

Rahi, ABM Fazle; Johansson, Jeaneth; Fagerström, Arne; Blomkvist, Marita

Article

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Review

Sustainability Reporting and Management Control System: A Structured Literature Review

ABM Fazle Rahi ^{1,2,*} , Jeaneth Johansson ^{2,3} , Arne Fagerström ¹ and Marita Blomkvist ⁴

¹ Department of Business and Economics Studies, University of Gävle, 801 76 Gävle, Sweden

² School of Business, Innovation and Sustainability, Halmstad University, 301 18 Halmstad, Sweden

³ Department of Entrepreneurship and Innovation, Luleå University of Technology, 971 87 Luleå, Sweden

⁴ Department of Business Administration, University of Gothenburg, 405 30 Gothenburg, Sweden

* Correspondence: fazle.rahi@hig.se

Abstract: The purpose of this paper is to contribute to the management accounting literature by reviewing how previous studies conceptualised the relationship between sustainability reporting and management control systems, analysing the main themes and discussing potential future developments of the sustainability reporting and management control systems (SRMCS) research agenda. This study builds on the structured literature review method by categorising and synthesising 15 years of research into the topic “sustainability reporting and management control”. Approximately 500 relevant articles were identified in the first round of searching Google Scholar and Scopus with the selected keywords, but after filtering and manual assessment, 45 articles were selected for the full review. Coding reliability was maintained with the K-alpha test. Our findings divulge that the researcher looks at the management control and the sustainability reporting agenda with just one eye. They either focus on management control or sustainability reporting. Very little research focuses on relationships. In addition, from the methodological point of view, we found that qualitative case studies and interviews dominate the field, together with commentary papers. We proposed a framework showing a complex and multifaceted relationship (a spider diagram) to conceptualise the synthesis of the literature. This framework is intended as a blueprint for the relationship between sustainability reporting and management control in order to design and redesign a company’s internal strategies on management control systems (MCS).

Keywords: sustainability report; integrated report; management control system; structured literature review; management accounting



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1. Introduction

The movement for corporate sustainability reporting (SR) came into the spotlight in the middle of the 1990s when the South African first king code of corporate governance, widely known as the “King I” report, was published (Dumay et al. 2016; Gleeson-White 2014)¹. The stakeholder notion grabbed quick attention in the business world for its durable business growth without compromising stakeholders’ interests. Later, in 2002, the King II report introduced the concept of integrated reporting as a means of non-financial reporting in addition to financial reporting. This integrated reporting underpinned frameworks, such as the current Global Reporting Initiative (GRI), the Sustainability Accounting Standard Board (SASB), and the triple bottom line (Dumay et al. 2016; Gleeson-White 2014). Since then, organisations have been progressively motivated to report in line with such standards.

The SR aims to increase transparency in companies and their contribution to sustainable development (Elkington 1997; Herzig and Schaltegger 2006; Traxler et al. 2020). However, there are many reasons beyond transparency, pointing to the demands of the sustainability report, such as performance improvement, legitimacy, accountability, control, and stakeholder management (WBCSD 2015; Maas et al. 2016a, 2016b; Gond et al. 2012;

Joseph 2012; Nigri and Del Baldo 2018). Direct and indirect pressure from stakeholders has sped up the disclosure process (Gleeson-White 2014; Jollands et al. 2018). For the sake of protecting shareholders and other stakeholders' interests, the European Parliament issued the directive (European Union Directive 2104/95) on non-financial disclosure and diversity (La Torre et al. 2018). This new regulation requires larger companies with more than 500 employees and public interest entities to produce annual corporate reports with information on their social, environmental, human rights and anti-corruption policy, risks, and performance (European Union 2014). Thus, now many European countries, such as Sweden, Denmark, and Germany (Hoffmann et al. 2018), amend their voluntary disclosure, turning to higher degrees of mandatory disclosure.

There is a growing recognition that contribution to sustainable development requires organisations to embed considerations of the triple bottom line or ESG along with financial considerations into their managerial decision-making and organisational control process (Bonacchi and Rinaldi 2007; Perego and Hartmann 2009; Rahi et al. 2022b). Meanwhile, accounting scholars diverge in their opinions on whether SR and management control systems (MCS)² should or should not be mixed into the same frameworks and clearly reflected in the sustainability report. Some scholars argue that SR is a mirror of managerial decision-making and control processes (Biswas and O'Grady 2016). In line with this, they provide frameworks of sustainability reporting management control systems (SRMCS) for bridging the relationship between them (i.e., Laughlin 1991; Morioka and de Carvalho 2016; Traxler et al. 2020; Tilt 2006). Researchers even warn of the risk of greenwashing if sustainability data solely is integrated into sustainability reports but not embedded in companies' internal decision-making (Gray and Milne 2004; Milne and Gray 2013; Traxler et al. 2020). In contrast, other scholars see the links between SR and MCS as dangerous, risking direct management focus apart from the sustainability practice involving internal decision and management control processes (Bebbington et al. 2007; Riccaboni and Leone 2010; Maas et al. 2016b).

Despite the mixed scholarly views on the integration of sustainability reporting and management control, as well as how it spills over into companies' sustainability practices, (i.e., what companies do and how they work), there is a growing consensus that SR should reflect the managerial motivations and attitudes within the company, as they respond directly to stakeholders' demands. The development of sustainability reporting may, in line with this reasoning, be orientated towards improving sustainability practice in terms of management decision-making and work processes. Producing extensive sustainability reports may be considered inconsistent, with companies thereby claiming accountability and transparency while not linking sustainability to the company's sustainability practice and MCS. Researchers see the effective implementation of successful sustainability strategies as requiring comprehensive MCS to ensure integration of sustainability into an organisation's core operations and to push it towards transparency, performance improvement, legitimacy, accountability, control, and stakeholder management together (Epstein 1996; Epstein and Wisner 2005; Gond et al. 2012; Moon et al. 2011). In addition, empirical studies further identified that there is a clear linkage between sustainability reporting and financial performance (Oncioiu et al. 2020; Jones et al. 2007), and a proper contract of executive compensation helps in this regard (Al-Shaer and Zaman 2019). This means that sustainability reporting, employee motivation, financial performance, and stakeholder prosperity are endogenously and exogenously related to each other. There is a growing number of literature reviews focusing on sustainability and MCS separately. Their primary focus is performance management (i.e., Morioka and de Carvalho 2016) or MCS for sustainable development in general (i.e., Lueg and Radlach 2016), while neglecting the linkage between SR and MCS. A recent systematic review by Traxler et al. (2020) limits the review to a specific management control (MC) framework known as the Malmi–Brown framework. Given this background, and understanding what we have learned, this paper aims to identify, map, and analyse the important literature in the field of sustainability reporting and management control to answer the following research questions:

RQ1—How do research scholars investigate the relationship between sustainability reporting (SR) and management control systems (MCS)?

RQ2—What are the emphases, critiques, and gaps in the literature?

Obtaining answers to the above questions is important both for academics as well as for practitioners. This is because SR is an outcome of numerous sustainable strategy trajectories rather than just the successful application of management control (MC). The findings of this literature review identified that researchers looked at the management control and the sustainability reporting agenda with just one eye. They either focus on MC or SR, whereas there is a clear linkage between SR and MCS. In this study, we mapped the relevant literature from the two research fields without having a narrow focus on any specific MC framework. Finally, we propose a comprehensive conceptual framework (a spider diagram) outlining a multifaceted relationship between SR and MCS. This framework is considered as a blueprint of the relationship between sustainability reporting and management control system for designing and redesigning a company's internal strategies on MCS.

Structure of the remainder of the paper as follows. Section 2 introduces the conceptual background of SR and MCS. The research design, methodology, and findings are illustrated in Section 3. This is followed by a few subsections, where we present a description of the identified literature. Section 4 deals with the synthesis in the form of content analysis. At the end of this section, we highlight the limitations of the review and guide researchers towards strands of future research. Finally, in Section 5 we outline the conclusion and implications for practice and academia.

2. Conceptual Background of SR and MCS and Their Relationships

2.1. Sustainability Reporting (SR)

A combination of financial and non-financial information is critical both for managers and for external stakeholders, such as investors (Koellner et al. 2005; Milne and Chan 1999; Reimsbach et al. 2018). Similar to financial reporting, sustainability reporting plays a crucial role for external decision-makers, such as in investment-related decisions (Bernow et al. 2019; Arvidsson and Johansson 2019). Here, SR refers to a non-financial report aimed at providing stakeholders with high-quality sustainability information in accordance with the three sustainability dimensions, namely governance, social, and environmental (White 2016; Arvidsson and Dumay 2021). Disclosure of SR is a major channel for companies to ensure transparency and legitimacy in front of stakeholders (Ditlevsen et al. 2013; and Beck et al. 2017). Nonetheless, a company's degree of sustainability depends on the company's true actions.

From the beginning, companies published sustainability reports according to their own frameworks, and these frameworks often changed over the years. The lack of uniformity caused incomparability between organisations and even between years within the same company (Haller et al. 2018). In many countries, SR is still considered a voluntary practice, lacking uniform frameworks (Bhasin 2017). One reason for the lack of attention to SR from the beginning was the difficulty in transforming sustainability actions into accounting terms. However, the Global Reporting Initiative (GRI) and Sustainability Accounting Standard Board's (SASB) frameworks have been widely practiced by a large number of companies, also aligning sustainability and accounting. Over the years, the focus of SR is now on value creation through intellectual, human, social, and natural capitals as emphasised by Gleeson-White 2014. In order to ensure that sustainable value creation is connected to the different types of capital, companies need to manage and control for such value creation. This point emphasises the link between value creation and MCS (Chenhall et al. 2010; Skoog 2003).

2.2. Management Control Systems (MCS)

The term *management control* was introduced in Anthony's (1965) theoretical work, where MC was separated from strategic planning and operational control. The concept of management accounting and control was, until this time, limited to cost accounting control,

a perspective failing to take technological progression, organisational structure, and environmental changes into account (Otley 1994; Birnberg 2011). However, through Anthony’s work, MCS was theoretically developed into the notion that accounting is an integral part of planning and control. Scholars started to emphasise that design of the management control systems (MCS) needed to be shaped in line with organisational strategies, since the contemporary business environment and acceptance of changes are unavoidable when designing a MCS (Otley 1994). Over the years, researchers followed this framework of management control and developed the notion of contingency approaches in management accounting and control (i.e., Hopewood, Govindarajan, Gordon-Miller, Hayes, and Otley). Accordingly, sustainability strategies, goals, discourse, and mission statements are expected to be reflected within formal management control systems, while also communicated to stakeholders formally through reporting (Gond et al. 2012; Narayanan and Boyce 2019). This is in line with an “inside-out” perspective (Maas et al. 2016b; Schaltegger and Wagner 2006). The inside-out perspective is based on the business strategy and an analysis of issues that are important for the effective implementation for these strategies.

