdependent systems, varying across different contexts (Bedford et al., 2016). In the private sector, value maximization in the presence of a competitive environment drives actions in organizations to win the competition and achieve the organizational goal of maximizing value. In the public sector, value creation is not attainable in a single organization, and strategizing differs from the private sector (Alford & Greve, 2017). Even though studies in MCS and strategy are conducted in both the private and public sectors, there is limited emphasis on the public sector. In this sector, the government influences the design and use of MCS (Lapsley & Wright, 2004). Moreover, the public sector, specifically in developing nations has been in a plethora of reforms led by the new public management movement. In this process, MCS can be used by the government as a signal to get short-term support and legitimacy (Andrews, 2013). Hence, given the contested nature of MCS in the public sector (Maran et al., 2018), this localized nature of the MCS and strategy suggests that such a relationship cannot be taken for granted in any setting.

3.3 Theoretical Perspective

Figure 4 presents research in the area based on the theory used. The review identified three primary theoretical perspectives: Contingency/resource-based view (40%), followed by no clear theory identification (38%), Institutional and practice theory (10%), others (8%), and Grounded theory (4%).

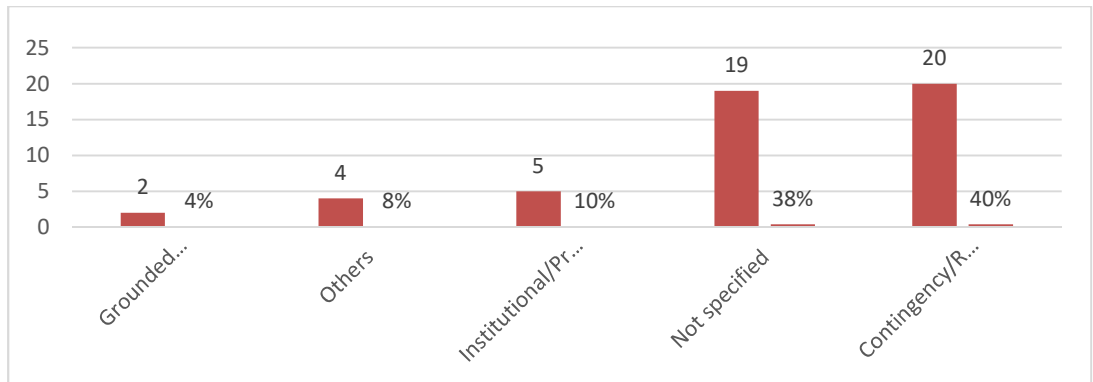


Figure 4: MCS and strategy papers theory use

Source: Authors own presentation

Studies commonly used contingency theory/resource-based view as a theoretical framework. The main theme of contingency theory to MCS is that there is no unique system for all organizations in all circumstances. Instead, the appropriate MCS depends on the organization's specific circumstances. Indeed, it is developed by responding to a set of contingency factors (Otley, 1980). In other words, contingency theory emphasizes that there is no one best way of designing MCS in organizations, and it is context-dependent. On the other hand, the resource-based view argues that competitiveness is a function of unique and valuable resources and capabilities controlled by a firm (Henri, 2006). These frameworks consider the context-dependent nature of MCS and strategizing and enable a better understanding of the area.

Even though these theories enhance our understanding in the area, they have deficiencies in empirically investigating the relationship between MCS and strategy. Contingency theory disregards the presence of one best way and argues that everything is situational (Reinking, 2012). It gives limited attention to how MCS and strategy may combine in organizations operating within highly institutionalized environments (Tucker & Parker, 2015). It acknowledges that we may have various answers that are difficult to understand or apply to the current situation, which may give managers the freedom to postpone resolving problems instead of dealing with them (Otley, 1980). This method also disregards the potential that the advantages of utilizing MCS techniques may depend on how well they fit with the plan and how well they work together (Bedford *et al.*, 2016). Resource-based view on the other hand is criticized for its imprecise definitions that hinder prescription, and static

approaches relegate causality to a black box in Strategy (Priem & Butler, 2001). Hence, research illuminated by contingency theory/resource-based view makes empirical measurement difficult and will not enable to fully understand the relationship between MCS and strategy.

The second commonly used theory in the area is institutional theory. The theory provided critical theoretical insights in examining various MCS-related issues, including MCS change, performance measurement, budgeting, manufacturing methods, and cost management (Damayanthi & Gooneratne, 2017). It is also used to understand the relationship between MCS and strategy (see Modell, 2012; Tucker & Parker, 2013). However, as Fligstein & McAdam (2012) argued, the theory underestimates power's role in structuring fields; actors do not have interests, resources, or positions determining what they can get. The theory is criticized for its inadequacy in addressing micro-dynamics (Powell & Colyvas, 2008), inattention to process (Suddaby, 2010), and practices (Lawrence & Suddaby, 2006). The theory also fails to address how institutions are created, modified, or transformed. Moreover, it lacks integration of exogenous shocks, institutional entrepreneurship, and practice-based change (Micelotta et al., 2017). In addition, it does not account for the piecemeal changes expected in the game's constant playing as conditions change within a field or between fields. Hence, given the context-dependent nature and the influence of government and incumbent actors on the design and use of MCS and strategy, the institutional theory fails to provide a lens to understand the micro and macro dynamics of how MCS and strategy emerge and transform as it mainly focuses on stability.

3.4 Research Paradigm and Approach

As it is shown in Figure 5, the research approaches used include qualitative (38), quantitative (38%), conceptual (16%) mixed (4%), and literature reviews (4%).

