Accounting for Sustainability Governance:
the enabling role of social and environmental accountability research

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Abstract
(53 words)

The purpose of this paper is to critically examine the concerns inherent in governance for the achievement of sustainability. The paper provides insights into the challenges and tools as investigated by accounting researchers, identifies gaps in the literature, presents the contributions to this special issue and sketches an agenda for future research.

Social media summary
(136 characters)

A study that integrates academic accounting perspectives with the governance of sustainability, providing an agenda for future research.

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1. Introduction

Sustainability governance is a term that has become widely used in different contexts, although a general commonly accepted definition is currently missing. Implicit within research which uses the term, are analyses of new ways in which governmental bodies, private entities and non-governmental organisations operate in the collective choices and actions that overcome current unsustainable practices (Biermann et al., 2012; Garrick et al., 2017; Steffen et al., 2015). Conventional corporate governance relies on political processes based on partisanship and patronage, and their underpinning ideologies (Ramos, 1997), and severe obstacles have been found in integrating socio-ecological concerns as critical factors in the conduct of public and private institutions (Bevir, 2011; Levi-Faur, 2012). On the contrary, the demands of an effective sustainability governance point to the opposite, that is to open and multi-disciplinary participation with a solid scientific base (Bebbington and Larrinaga, 2014). The concept of sustainability plays a central role in defining complex socio-ecological problems and legitimising interventions for their alleviation (Bebbington, Unerman, and O'Dwyer, 2014). However, the threat of massive resource degradation also results from a "stunted conception of 'human dimensions' at a time when the challenges posed by global environmental change are increasing in magnitude, scale and scope" (Castree et al., 2014, p.763) and the consequent narrow ecosystem governance arrangements (Dietz, Ostrom, and Stern, 2003; Griggs et al., 2013).

Social and environmental accountability scholarship has long been involved in interdisciplinary research, engendering plural representations, theorisations and analyses of the concerns inherent in the governance of social-ecological systems for the achievement of sustainability. As practices aimed at integrating sustainability strategies within management and sustainability measurement and reporting processes have now developed and become more widely adopted (Gibassier and Alcouffe, 2018; Bebbington and Larrinaga-Gonzalez, 2008; Bebbington and Unerman, 2017; Kanie and Biermann, 2017), this seems an appropriate time to reflect upon the characteristics of organisations and the nature of the mechanisms that can facilitate (or undermine) sustainable outcomes under particular conditions. Dietz et al. (2003) argue that sustainability governance depends on reliable information "about stocks, flows, and processes within the resource systems being governed, as well as about the human-environment interactions affecting those systems" (p. 1908). Accounting, therefore, holds a pivotal position in the process of developing practices that enable diverse forms of sustainability governance.

The aim of this paper is to provide insights into the ways in which accounting can contribute to the governance challenges that facilitate the transition towards a more sustainable environment, society and economy, identify gaps in the literature, and sketch an agenda for future research. To achieve this aim, the paper first examines published accounting research that focuses on the relationships between governance and sustainability. As will be discussed in the next section, the paper analyses accounting research that explicitly engages with sustainability governance issues, having signposted such engagement through explicit reference to sustainability and governance.

The paper provides a structured analysis of the diversity of accounting practices used to understand, explain and assess how accounting may be used to support the social, economic and administrative systems at different levels of society "so that social and environmental outcomes may be attained" (Bebbington, 2004, p.18). A key insight from the analysis of the literature is that most academic research frames accounting for sustainability governance as a means of managing a wide range of issues and relationships, while there is relatively little research into the role of accounting in affecting social and environmental outcomes. The two studies in this special issue of SEAJ go some way to filling these gaps, as summarised later in this paper.

In addressing its aim, the paper proceeds as follows. Section 2 provides an overview of the methods used to collect the research material in this study. Section 3 analyses insights from the accounting literature revealing a significant distinction between areas of research based on common subject matter, and identifies connections and gaps in these insights. Section 4 summarises the contributions of the articles published in this special issue of SEAJ and provides a schematic representation of the accounting for sustainability governance research landscape. The final section draws conclusions and outlines an agenda for future research.

2. Research Method

To identify areas where academic literature could provide evidence of developing sustainability governance analyses and theorisations, this section explains the method used to capture and analyse insights from studies published in peer-reviewed accounting journals from January 2001 to August 2018. The length of time is important to investigate the roles of accounting in furthering sustainable governance. One of the first and most influential global sustainable governance agenda was introduced by the United Nations in the form of the (UN) Millennium Declaration, which was adopted in 2000 (UN, 2000). This was followed in 2015 by its most recent iteration, 'Transforming Our World: The 2030 Agenda for Sustainable Development' (United Nations, 2015) that adopted 17 Sustainable Development Goals (SDGs). The endpoint of August 2018 was chosen on the practical basis that it was the last possible date to capture data before completing this paper.