2.3. Relationship between SR and MCS

As a first step in our conceptualization, we outline a conceptual interplay of the relationships between sustainability reporting and management control systems, as shown in Figure 1. The conceptualisation is based on the theoretical discussion mentioned above. In this, SR in the middle is surrounded by the MCS, stakeholder’s expectation, and institutional expectations, since SR is the interest of all the stakeholder, internally and externally. The four circles illustrate different parts of an MCS, including (1) informal control, (2) formal control, (3) stakeholders’ expectations, and (4) transparency and legitimacy requirements.

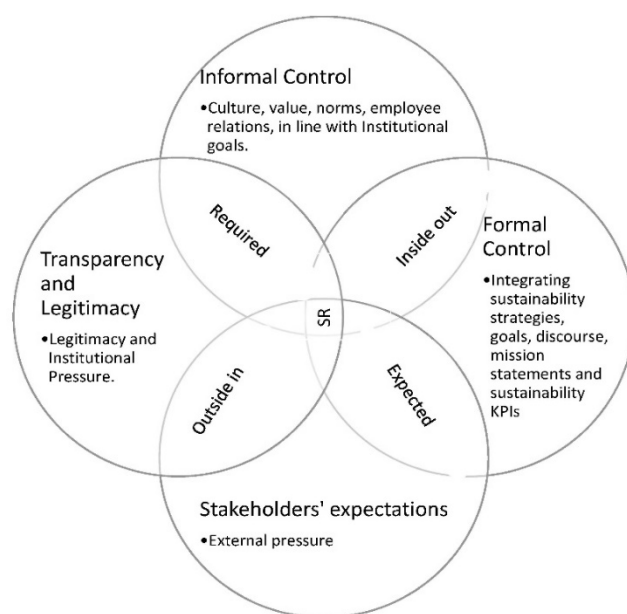


Figure 1. Conceptual interplay of the relationship between sustainability reporting and management control systems.

To meet regulatory and stakeholder requirements, SR is considered a cardinal approach to decision-making based on both an “inside-out” and an “outside-in” perspective (Maas et al. 2016b). The inside-out perspective spans the informal and formal control systems and captures business areas, such as strategy, mission, vision, and analysis of issues that are relevant for the implementation of strategies (Maas et al. 2016b; Chiucchi et al. 2018). Here, the choice of KPIs, performance measurement, as well as what is reported externally, are based on internal decisions from an inside-out perspective (Maas et al. 2016b; Schaltegger and Wagner 2006; Nigri and Del Baldo 2018). That is, internal control and strategy-related information

are highly linked to external reporting (Bui and Villiers 2017). This outlines a clear linkage between management accounting control and sustainability reporting. The outside-in perspective derives from external stakeholders' requirements and expectations of the company's sustainability impacts and operations (Bebbington et al. 2007; Clarkson et al. 2011; Gray 1992). The link between control and reporting is, thus, strongly influenced by societal expectations, regulatory requirements, and standards. Management control is, as such, guided by the "required" and the "expected." Therefore, many authors argue that sustainability reporting reduces information asymmetry between organisations and key stakeholders, also facilitating improvement of corporate governance (Riccaboni and Leone 2010; Wulf et al. 2014; Chen et al. 2007; Heflin et al. 2005). The outside-in or inside-out perspectives, or both, can be used in an integrated manner for performance measurement and the reporting of sustainability issues (Maas et al. 2016b).

Sustainability reporting initially came into action for external stakeholder purposes, but there is also increasing awareness of the potential of this communication channel to support managerial decision-making and internal control processes (Chiucchi et al. 2018). The rising attention on internal control through the preparation of sustainability reports has led many researchers to focus on the effects of SR design and implementation on MCSs (Chiucchi et al. 2018). Many authors have argued that SR can improve MCS through the successful implementation of intended strategies; following the assumptions that guiding principles for SR can help and develop control measures, this in line with the company's strategic directions (Montemari and Chiucchi 2018). As such, SR may improve the capacity of MCSs. The current literature review will continue to dig deeper into previous studies and the conceptual interplay of the relationship between sustainability reporting and management control systems.

3. Research Design, Methodology and Findings

While initially searching for work in the literature on the relationships between sustainability reporting and management control systems, a few links between the topics were identified. However, in order to present a comprehensive picture of the relationship, we conducted a structured literature review. Arguably, many of the articles in the field are in the first stage of research, where effort typically focuses on SR or MCSs separately. A small number of researchers have attempted to link the two fields (Kerr et al. 2015; Traxler et al. 2020), thus, ending up with a specific type of control system, either by advocating Simons' levers of control or Malmi–Brown's packages of control (i.e., Simons 1994; Malmi and Brown 2008). The current study stretches beyond such links by examining the foundation of the relationships and, as such, contributes to insight that may guide future research. Through this structured literature review, we established a foundation of contemporary research and offered both insights and critiques that may help to evaluate, identify, and address future research itineraries, as guided by Massaro et al. (2016) and Dumay et al. (2016). The SLR enables capturing relationships between the concepts, a strand of research that few researchers have deep and detailed knowledge about (Massaro et al. 2016). There are numerous methods available to conduct a literature review, such as a traditional authorship review, systematic review, meta-analysis, bibliometric review, etc. These methods differ from each other, and sometimes the rigidity of the rules of each needs to be followed (Ascani et al. 2021). As with other methods, SLR has some basic rules to follow for transparency and replicability, but at the same time gives more freedom, which helps to accumulate knowledge from a nascent area of study. Furthermore, SLR is suitable for identifying insight, critique and future research agendas (Massaro et al. 2016). Therefore, considering our topic and research questions, we decided to apply SLR. We started the structured literature review (SLR) by establishing a protocol for the review. We discovered that there was no earlier SLR focusing on the relationship between SR and MCS. Obviously, this is not a research gap per se, but it may serve as a starting point, providing a comprehensive insight into that relationship, which could be expected to provide a platform for future research avenues by providing evidence-based jus-

tifications for the discovered research gaps in accordance with research questions. For this, we covered research for a period of 15 years (January 2005 through June 2020), expecting to spend a major part of the research on the relationship between sustainability reporting and management control. To capture widespread evidence and cover the literature in the field, we searched through the Google Scholar (GS) and the Scopus database³. Scopus and Google scholar were chosen because Scopus has over 20,000 peer-reviewed journals, and Google scholar has coverage of recently published articles, many of which are not covered by Scopus alone (Bretas and Alon 2021; and Bar-Ilan 2008). However, we are completely aware of duplicity and handled those issues very cautiously.

3.1. Literature Search

Following the protocol, the second step comprises the selection of data sources for the SLR. For the keyword selection process, the authors had several meetings, and we actively sought inspiration from the previous literature in order not to miss any impactful and relevant keywords. This was performed through a structured keywords search strategy, as guided by previous researchers (e.g., De Bem Machado et al. 2022; Winchester and Salji 2016). While actively conducting the literature search, we kept the research questions in mind and searched through the following combinations of keywords: “sustainability reporting”, “sustainability disclosure”, “integrated reporting”, “sustainability reporting and management control” “management control”, “management control system”, “formal control”, “informal control”, “accounting and control” “balanced scorecard”, “integrated thinking”, “quality management”, “social accounting” “environmental accounting”, “environmental reporting”, “accounting and decision-making”, “corporate social responsibility”, “CSR”, “integrated report”, “International Integrated Reporting Council”, “IIRC”, “Global Reporting Initiative”, “GRI”, “ESG”, and “management accounting and control” in the title, abstract, or keywords of the articles (articles, conference papers, book chapters, etc.). Altogether, there were relevant 517 search results identified in the Scopus and Google Scholar databases, but not all the articles contributed to answering the research questions. Finally, after performing the necessary screening and removal of duplicates, we identified a total of 45 papers based on the panel judgement of authors for further investigation. In the selection process, the primary criterion was that selected articles should articulate the relationship between sustainability reporting and management control. Second, the selected articles should have at least five Google Scholar citations. We were not able to apply more stringent filtering criteria because the chosen field is still nascent, and more filtering would result in an unrealistic and inappropriate number of papers for the literature review. A PRISMA (preferred reporting items for systematic reviews and meta-analyses) article screening diagram is used 3 to ensure the transparency and replicability of the study. The details of the exclusion criteria are further discussed in Section 3.6.

We sorted the identified articles as follows. We started by reading the initially considered relevant abstracts, followed by reading the full paper when abstract analyses indicated that the articles were relevant. Finally, we read the full paper and kept it with full referencing details. Figure 2 plots the publication trend; notice the zigzag downwards trend in the field of SRMC compared to total publications ($n = 337$, see Figure 3) identified for further assessment (see also Appendix B). The peak of the graph is in 2016, with a total of nine articles.

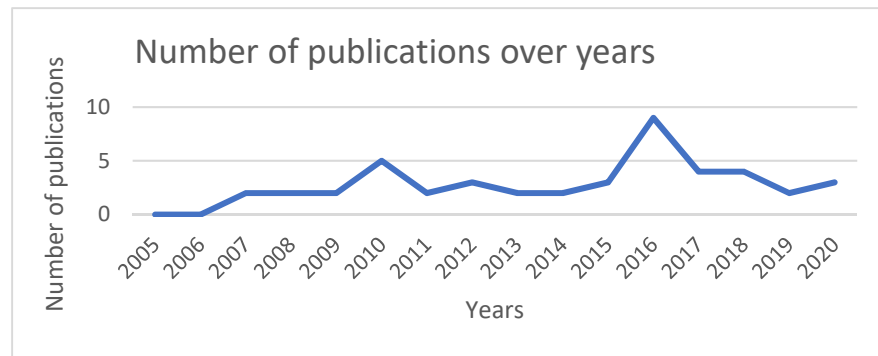


Figure 2. Publication years of the 45 articles chosen.