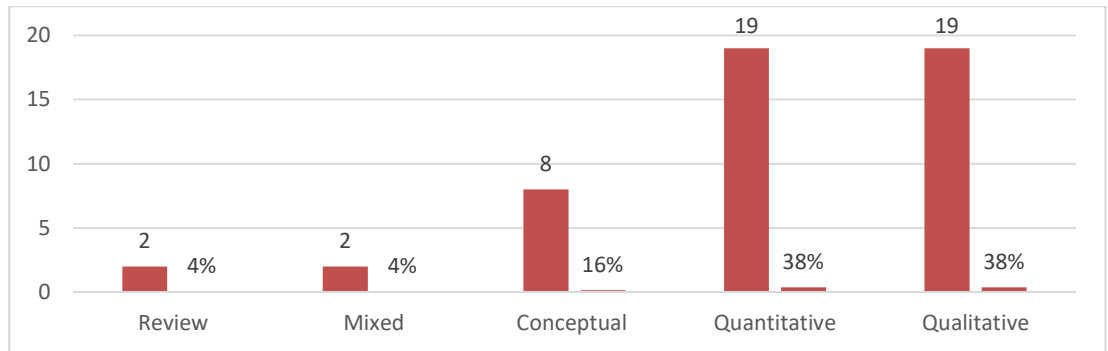


Figure 5: MCS and strategy papers with a research approach

Source: Authors' presentation

Most studies are inclined to qualitative and quantitative research approaches. In other words, the literature in the area is divided into quantitative and qualitative approaches with limited recognition of a mixed methods research approach. This shows a subjective-objective ontological divide between MCS and strategizing research which is a problem in the management accounting literature (Ahrens, 2008; Stergiou et al., 2013). Despite the presence of some mixed research design studies, they do not clearly show their ontological grounds while mixing the two contradicting paradigms. The mixed approach enables an understanding of the relationship between MCS and strategy by offsetting one approach's limitation with the other's strength. However, it creates a strand between two ontological positions, making it difficult to integrate them (Modell, 2009).

The conventional ontological divide within social research is positivism (objective) versus interpretivism (subjective), with separate epistemologies. Positivists are usually associated with quantitative approaches that often allow preferential access to social phenomena. They believe in a single reality irrespective of the individuals experiencing it, which is susceptible to observation and measurement (Tashakkory & Teddlie, 1998). Concentrating on quantitative approaches within positivism is necessary, given that causality within this philosophy has always been established by the human idea of continual conjunctions of actual occurrences (Bhaskar, 1978). This approach comprises huge samples of quantitative data to make time and context-free generalizations and predictions assuming closed systems. MCS and strategy here are conceptualized as universal and measurable. The approach gives limited emphasis on the context-dependent and subjective element of MCS and

strategy. These closed systems are problematic as they do not represent the social world's open, complex, and layered systems (Bhaskar, 1978). Quantitative analysis in the positivist sense may thus lead to reductionist ideas that do not capture the complexity of MCS and strategy.

Interpretivism on the other hand is associated with the qualitative research approach that works from different assumptions. Interpretivism assumes that knowledge or the meaning of things is produced via individuals and their subjective ideas and assumes multiple context-dependent realities. MCS is understood as emergent, subjectively created, and objectified through human interaction (Chua, 1986). This view acknowledges the context-dependent nature of MCS and strategy. When participants share their understandings, they speak from meanings shaped by social interaction with others and from their personal experiences (Creswell & Clark, 2018). In this style of inquiry, research is influenced “from the bottom up”; individual viewpoints to large patterns and, eventually, to broad understandings (Denzin, 2012). This approach disregards the role of structure with the enabling or constraining ability (Archer, 1995; Bhaskar, 1998). However, the MCS and strategy can be influenced by the structure’s enabling or constraining role and fails to address the MCS use in a highly institutionalized context.

That is, events and phenomena do not happen independently; objects' underlying powers/properties generate phenomena and events (Sayer, 1992). There is an objective reality, but there is no one way of verifying it. In order to explain an empirically manifested social phenomenon, researchers need to identify first the structures (and their associated tendencies) and then the human agency, a concept known in critical realism as analytical dualism (Archer, 1995). Since agents inhabit multiple structures simultaneously, the outcome of structural relationships cannot be predicted. Empirical events are caused by the interaction of various structures (political, economic, social, and so on) and their mediation through human agency. Hence, given the enabling role of structure and the socially constructed nature of MCS and strategy, the strict separation of research to objectivist and subjectivist paradigm make understanding in the area limited.

3.5 Strategy and MCS relationship

As it is shown in Figure 6, most studies assume a one-directional relationship between MCS and strategy (86%). Even though they are limited in number

(8%), the review also showed that MCS and strategy could have a bidirectional relationship. The remaining (6%) are conducted without clearly identifying the relationship.

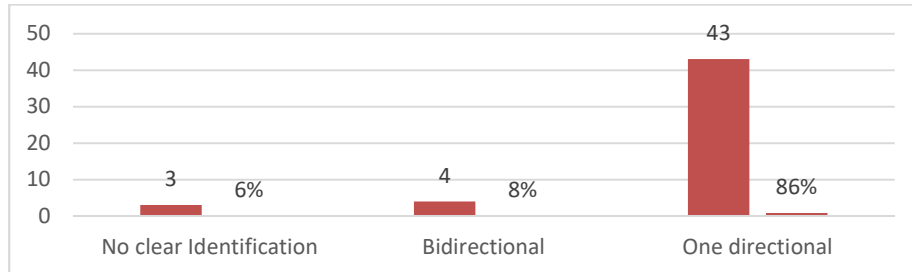


Figure 6: The relationship between MCS and strategy

Source: Authors' presentation

MCS enables strategy formulation (Chenhall et al., 2011; Govindarajan & Gupta, 1985). It can be used as an obligatory point of passage into the strategic agenda of the firms (Whittle & Mueller, 2010). The broad definition of MCS by Malmi & Brown (2008) is that MCS includes all the tools and systems used by managers to ensure that employees' behaviors and decisions are aligned with organizational objectives and strategies. The definitions acknowledge the given nature of strategy and mainly the one-directional relationship between the two. Generally, the one-directional relationship refers to MCS's effect on strategy or strategy's effect on MCS independently. It explains that MCS helps craft or implement strategy (Ahrens & Chapman, 2005; Arjaliès & Mundy, 2013; Henri, 2006; Tucker & Parker, 2013).