To determine the extent of research published in peer-reviewed accounting journals over the 18 year period 2001–2018, first required establishing which journals to include in the study and, second, identifying the journal articles from the body of literature of all articles published in these journals over the period of analysis. The paper adopts a filtering methodology that is conceptually similar to the method used in Unerman and O'Dwyer (2010) and Rinaldi et al., (2018). To establish the body of literature, it was decided to analyse the journal articles published in the subject area of "business, management and accounting" within Scopus, given the quality of selecting criteria used in choosing journals for inclusion in the database. For this purpose, the paper identified 73 Scopus-listed journals that included the words 'accounting', 'sustainability', 'governance', and 'accountability' in their title for the period January 2001–August 2018. Dividing accounting research publications into sustainability governance and non-sustainability governance gave rise to many problems, particularly given the holistic and multifaceted nature of the both sustainability and governance terms (Meadowcroft, 2011). As Thomson (2014) indicates, most accounting research could be construed to be concerned with the impact of sustainability and, it could be argued, very often with a relationship with governance. However, the majority of accounting research publications sustain the conventional governance model in the conduct of organisations and institutions while the demands of an effective sustainability governance point to the opposite (Thomson, 2014). To identify the journal articles from this body of literature, structured searches were conducted for all papers that had the terms 'sustainability', 'governance', 'environmental and social governance' or 'ESG' (Environmental and Social Governance) in their title, keywords (where available) and/or the abstract. These key terms were used concurrently to capture the body of literature that was explicit about its engagement in sustainability and governance concerns, to then identify gaps and connections. While the reason for including self-defining sustainability governance research was made to overcome the risk of subjective specification of the field, it carries some limitations. A potential implication of this approach is that sustainability research dealing with topics often associated with governance such as, accountability, regulation or control without framing them as governance analyses remain outside the scope of this paper. It is also possible that for some articles focusing on sustainability governance these terms might not be reflected in the title, keywords or abstract and are therefore not included in this research. Nonetheless, given that the whole body of accounting research has been analysed, if the main focus of a small number of articles was not reflected in their title, keywords or abstract, "this theoretical potential for an error should not materially affect the overall picture portrayed by the results of the study" (Rinaldi et al., 2018, p.1298). Another constraint is that this analysis is limited to academic journal articles. Accounting scholarship has highlighted that one communication channel is not always appropriate for capturing all relevant academic research in a field (Dumay, Bernardi, Guthrie, and Demartini, 2016). Other outlets, including conference proceedings, research monographs and public reports are all channels that provide valuable insights. These are limitations of this paper which open up areas for future research.

A total of 62 journal articles met these criteria and were identified as addressing the roles of accounting in furthering sustainable governance. Table 1 shows the number of articles identified per journal, per year.

A systematic analysis of the 62 articles identified through the above processes was carried out to identify the aims, objectives, area, and locus of sustainability governance, the form and effect of sustainability governance. A thematic table was prepared for each article which summarised these themes by recording the article's keywords, purpose, method, theory, jurisdiction and the key findings. The table was subsequently employed to develop an awareness of the various issues examined by the academic accounting literature about sustainability governance, how often these issues were examined, from what standpoint, and by which journals.

Once the thematic table was constructed, some key classifications were identified, and individual topics were grouped under these classifications. This analysis revealed a significant distinction between areas of research based on common subject matter, allowing the grouping of accounting for sustainability governance research into the following three broad areas:

Table 1 - Distribution of accounting for sustainability governance research over the period 2001-2018

Journals	2001	…	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOT
Accounting, Auditing & Accountability Journal		…						1			1	**2**
Australasian Accounting, Business and Finance Journal		…							1			**1**
Academy of Accounting and Financial Studies Journal		…									1	**1**
Australian Accounting Review		…	1									**1**
Accounting and Business Research		…							2			**2**
Accounting History		…							1			**1**
Advances in Accounting		…								1	1	**2**
Asian Journal of Business and Accounting		…			1			1				**2**
Accounting, Organizations and Society		…									1	**1**
Accounting Perspectives		…									1	**1**
Accounting and the Public Interest		…				1						**1**
Asia-Pacific Journal of Accounting and Economics		…							1			**1**
Accounting Research Journal		…	1									**1**
British Accounting Review		…								1	2	**3**
Critical Perspectives on Accounting	1	…		1								**2**
International Journal of Accounting & Information Management		…				1						**1**
International Journal of Managerial and Financial Accounting		…					1				1	**2**
Journal of Applied Accounting Research		…							1			**1**
Journal of Accounting and Public Policy		…								1		**1**
Journal of Contemporary Accounting and Economics		…							1			**1**
Journal of International Financial Management and Accounting		…					1					**1**
Journal of Management Accounting Research		…							1			**1**
Meditari Accountancy Research		…						3		3		**6**
Qualitative Research in Accounting and Management		…						1				**1**
Sustainability Accounting, Management and Policy Journal		…		3	1	4	1	3	5	1		**18**
Social and Environmental Accountability Journal		…		1		1	4	1				**7**
Total number of articles	1		2	5	2	7	7	10	13	7	8	62

1. Accounting for sustainability governance as a Management programme: includes research that focuses on the role of accounting within a space of management and measurement frameworks for sustainability governance. This area includes, for instance, research that analyses the role of ESG on disclosure practices and internal processes more broadly.
2. Accounting for sustainability governance as a Financial programme: includes studies that explore how accounting for sustainability data gives rise to and influences responsible investing and the characters of financial markets. This area comprises, for example, research that analyses the influence of selected ESG characteristics on firm value.
3. Accounting for sustainability governance as a Social and Environmental programme: includes research that investigates the calculative mechanisms put in place to influence social and environmental outcomes. This area includes, for instance, research that analyses the means that translate political ambitions into socially and environmentally responsible behaviour.

These areas have been used to inform the discussion in the following section.

3. Insights form accounting for sustainability governance research

As shown in Table 1, a growing volume of research has focused on the role accounting plays in the process of developing practices that enable diverse forms of sustainability governance. It is worth noting that almost all the body of literature has developed in the last few years, precisely between 2010 and 2018. In these years the volume of publications has increased considerably with two-thirds of all the articles being published between 2015 and 2018. One of the findings of the analysis of published research is that the body of literature was not evenly distributed across the journals, with few journals publishing almost 50% of the articles (namely, '*Sustainability Accounting', 'Management and Policy Journal', 'Social and Environmental Accountability Journal'* and *'Meditari Accountancy Research'*).

The following subsections summarise the key insights produced by published research dealing with areas of sustainability governance that have been developed in the accounting domain. To help the discussion, the results are presented according to the broad avenues of research that have been previously identified.

3.1 Accounting for sustainability governance as a Management programme

This area of research frames accounting for sustainability governance as a space of management where accounting systems support (and in some cases promote change) in the ways organisations and organisational leadership identify their objectives, procedures and rules. The main focus of the articles in this group investigates how accounting and accountability practices influence corporate sustainability performance by addressing organisations' strategic challenges. This area comprises the majority of the articles published and provides a wide range of insights into how accounting for sustainability governance is interpreted as a means for organisations to manage their performance, risks, legitimacy, and their administrative structure in a context of a shifting regulatory system.