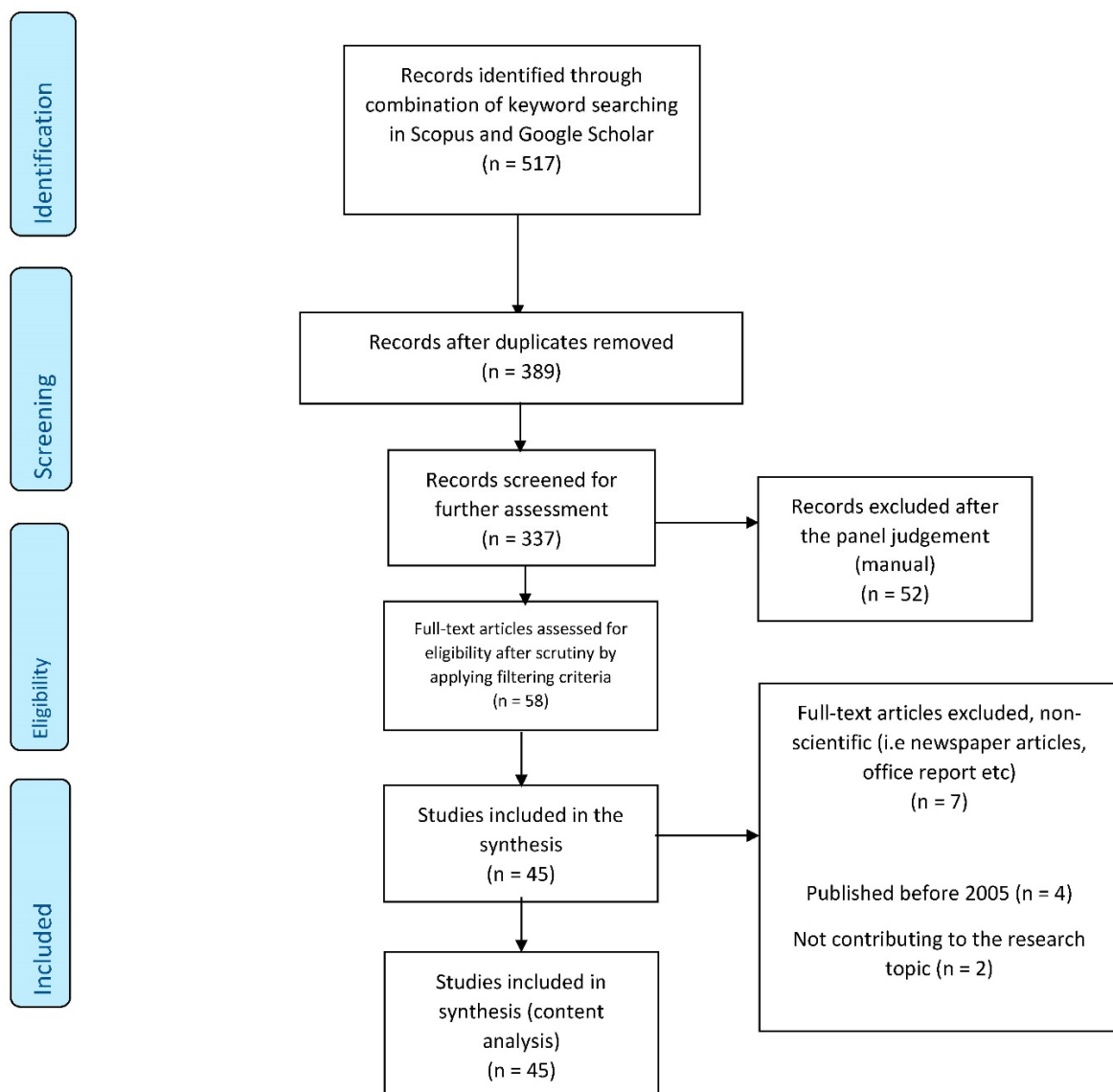


Figure 3. PRISMA article screening diagram for the SLR.

3.2. Article Impact

In the third step, we analyse the articles’ impact following Google Scholar citation numbers as of September 2020. The top 10 articles with their attached journals are ranked by citations (see Table 1). Additional ranking information is provided attached to the

articles based on the Australian Business Deans Councils (ABDC) 2019 list. It is obvious that old articles have higher citations (Dumay et al. 2016). To offset this problem, this article provides a separate ranking for the top 10 papers, adding citations per year (CPY) between 2005 to 2020 (Dumay et al. 2016); see Table 2⁴. Nine articles are common to both rankings. The two articles by Maas et al. (2016b) and Epstein et al. (2015) in Table 2 are both recent publications in highly ranked journals. This finding helps us to understand the trend of the research community. Scholars have a strong interest in citing the latest articles in the field of sustainability and management accounting and control; therefore, CPY ranking will help readers to compare and contrast the rankings.

Table 1. Top 10 articles by Google Scholar (GS) citations and their ranking by Australian Business Deans Councils (ABDC).

Title	Total Citations as per GS	Authors (Year)	Journals	Type	ABDC Ranking
Emerging themes in management control: a review of recent literature	599	Berry et al. (2009)	<i>The British Accounting Review</i>	Article	A*
Sustainability accounting and reporting: fad or trend?	595	Burritt and Schaltegger (2010)	<i>Accounting, Auditing & Accountability Journal</i>	Article	A*
Integrating sustainability reporting into management practices	558	Adams and Frost (2008)	<i>Accounting Forum</i>	Article	B
Eco-control: the influence of management control systems on environmental and economic performance	529	Henri and Journeault (2010)	<i>Accounting, Organizations and Society</i>	Article	A*
The interrelationship between management control mechanisms and strategy	369	Kober et al. (2007)	<i>Management Accounting Research</i>	Article	A*
Configuring management control systems: theorizing the integration of strategy and sustainability	357	Gond et al. (2012)	<i>Management Accounting Research</i>	Article	A*
The use of management control systems to manage CSR strategy: a levers of control perspective	308	Arjaliès and Mundy (2013)	<i>Management Accounting Research</i>	Article	A*
Towards a socially responsible management control system	231	Durden (2008)	<i>Accounting, Auditing & Accountability Journal</i>	Article	A*
Integrating corporate sustainability assessment, management accounting, control, and reporting	189	Maas et al. (2016b)	<i>Journal of Cleaner Production</i>	Article	A
Managing social, environmental and financial performance simultaneously	153	Epstein et al. (2015)	<i>Long Range Planning</i>	Article	A

Table 2. Top 10 articles by CPY and their ranking by ABDC.

Title	CPY as per Google Scholar	Authors (Year)	Journals	Type	ABDC Ranking
Sustainability accounting and reporting: fad or trend?	60	Burritt and Schaltegger (2010)	<i>Accounting, Auditing & Accountability Journal</i>	Article	A*
Emerging themes in management control: a review of recent literature	54	Berry et al. (2009)	<i>The British Accounting Review</i>	Article	A*
Eco-control: the influence of management control systems on environmental and economic performance	53	Henri and Journeault (2010)	<i>Accounting, Organizations and Society</i>	Article	A*
Integrating sustainability reporting into management practices	47	Adams and Frost (2008)	<i>Accounting Forum</i>	Article	B
Integrating corporate sustainability assessment, management accounting, control, and reporting	47	Maas et al. (2016b)	<i>Journal of Cleaner Production</i>	Article	A
Configuring management control systems: theorizing the integration of strategy and sustainability	44	Gond et al. (2012)	<i>Management Accounting Research</i>	Article	A*
The use of management control systems to manage CSR strategy: a levers of control perspective	44	Arjaliès and Mundy (2013)	<i>Management Accounting Research</i>	Article	A*
Integrated thinking as a cultural control?	35	Dumay and Dai (2017)	<i>Meditari Accountancy Research</i>	Article	A
Managing social, environmental and financial performance simultaneously	31	Epstein et al. (2015)	<i>Long Range Planning</i>	Article	A
The interrelationship between management control mechanisms and strategy	28	Kober et al. (2007)	<i>Management Accounting Research</i>	Article	A*

3.3. Developing the Analytical Framework

In step 4, this study developed an analytical framework (Table 3). In this, we followed the guidelines from Guthrie et al. (2012), Dumay and Garanina (2013), and Massaro et al. (2016). While coding the analytical framework, we investigated all of the 45 papers identified in detail and classified them under eight subsections, as suggested by scholars (see Broadbent and Guthrie 2008; Dumay et al. 2016; Guthrie et al. 2012). While coding, we tried to maintain the main idea of the framework, but were opened to changing, adding, or deleting sections. Therefore, this paper's authors coded five articles initially and added/edited a few sections/subsections for checking the suitability of the adopted framework. During and after the coding, we reviewed the existing framework suggested by the scholars (Broadbent and Guthrie 2008; Dumay et al. 2016; Guthrie et al. 2012) and changed some sections, aligning the coding to the aim and scope of the current SLR. We slightly modified some subsections and added three completely new section, as follows: F. SRMCS frameworks and models, G. Management control approach, and H. Signal of MCS

from SR. Each of the eight sections has from three to seven sub-sections. We will discuss the attributes of sections before discussing the results and critique developed from the analysis.

Table 3. Result of the analysis of SR- and MCS-related articles.

A: Jurisdiction	No	E. Research methods	No
A1. Supra-national/international/comparative—general	16	E1. Case/field study/interviews	21
A1.1. Supra-national/international/comparative—industry	2	E2. Content analysis/historical analysis	2
A1.2. Supra-national/international/comparative—organisational	5	E3. Survey/questionnaire/other empirical	8
A2. National—general	1	E4. Commentary/normative/policy	10
A2.1. National—industry	4	E5. Critical review of the recent literature	4
A2.2. National—organisational	6	Total	45
A3. One organisation	11	F. SRMCS frameworks and models	No
Total	45	F1. No model proposed	18
B: Organisational focus	No	F2. Applies or considers previous models	22
Publicly listed	10	F3. Proposes a new model	5
Private—SMEs	2	Total	45
Private—others	1	G. Management control approach	No
Public sector	3	G1. Simons’ levers of control	6
Not specified	10	G2. Malmi–Brown package of controls or part of the package	8
General/other/mixed	18	G3. Balanced scorecard/KPIs	9
Publicly listed and private companies	1	G4. Combination/other type of controls	8
Total	45	G5. Nothing specified	14
C. Location	No	Total	45
North America	4	H. Signal of MCS from SR	No
European/European Union	7	H1. Sustainability reporting provides information about management control	17
Australia, New Zealand, and Asia	12	H2. No information from SR concerning MCS	3
United Kingdom	1	H3. Only control-related information	13
Joint collaboration between/among countries	1	H4. Other information	11
Other/not specified	20	H5. Reputation management/greenwashing	1
Total	45	Total	45
D. Focus of the SRMCS literature	No		
Sustainability/integrated reporting	15		
Sustainability accounting	6		
Management control	14		
Accountability and governance	1		
Management strategy	6		
Performance measurement	3		
Total	45		

3.4. Developing Reliability

In step 5, before the coding, authors held several meetings to align their coding understandings. As mentioned above, the authors independently coded the sample of five articles in separate spreadsheets to check the coding reliability. All authors followed the content analysis procedure and coded the article in dichotomized order to enable running of the Krippendorff's alpha (K-alpha) test in the IBM SPSS software. The reason behind choosing K-alpha was to assure robustness against the number of observations, levels of measurement, sample sizes, and the presence or absence of missing data (Hayes and Krippendorff 2007; Massaro et al. 2016). As such, we applied a frequently used method to validate content analysis coding validity (Dumay et al. 2016; Massaro et al. 2016). After the initial sample coding, we determined an alpha value of 0.82 (82%), which is considered to indicate highly reliable coding (Hayes and Krippendorff 2007; Massaro et al. 2016). After the K-alpha test, the authors discussed and shared the coding and content analysis process with each other again to obtain a more robust outcome with the rest of the analysis/coding procedure.