On the other hand, the two-directional relationship refers to the MCS's facilitation role in changing the strategy and the strategy's role in changing the MCS to match the strategy (Englund *et al.*, 2017; Kober *et al.*, 2007). The two can support each other, MCS can be designed to fit the strategy, and MCS also facilitate the change in strategy. Strategy and MCS may interplay in day-to-day organizational life. They should not be viewed as two separate practices but rather as two aspects of one and the same practice, which form and recursively feed each other over time (Englund *et al.*, 2017).

Moreover, strategy is conceptualized as what a firm has in the existing literature. However, the strategy literature is changed to conceptualize it as a practice. It is argued that strategy is not what a firm has but what a firm does

(Jarzabkowski, 2004; Jarzabkowski & Spee, 2009; Whittington, 2006, 2007). Strategizing is becoming everyday practice for organizations. Besides, strategy and MCS interplay to achieve a common goal in the district boundary. Strategy and MCS interplay, and one constitute the other (Englund *et al.*, 2017). Even though previous studies enhance understanding of the definition of the two and their findings differ. When we change the conceptualization of strategy, the relationship between the two will change. The dominant understanding of strategy as given and the one-directional relationship between MCS and strategy limits our understanding in the area.

4. FUTURE RESEARCH AGENDA

This section presents the future research agenda in line with the review framework; context, theory, research approach, and conceptualizing the relationship between strategy and MCS. Concerning context, the review showed that most studies are in a developed market context specifically in Europe and Australia and primarily focused on the business sector. The MCS and strategy practice depend on human actions, which are different in different contexts. Given the multidisciplinary and context-dependent nature of MCS design and use and strategy, further study in developing countries and in the public sector can enhance understanding in the area.

The review showed that contingency/resource-based views and institutional theories are commonly used in the literature. Contingency/resource-based considers MCS and strategy emergent and situational. This view fails to address how MCS and strategy can interact in a highly institutionalized context. Institutional theory on the other hand focuses on stability; on how practices are taken for granted. Alternative theories will give a lens to understand the relationship between Strategy and MCS. Researchers (Ashraf & Uddin, 2015; Steccolini, 2019; van Helden & Uddin, 2016) also recommended that more management accounting control-related research be conducted using an alternative solid theoretical foundation to capture socio-political and socio-cultural contexts. Although different theories like structuration are recommended as a theoretical lens (Englund *et al.*, 2017) for MCS and related research, the theory lacks field theory (Fligstein & McAdam, 2012). Hence, the assumptions of these theories and their inherent deficiencies will not be able to fully understand the dynamics of MCS design and strategizing in different contexts.

Strategizing can be considered a field with an occupational group with an individual or collective identity and a set of connections far beyond particular organizations (Whittington, 2007). Moreover, since the strategy literature is changing to strategy as a practice conceptualization, micro and meso-level theories will enhance the understanding of the area. Since both state and non-state actors can influence MCS and strategy, researchers suggest a broad theory like a theory of strategic action fields (SAF) to understand the area further. It defines fields as a meso-level social order and considers the state as a field too. This enable researchers to see the micro and macro dynamics of MCS design and use and the relationship with strategy.

The research method applied in the existing literature is divided into qualitative and quantitative research approaches. Even though there are some mixed methods research in the area, the design is criticized for having multiple ontological and epistemological grounds and difficulty integrating. The critical realist notion of triangulation counters these criticisms by re-conceptualizing in abductive reasoning to address validity threats of qualitative and quantitative research (Modell, 2005, 2009). Critical realism is positioned as an alternative to positivist and interpretative paradigms and takes advantage of both elements to provide new approaches to knowledge development. It recognizes the role of subjective knowledge among social actors in a given situation and the existence of independent structures (Wynn & Williams, 2012). Hence, further studies can enhance understanding by applying the critical realist ontological ground. It acknowledges the presence of objective reality but questions the appropriateness of one single way to know it, gives an alternative view of reality, and enable researchers to understand the complex reality within their context. Hence the critical realist view of mixed research design will have a value-adding role in enhancing understanding of the relationship between MCS and strategy by mixing two approaches at the ontological level.

Moreover, existing literature in the area emphasizes the role of strategy in selecting MCS or the MCS's role in formulating strategy and considering strategy as what a firm has and mainly one directional relationship between the two. However, the literature acknowledges strategy as what a firm does and emphasizes strategy as a given and pre-specified one. Given the multifaceted nature of the strategy concept, it is neither desirable nor possible to arrive at a single method of classification that would be appropriate in all situations (Kald *et al.*, 2000). Hence, considering Strategy as a practice (Jarzabkowski, 2004),

further study will help further understand the relationship between Strategy and MCS. Strategy as a practice understanding fits with institutional theory (Suddaby *et al.*, 2013) and gives an alternative approach to studying the relationship between the two.