Accounting scholars have highlighted the key roles of performance measurement and reporting systems in supporting a wide range of management practices in different contexts (Idris, A., 2012; Mader, C., G. Scott, and D. Abdul Razak, 2013). An emerging and growing body of research looks at the emerging practice of Integrated Reporting as outlined in the IIRC's (2013) International Integrated Reporting Framework (De Villiers, Rinaldi, and Unerman, 2014; Rinaldi et al., 2018). According to the IIRC "an integrated report is a concise communication about how an organisation's strategy, governance, performance, and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long-term" (IIRC, 2013, p.7). Research in this area looks into how integrated reports (IR) emerged as corporate governance regulation (Rowbottom, N. and J. Locke, 2016), how IRs are prepared, and the management and governance challenges associated with it (Atkins, J.F., A. Solomon, S. Norton, and N.L. Joseph, 2015; McNally, M.A., D. Cerbone, and W. Maroun, 2017; Tweedie, D. and N. Martinov-Bennie, 2015). Drawing on the management accounting change literature, for example, Guthrie et al. (2017) investigated the linkages between the adoption of IR and organisations' internal processes, and found that the mechanisms of change were triggered when organisations internalised the IR process and embraced integrated thinking. In a similar vein, Stent and Dowler (2015) assessed the changes in corporate reporting processes required by the adoption of IR and the potential for these changes to contribute towards helping manage major problems such as financial and environmental crises. Finally, other studies looked into the strategies of communicating ESG related information. Melloni et al. (2017), for instance, analysed how organisations use IR to connect their financial and sustainability performance, finding that early adopters of IR employed different forms of syntactical, thematic content and verbal tone manipulation as impression management.

Another stream of research within this line of enquiry examined the establishment of governance standards and its association with sustainability reporting and performance management (Adams, C.A., 2013; Rezaee, Z. and L. Tuo, 2017). Fisal and Achmad (2014), for example, showed that organisations operating with the support of an Environmental Management System (EMS) and an environmental committee enhanced the extent of companies' environmental communication. Haque and Deegan (2010) analysed the disclosures made about various policies and procedures that Australian organisations have in place for addressing the issues associated with climate change-related risks and opportunities. In this context, other scholarship examined the gap between what information stakeholders expect and what business organisations disclose, in order to assess climate change-related corporate governance disclosures (Haque, S., C. Deegan, and R. Inglis, 2016). The research findings of these studies point to the importance of 'best practice', providing a point of reference to evaluate sustainability governance information disclosures, enabling reporting users to make a more informed analysis of what organisations are doing to facilitate sustainability.

In addition to performance and impression management issues, this literature highlighted the numerous challenges associated with risk management. Murphy and McGrath (2013), for instance, explored the motivations for corporate environmental, social and governance (or ESG) reporting, finding that the primary driver for some corporations to increase ESG disclosures was to manage the financial risks associated with unsustainable practices. Other studies have looked into the role of accounting systems and reporting as part of a legitimation strategy. Elad (2001), for instance, examined the impact of environmental audit and eco-labelling strategies on governance arrangements. The case analyses how managers strived to actively use corporate social disclosures to defend their company's enlightened self-interest, or to deflect undesirable stakeholder demands. While endorsing the argument that ESG can be seen as part of a strategic posture adopted to manage corporate legitimacy actively, the findings also demonstrate how consumer-driven audits could shift much of the responsibility for sustainable management from state bureaucracy to management control mechanisms within companies.

Similarly, Giles and Murphy (2016) investigated the link between the corporate issue of a Strategic Lawsuit Against Public Participation (SLAPP) with a changed environmental, social and governance reporting focus in a sample of Australian corporations. By analysing the number and type of ESG disclosures, the study revealed that organisations were using ESG reporting as a strategy to legitimise SLAPP behaviour, rather than increasing ESG reporting in an overall sense. In a similar vein, Abdalla and Siti-Nabiha (2015) provide useful insights into the strategy adopted by big organisations operating in emerging economies to deal with external and internal accountability pressures. The study found that the organisational response to these pressures was profoundly influenced by managers' views about the impact of the stakeholders' actions on the organisation's legitimacy. To analyse the role of accounting in the implementation of strategies aimed at facilitating sustainability, Kend (2015) investigated the relationships between sustainability report production, assurance provision and governance characteristics, finding that organisations with an active audit committee are more likely to produce and subsequently assure the sustainability report. Another example of the strategic use of ESG data by corporations is provided by Haque (2017) who empirically explored the relationships between ESG based compensation policies with carbon reduction initiatives. The findings of this research provide insights into the roles of internal corporate governance mechanisms in addressing climate change risks, showing that corporate boards and executive management tend to focus on a firm's process-orientated carbon performance, without improving actual carbon performance (i.e. reduced CO2 emission). Taking an investor-based view, Herda et al. (2014) explored the strategic role of ESG assurance. The study examined the relationships between the assurance practices and the level of investor protection, explaining how firms domiciled in countries with weaker protection are more likely to obtain assurance on their sustainability report. The findings suggested that firms take on assurance to supplement the governance and monitoring function for external shareholders. Finally, Lin and Dong (2018) documented the role of corporate ESG engagement concerning business risk. The study provided empirical evidence that firms with a prior history of positive CSR engagement are less likely to file for bankruptcy when they are in deep financial distress and are more likely to experience accelerated recovery from distress.