3.5. Testing Literature Review Validity

External validity is concerned with whether the results of the study can be generalised or not (White and McBurney 2012). To ensure external validity, in step 6 we performed several database searches with different keywords in combination to acquire as comprehensive and relevant search results as possible. The articles rejected as not relevant to the aim and scope of this SLR were mostly ambiguous, non-scientific, published in unknown journals, old (published before 2005), and/or not contributing directly or indirectly to the SR and MCS field. Writing the SLR took several months, including reading the full papers, prepare contents for coding, and accumulating the synthesis. Therefore, we were continuously updating our dataset with the most recent and relevant papers. Our last inclusion in the data set is "How management control systems enable and constrain integrated thinking," published in July 2020, written by De Villiers and Dimes (2020).

3.6. Article Coding

After setting up the analytical framework and checking for reliability, where alpha is greater than 80%, the authors further discussed the coding process to make the understanding uniform (step 7). After the meeting, the authors recorded the results, in this case 45 papers, in a spreadsheet. As we discussed in Section 3.4, we maintained the open coding approach while maintaining the idea of Guthrie et al.'s (2012) SLR framework. However, at the last step of coding, we added the attribute "Reputation management/greenwashing" under section H, because one of the papers, Miles and Ringham (2019) was signalling the relationship between SR and reputation management. Thus, the SLR is not simply a rigid process, but is flexible and develops iteratively (Dumay et al. 2016).

3.7. Insights and Critique

In step 8, we analysed the content of the sustainability reporting and management control-related articles and answered the following two research questions: (1) How does research investigate the relationship between SR and MCS? and (2) What are the emphases, critiques, and gaps in the literature? We have described the categories and subcategories in the SLR framework and outlined insights and critiques that were synthesized from the results. We now introduce the findings on the identified coding categories and their attached subcategories, based on the 45 reviewed SR and MCS articles. The categories outlined are as follows: A. Jurisdiction, B. Organisational focus, C. Location, D. Focus of the SRMCS literature, E. Research method, F. SRMCS frameworks and models, G. Management control approach, and H. Signal of MCS from SR.

3.7.1. Jurisdiction

This study adopted the Jurisdiction category (A) from Guthrie et al. (2012) and followed the same classification when coding the 45 articles. Jurisdiction involves three subcategories. Here, “A1. General” includes articles that do not have any empirical basis (country), while “A2. National” includes articles with evidence from specific nations and regions. Finally, “A3. One organisation” includes articles providing evidence from a single specific organisation. We further classified the articles under subsections as suggested by Dumay et al. (2016) and Guthrie et al. (2012). Indeed, “A1.1 International—Industry” outlines articles referring to an organisational boundary, providing evidence from specific industries belonging to specific countries. Furthermore, “A1.2 International—Organisational” includes articles providing evidence from one or more organisations belonging to either multiple industries or multiple countries, while “A2.1 National—Industry” includes articles with evidence from a specific industry belonging to one single country. Finally, “A2.2 National—Organisational” includes papers showing evidence from organisations belonging to a single country.

Analysing the coding data from Table 3 for the Jurisdiction category (see Figure 4), we found that 17 (16 + 1) out of 45 articles (around 36 + 2 = 38%) are categorized under the general approach; 6 papers (4 + 2) which represent 13% (4 + 9%) take an industry approach, and the remaining 49% (11 + 6 + 5 = 22 papers) take an organisational approach, including a focus on one organisation (mostly case studies). These findings align well with the authors’ perception, as most of the studies are conducted on small numbers of organisations, often case studies, also capturing less evidence from industry perspectives.

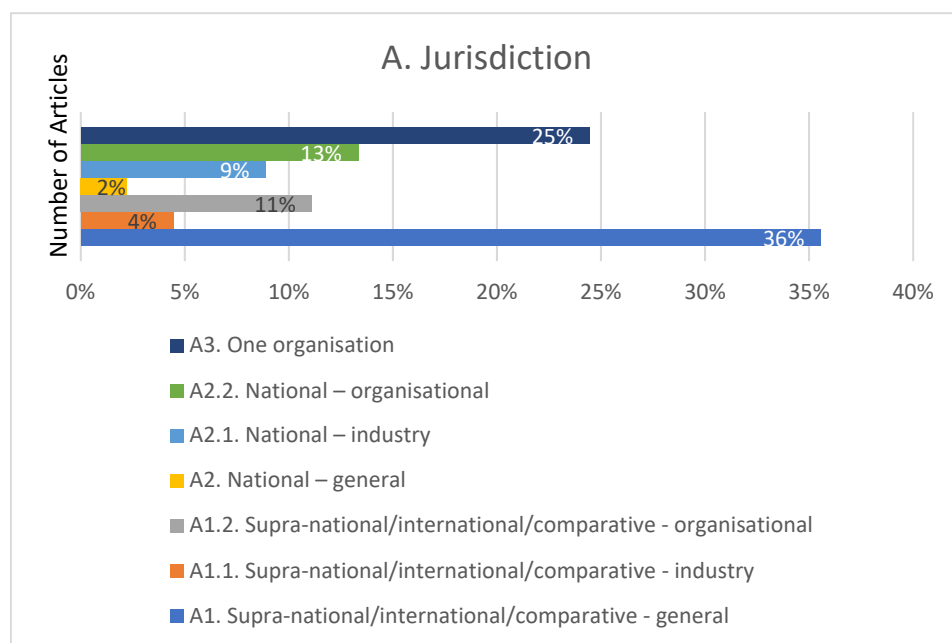


Figure 4. Classification of articles under the Jurisdiction category.

This result is well aligned with the arguments of Traxler et al. (2020) and Maas et al. (2016a), who argue that SRMCS is under-researched and mostly focuses on the general perspective in an isolated manner.

3.7.2. Organisational Focus

Following the protocol and suggestion from Guthrie et al. (2012), the second category, “Organisational focus” (B), is divided into seven subcategories as follows: B1. Publicly listed, B2. Private—SMEs, B3. Private—others, B4. Public sector, B5. Not specified, B6. Publicly listed and private companies together, and B7. General/other/mixed.

We found that 40% of the articles are discussed from a general/other or mixed organisational focus perspective (see Table 3 and Figure 5) and that 22% of the articles do not reveal the type of organisation specifically. This general approach aligns well with the structures identified under the Jurisdiction heading. Most of these articles are of a normative character, reflecting on recent articles or commentary papers in the field, trying to emphasise the relationship between SRMCS or are in search of a comprehensive framework. This is also a reason for the lack of organisational focus. We added one new subsection here, namely B5. Not specified, which includes articles that have organisational focus but did not mention which type of organisation.

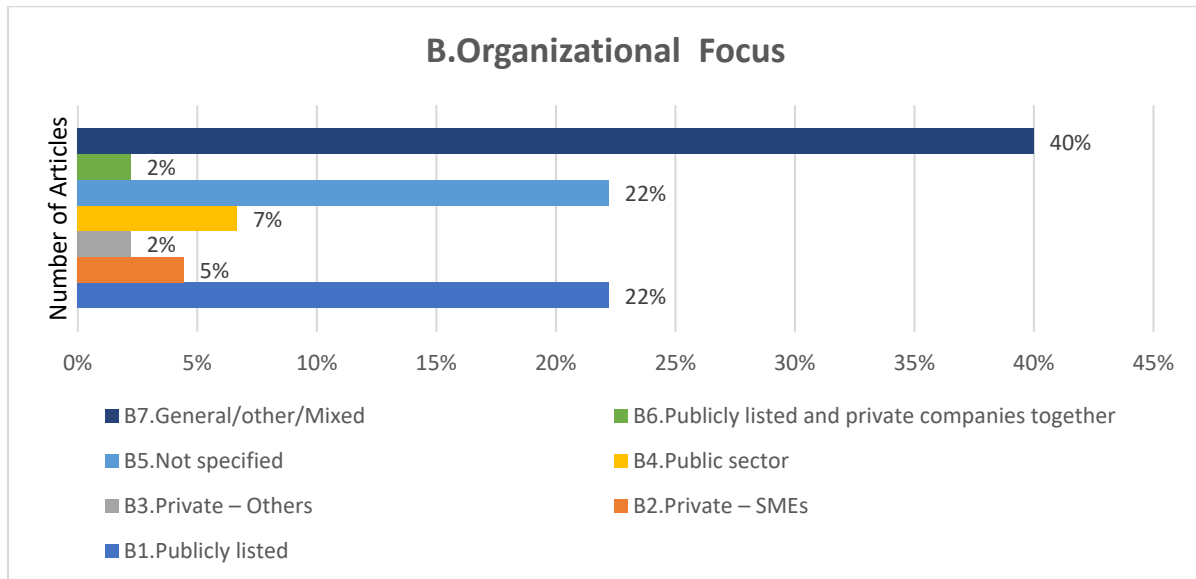


Figure 5. Organisational focus.

Apart from two subsections, 22% of articles focused on publicly listed companies. We also find that few articles involve private organisations, SMEs, and public sector organisations. Most interestingly, we did not find any study conducted on not-for-profit organisations. This supports previous researchers’ claims that SRMCS is neglected or practiced in scattered ways by for-profit organisations (Dumay et al. 2016; Maas et al. 2016a). This is further supported by an International Integrated Reporting Council (IIRC) statement, cited by Dumay et al. (2016), that the framework for non-financial (i.e., integrated) reporting is easy to adopt by profit-oriented organisations, and the reason could be pressure from the stakeholders’ side. As such, there may be a lack of pressure from stakeholders in small organisations and from stakeholders in not-for-profit organisations. Our review of the 45 articles provides knowledge from a wide spread of organisational types. However, when we specifically analysed the SRMCS focus, we found that the majority of articles focused either on integrated/sustainability reporting or on management control. Only a few dealt with both.