5. CONCLUSION

This study deals with the analytical literature review on MCS and strategy. It aims to understand the current body of knowledge on the relationship between the two, identify the gap, and suggest further research agenda. The review was conducted by critically evaluating the context in which the study is conducted, the theory used, the paradigm and research approach applied, and the relationship between MCS and Strategy. The review period is from 1997-2022, and papers were located using keywords in the Scopus database and the Google scholar search engine. The process resulted in 50 articles from 23 journals for full reading and critical review.

The review shows that research on the relationship between MCS and strategy is conducted in varied contexts, theoretical orientations, research approaches, and conceptualization of the relationship between the two. Most studies are in developed economies and the business sector. Studies other than conceptual and literature reviews focused on qualitative and quantitative approaches with limited emphasis on mixed research approaches. In addition, the theory applied is mainly contingency theory followed by institutional theory. Besides, the strategy type mainly considers strategy as a given and one-directional relationship between MCS and Strategy. Given the context-dependent nature of MCS and strategy, varied conceptualizations, different theorizations, and the existing methodological divide between qualitative (subjectivist) and quantitative (objectivist) ontologies make understanding of the area incomplete. Hence future research can advance understanding by incorporating different contexts, non-business sectors, using mixed methods research design and alternative broader theories.

References

- Acquaah, M. (2013). Management control systems , business strategy and performance : A comparative analysis of family and non-family businesses in a transition economy in sub-Saharan Africa §. *Journal of Family Business Strategy*, 4(2), 131–146.
<https://doi.org/10.1016/j.jfbs.2013.03.002>
- Adler, R. W. (2011). Performance management and organizational strategy :

- How to design systems that meet the needs of confrontation strategy firms. *The British Accounting Review*, 43(4), 251–263.
<https://doi.org/10.1016/j.bar.2011.08.004>
- Ahrens, T. (2008). Overcoming the subjective-objective divide in interpretive management accounting research. *Accounting, Organizations and Society*, 33(2–3), 292–297. <https://doi.org/10.1016/j.aos.2007.03.002>
- Ahrens, T., & Chapman, C. S. (2005). Management control systems and the crafting of strategy: a practice-based view. *Controlling Strategy: Management, Accounting, and Performance Measurement*, 106–124.
- Alford, J., & Greve, C. (2017). Strategy in the Public and Private Sectors: Similarities, Differences and Changes. *Administrative Sciences*, 7(4), 35. <https://doi.org/10.3390/admsci7040035>
- Anderson, S. W., & Lanen, W. N. (1999). Economic transition, strategy and the evolution of management accounting practices: The case of India. *Accounting, Organizations and Society*, 24(5–6), 379–412. [https://doi.org/10.1016/S0361-3682\(97\)00060-3](https://doi.org/10.1016/S0361-3682(97)00060-3)
- Archer, M. (1995). *Realist social theory: the morphogenetic approach thus not only rejects*. Cambridge University Press.
<http://books.google.co.uk/books?id=SMbNRp5EseMC>
- Arjaliès, D., & Mundy, J. (2013). The use of management control systems to manage CSR strategy : A levers of control perspective. *Management Accounting Research*, 24(4), 284–300. <https://doi.org/10.1016/j.mar.2013.06.003>
- Ashraf, J., & Uddin, S. (2015). Military, “managers” and hegemonies of management accounting controls: A critical realist interpretation. *Management Accounting Research*, 29, 13–26. <https://doi.org/10.1016/j.mar.2015.07.002>
- Bedford, D. S., Malmi, T., & Sandelin, M. (2016). Management control effectiveness and strategy: An empirical analysis of packages and systems. *Accounting, Organizations and Society*, 51, 12–28. <https://doi.org/10.1016/j.aos.2016.04.002>
- Bhaskar, R. (1978). *A Realistic Theory of Science*. (Vol. 24, Issue 5). Hassocks, UK, Harvester Press Limited. <https://doi.org/10.2307/2215817>
- Bhaskar, R. (1998). The possibility of naturalism: A Philosophical Critique of the Contemporary Human Sciences. In *Harvester Wheatsheaf, Hemel Hempstead [1998]* (3rd ed.). Routledge. <https://doi.org/10.4324/9781315756332>
- Bromwich, M. (1999). Thoughts on management accounting and strategy. *Pacific Accounting Review*, 11(1–2), 41–48. <https://doi.org/10.1108/eb037925>
- Bruining, H., Bonnet, M., & Wright, M. (2004). Management control systems and strategy change in buyouts. *Management Accounting Research*, 15(2), 155–177. <https://doi.org/10.1016/j.mar.2004.03.003>