Another form of risk that organisations have to deal with is that of a change in regulations or pronouncements made by governments, regulatory bodies or religious organisations. Regulatory interference can impact not only the competitive landscape and the costs of operations, but also, importantly, the ESG strategic policies, planning and disclosure. In this regard, there has been a number of studies providing insights into the influence of regulatory policies on ESG measurement and reporting. Freedman and Jin Dong (2014), for example, examined the introduction of mandatory state legislation that required certain public US firms to assess the impact of climate change on their financial condition or operating performance, and to disclose the information on the documents filed with the Security and Exchange Commission (SEC). The paper found that while this initiative was only a starting point in dealing with global warming, organisations were materially affected by this change in regulation, which led to increased carbon disclosure. In the European context, Camilleri (2015) investigated the European Union's (EU) latest regulatory principles for ESG disclosures. Arguing that governments have a vital role to play in improving on the environmental and social practices of business and industries operating in their country, the paper finds that the EU's regulatory changes are acting as a driver of CSR policy, involving the reporting of non-financial performance of corporate business. Cashman (2011) analyses the governance challenges that climate change poses to the sustainability of water systems. By exploring the case of the state-centred water governance arrangements of Barbados' government, the study focused on the roles of accounting in the enforcement of political decisions. In identifying several symptoms of poor governance (that included lack of water accounting, water metering and accountability), the study argues for a rebalancing of institutional arrangements where society plays a supporting role to government regulations, and acknowledgement of accountability and sustainability as key attributes. From a different perspective, Sulaiman et al. (2015) empirically investigated the extent to which Islamic Financial Institutions (IFIs) in Malaysia provided governance information in their annual reports. The study offers significant insights into how corporate reporting is shaped by religious principles and how the accounting and governance guidelines developed following them. The unique aspect of IFIs originates from the fundamental principle to conduct and operate under the Islamic *Shariah*. Consequently, governance in IFIs is of utmost importance and it is vital that IFIs provide information about how they are complying with such guidelines.

The pivotal role of accounting in the process of developing performance metrics that influence (but are also influenced by) the administrative structure was also at the heart of several research studies (Larrinaga, C., 2014). Carbon accounting, for example, has been an important dimension of analysis in accounting research, with specific clusters of papers in carbon management accounting, carbon financial accounting, carbon disclosure and reporting, and carbon accounting education (Ascui, F., 2014; Giner, B., 2014). Accounting was also found to be in a reflexive relationship with the administrative structure of organisations. A stream of research, in fact, analysed the influence of governance structure on sustainability performance and disclosure (Aras, G., N. Tezcan, O.K. Furtuna, and E.H. Kazak, 2017) including, for instance, the effect of board gender diversity on the quality of ESG disclosure (Al-Shaer, H. and M. Zaman, 2016; Manita, R., M.G. Bruna, R. Dang, and L. Houanti, 2018; Mohd-Said, R., L.T. Shen, H.S. Nahar, and R. Senik, 2018); the size of board of directors and the extent of environmental disclosure (Trireksani, T. and H.G. Djajadikerta, 2016); the relationship between management by objectives and sustainability policies (Mio, C., A. Venturelli, and R. Leopizzi, 2015); and the correlation between gender performance and financial strength (Miles, K., 2011).

3.2 Accounting for sustainability governance as a Financial programme

This literature focuses on the extent to which accounting connects sustainability to financial markets. This area of research highlights not only the various empirical challenges associated with measuring and quantifying ESG issues, but also with linking them to the structures and rules of financial markets (Hiss, 2013)(Van Gelder, German, and Bailis, 2012).

To explore the relationships between ESG factors and financial performance, accounting scholarship relevant to this area looked into investors' investment strategy. Siew et al. (2016), for example, investigated the impact of ESG disclosures and institutional ownership on market information asymmetry. The findings showed that ESG disclosures had the potential to affect investors' asset allocation process, suggesting that a regulation of the quality and timing of ESG information would contribute to reducing the gap between more-informed and less-informed investors, thus providing an equal playing field to all stakeholders. In a similar vein, Jain (2016) analysed how CSR performance and disclosure in the areas of ESG influenced the investment strategy of a specific group of investors, namely the short sellers. The study found that short sellers considered ESG scores as values relevant in making investment decisions, arguing, for this reason, that management should integrate CSR into strategic decisions and corporate reporting.

Key insights produced by accounting research relevant to this phase also emerged from the analysis of the financial investors' perception of ESG information. For example, Atkins and Maroun (2015) examined investors' reactions to the emergence of reporting frameworks aimed at integrating financial and ESG metrics. The paper found that investors regarded the integration of financial and environmental, social and governance metrics as providing a better understanding of organisational sustainability. Du Rietz (2018), instead, empirically investigated how investors attain knowledge when demanding corporate accountability for ESG issues. By exploring the institutional investors' engagement with organisations addressing ESG issues, the study highlighted the distinction between information and knowledge. The study showed that accountability is unlikely to be established through ESG disclosure alone, but for investors to acquire knowledge of ESG factors in organisations, information needs to be used dynamically (for example, seeking convergence with other accounts, or using it for contradicting and disproving executives' information).

Other scholars examined the role of accounting practices in the context of responsible investing (RI). Himick (2011), for instance, examined the use of relative performance evaluation (RPE) as a form of compensation in one empirical setting - Canadian pension funds - to determine its impact on the use of ESG-driven investment practices. The study found that the relative evaluation processes continued to focus on purely financial terms, arguing that if pension funds wish to modify their portfolios to meaningfully include ESG investment considerations, then alternative evaluation measures should be developed. From a different perspective, de Zwaan et al. (2015) investigated the superannuation members' attitudes and behaviours towards ESG investing in the context of their superannuation funds. The result indicates that the majority of superannuation fund members are interested in ESG investing and believe that consideration of ESG issues makes sound financial sense. Bianchi et al. (2010), by contrast, analysed the level of RI disclosure of the world's largest pension funds based in the US and the EU. The study documented a lack of public disclosure of RI by North American funds, suggesting that current practices indicate a difference of philosophical views based on a belief in the merits of responsible investing and reporting.