3.7.3. Organisational Location

The category “Organisational location” refers to the regional focus or geographical location where the study was conducted. We found that 44% of the articles are based on non-specified geographical locations, i.e., either from different regions that are not classified individually in the article, or articles that have not revealed any regional information, classified as “Other/not specified”.

Many of studies are from South Africa, which we know is the birth country of the King II report. We also added Australia, New Zealand, and Asia together. Later, we made another subsection to capture those researchers that conducted research on several or many

different countries together as “Joint collaboration”. We classified all the papers under six subsections as follows: C1. North America, C2. European/European Union, C3. Australia, New Zealand, and Asia, C4. United Kingdom, C5. Joint collaboration between/among countries, and C6. Other/not specified (see Figure 6).

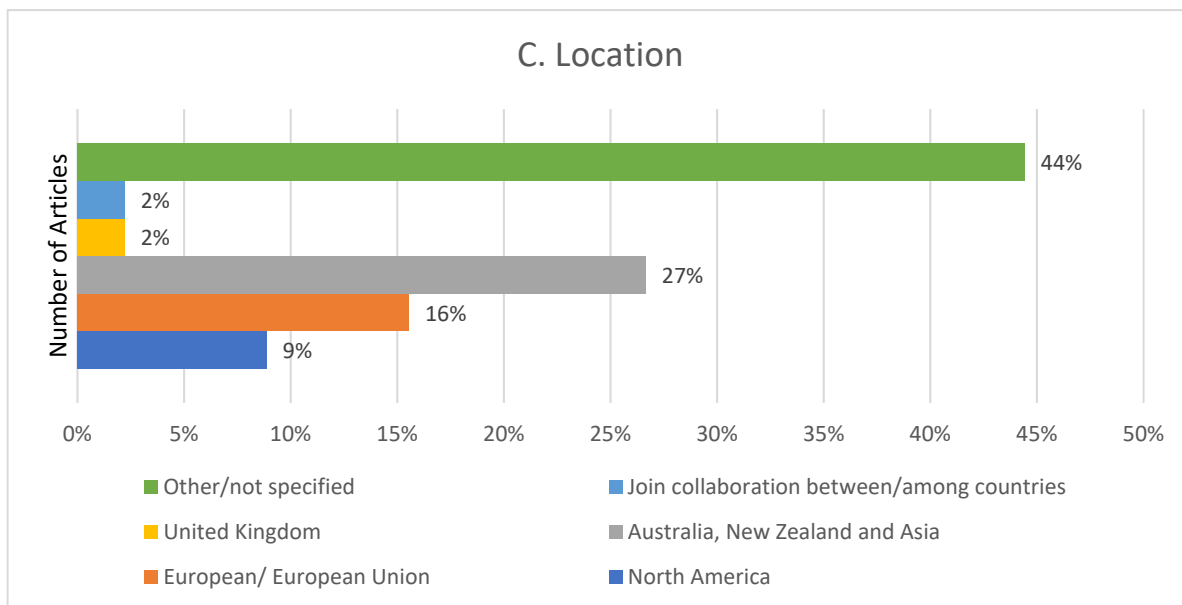


Figure 6. Organisational location.

We found that 27% of the 45 articles focused on Australia, New Zealand, and Asia, and that 16% focused on the Europe/EU region. Many researchers are active in these geographical locations, especially from the Australia and New Zealand region. The contribution from Asia is more limited in scope. Findings from the European region revealed that after the EU 2014/95 directive, the research on non-financial reporting received more attention (see Figure 2 and Appendix B between 2014 to 2018). Finally, it is worth mentioning that research from the UK and North America only contributed 2% each. This may be related to their capitalist focus, a primary focus on companies’ financial performance from positivistic capital market research traditions (Dumay et al. 2016).

3.7.4. Focus on SRMCS Literature

The fourth category, “Focus on SRMCS literature”, departed from the framework by Guthrie et al. (2012) based on the new categories identified through our coding. We outline six subsections as follows: D1. Sustainability/integrated reporting, D2. Sustainability accounting, D3. Management control, D4. Accountability and governance, D5. Management strategy, and D6. Performance measurement (See Table 3 and Figure 7).

We found that the majority, i.e., 31%, of the 45 articles, fall under management control, with 33% under the sustainability/integrated reporting field. The sustainability accounting and management strategy fields are each targeted in 14% and 13% of the articles respectively. Which captures sustainability and management control systems, i.e., the combination of sustainability accounting, strategic management, performance management, management control, and governance-related fields. The extended literature relies on the management control and sustainability reporting perspectives. In this, the primary aim of SRMCS is to support integrated thinking, decision-making, and actions enabling firms to plan for and achieve their sustainability objectives.

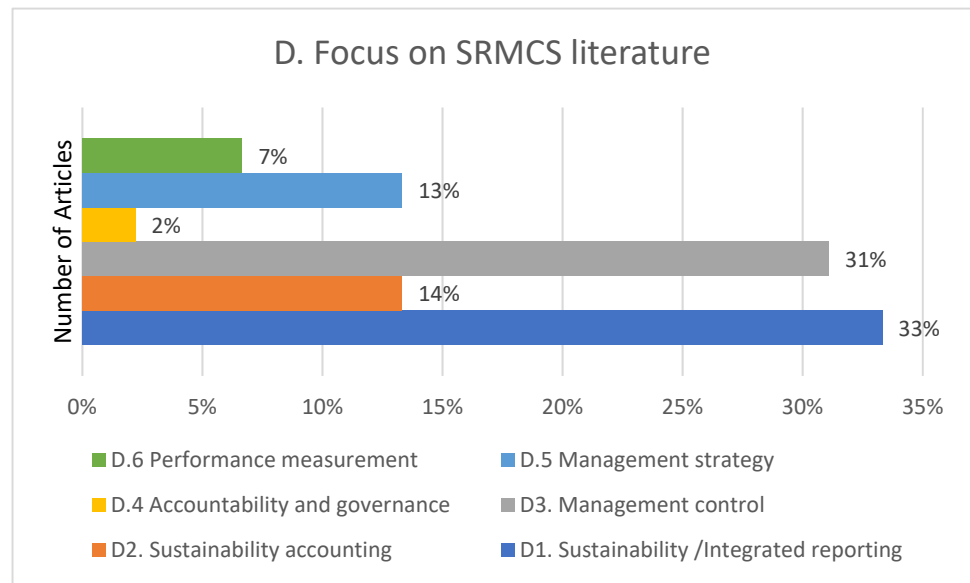


Figure 7. Focus on SRMCS literature.

3.7.5. Research Methods

The category “Research method” (E) is adapted from Guthrie et al. (2012). Here we kept all the original subcategories, as follows: E1. Case/field study/interviews, E2. Content analysis/historical analysis, E3. Survey/questionnaire/other empirical, E4. Commentary/normative/policy, and E5. Critical review of the recent literature (critical review) (see Table 3 and Figure 8). We modified E5 since we did not include a typical literature review paper for the analysis. Instead, we added four (9%) commentary, reflection, or critical review articles (e.g., Berry et al. 2009; Burritt and Schaltegger 2010; Carens 2010; Ditillo and Lisi 2014). The commentary articles are quite comprehensive and enabled us to capture the idea in order to identify the arguments and answer the research questions.

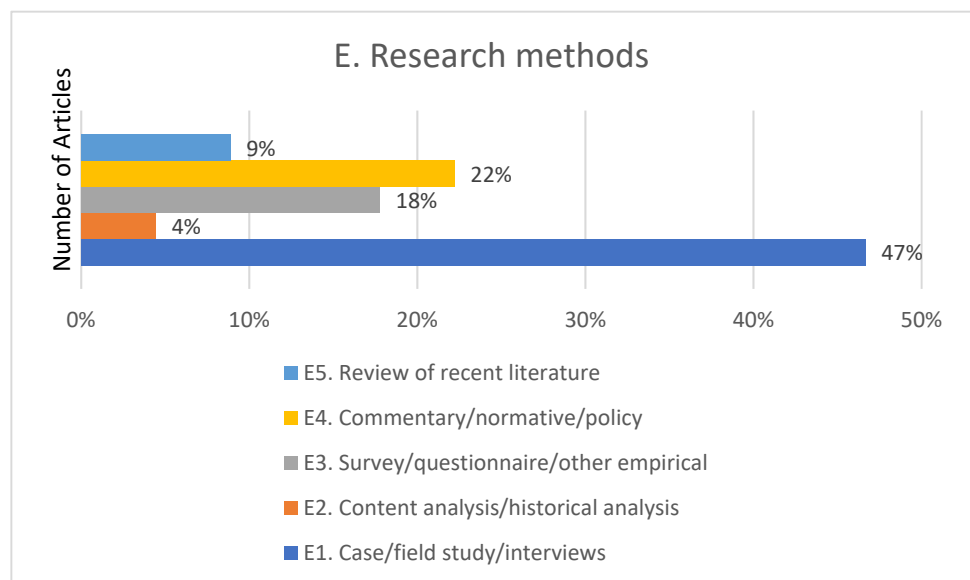


Figure 8. Research methods.

We found that 47% of the 45 articles applied qualitative methods, such as case/field study/interviews. The results are somewhat expected, since combined SRMCS research is still in a nascent stage (Traxler et al. 2020). From a methodological perspective, this type of method is common in the early stages of research, often also preferred among

researchers (Edmondson and McManus 2007). There are also empirical studies of a quantitative character showing empirical evidence. We identified that 18% of the articles applied such methodologies (e.g., Garcia et al. 2016; Miles and Ringham 2019). As an illustrating example, Correa-Garcia et al. (2020) show how some distinct corporate variables of business groups influence the disclosure quality of corporate social responsibility practices. By using a logistic regression model, they found that controlled equity negatively impacted the quality of SR. This study empirically helps us to understand the importance (lack) of governance and control to ensure organisational sustainability, which also can be reflected from the sustainability reporting. An additional 22% of the articles are of a commentary/normative/policy character (e.g., Berry et al. 2009; Burritt and Schaltegger 2010). Burritt and Schaltegger (2010) argued that sustainability accounting and reporting should be used as a tool for management decision-making. They comment that a twin-track approach (inside-out and outside-in) plays a communicative role between SR and MCS. In addition to that, Berry et al. (2009) identified a lack of research on management control and sustainability. These commentary papers help us understand the importance of the twin-track approach as well as the research gap in the field of sustainability and management accounting systems.

However, the evidence captured from studies revealed that the link between sustainability reporting and management control exists, although there is a lack of any comprehensive framework (Lueg and Radlach 2016; Maas et al. 2016a). Finally, we can conclude that though there is significant empirical evidence to examine the link between SR and MCS (SRMCS), the qualitative case studies/interviews dominate the field together with commentary.