- Chenhall, R. H. (1998). The Relationship Between Strategic Priorities, Management Technique and Management Accounting: AN Emperical Investigation Using a Systems Approach. *Accounting Organization and Society*, 23(3), 243–264.
- Chenhall, R. H. (2003). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. *Accounting, Organizations and Society*, 28(2–3), 127–168. [https://doi.org/10.1016/S0361-3682\(01\)00027-7](https://doi.org/10.1016/S0361-3682(01)00027-7)
- Chenhall, R. H. (2005). Integrative strategic performance measurement systems , strategic alignment of manufacturing , learning and strategic outcomes : an exploratory study. *Accounting, Organizations and Society*, 30, 395–422. <https://doi.org/10.1016/j.aos.2004.08.001>
- Chenhall, R. H., Kallunki, J. P., & Silvola, H. (2011). Exploring the relationships between strategy, innovation, and management control systems: The roles of social networking, organic innovative culture, and formal controls. *Journal of Management Accounting Research*, 23(1), 99–128. <https://doi.org/10.2308/jmar-10069>
- Chenhall, R. H., & Langfield-Smith, K. (2003). Performance measurement and Reward systems, Trust, and Strategic Change. *Journal of Management Accounting Research*, 15, 117–143.
- Chua, W. F. (1986). Radical Developments in Accounting Thought. *The Accounting Review*, 1x1(4).
- Cinquini, L., & Tenucci, A. (2010). Strategic management accounting and business strategy: A loose coupling? *Journal of Accounting & Organizational Change*, 6(2), 228–259. <https://doi.org/10.1108/18325911011048772>
- Creswell, J. W., & Clark, V. L. P. (2018). *Designing and Conducting Mixed Methods Rsearch* (3rd ed.). SAGE Publications.
- Cuganesan, S., Dunford, R., & Palmer, I. (2012). Strategic management accounting and strategy practices within a public sector agency. *Management Accounting Research*, 23(4), 245–260. <https://doi.org/10.1016/j.mar.2012.09.001>
- Damayanthi, S., & Gooneratne, T. (2017). Institutional logics perspective in management control research: A review of extant literature and directions for future research. *Journal of Accounting and Organizational Change*, 13(4), 520–547. <https://doi.org/10.1108/JAOC-01-2017-0002>
- Davila, T. (2000). An empirical study on the drivers of management control systems’ design in new product development. *Accounting, Organizations and Society*, 25(4–5), 383–409. [https://doi.org/10.1016/S0361-3682\(99\)00034-3](https://doi.org/10.1016/S0361-3682(99)00034-3)
- Denzin, N. K. (2012). Triangulation 2.0. *Journal of Mixed Methods Research*, 6(2), 80–88. <https://doi.org/10.1177/1558689812437186>
- Englund, H., Gerdin, J., & Burns, J. (2017). A structuration theory perspective

- on the interplay between strategy and accounting: Unpacking social continuity and transformation. *Critical Perspectives on Accounting*, 2016. <https://doi.org/10.1016/j.cpa.2017.03.007>
- Erhart, R., Mahlendorf, M. D., Reimer, M., & Schäffer, U. (2017). Theorizing and testing bidirectional effects: The relationship between strategy formation and involvement of controllers. *Accounting, Organizations and Society*, 61, 36–52. <https://doi.org/10.1016/j.aos.2017.07.004>
- Ferreira, A., Moulang, C., & Hendro, B. (2010). Environmental management accounting and innovation: An exploratory analysis. *Accounting, Auditing and Accountability Journal*, 23(7), 920–948. <https://doi.org/10.1108/09513571011080180>
- Fligstein, N., & McAdam, D. (2012). *A Theory of Fields*. Oxford University press.
- Gond, J., Grubnic, S., Herzig, C., & Moon, J. (2012). Configuring management control systems : Theorizing the integration of strategy and sustainability. *Management Accounting Research*, 23(3), 205–223. <https://doi.org/10.1016/j.mar.2012.06.003>
- Govindarajan, V., & Gupta, A. (1985). Linking control systems to business unit strategy : impact on performance. *Accounting Organization and Society*, 10(1), 51–66.
- Henri, J. F. (2006). Management control systems and strategy: A resource-based perspective. *Accounting, Organizations and Society*, 31(6), 529–558. <https://doi.org/10.1016/j.aos.2005.07.001>
- Hosoda, M., & Suzuki, K. (2015). Using Management Control Systems to Implement CSR Activities: An Empirical Analysis of 12 Japanese Companies. *Business Strategy and the Environment*, 24(7), 628–642. <https://doi.org/10.1002/bse.1896>
- Hutaibat, K., Alberti-Alhtaybat, L. von, & Al-Htaybat, K. (2011). Strategic management accounting and the strategising mindset in an English higher education institutional context. *Journal of Accounting & Organizational Change*, 7(4), 358–397.
- Jarzabkowski, P. (2004). Strategy as practice: Recursiveness, adaptation, and practices-in-use. *Organization Studies*, 25(4), 529–560. <https://doi.org/10.1177/0170840604040675>
- Jarzabkowski, P., & Spee, A. P. (2009). Strategy-as-practice: A review and future directions for the field. *International Journal of Management Reviews*, 11(1), 69–95. <https://doi.org/10.1111/j.1468-2370.2008.00250.x>
- Jermias, J., & Gani, L. (2004). Integrating business strategy, organizational configurations and management accounting systems with business unit effectiveness: A fitness landscape approach. *Management Accounting Research*, 15(2), 179–200. <https://doi.org/10.1016/j.mar.2004.03.002>
- Jørgensen, B., & Messner, M. (2010). Accounting and strategising: A case