Research in this area also provided key insights into the influence of ESG measurement and reporting on firm value. Hendriksen et al. (2016), for example, developed a methodology to quantify in financial terms the socio-economic and environmental value created (or consumed) by organisations, the idea being that the financial format that can easily be understood and used by business leaders to affect key business decisions. Li et al. (2018) investigated the link between ESG disclosure and firm value, finding that the former played a significant role in boosting the latter as ESG disclosure was found to improve transparency and accountability, thus enhancing stakeholder trust. Lee et al. (2013) similarly looked at whether investment portfolios comprising high-ranked corporate social performance (CSP) firms out/underperformed portfolios comprised of low-ranked CSP firms. From an alternative standpoint, Sodjahin et al. (2018) analysed the reaction of the stock market to changes in ratings related to ESG factors. Interestingly, the results suggest that upgrades in ESG ratings led to long-term negative abnormal returns, results that are consistent with the idea that socially responsible firms would grant a lower return due to the lower expected associated risks (Arayssi, M., M. Dah, and M. Jizi, 2016).

3.3 Accounting for sustainability governance as a Social and Environmental programme

Some of the key insights produced by research in this area emerged from the analysis of the influence of accounting in the governance of social and environmental outcomes. A notable example in this area of research is presented by Corvellec et al. (2018), which analysed the influence of performative space-constituting practice of accounting on environmental governance. By examining a public programme aimed at increasing the sustainability of waste management in the City of Göteborg, the study used pay-as-you-throw solid waste-collection invoices to show how accounting inscriptions can define the distances they cover. The research revealed that by displaying weight and cost side by side, these invoices conduct topological operations that dissolved, created, and redefined the distance between three key spaces: between people and their waste; between the economy and the environment; and between the city and its residents. In doing so, the study provided novel and compelling insights into how accounting operations help to translate political ambitions into environmentally responsible behaviour, and elucidates how these operations enrol residents in the city's sustainability programme by mobilising environmental responsibility. From a different perspective, Macdonald et al. (2011) analysed a case of science governance implemented through governmental policies. The study investigated the role of stakeholder engagement and dialogue in shaping the social and cultural sustainability of biotechnology developments. The research revealed that as government policies on biotechnology were built on economic progress and competitive positioning, the political debate on sustainable biotechnology issues came to be framed in economic and technical terms, while public dialogue came to be seen as misleading and – as a result – was ineffective in influencing government policy.

This is not to say that engagement and dialogue are vain means to govern sustainability, but instead shows that how the social and cultural dimensions of the public sphere are constructed play a key role in influencing policy. In this regard, Coffey (2013) assessed strategic governmental policy and planning processes aimed at promoting sustainability. Focusing on the case of the State of Victoria, Australia, the study shed light on the importance of public engagement and other governance arrangements as solid foundations for promoting and realising sustainability goals. The research highlighted that failing to shape the social and cultural dimensions frustrated the policy objectives despite the efforts made by the State to fulfil its sustainability ambitions. Covering similar ground, Afreen and Kumar (2016) investigated stakeholders' interactions and learnings as a means of governance for a project involving significant ecological and social externalities. Taking the case of a port development project in India, the study examined the dynamic challenges emerging from the need to reconcile multiple, and often conflicting, interests of stakeholders. In claiming that development and sustainability should be seen a trade-off, the paper argues for widespread participation of all stakeholders involved, with civil society actors playing an active role. In a similar vein, Larsen and Powell (Larsen, R.K. and N. Powell, 2013) empirically analysed a multi-stakeholder natural resource governance strategy. Through an examination of the Danish Green Growth Strategy, the study revealed three co-existing yet somewhat different frames of governance (namely, reductionist, holistic and interactionist) that have the potential to shape the environmental dimensions of the public sphere (i.e. environmental measures and targets), thus influencing how stakeholders mobilise their accountability claims and public policy more broadly.

Religion and religious institutions also play an important role in constructing the social and cultural dimensions of the public sphere and therefore represent potentially powerful means of governing sustainability (Carmona, S. and M. Ezzamel, 2006; McKernan, J.F. and K. Kosmala, 2007). Khan (2013) provides the Islamic perspective of CSR and suggests a CSR framework for Islamic Banking and Financial Institutions (IBFIs) based on principles of Islamic economics and society to facilitate the broader circulation of wealth and sustainable development in the world.

Other researchers analysed the impact of specific sustainability governance tools, such as non-state and state market regulation. D'Hollander et al. (2014), for example, explored the effectiveness of non-state market regulation, namely private certification systems (PCS). As PCSs increasingly regulate social and environmental standards through global supply chains, their institutional design (i.e. setting process, conformity assessment verification procedure) has a significant impact on how organisations can use PCSs to govern social, economic and environmental issues relating to suppliers (Spence and Rinaldi, 2014). Focusing on the role of governments in the institutional design of PCSs, the study provided valuable insights to this area of literature by showing that buying power and market share of government spending are critical drivers for policy-makers, not only to stimulate the adoption of PCSs but also for shaping their design and effectiveness towards sustainability. By contrast, Camilleri (2017) investigated the effectiveness of state market regulation. The study analysed the case of the US regulatory policies and principles issued by governmental agencies and bureaus which contain environmental, social and governance requirements that business organisations must follow. The research documented how the regulatory policies and the strategies of interest groups are creating both challenging opportunities and threats for the US-based businesses. More specifically, the study argues that the U.S. government and its agencies should ensure that the ecological cost of environmental degradation and climate change is considered in the market, and urges U.S. regulatory authorities should promote responsible behaviours.

Finally, another notable example of how accounting mechanisms have developed to facilitate and accommodate substantive changes in social culture is offered by Siddiqui and Humphrey (2016). By looking at the governance of the game of cricket, the article examines the changing nature of the function of 'keeping score'. The research reveals that the commercialisation of cricket has seen the focus of the scoring process shifting from an emphasis on factual recording to results determination. In this context, the study shows how the scoring function had to adapt and develop itself to meet the needs of a developing game, arising from its commercialisation, but also, importantly, the extent to which the scoring function had an active role in rendering such developments possible.