3.7.6. SRMCS Frameworks and Models

The category “SRMCS framework and models” (F) is also adopted from Guthrie et al. (2012). In this category, we kept the three original subsections as follows: F1. No model proposed, F2. Applies or considers previous models, F3. Proposes a new model (see Table 3 and Figure 9). First of all, 49% of the 45 articles consider previously adopted models in the MCS. Most of the articles either consider the previous model or proposed no model for SRMCS, which we presumed, as the concept is still in an emerging stage. To create a comprehensive framework for SRMCS, the articles advocating previous models are directly or indirectly attached to Simons’ levers of control, the Malmi–Brown package of controls, part of the packages, or else balanced scorecard or KPIs, but this did not result in any realistic framework that conjoins SR and MCS together (c.f Adams and Frost 2008; Arjaliès and Mundy 2013; Crutzen et al. 2017; De Villiers et al. 2016; De Villiers and Dimes 2020; Kerr et al. 2015, etc.).

Only 11% of the 45 articles proposed new models (c.f Durden 2008; Henri and Journeault 2010; Maas et al. 2016a; Sundin and Brown 2017; Thoradeniya et al. 2015). For example, Durden (2008) highlighted internal and micro aspects in relation to stakeholder factors. Maas et al. (2016a, 2016b) highlighted the transparency perspective of SRMCS, focusing on the inside-out and outside-in perspectives. Sundin and Brown (2017) added agency theory with Malmi–Brown’s control framework, which helps them to explain how MCS can incorporate environmental considerations and then bond agents’ behaviour at the level of management actions. Thoradeniya et al. (2015) developed a framework that examines the influence of managers’ attitudes and other psychological factors on sustainability reporting. Finally, Henri and Journeault (2010) highlighted a mediation model that reflects the relationships among eco-control, environmental performance, and economic performance. Based on studies applying established models and developing new models, we find that the articles primarily focus on either SR or MC, with very few ties between both concepts. As a result, we identify a research trend of improving normative frameworks of SRMCS. Furthermore, 40% do not propose any model at all. These articles primarily focused on the factors influencing reporting practice and how MCSs could drive an organisation towards sustainability.

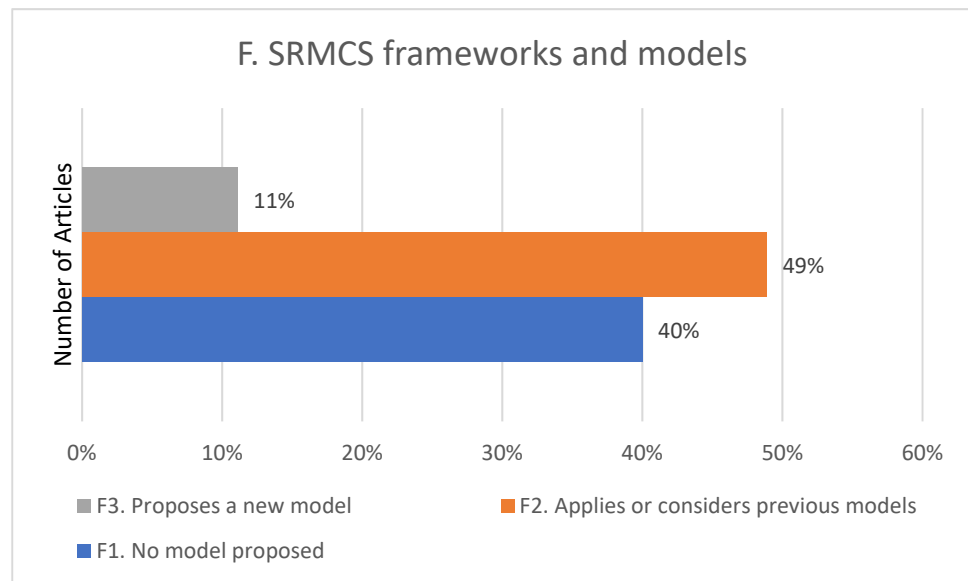


Figure 9. SRMCS frameworks and models.

3.7.7. Management Control Approach

The category “Management control approach” (G) was developed based on the needs identified while coding, adding to Guthrie et al.’s (2012) underlying framework (see Table 3 and Figure 10). By management control approach, we mean management control tools that have been used widely in the literature. We added this category since we observed that many authors primarily focused on establishing sustainability and management control frameworks by focusing on already famous control tools. The subsections are coded as follows: G1. Simons’ levers of control, G2. Malmi–Brown package of controls of part of the package, G3. Balanced Scorecard/KPI, G4. Combination/other types of controls, G5. Nothing Specified.

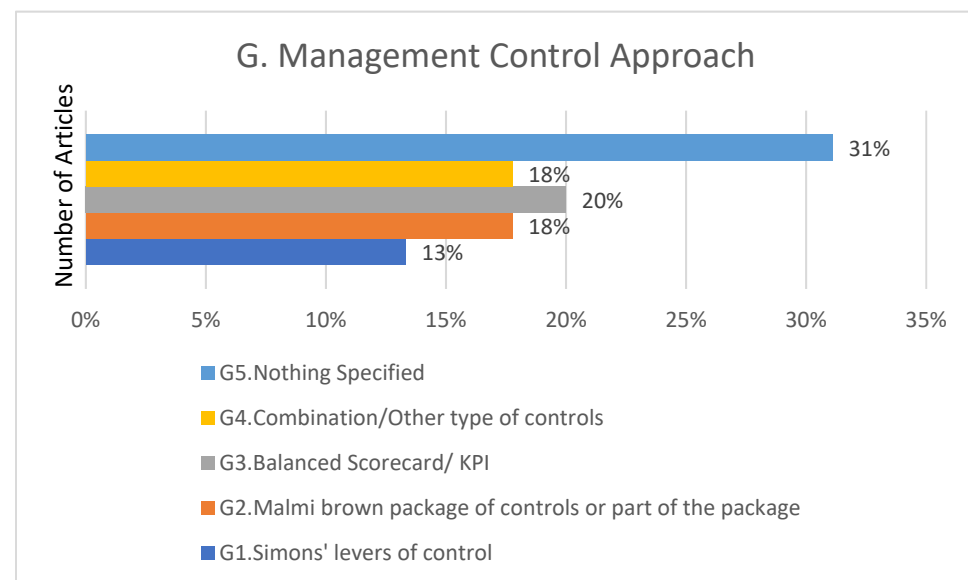


Figure 10. Management control approach.

We found that 51% (13 + 18 + 20%) of the articles rely upon Simons’ levers of control, the Malmi–Brown package of controls, or part of the packages, triple bottom line, and balanced scorecard/KPI approaches (e.g., Adams and Frost 2008; Arjaliès and Mundy 2013; Crutzen et al. 2017; De Villiers et al. 2016; Kerr et al. 2015). The remaining 49% either did

not mention any approach or support other types of MCS, including a combination of previously discussed control packages, such as cultural control or eco-control, etc. This categorization helped us to identify the focus of SRMCS tools in academia as well as by opening a window to find a gap in the MC tools. This knowledge helped us to draw the conceptual framework shown in Section 3.7.9.

3.7.8. Signal of MCS from SR

Finally, we added the category “Signal of MCS from SR” (H) to the categories proposed by Guthrie et al. (2012); see Table 3 and Figure 11. We identified this as a central category based on the coding and wanted to see how academia regards this, i.e., can SR be a tool to obtain information about MCS or not? The subsections are coded as follows: H1. Sustainability reporting provides information about management control, H2. No information from SR concerning MC, H3. Only control-related information, H4. Other information, H5. Reputation management/greenwashing.

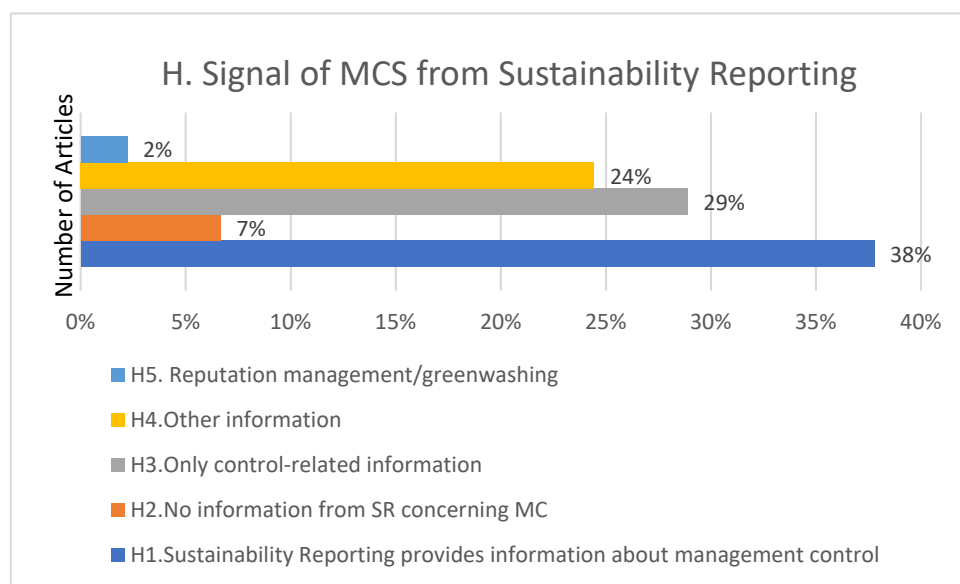


Figure 11. Signal of MCS from sustainability reporting.

We found that 38% of the articles (17) supported the category in that SR provides information about and value for MCS. As an example of positive relationships between SR and MCS, Adams and Frost (2008) find that sustainability KPIs are utilized and influence management decisions, and that such information helps to improve the external reporting processes. Arjaliès and Mundy (2013) also find that the use of MCS has the potential to contribute to a broader sustainability agenda, including the reporting.

However, we also notice contrary insights on negative relationships between SR and MCS. This is outlined in 2% of the articles (one paper). Miles and Ringham’s (2019) findings point out that SR could be used for reputation management or greenwashing. Based on a content analysis of 49 GRI topics found for the largest 100 companies listed on the London Stock Exchange (FTSE100), they found a statistically significant result that companies disclose sustainability information due to stakeholder and legal pressures, which they described as “impression management” or greenwashing. Both the positive and negative relationships between SR and MCS can help to guide future research and researchers in the theoretical and practical knowledge for the development and design of comprehensive SRMCS frameworks.