- study from new product development. *Accounting, Organizations and Society*, 35(2), 184–204. <https://doi.org/10.1016/j.aos.2009.04.001>
- Kald, M., Nilsson, F., & Rapp, B. (2000). On Strategy and Management Control: The Importance of Classifying the Strategy of the Business. *British Journal of Management*, 11(3), 197–212. <https://doi.org/10.1111/1467-8551.00161>
- Kober, R., Ng, J., & Paul, B. (2003). Change in Strategy and Mcs: a Match Over Time? *Advances in Accounting*, 20(03), 199–232. [https://doi.org/10.1016/S0882-6110\(03\)20009-2](https://doi.org/10.1016/S0882-6110(03)20009-2)
- Kober, R., Ng, J., & Paul, B. J. (2007). The interrelationship between management control mechanisms and strategy. *Management Accounting Research*, 18(4), 425–452. <https://doi.org/10.1016/j.mar.2007.01.002>
- Langfield-Smith, K. (1997). Management Control Systems and Strategy: a Critical Review. *Accounting, Organizations & Society*, 22(2), 207–232. <http://0-search.ebscohost.com/pugwash.lib.warwick.ac.uk/login.aspx%3Fdirect%3Dtrue%26db%3Dbth%26AN%3D12494232%26site%3Deds-live&group=trial>
- Langfield-Smith, K. (2006). A Review of Quantitative Research in Management Control Systems and Strategy. *Handbooks of Management Accounting Research*, 2(2003), 753–783. [https://doi.org/10.1016/S1751-3243\(06\)02012-8](https://doi.org/10.1016/S1751-3243(06)02012-8)
- Lawrence, T. B., & Suddaby, R. (2006). Institutions and Institutional Work. In *Handbook of organization studies* (Vol. 1, Issue 4, pp. 689–699). Sage. <https://doi.org/10.1007/s11786-007-0026-2>
- Malmi, T., & Brown, D. A. (2008). Management control systems as a package-Opportunities, challenges and research directions. *Management Accounting Research*, 19(4), 287–300. <https://doi.org/10.1016/j.mar.2008.09.003>
- Maran, L., Bracci, E., & Inglis, R. (2018). Performance management systems ' stability : Unfolding the human factor – A case from the Italian public sector. *The British Accounting Review*, 50(3), 324–339. <https://doi.org/10.1016/j.bar.2018.01.002>
- Marginson, D. E. W. (2002). Management control systems and their effects on strategy formation at middle-management levels: Evidence from a U.K. organization. *Strategic Management Journal*, 23(11), 1019–1031. <https://doi.org/10.1002/smj.271>
- Martyn, P., Sweeney, B., & Curtis, E. (2016). Strategy and control: 25 years of empirical use of Simons' Levers of Control framework. *Journal of Accounting & Organizational Change*, 12(3), 281–324.
- Masanet-Llodra, M. J. (2006). Environmental management accounting: A case study research on innovative strategy. *Journal of Business Ethics*, 68(4), 393–408. <https://doi.org/10.1007/s10551-006-9029-1>

- Micelotta, E., Lounsbury, M., & Greenwood, R. (2017). Pathways of Institutional Change: An Integrative Review and Research Agenda. *Journal of Management*, 43(6), 1885–1910. <https://doi.org/10.1177/0149206317699522>
- Modell, S. (2005). Triangulation between case study and survey methods in management accounting research: An assessment of validity implications. *Management Accounting Research*, 16(2), 231–254. <https://doi.org/10.1016/j.mar.2005.03.001>
- Modell, S. (2009). *In defence of triangulation : A critical realist approach to mixed methods research in management accounting*. 20, 208–221. <https://doi.org/10.1016/j.mar.2009.04.001>
- Modell, S. (2012). Strategy , political regulation and management control in the public sector : Institutional and critical perspectives. *Management Accounting Research*, 23(4), 278–295. <https://doi.org/10.1016/j.mar.2012.05.001>
- Naranjo-Gil, D., & Hartmann, F. (2006). How Top Management Teams Use management Accounting Sytems To implement starategy. *Journal of Management Accounting Research*, 18, 21–53.
- Naranjo-Gil, D., & Hartmann, F. (2007). Management accounting systems, top management team heterogeneity and strategic change. *Accounting, Organizations and Society*, 32(7–8), 735–756. <https://doi.org/10.1016/j.aos.2006.08.003>
- Nilsson, F. (2002). Strategy and management control systems : A study of the design and use of management control systems following takeover. *Accounting and Finance*, 42, 41–71.
- Nilsson, F., & Consulting, D. (2001). Control Systems in Multibusiness Companies : From Performance Management to Strategic Management. *European Management Journal*, 19(4), 344–358.
- Nimtrakoon, S., & Tayles, M. (2015). Explaining management accounting practices and strategy in Thailand A selection approach using cluster analysis. In *Accounting in Emerging Economies* (Vol. 5, Issue 1).
- Nyamori, R. O., Perera, M. H. B., & Lawrence, S. R. (2001). The concept of Strategic Change and Implications for management accounting research. *Journal of Accounting Literature*, 20, 62–83.
- Otley, D. T. (1980). The contingency theory of management accounting: Achievement and prognosis. *Accounting, Organizations and Society*, 5(4), 413–428. [https://doi.org/10.1016/0361-3682\(80\)90040-9](https://doi.org/10.1016/0361-3682(80)90040-9)
- Pasch, T. (2019). Strategy and innovation: the mediating role of management accountants and management accounting systems’ use. *Journal of Management Control*, 30(2), 213–246. <https://doi.org/10.1007/s00187-019-00283-y>
- Perego, P., & Hartmann, F. (2009). Aligning performance measurement systems with strategy: The case of environmental strategy. *Abacus*,