In summary, research insights into the three areas of accounting scholarship demonstrate that accounting for sustainability governance is a topic of growing interest. The analysis also reveals that the level of research covered by the accounting literature is focused on a macro level (i.e. social structures, institutions and organisations). These constitute important gaps for future research to explore and theorise, at a more detailed level, the interactions between single organisational actors in implementing or understanding accounting for sustainability governance practices. The findings of the papers published in this *SEAJ* special issue go some way to filling these gaps through in-depth case studies that are summarised in the next section.

4. Papers in the special issue and their contribution to the accounting for sustainability governance literature

The papers in this *SEAJ* special issue contribute to the area of sustainability governance as a social and environmental programme. This research includes two case studies from different jurisdictions, providing insights into the role of accounting in affecting social and environmental outcomes. Taken together, the cases highlight two key empirical and theoretical governance issues faced by people and organisations when trying to make sense of and engage with social environmental accountability practices.

Johnstone (2019) aims to examine the potential of social environmental accountability to bring about transformational change. To achieve this aim, the paper uses the case study of a 'strategic knowledge-sharing net' in Sweden, focusing on relational accountability between stakeholders. Johnstone (2019) illustrates the potential that such relational arrangements can offer to sustainability by looking at the accountability practices of Swedish organisations through the relationships they hold with the State and each other across various industries and countries. In doing so, the study provides novel insights into how multisector business actors and the state work together to improve the understanding of the translation of national sustainability objectives into organisational outcomes.

Johnstone's findings show how relational accountability is operationalised in performance outcomes at the firm-level, presenting the strategic knowledge-sharing net as a sustainability governance structure that bridges the field and the firms, as well as serving as the link between policy and practice. In particular, Johnstone (2019) illustrates that this type of governance structure is based on a combination of horizontal and vertical relations, and involves a shared value system to meet a unified goal - represented in this case by the translation of Sweden's national environmental objectives into performance outcomes.

By a systemic conceptualisation of sustainability, sustainability governance is proposed as a useful accountability tool that merits more attention in accounting research. A significant implication of Johnstone's (2019) findings is that 'strategic nets' become forms of governance that shift away from the hierarchical model of control, towards a more collaborative approach where power differentials are reduced and where industry and government are given 'equal' platforms to discuss sustainability issues. Another important implication is that relational configurations (i.e. net architecture) become key in the pursuit of sustainability outcomes. As the case highlights, the net provides the structural means for organisations to develop internal operating practices and outcomes. This is critical to embed external policy goals into businesses' sustainable strategies and operations. As a consequence, dialogue, both within net configurations and between net collaborators, becomes a key characteristic of how the process of facilitating sustainability can be governed.

Tregidga et al. (2019) investigate the extent to which ethical certification and its related labelling affect sustainability outcomes by increasing awareness of the social and environmental impacts of products. Drawing on a comparative case study of two certification schemes operating within a single market, the paper of problematises ethical certification as a sustainability governance regime of practice. Framed through Michel Dean's (2009) analytics of governmentality theoretical standpoint, Tregidga et al. (2019) question whether communication through certification of the social/environmental credentials of a product impacts the power of the certifier and certified to govern the social acceptability of their product. The paper uses this focused theorising to problematise the sustainability governance regime along four interlinked yet relatively autonomous dimensions, namely visibilities, knowledge forms, techniques of government, and identities produced.

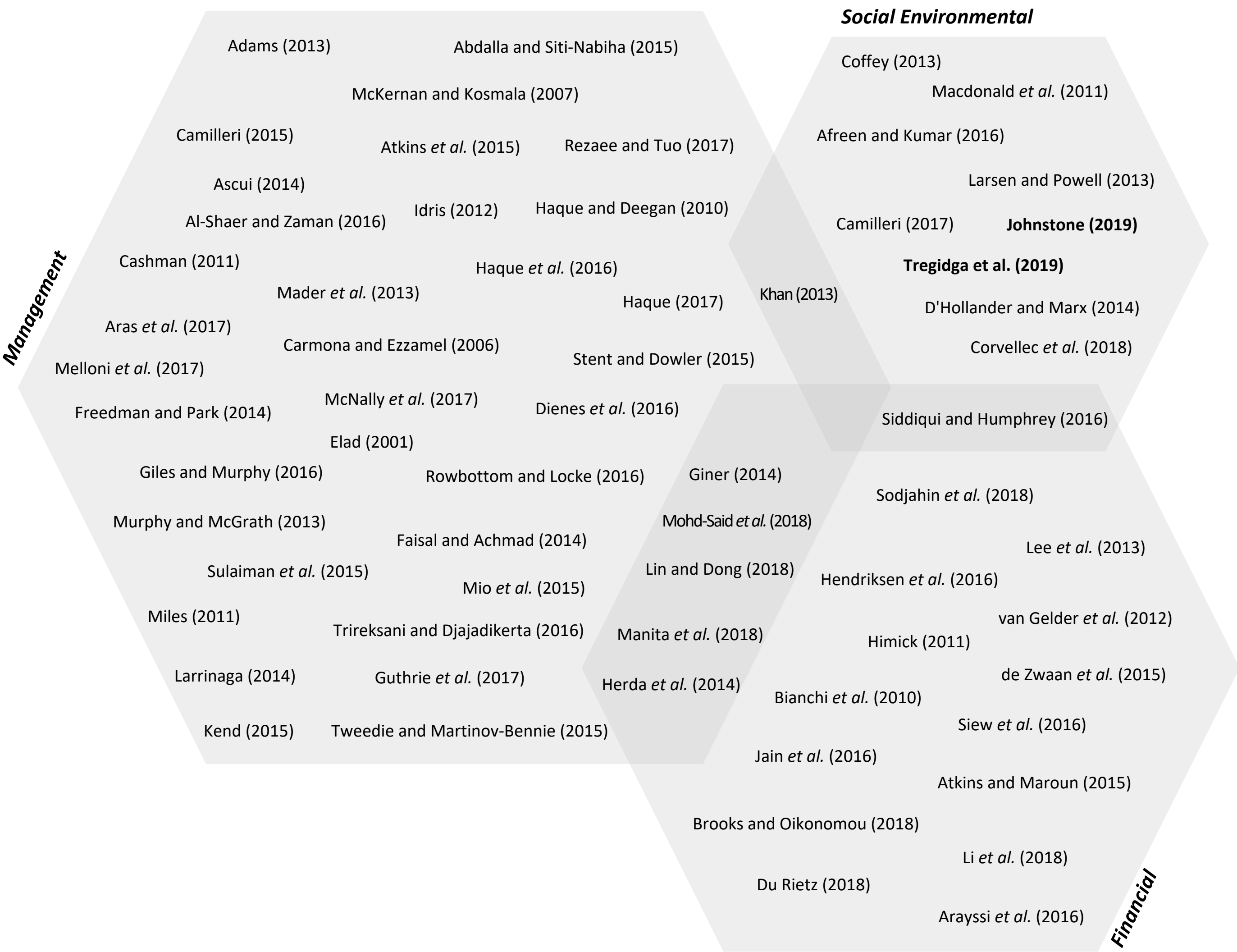
Tregidga et al. (2019) raise concerns with certification as a form of sustainability governance, highlighting the complexities and limits of two specific certification schemes. The findings reveal that while ethical certification practices have some effect on the ability to hold companies to account, these effects are seen to derive not from increased transparency but, somewhat paradoxically, due to lack of transparency. A significant implication of the findings of Tregidga et al. (2019) is that communication through certification and labelling practices has the potential to promote active politicised consumption, allowing citizen-consumers to bring about political and social change (Hiscox, M.J., M. Broukhim, and C. Litwin, 2011). However, given the growing market for ethically labelled products in retail settings, the work by Tregidga et al. (2019) suggests the need for further research into the transparency aspects of ethical certification and consumer understandings of certification practices, as well as the role of both governmental and non-governmental organisations in achieving the desired goals.