3.7.9. Result from the Content Analysis and Towards a Conceptual Framework

We now present our developed conceptual framework for SRMCS (Figure 12), based on the general analysis as well as the content analyses of the identified central articles,

which are seen as a blueprint for the field. The framework was developed based on the common themes which appeared in the systematic content analysis. The framework is based on seven core themes identified in the analysis process. The core themes are as follows:

1. Role of management accounting for setting sustainability strategies;
2. The importance of management control tools for executing sustainability strategies;
3. The emphasis on sustainability performance in a modern organisation;
4. Sustainability reporting—a mirror of the inside-out perspective;
5. The role of institutional quality and legitimacy in SR;
6. Sustainability reporting being a widely used tool for greenwashing;
7. Taking into consideration stakeholders’ expectations and the success factors.

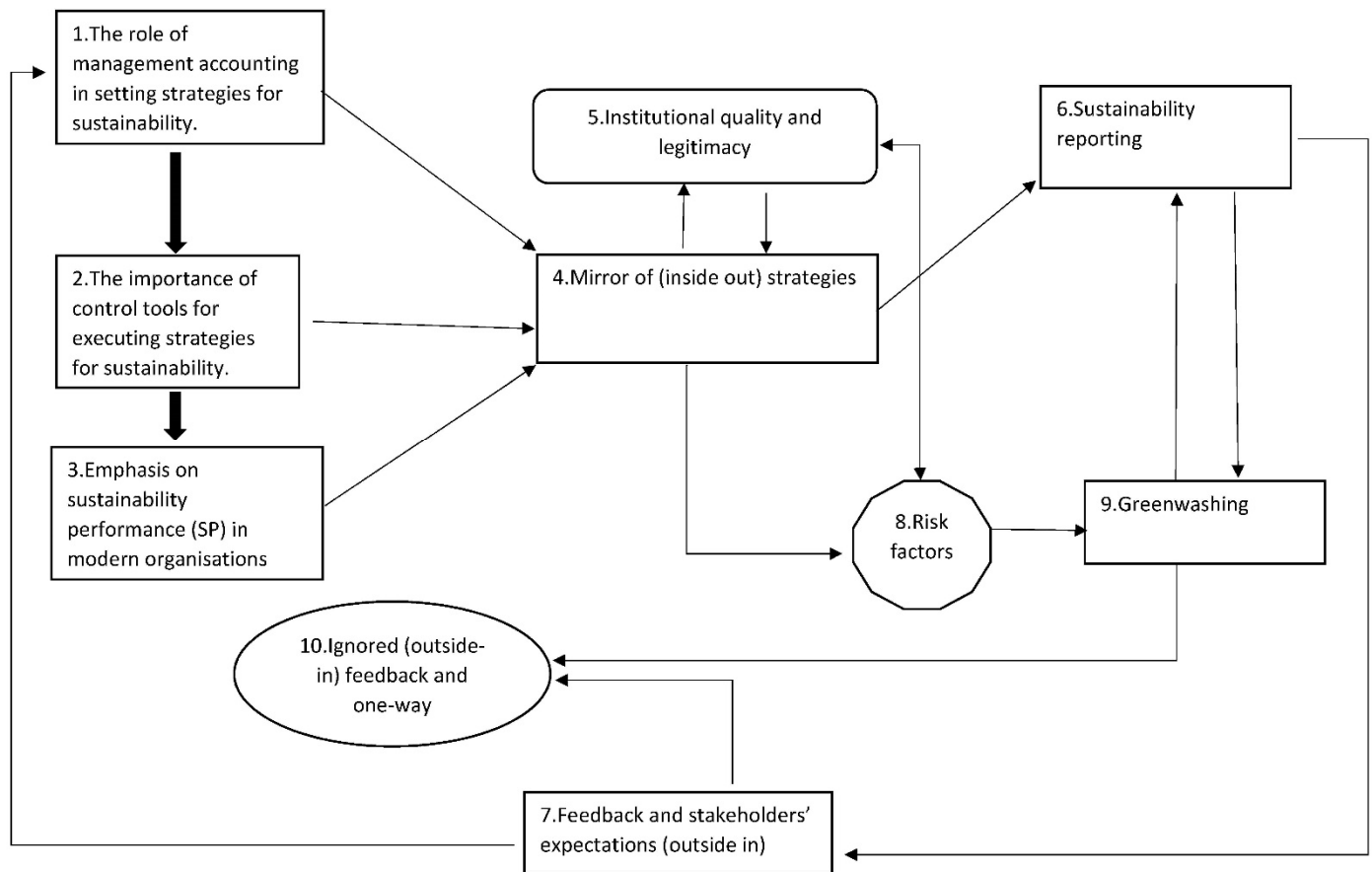


Figure 12. Conceptual framework (a spider diagram) of a sustainability reporting and management control system, which is a complex and multifaceted relationship. Dark black arrows represent sustainability activities within the company (the shapes of the boxes are only for ornamentation and do not provide any extra information). In the figure above, arrow indicators 1–7 are applicable when accountability and legitimacy are the agenda of SRMC; contrarily, 1–6 and 8–10 implies when SRMC serve the greenwashing agenda.

4. Discussion

4.1. Role of Management Accounting for Setting Sustainability Strategies (Arrow Indicator 1)

Traditionally, the role of management accounting was structured with strategies to achieve economic goals to satisfy the shareholders’ needs. Management accountants were not even responsible for the reporting (Gond et al. 2012; Lepistö and Ihantola 2018). However, the role of modern management accountants has changed with the response to contemporary stakeholder pressure. Based on this, internal sustainability strategies,

techniques, and systems have been established by the management accountants to satisfy stakeholders' needs and facilitate communication/disclosure in the form of sustainability reporting (Gond et al. 2012; Arjaliès and Mundy 2013; Ditillo and Lisi 2016). In a modern organisation, the manager needs to be creative, target-oriented, and strategic to ensure sustainability, as sustainability is considered a core value that comes from the successful implementation of sustainability strategies into the MCS (Berry et al. 2009; Gond et al. 2012; Gatti et al. 2018). Kober et al. (2007) argue that "MCS both shapes, and is shaped by, strategy (p. 425)". Empirical evidence supports the claim and shows that there is an indirect positive relationship between sustainability strategies and sustainability performance (Nigri and Del Baldo 2018), which leads to better long-run financial performance (Epstein et al. 2015; Joshi and Li 2016; Rahi et al. 2022b).

4.2. The Importance of Management Control Tools for Executing Sustainability Strategies (Arrow Indicator 2)

Based on the literature analysis, this study found that the most common theme was "control tools". While exploring the relationship between sustainability reporting and management control, we identified that many authors widely advocate for a few but effective control tools. These are, primarily, (1) the Malmi and Brown control tools, (2) Simons' levers of controls, and (3) the balanced scorecard (Ceulemans et al. 2014; Crutzen et al. 2017; Kerr et al. 2015; Narayanan and Boyce 2019; Sundin and Brown 2017). Many authors argue that these three control tools are capable enough to incorporate the sustainability strategies and help to develop managerial motivation into sustainable directions. Managers implement different types of formal and informal control for mitigating risk and measuring performance for the sake of safeguarding internal control (Dkhili and Noubbigh 2013; Bui and Villiers 2017; Jollands et al. 2018; Riccaboni and Leone 2010). Researchers warn that too high a focus on formal control clashes with informal and cultural controls and vice versa. This may either negatively affect agents' psychological considerations or organisational performance (Thoradeniya et al. 2015). Furthermore, studies reveal that agents do not focus on sustainability questions until or unless their interests align with sustainability outcomes (Sundin and Brown 2017). Therefore, choosing the right control tool in order to create a balance between formal and informal control is highly important for reaching sustainability goals, which in turn influence SR characteristics (Ditillo and Lisi 2014; Herremans and Nazari 2016; Moon et al. 2011).

4.3. The Emphasis on Sustainability Performance in a Modern Organisation (Arrow Indicator 3)

Emphasising sustainability performance (SP) in business is the most crucial trend in the modern organisation (Adams and Frost 2008; Berry et al. 2009; Henri and Journeault 2010; Perego and Hartmann 2009). Businesses and strategic managers are increasingly considering ways to incorporate a balance among economic, ecological, social, and cultural value creation via their business models, and it is influencing the long-run SP of companies more than ever and, in turn, satisfying more stakeholders' needs (Henri and Journeault 2010; Joshi and Li 2016; Neumann et al. 2012; De Villiers and Maroun 2017). The basic definition of organisational sustainability must include long-run planning and retention of fundamental principles or goals, regardless of internal or external changes over time (Gond et al. 2012). The internal context for promoting SP includes integration of sustainability into strategic plans to provide a formal announcement of the importance of sustainability to the firm. Corporate governance consists of formal organisational policy, top management support and commitment to ethics, as well as organisational cultural values (Griffith and Bhutto 2008; Grosvold et al. 2014; Sugita and Takahashi 2015). There are also external factors that affect corporate SP, including legislation concerning the natural environment and social context, as well as industry-specific competitive and technological dynamics (Griffith and Bhutto 2008; Grosvold et al. 2014; Dao et al. 2011). Herremans and Nazari (2016) and Schaltegger (2011) argue that using the appropriate control tools can

account for both internal and external factors that can influence business success and links to accounting, assessment, and reporting.

4.4. Sustainability Reporting: A Mirror of the Inside-Out Perspective (Arrow Indicator 4)

Nowadays, in addition to the financial report, there is extreme pressure from institutional investors and other external stakeholders for companies to publish non-financial performance reports. Investors and other stakeholders require such information for their decision-making and investment purposes (Maas et al. 2016a; Waddock and Graves 1997; WBCSD 2015). That is why companies disclose strategies, performance evaluation criteria, and other internal considerations to their stakeholders in the sustainability report (Biswas and O'Grady 2016). Not only should companies report the final result, but they must also explain how it was achieved and integrated into the business context (Maas et al. 2016b; WBCSD 2015). As a result, SR also considers the process leading to SP outcomes, as well as the relationship between SP and business strategy, business models, strategic programs, and strategic objectives (Thijssens et al. 2016). This process is considered a mirror of the inside-out perspective (Schaltegger and Wagner 2006). Authors recommend this perspective based on an analysis of what issues are relevant for effective implementation of a successful business strategy (Schaltegger and Wagner 2006). This perspective focuses on SP improvement, which is then reported as a final step from the companies to the stakeholders, using an inside-out approach to developing linkages between management accounting control and reporting (Maas et al. 2016b). Reporting from the inside-out explains not only the non-financial results but also why and how they were achieved (Eccles and Saltzman 2011). Finally, it also considers the companies' and stakeholders' future assessment of sustainability performance (Adams 2015).