- 45(4), 397–428. <https://doi.org/10.1111/j.1467-6281.2009.00297.x>
- Powell, W., & Colyvas, J. (2008). Micro foundations of institutional theory. In *The Sage handbook of organizational institutionalism*, (Vol. 28, Issue 7).
- Priem, R. L., & Butler, J. E. (2001). The Resource-Based View A useful perspective for strategic management research. *Academy of Management Review*, 26(1), 22–40.
- Rana, T., Steccolini, I., Bracci, E., & Mihret, D. G. (2022). Performance auditing in the public sector: A systematic literature review and future research avenues. *Financial Accountability and Management*, 38(3), 337–359. <https://doi.org/10.1111/faam.12312>
- Reinking, J. (2012). Contingency Theory in Information Systems Research. In *Information Sytem Theory: Expanding and pridiction Our digital Society* (pp. 247–263). <http://www.springer.com/series/6157>
- Riccaboni, A., & Luisa Leone, E. (2010). Implementing strategies through management control systems: the case of sustainability. *International Journal of Productivity and Performance Management*, 59(2), 130–144. <https://doi.org/10.1108/17410401011014221>
- Roslender, R., & Hart, S. J. (2003). In search of strategic management accounting : theoretical and field study perspectives. *Management Accounting Research*, 14, 255–279. [https://doi.org/10.1016/S1044-5005\(03\)00048-9](https://doi.org/10.1016/S1044-5005(03)00048-9)
- Rousseau, D. M., Manning, J., & Denyer, D. (2008). 11 Evidence in Management and Organizational Science: Assembling the Field’s Full Weight of Scientific Knowledge Through Syntheses. *The Academy of Management Annals*, 2(1), 475–515. <https://doi.org/10.1080/19416520802211651>
- Sayer, A. (1992). *Methods in Social Scince: A realist Approach* (2nd ed.). London and New York, NY: Routledge.
- Simeone, L. (2020). Characterizing Strategic Design Processes in Relation to Definitions of Strategy from Military , Business and Management Studies Characterizing Strategic Design Processes in Relation to Definitions of Strategy from Military , Business and Management Studi. *The Design Journal*, 0(0), 1–20. <https://doi.org/10.1080/14606925.2020.1758472>
- Slagmulder, R. (1997). Using management control systems to achieve alignment between strategic investment decisions and strategy. *Management Accounting Research*, 8(1), 103–139. <http://www.scopus.com/inward/record.url?eid=2-s2.0-0031094112&partnerID=40&md5=e6be540ee5c227e9dce9e4a925bfa334>
- Solovida, G. T., & Latan, H. (2017). Linking environmental strategy to environmental performance: Mediation role of environmental

- management accounting. *Sustainability Accounting, Management and Policy Journal*, 8(5), 595–619. <https://doi.org/10.1108/SAMPJ-08-2016-0046>
- Steccolini, I. (2019). Accounting and the post-new public management: Re-considering publicness in accounting research. *Accounting, Auditing and Accountability Journal*, 32(1), 255–279. <https://doi.org/10.1108/AAAJ-03-2018-3423>
- Stergiou, K., Ashraf, J., & Uddin, S. (2013). The role of structure and agency in management accounting control change of a family owned firm: A Greek case study. *Critical Perspectives on Accounting*, 24(1), 62–73. <https://doi.org/10.1016/j.cpa.2012.09.007>
- Suddaby, R. (2010). Challenges for institutional theory. *Journal of Management Inquiry*, 19(1), 14–20. <https://doi.org/10.1177/1056492609347564>
- Suddaby, R., Seidl, D., & Lê, J. K. (2013). Strategy-as-practice meets neo-institutional theory. *Strategic Organization*, 11(3), 329–344. <https://doi.org/10.1177/1476127013497618>
- Tashakkory, A., & Teddlie, C. (1998). *Mixed Methodology: Combining Qualitative and Quantitative Approaches* (Vol. 46). SAGE Publications Inc.
- Tsamenyi, M., Sahadev, S., & Qiao, Z. S. (2011). The relationship between business strategy, management control systems and performance: Evidence from China. *Advances in Accounting*, 27(1), 193–203. <https://doi.org/10.1016/j.adiac.2011.05.001>
- Tucker, B. P., & Parker, L. D. (2013). Out of control? Strategy in the NFP sector: The implications for management control. In *Accounting, Auditing and Accountability Journal* (Vol. 26, Issue 2). <https://doi.org/10.1108/09513571311303729>
- Tucker, B. P., & Parker, L. D. (2015). Business as Usual? An Institutional View of the Relationship Between Management Control Systems and Strategy. *Financial Accountability and Management*, 31(2), 113–149. <https://doi.org/10.1111/faam.12050>
- Tucker, B. P., Thorne, H., & Gurd, B. (2009). Management Control Systems and Strategy: What’s Been Happening? *Journal of Accounting Literature*, 28, 123–163.
- Tuomela, T. (2005). The interplay of different levers of control : A case study of introducing a new performance measurement system. *Management Accounting Research*, 16, 293–320. <https://doi.org/10.1016/j.mar.2005.06.003>
- Van der Kolk, B., & Schokker, T. (2016). Strategy implementation through hierarchical couplings in a management control package: an explorative case study. *Journal of Management Control*, 27(2–3), 129–154. <https://doi.org/10.1007/s00187-015-0226-x>

- van Helden, J., & Uddin, S. (2016). Public sector management accounting in emerging economies: A literature review. *Critical Perspectives on Accounting*, 41, 34–62. <https://doi.org/10.1016/j.cpa.2016.01.001>
- Whittington, R. (2007). Strategy practice and strategy process: Family differences and the sociological eye. *Organization Studies*, 28(10), 1575–1586. <https://doi.org/10.1177/0170840607081557>
- Whittle, A., & Mueller, F. (2010). Strategy, enrolment and accounting: The politics of strategic ideas. *Accounting, Auditing and Accountability Journal*, 23(5), 626–646. <https://doi.org/10.1108/09513571011054918>
- Widener, S. K. (2007). An empirical analysis of the levers of control framework. *Accounting, Organizations and Society*, 32(7–8), 757–788. <https://doi.org/10.1016/j.aos.2007.01.001>
- Wijethilake, C., Munir, R., & Appuhami, R. (2018). Environmental Innovation Strategy and Organizational Performance : Enabling and Controlling Uses of Management Control Systems. *Journal of Business Ethics*, 115, 1139–1160. <https://doi.org/10.1007/s10551-016-3259-7>
- Wynn, D., & Williams, C. (2012). Principles for Conducting Critical Realist Case Study Research in Information Systems. *MIS Quarterly*, 36(3), 787–810. https://ecommons.udayton.edu/mis_fac_pubhttps://ecommons.udayton.edu/mis_fac_pub/62