The summaries of the papers included in this SEAJ special issue indicate the insights that Johnstone (2019) and Tregidga et al. (2019) can offer to some key themes surrounding sustainability governance, contributing to the shaping of a distinct yet complementary understanding of the notion of sustainability governance in-action. Johnstone (2019), for instance, is more concerned with the conception of accountability and emphasises the systemic arrangements of governance relationships. The paper examines the complexity of sustainability governance based on relational accountability and dynamics of the redistribution of power (rather than on balance). As business actors strive to embed policy into operational activities, the case shows the potential for relational governance mechanisms to provide positive economic, environmental and societal effects. Tregidga et al. (2019), instead, are more concerned with the conception of steering, and stress the rationalities and practices underlying the governance regime. The paper shows how ethical product certification and labelling practices are used to influence social and political behaviour. The case critically highlights the role of such governance mechanisms in steering politicised consumption, bypassing more traditional political channels, such as government regulation.

The two papers also contribute to the accounting for sustainability governance literature by offering distinctly focused theorisations. By applying Mitchell Dean's analytics of government framework, Tregidga et al. (2019) bring greater theoretical sophistication to the study of the governance of change and governance systems, providing nuanced understanding for the assessment and critique of certification and labelling as accountability practices. Johnstone (2019), instead, brings a novel perspective in the analysis of the scale and form of sustainability governance. The study provides an analysis of the complex sustainability relationships between public and private organisations through the lens of strategic nets, a form of governance characterised by informal rather than bureaucratic structures, and that is used in the case study to explore the coordination of complex sustainability policy.

Figure 1 provides a visual representation of the three main areas of accounting for sustainability governance research and locates the examined literature within the appropriate area. As the papers examined in this study were not produced with the intention of fitting into the areas identified in this study, some papers provide insights that cross more than one area. Consequently, this paper has classified each paper according to an interpretation and understanding of the areas that its insights primarily inform. The size of the areas is indicative of the relative weighting of each area within the examined body of literature, while the positioning of the references at the intersection of two areas in Figure 1 indicates their relative contribution to both areas. The articles published in this special issue are highlighted in bold.

Figure 1 Representation of the accounting for sustainability governance research field over the 18 year period 2001 to 2018



Future research could add to these contributions by developing further in-depth theoretical and empirical knowledge of sustainability governance issues.

5. The enabling role of Social and Environmental Accountability research

This paper aims to provide insights into the governance challenges and instruments as revealed through academic accounting literature, and identify gaps in the literature. To achieve these aims, the paper classified and structured insights from extant research to understand, explain, and evaluate how accounting may be used to achieve governance that can facilitate sustainable outcomes.

As can be seen from the analysis in this paper, there are a rich variety of insights across most areas of accounting for sustainability governance. This field already comprises discussions framing sustainability governance as management and financial practice. Perhaps surprisingly, however, if considered together with the accounting literature on sustainability governance, the paper demonstrates that there has been less engagement with socio-ecological and political framings of governance, compared to the market and financial framings. This reveals an important gap for future research. Another key finding is that the locus of the articles' inquiry is focused at the organisational and macro level (including transnational, international, national and sub-national loci). If we want to understand the extent to which accounting has contributed to shaping the social, economic and administrative behaviours at different levels of society, there is an opportunity for accounting scholars to investigate complex micro dynamics at the individual level, such as, for example, the analysis of the interactions between organisational actors in implementing or understanding sustainability governance practices.

The paper contributes to accounting for sustainability governance literature in two ways. First, this paper brings together several insights from an emerging and heterogeneous body of research. It provides a multi-dimensional perspective on accounting for sustainability governance and offers a diagrammatic representation of the main areas and interrelationships within the field. As Thomson (2014) maintains, diagrams and maps help "visualising relationships, organising ideas, communicating complex ideas and evaluating contributions (actual and potential)" (p. 15-16). Secondly, this paper helps inform improvements in research, policy and practice by identifying gaps regarding the areas of sustainability governance that have not been covered by current accounting academic research.