4.5. The Role of Institutional Quality and Legitimacy in SR (Arrow Indicators 5 and 6)

Based on the content analysis, this study found that a number of authors have used institutional and legitimacy theory to describe the organisational responses to external pressures and how such pressures motivate organisations to change and adopt sustainability strategies and reporting practice (e.g., De Villiers and Dimes 2020; Dumay and Dai 2017; Herremans and Nazari 2016; Joshi and Li 2016). The supporters of institutional quality (IQ) argue that firms' behaviour is governed by their institutional environment, since the institutions shape companies' values, preferences, and repertoire of actions, as well as their type of rational behaviour towards society (Rahi et al. 2022a; Vatn 2020; and Herremans et al. 2010). Institutional theorists further posit that external pressures act as motivators and internal controls act as facilitators, which significantly links to the improvement of SR practice and report quality (Nazari et al. 2015). Thus, there is a double method for the communication of IQ and the inside-out perspective (see Figure 12, box 4 and 5). As such, the higher the IQ, the better it reflects the strategies and improves report quality. A practical example is the EU directives that made it institutionally possible and legitimate to ensure environmental, social, and governance-related disclosures from the large companies operating within the EU (Kinderman 2020; Mion and Loza Adauí 2019). The directives substantially changed the mindset of managers from the voluntary burden of reporting to serious actions and, thus, had a positive outcome (Mion and Loza Adauí 2019).

4.6. Sustainability Reporting a Widely Used Tool for Greenwashing (Arrow Indicators 8, 9 and 10)

Greenwashing is considered to involve engineering corporate disclosure matters to maximize perceptions of legitimacy and improve reputation management in order to hide strategic managerial problems (Laufer 2003; Miles and Ringham 2019). Vatn (2020) and Joshi and Li (2016) argue that institutional quality (IQ) shapes the organisational responsibility and behaviours to oppose greenwashing. Therefore, if the IQ framework is weak and legitimacy obligation is low or voluntary, then managers become more profit-oriented and aim to meet periodic performance goals, while satisfying the shareholders by taking unusual business risks that suppress sustainability strategies (Schaltegger and

Hörisch 2017). In such scenarios, the reporting only serves the purpose of greenwashing. Montecchia et al. (2016) described this as a selfie-taking approach, where the quantity of unnecessary information is higher than the quality of the sustainability information. In such cases, companies fail to adopt outside-in stakeholder feedback into the internal strategies, as stakeholders are sent wrong or fabricated messages (Maas et al. 2016b). As a result, it becomes one-way communication (follow arrow indicators 6, 9, and 10). When stakeholders realize the difference between the reality and the report, they lose their trust in the company.

4.7. Taking into Consideration Stakeholders' Expectations and the Success Factors (Arrow Indicator 7)

Taking stakeholders' expectations into consideration is crucial for managers when supporting the formulation of internal sustainability strategies (Joseph 2012); otherwise, there is a great risk of social boycotting or industrial action (Adams and McNicholas 2007; Eliwa et al. 2021; Maas et al. 2016a, 2016b). Responding to stakeholders' feedback is, thus, considered to be an outside-in perspective, where internal actors and external stakeholders work in a way that contributes to performance improvements in a sustainability direction through an iterative process (Baker and Schaltegger 2015; Maas et al. 2016b). When inside-out communications are reliable and produce high-quality reports to achieve transparency, then outside-in communication develops that may provide feedback on key sustainability problems and the specific nature of stakeholder expectations, enhancing trust and reliability. If organisations overlook outside-in feedback and are unable to incorporate external suggestions, then it may create a gap between organisational performance and stakeholders' expectations. We can conclude that the link between sustainability strategies and reporting is, thus, strongly influenced by societal expectations, reporting requirements, and standards (Schaltegger and Wagner 2006).

4.8. Discussion, Limitations, and Future Research Agenda of Management Control and Sustainability Reporting

From the above discussion, we have addressed the first two research questions, namely how research investigates the relationship between SR and MCS and what the emphases, critiques, and gaps in the literature are. Through this SLR, we tried to show evidence of how the research community inquired about the relationship between SR and MCS. We proposed a framework to conceptualize the synthesis of the literature (see Figure 12). This framework is intended as a blueprint for sustainability reporting and management control in order to design and redesign a company's internal strategies on MCS, where adoption of stakeholder feedback is crucial.

Notwithstanding, our findings divulge that researcher look at the management control and the sustainability reporting agenda with just one eye. They either focus on MC or SR, whereas many argue that they need to be linked to each other (Lueg and Radlach 2016; Traxler et al. 2020). In addition, we found that the primary focus on SRMCS frameworks relies on the established traditional control tools of either Simons' levers of control or the Malmi–Brown package of controls, or part of them, and/or balanced scorecard/KPIs. We believe there is a need to rethink the reliance on such established frameworks. These traditional MC tools have widely been used for internal control, whereas SRMCS requires transparency, performance improvement, legitimacy, accountability, control, and stakeholder management together, adding additional dimensions to be considered. A broad notion exists in academia that good progress on corporate sustainability entwines reporting and control together (Traxler et al. 2020). Therefore, sustainability practice (i.e., ESG and GRI practice, etc.) would be a prerequisite for improving MCS and credible SR.

To address the future of SR and MC research, we stress the different ontological and epistemological positions of SRMCS research. This leads to a suggestion that well-grounded theoretical frameworks be developed that enable more theory-guided analyses. We find the current link between the conceptual and empirical literature on SRMCS rather weak. Our review discovered that the literature examining the relationship between SR and MCS

is still in its early stages, and predominantly concerns in-depth analyses. Future research should strengthen the link between conceptual SRMCS studies through empirical studies. Applying theoretical concepts in empirical studies might support the step from describing the phenomenon toward explaining it and, as such, enforcing transparency, performance improvement, legitimacy, accountability, control, and stakeholder management together. Finally, empirical research on this topic requires the development of some indicators or variables coded manually from qualitative data (such as from sustainability reports or from surveys).

Our SLR is not without limitations. During the content analysis, we only focused on widespread findings to build themes and, therefore, missed investigating how appropriate the theories are in the research field. Future SLRs could focus on this question. Based on the analysis, researchers could contribute towards building appropriate new theories. In addition, we recommend blending SLR with bibliometric coupling analysis in order to identify clusters that would enrich the content analysis synthesis and guide future research itineraries. Finally, the findings of this study suggest that further investigation into the following two research questions would be of interest⁵:

1. How has the evolution of SR and MCS research taken place?
2. How applicable are the theories in the studies on SR and MCS?

5. Concluding Remarks

We focused on academic views of SRMCS in this paper. Nevertheless, we should not forget that adoption and implementation of such findings and recommendations are fully dependent on them being acceptable to practitioners. Previously, accounting researchers have long been blamed for carrying out research with limited contributions to practice. This is also one of the major challenges for accounting in general (Dumay et al. 2016; Evans et al. 2011) and the research of SRMCS specifically. Focusing on that argument, our content analysis of articles based on case studies revealed a significant difference between academic research and practice regarding SRMCS. Practitioners handle SR as legitimacy and MCS as an internal perspective, whereas SR is meant to reflect the internal governance from the transparency, legitimacy, accountability, and control perspective, targeting the public, especially the stakeholders. Observing practice through isolated case studies would not change much. Instead, there is a need for performative or interventionist research complementing the strand of research (Dumay 2010; Jönsson and Lukka 2005). The proposed research agenda is not only relevant for academics, but could also be of interest for practitioners as SRMCS increases in importance. Companies can benefit from the emphasis of SRMCS on being resilient, sustainable, transparent, legitimate, and accountable, especially in the time of the global pandemic and war.

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Data Availability Statement: Data for the literature review is available in Appendix A.

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Appendix A. The 45 SRMCS Publications Reviewed (2005–2020)

Adams, C. and McNicholas, P. (2007). Making a difference: sustainability reporting, accountability and organisational change. *Accounting, Auditing, & Accountability Journal*, vol. 20, No. 3, pp. 382–402. <https://doi.org/10.1108/09513570710748553>.

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Appendix B

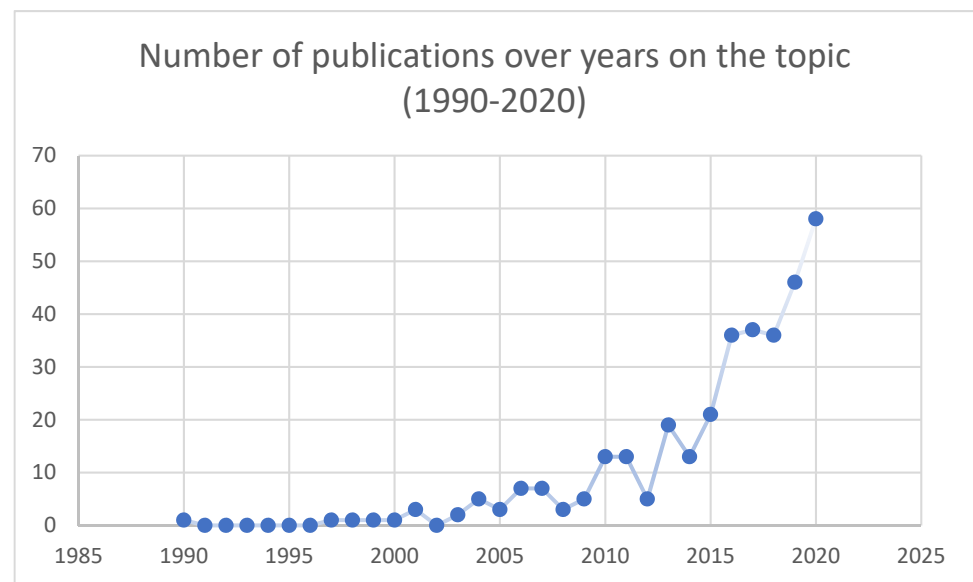


Figure A1. Number of publications over years on the topic from 1990–2020.

Notes

- ¹ We use sustainability reporting and integrated reporting as synonyms in this paper, while still acknowledging their differences. However, we keep in mind the International Integrated Reporting Council stated that a “sustainability report may very well migrate into the integrated report, but only to the extent that it materially relates to value creation over time”. We believe that SR creates value over years.
- ² Here, MC is part of MCS. However, MCS is a much wider concept, which designs and implements strategic processes within an organization.
- ³ We added Google Scholar data manually as the platform does not provide the facility to download the search results in the form of a list as Scopus does.
- ⁴ Citations per year were calculated through Harzing’s Publish or Perish software (<http://www.harzing.com/pop.html> (accessed on 1 September 2020)).
- ⁵ This study is motivated by the seminal work of Secinaro et al. (2022) to formulate research questions as a recommendation.

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