Annex 1: Details of Reviewed Articles

No.	Article	Journal	Context		Theory	Research method	Strategy & MCS relationship	ABDC 2019 Rank
			Continent	Sector				
1	Slagmulder, (1997)	MAR	Europe	Business	Grounded theory	Qual	One directional	A*
2	Chenhall (1998)	AOS	Australia	Business	Contingency	Quant.	One direcional	A*
3	Bromwich (1999)	PAR	N/A	N/A	N/A	Conceptual	N/A	B
4	Anderson & Lanen (1999)	AOS	Asia	Businee	Contingency	Quant.	One directional	A*
5	Davila (2000)	AOS	Europe and USA.	Business	Resource-based view	Mixed	One directional	A*
6	Kald et al., (2000)	BJM	N/A	N/A	Contingency	Conceptual	One directional	A
7	Nyamori et al., (2001)	JAL	N/A	N/A	N/A	Conceptual	One directional	A
8	Nilsson & Consulting (2001)	EJM	N/A	Business	N/A	Conceptual	One directional	B
9	Marginson (2002)	SMJ	Europe	Business	Resource-based view	Qual.	One directional	A*
10	Nilsson (2002)	A&F	Europe	Business	Contingency	Quant.	One directional	A
11	Chenhall (2003)	AOS	N/A	N/A	Contingency	Literature	One directional	A*
12	Chenhall & Langfield-Smith (2003)	JMAR	Australia	Business	Contingency	Qual.	One directional	A*
13	Kober et al., 2003)	AIA	Australia	Public sector	contingency	Mixed	One directional	A
14	Bruining et al. (2004)	MAR	Europe	Business	NA	Qual.	One directional	A*
15	Jermias & Gani (2004)	MAR	Asia	Business	Contingency	Quant.	One directional	A*
16	Chenhall (2005)	AOS	Australia	Business	Not specific	Quant.	One directional	A*
17	Henri (2006)	AOS	Canada,	Business	Resource-based view	Quant	One directional	A*
18	Masanet-Llodra (2006)	JBE	Europe	Business	Not specific	Qual.	One directional	A
19	Naranjo-Gil & Hartmann, 2006)	JMAR	Europe	Business	upper echelons theory	Quant.	One directional	A*
20	Kober et al. (2007)	MAR	Australia	Public sector	Resource-based view	Qual.	Bi-directional	A*
21	Widener (2007)	AOS	USA	business	Resource-based view	Quant.	One direction	A*
22	Naranjo-Gil & Hartmann (2007)	AOS	Europe	Publics	Resource-based view	Quant.	One directional	A*
23	Perego & Hartmann (2009)	Abacus	Europe	Business	Not specific	Quant.	One directional	A
24	Tucker et al. (2009)	JAL	N/A	N/A	N/A	Conceptual	Bidirectional	A
25	Jørgensen & Messner (2010)	AOS	Europe	Business	Practice theory	Qual.	One directional	A*

26	Cinquini & Tenucci (2010)	JAOC	Europe	Business	Contingency	Quant.	One directional	B
27	Whittle & Mueller (2010)	AAAJ	Europe	Business	ATN	Qual.	One directional	A*
28	Ferreira et al., (2010)	AAAJ	Australia	Business	Not specific	Quant.	One directional	A*
29	Riccaboni & Luisa Leone (2010)	IJPPM	N/A	Multinational	Not specific	Qual.	One directional	B
30	Adler (2011)	BAR	USA,	Business	N/A	Qual.	One directional	A*
31	Chenhall et al. (2011)	JMAR	Europe	Business	Contingency	Quant.	One directional	A*
32	Hutaibat et al., (2011)	JAOC	Europe	Business	Grounded theory	Qual.	No position	B
33	Tsamenyi et al. (2011)	AIA	Asia	Business	Contingency theory	Quant.	One directional	A
34	Cuganesan et al. (2012)	MAR	Australia	Public sector	Practice theory	Qual.	One directional	A*
35	Gond et al. (2012)	MAR	Not Required	Not required	Resource-based view	Conceptual	One directional	A*
36	Modell (2012)	MAR	Europe	Public sector	Institutional and critical	Conceptual	One directional	A*
37	Acquaah (2013)	JFB	Africa	Business	Contingency	Quant.	One directional	B
38	Arjaliès & Mundy (2013)	MAR	Europe	Business	Not specified	Qual.	One directional	A*
39	Tucker & Parker (2013)	AAAJ	Australia,	NFP	Neo-institutional & Contingency	Qual.	One directional	A*
40	Hosoda & Suzuki (2015)	BSE	Asia	Business	Not specific	Qual.	One directional	A
41	Nimtrakoon & Tayles (2015)	JAEE	Asia	Business	Contingency theory	Quant.	One directional	B
42	Tucker & Parker (2015)	FAM	Australia	NFP	Institutional	Qual.	One directional	A
43	Bedford et al. (2016)	AOS	Australia,	Business	Resource-based view	Quant.	One directional	A*
44	Martyn et al. (2016)	JAL	Not Required	Nor required	Not specified	Literature review	Not required	A
45	Van der Kolk & Schokker (2016)	JMC	Europe	Government	Coupling theory	Qual.	One directional	A
46	Solovida & Latan (2017)	SAMPJ	Asia	Business	Not specific	Quant.	One directional	B
47	Englund (2017)	CPA	N/A	N/A	Structuration	Conceptual	Bi-Directional	A
48	Erhart et al. (2017)	AOS	Europe	Business	Contingency	Quant.	Two directional	A*
49	Wijethilake et al. (2018)	JBE	Asia	Multinational	Not specified	Quant.	One directional	A
50	Pasch (2019)	JMC	Europe	Business	Not specific	Quant.	One directional	A