Besides the overall contributions outlined above, this study also aims to appraise the extent to which the term 'sustainability governance' is used and understood in accounting research. The study finds that there is negligible use of the term 'sustainability governance' in accounting scholarship and that appreciation of the term amongst researchers varies substantially, reinforcing the conclusion that the term 'sustainability governance' lacks concise definition. This paper reflects the breadth of such conception as of managerial, financial and socio-environmental concerns. One important finding of this paper is that the literature that is explicit about its engagement in sustainability governance concerns is diverse but potentially limited. There is a suggestion of more significant appreciation of sustainability governance amongst researchers involved in studying governance disclosure practices (in part related to the use of a specific set of keywords), but the potential for social, environmental accountability research is much higher than this. As this analysis suggests, accounting for sustainability governance scholarship needs to ensure that it is interested in more than disclosure. Thus, this analysis sheds new light on the breadth of sustainability governance research by providing a richer picture that identifies not only the gaps, but also the opportunities for accounting scholarship to effectively cope with the complex challenges involved in the theories, processes, practices and interactions of the highly interdependent dimensions of governance and sustainability.

The study's findings should be interpreted in light of some limitations. In addition to the limitations acknowledged in the method section, a problem confronted in this study relates to the boundaries set to sustainability governance field that inevitably did not include affine academic research. A notable example is represented by the high quality and influential research on sustainability, accounting and governmentality. This body of literature looks into the hidden rationales behind organisational processes and practices employed by policymaking to facilitate sustainability. Though having strong links with the scope of this paper most of this research has not situated its contribution as sustainability governance scholarship per se, that is, it does not explicitly use the term as above (see, among others, Boomsma and O'Dwyer, 2018; Tregidga, 2017; Spence and Rinaldi, 2014; Bebbington and Larrinaga, 2014; Thomson et al., 2014; Russell and Thomson, 2009). Consequently, their output is not included in this research.

While in effect, the paper deals with issues of 'governance', it uses this term not as a synonym for government or governmentality. Although these terms share many characteristics, this paper, following Guy Peters (2014), holds that 'governance' is concerned with the conception of steering and accountability. Societies and organisations require collective choice about sustainability issues (i.e. climate change, biodiversity threats and resource depletion) that cannot be adequately addressed by individual actions and therefore need means to make and implement those decisions. For this reason, governance also implies some conception of accountability, so that whoever is involved in setting objectives and in seeking to achieve them must be held accountable for their consequences. Governance studies, therefore, emphasise the capacity for influence through steering and accountability rather than direct and authoritative control (a faculty commonly associated with government). This literature that has been characterised as "governance without government" (Guy Peters and Pierre, 1998), can be related to networks, partnerships, and a variety of other interactions that move government away from its role as the central source of values for the society (Guy Peters and Pierre, 1998). Governmentality, on the other hand, is a Foucauldian term concerned with the techniques and modes of ruling and guiding in an encompassing sense (Dean, 2009). Therefore, "an analysis of governmentalities […], is one that seeks to identify these different styles of thought, their conditions of formation, the principles and knowledges that they borrow from and generate, the practices that they consist of, how they are carried out, their contestations and alliances with other arts of governing" (Rose et al., 2006, p. 84). As a result, both governance and governmentality have a concern with the acts of governing as their common denominator, albeit with very different traditions and focus areas.

In summary, social and environmental accountability research has the potential to enable transformative sustainability governance and, as the paper highlights, there are several avenues for future research that could be further explored to investigate the roles of accounting for sustainability governance. Among these are the following three areas.

First, the scope of analysis among research projects in accounting for sustainability governance needs to be expanded beyond individual organisations to include, for example, the role of accounting professionals, professional services firms and the accounting profession more broadly. This would also facilitate greater use of comparative studies, examining how and why various forms of accounting for sustainability governance emerge and develop, and how institutional environments influence these practices.

Second, new examples of accounting for sustainability governance may occur away from business organisations, market structures or political institutions. Contexts such as Non-Governmental Organisations (NGOs), Co-operatives, Public Sector Organisations (PSOs) and other forms of hybrid organisation, could provide valuable insights. Subsequently, for those researchers interested in addressing these aspects, future studies may examine the organisational practice of sustainability governance, investigating the accounting and accountability practices of SMEs, NGOs, PSOs within their relationships with each other or across various industries or countries. Additional insights could be provided by exploring the functional requirements and overall characters of sustainability governance reforms in these contexts.

Third, future research could add to these contributions by developing further in-depth theoretical knowledge of sustainability governance issues. Given the considerable breadth and depth of complexity underlying the role of accounting for sustainability governance, future development of accounting research would benefit from a greater theorised engagement. This engagement could develop what O'Dwyer and Unerman (2016) refer to as 'focused theorisations' in the field of accounting for sustainability governance, aimed at developing specific sets of knowledge on the material areas that set the foundation of accounting for sustainability governance. These focused theorisations could draw from other research areas, such as management or organisational studies, thus facilitating greater interdisciplinary collaboration and increasing the potential to influence policy and practice. This represents another significant research area, aiming, for example, at theorising the conditions under which organisations engage in the governance of multiple timeframes, looking at the role of accounting and accounting systems in the reconciliation of the long-term, multi-generational planning with the short term of political interactions. Additionally, future studies could develop multidimensional decision-making frameworks aimed at exploring and mitigating the tensions between competing theorisation of governance.

In conclusion, this paper reconciles insights from an understandably fragmented emerging field. However, while sustainability governance is a topic that has gained a growing and significant interest within the social and environmental accountability literature, this paper urges accounting researchers to be more ambitious and contribute to the development of the area. The increase in publications in the last few years, the large number of outlets and researchers involved, and the wide range of perspectives and loci of enquiry, all point to a field with substantial future potential.

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